



COMMONWEALTH OF VIRGINIA
STANDARD CONTRACT

Contract No. UCPJMU6763

This contract entered into this 11th day of December, 2023, by Ashburn Consulting LLC hereinafter called the "Contractor" and Commonwealth of Virginia, James Madison University called the "Purchasing Agency".

WITNESSETH that the Contractor and the Purchasing Agency, in consideration of the mutual covenants, promises and agreements herein contained, agree as follows:

SCOPE OF CONTRACT: The Contractor shall provide the services to the Purchasing Agency as set forth in the Contract Documents.

PERIOD OF PERFORMANCE: From 12/11/2023 through 12/10/2024 with four (4) one-year renewal options.

The contract documents shall consist of:

- (1) This signed form;
(2) The following portions of the Request for Proposal RFP FDC-1175 dated June 15, 2023
(a) The Statement of Needs,
(b) The General Terms and Conditions,
(c) The Special Terms and Conditions together with any negotiated modifications of those Special Conditions;
(d) Addendum No. One, dated July, 25, 2023
(e) Addendum No. Two, dated August 3, 2023
(3) The Contractor's Proposal dated August 14, 2023 and the following negotiated modification to the Proposal, all of which documents are incorporated herein.
(a) Negotiations Summary, dated December 1, 2023
(b) Commonwealth of Virginia Agency Contract Form Addendum to Contractor's Form, dated October 26, 2023, which shall govern in the event of conflict.

IN WITNESS WHEREOF, the parties have caused this Contract to be duly executed intending to be bound thereby.

CONTRACTOR:

PURCHASING AGENCY:

By: Ben Eiserike (Signature)

By: [Signature] (Signature)

Ben Eiserike (Printed Name)

Doug Chester (Printed Name)

Title: Director, Proposals & Contracts

Title: Buyer Senior

**RFP # FDC-1175 Information Technology Consulting Services
Negotiation Summary for Ashburn Consulting, LLC**

December 1, 2023

- Parties agree that this Negotiation Summary modifies RFP# FDC-1175 and the Contractor's initial response to RFP# FDC-1175, and in the event of conflict this negotiation summary shall take precedence.
- Contractor's pricing schedule for the Purchasing Agency is as follows:
(All prices are in US Dollars and per hour rates)

Oracle Core Technologies	Onsite	Offsite
PM or Expert Consultant	185.00	180.00
Sr Engineer or Sr Consultant	175.00	170.00
Engineer or Consultant	155.00	150.00

Change Mgmt Training, Svcs, and Certs	Onsite	Offsite
PM or Expert Consultant	170.00	165.00
Sr Engineer or Sr Consultant	155.00	150.00
Engineer or Consultant	125.00	120.00

Oracle/PeopleSoft Enterprise Solutions	Onsite	Offsite
PM or Expert Consultant	185.00	180.00
Sr Engineer or Sr Consultant	180.00	175.00
Engineer or Consultant	165.00	160.00

Security and Federation Services	Onsite	Offsite
PM or Expert Consultant	175.00	170.00
Sr Engineer or Sr Consultant	160.00	155.00
Engineer or Consultant	135.00	130.00

Desktop and Mobile Device Management	Onsite	Offsite
PM or Expert Consultant	155.00	150.00
Sr Engineer or Sr Consultant	135.00	130.00
Engineer or Consultant	125.00	120.00

Cisco Tech., Infrastructure Support, and Visualization	Onsite	Offsite
PM or Expert Consultant	175.00	170.00
Sr Engineer or Sr Consultant	160.00	155.00
Engineer or Consultant	135.00	130.00

Microsoft Azure and M365	Onsite	Offsite
PM or Expert Consultant	160.00	155.00
Sr Engineer or Sr Consultant	150.00	145.00
Engineer or Consultant	140.00	135.00

Audio Visual Technologies	Onsite	Offsite
PM or Expert Consultant	140.00	135.00
Sr Engineer or Sr Consultant	125.00	120.00
Engineer or Consultant	105.00	100.00

Okta	Onsite	Offsite
PM or Expert Consultant	155.00	150.00
Sr Engineer or Sr Consultant	140.00	135.00
Engineer or Consultant	130.00	125.00

Secure Research Enclaves	Onsite	Offsite
PM or Expert Consultant	170.00	165.00
Sr Engineer or Sr Consultant	140.00	135.00
Engineer or Consultant	120.00	115.00

Data Analytics/ Visualization/ Warehouse/ Lake	Onsite	Offsite
PM or Expert Consultant	185.00	180.00
Sr Engineer or Sr Consultant	165.00	160.00
Engineer or Consultant	130.00	125.00

Other Technology	Onsite	Offsite
Project Manager	125.00	120.00
Senior Engineer	110.00	105.00
Engineer	90.00	85.00

Training Offerings	Onsite	Offsite
Expert Trainer or PM	170.00	165.00
Sr Trainer or Sr Engineer	155.00	150.00
Trainer or Engineer	125.00	120.00

Info. Tech. (IT) Consultants	Onsite	Offsite
Sr. IT SME	185.00	180.00
IT SME	175.00	170.00
IT Architect	165.00	160.00
IT Administrator	115.00	110.00
IT Analyst	105.00	100.00
IT Technician	85.00	80.00

PM = Project Manager
SME = Subject Matter Expert

3. Onsite pricing shall be inclusive of all travel costs.
4. Billable hours shall be for actual work hours on authorized projects/tasks rounded to the quarter hour. Billable hours shall not include travel time.
5. Contractor shall provide detailed invoicing to include project title, number of hours worked onsite and/or offsite, role of individual(s) performing the work, and specific tasks performed.
6. The University may also request that these services be provided as a fixed-fee project, as would be mutually agreed to prior to services being rendered, with deliverables billed upon completion of milestones.
7. The University may also request that these services be provided as a monthly subscription service, as would be mutually agreed to prior to services being rendered, with deliverables determined by monthly service requirements.
8. The Purchasing Agency reserves the right to reject any assigned personnel at any time with or without cause. Contractor shall provide a suitable replacement within a timely manner.
9. Contractor has disclosed all potential fees. Additional charges will not be accepted.

**COMMONWEALTH OF VIRGINIA AGENCY
CONTRACT FORM ADDENDUM TO CONTRACTOR'S FORM**

AGENCY NAME: James Madison University

CONTRACTOR NAME: Ashburn Consulting LLC

DATE: 10/26/2023

The Commonwealth and the Contractor are this day entering into a contract and, for their mutual convenience, the parties are using the standard form agreement provided by the Contractor. This addendum, duly executed by the parties, is attached to and hereby made a part of the contract. In the event that the Contractor enters into terms of use agreements or other agreements of understanding with University employees and students (whether electronic, click-through, verbal, or in writing), the terms and conditions of this Agreement shall prevail.

The Contractor represents and warrants that it is a(n) // individual proprietorship // association // partnership / / **corporation** // governmental agency or authority authorized to do in Virginia the business provided for in this contract. (Check the appropriate box.)

Notwithstanding anything in the Contractor's form to which this Addendum is attached, the payments to be made by the Commonwealth for all goods, services and other deliverables under this contract shall not exceed Purchase Order Amounts; payments will be made only upon receipt of a proper invoice, detailing the goods/services provided and submitted to James Madison University. The total cumulative liability of the Commonwealth, its officers, employees and agents in connection with this contract or in connection with any goods, services, actions or omissions relating to the contract, shall not under any circumstance exceed payment of the above maximum purchase price plus liability for an additional amount equal to such maximum purchase price. In its performance under this contract, the Contractor acts and will act as an independent contractor, and not as an agent or employee of the Commonwealth.

The Contractor's form contract is, with the exceptions noted herein, acceptable to the Commonwealth. Nonetheless, because certain standard clauses that may appear in the Contractor's form agreement cannot be accepted by the Commonwealth, and in consideration of the convenience of using that form, and this form, without the necessity of specifically negotiating a separate contract document, the parties hereto specifically agree that, notwithstanding any provisions appearing in the attached Contractor's form contract, none of the following paragraphs **1 through 18** shall have any effect or be enforceable against the Commonwealth:

1. **Requiring the Commonwealth to maintain any type of insurance either for the Commonwealth's benefit or for the contractor's benefit;**
2. **Renewing or extending the agreement beyond the initial term or automatically continuing the contract period from term to term;**
3. **Requiring or stating that the terms of the attached Contractor's form agreement shall prevail over the terms of this addendum in the event of conflict;**
4. **Requiring the Commonwealth to defend, indemnify or to hold harmless the Contractor for any act or omission;**
5. **Imposing interest charges contrary to that specified by the Code of Virginia, §2.2-4347 through 2.2-4354, Prompt Payment;**
6. **Requiring the application of the law of any state other than Virginia in interpreting or enforcing the contract or requiring or permitting that any dispute under the contract be resolved in the courts of any state other than Virginia;**
7. **Requiring any total or partial compensation or payment for lost profit or liquidated damages by the Commonwealth if the contract is terminated before its ordinary period;**
8. **Requiring that the contract be "accepted" or endorsed by the home office or by any other officer subsequent to execution by an official of the Commonwealth before the contract is considered in effect;**

9. Delaying the acceptance of this contract or its effective date beyond the date of execution;
10. Limiting or adding to the time period within which claims can be made or actions can be brought;
11. Limiting the liability of the Contractor for property damage or personal injury. The parties agree that this clause does not extend the Contractor's liability beyond its own acts or those of its agents/employees;
12. Permitting unilateral modification of this contract by the Contractor;
13. Binding the Commonwealth to any arbitration or to the decision of any arbitration board, commission, panel or other entity;
14. Obligating the Commonwealth to pay costs of collection or attorney's fees;
15. Granting the Contractor a security interest in property of the Commonwealth;
16. Bestowing any right or incurring any obligation that is beyond the duly granted authority of the undersigned agency representative to bestow or incur on behalf of the Commonwealth.
17. Requiring the "confidentiality" of the agreement, in whole or part, without (i) invoking the protection of Section 2.2-4342F of the Code of Virginia in writing prior to signing the agreement (ii) identifying the data or other materials to be protected, and (iii) stating the reasons why protection is necessary.
18. Requiring the Commonwealth to reimburse for travel and living expenses in excess of the agency policy located at <https://www.jmu.edu/financemanual/procedures/4215mie.shtml>

This contract may be renewed annually by the Commonwealth after the expiration of the initial term under the terms and conditions of the original contract except as noted herein. If the Commonwealth elects to exercise the option to renew the contract for an additional renewal period, the contract price(s) for the succeeding renewal period shall not exceed the contract price(s) of the previous contract term increased/decreased by no more than the percentage increase/decrease of the "Other Services" category of the CPI-W of the Consumer Price Index of the United States Bureau of Labor Statistics for the latest twelve months for which statistics are available.

This contract has been reviewed by staff of the agency. Its substantive terms are appropriate to the needs of the agency and sufficient funds have been allocated for its performance by the agency. This contract is subject to appropriations by the Virginia General Assembly.

IN WITNESS WHEREOF, the parties have caused this contract to be duly executed, intending thereby to be legally bound.

AGENCY by 
 Title Buyer Senior
 Printed Name Doug Chester

CONTRACTOR by 
 Title Director, Proposals & Contracts
 Printed Name Ben Eiserike

PROPOSAL

in response to
James Madison University
Request for Proposal
RFP# FDC-1175



Information Technology Consulting Services

Submitted by:



Ashburn Consulting LLC
42813 Forest Spring Dr.
Leesburg, VA 20176

Point of Contact:
Ben Eiserike, PMP
Director, Proposals & Contracts
Telephone: 240-997-0322
Email: beiserike@ashburnconsulting.com

Proposal due date: August 15, 2023 at 2:00 p.m.

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1. Return RFP cover sheet and all addenda acknowledgements, if any, signed and filled out as required.

REQUEST FOR PROPOSAL RFP# FDC-1175

Issue Date: June 15, 2023
Title: Information Technology Consulting Services
Issuing Agency: Commonwealth of Virginia
 James Madison University
 Procurement Services MSC 5720
 752 Ott Street, Wine Price Building
 First Floor, Suite 1023
 Harrisonburg, VA 22807

Period of Contract: From Date of Award Through One Year (Renewable)

Sealed Proposals Will Be Received Until 2:00 PM on August 3, 2023 for Furnishing the Services Described Herein.

SEALED PROPOSALS MAY BE MAILED, EXPRESS MAILED, OR HAND DELIVERED DIRECTLY TO THE ISSUING AGENCY SHOWN ABOVE.

All Inquiries For Information And Clarification Should Be Directed To: Doug Chester, Buyer Senior, Procurement Services, chestefd@jmu.edu; 540-568-4272; (Fax) 540-568-7935 by July 20, 2023 by 5:00 PM EST.

NOTE: THE SIGNED PROPOSAL AND ALL ATTACHMENTS SHALL BE RETURNED.

In compliance with this Request for Proposal and to all the conditions imposed herein, the undersigned offers and agrees to furnish the goods/services in accordance with the attached signed proposal or as mutually agreed upon by subsequent negotiation.

Name and Address of Firm:

Ashburn Consulting LLC

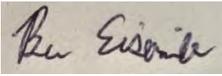
42813 Forest Spring Dr.

Leesburg, VA 20176

Date: 8/14/2023

Web Address: www.ashburnconsulting.com

Email: beiserike@ashburnconsulting.com

By: 
(Signature in Ink)

Name: Ben Eiserike
(Please Print)

Title: Director, Proposals & Contracts

Phone: 240-997-0322

Fax #: 866-576-9382

ACKNOWLEDGE RECEIPT OF ADDENDUM: #1BE #2 BE #3 _____ #4 _____ #5 _____ (please initial)

SMALL, WOMAN OR MINORITY OWNED BUSINESS:

YES; NO; *IF YES =>* SMALL; WOMAN; MINORITY ***IF MINORITY:*** AA; HA; AsA; NW; Micro

***Ashburn Consulting is working to become SBSB-certified as Small Business / Minority-Owned Business (AA) but is not yet certified as of the due date for receipt of proposals – our application to SBSB is in progress and we hope to be certified before contract award.**

Note: This public body does not discriminate against faith-based organizations in accordance with the Code of Virginia, § 2.2-4343.1 or against an offeror because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment.

2. Plan and methodology for providing the goods/services as described in Section IV. Statement of Needs of this Request for Proposal.

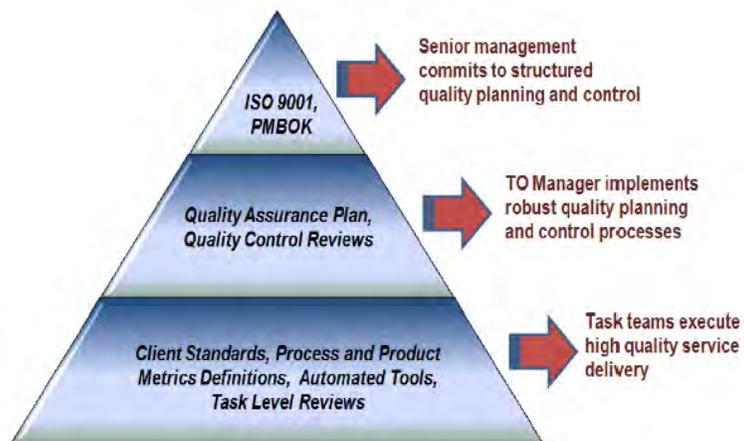
Ashburn Consulting LLC understands that James Madison University (JMU) desires to contract with highly qualified firms to provide expertise and a range of services to support technologies used by the University. Contractor staff will serve on special projects as technology experts when requested and as needed, and reports will be provided back to the University summarizing options and providing recommendations. Contractor staff will also serve as technology advisors to understand, communicate, and propose solutions as requested, and will serve as resources for research, implementation, troubleshooting, and other technical tasks to support the efforts of James Madison University Information Technology (JMU IT) staff.



Ashburn Consulting (“Ashburn”) is incorporated in Virginia and was founded in 2002 with a mission to solve client IT challenges with technology. Ashburn Consulting is a minority-owned small business (certified by the National Minority Supplier Development Council) and ISO 9001:2015 certified for our Quality Management System (QMS), to give clients high confidence in our repeatable processes and high-quality service delivery approach. With offices in Leesburg, VA and Bethesda, MD, and supporting local government, educational, and commercial clients for two decades, Ashburn Consulting’s 60+ full time consulting professionals average 20+ years of technical experience in large-scale environments in the public sector, as well as backgrounds that encompass the full technology life cycle: analysis, design, planning, development, implementation, and ongoing support. This, combined with ongoing training and certification in the latest technologies – collectively, Ashburn staff hold 100+ relevant IT certifications – allows us to engineer optimized, comprehensive solutions. Our goal is to establish long-term client and partner relationships where trust and value are established for assisting customers navigate business challenges and initiatives while leveraging our people to achieve their mission or business objectives.

Ashburn believes that the most effective means for delivering premium quality is to demonstrate a full commitment to structured quality planning and control procedures at the top of our organization, and then make certain these model standards permeate each level of task management and task execution, as illustrated in the graphic below. By continually ingraining this commitment throughout Ashburn’s teams, we ensure that high-quality products and client satisfaction become natural extensions of our employees’ programmatic efforts.

Each project is assigned a lead Task Order (TO) Manager who is responsible for developing a Quality Control Plan (QCP) for the project. Our QCPs are built around Service Level Agreements (SLAs), deliverables, and performance expectations, which drive our selection of meaningful metrics to track and Key Performance Indicators (KPIs) we use to monitor quality. We conduct weekly meetings to monitor projects and risks, brainstorm solutions, and drive project-wide accountability for performance, deliverables, and



Ashburn’s QMS and Quality Control Approach for Service Delivery

adherence to our company values, management framework, and project plan. We also conduct monthly Project Management Reviews (PMRs) and quarterly one-on-ones with employees to drive accountability, identify potential risks, and flag opportunities for improvement. This operational tempo sets an expectation of open and proactive communication and accountability to our clients, the company’s executives, and between employees. We carry this mindset onto each project with our development of QCPs, project plans and schedules, and Standard Operating Procedures (SOPs). We use these tools to ensure performance expectations are clearly understood and adhered to, and to empower our employees’ success. Promoting accountability starts at project kickoff with our clients and is reinforced during our internal kickoff and employee training. As an example, based on SLAs and deliverables in our contracts, we build project plans which identify tasks required to complete client objectives. Our project plans include a breakdown of tasks into sub-tasks which can be completed in two-week or 80-hour increments, and project schedules identify dependencies for tasks to be started and/or completed. Schedules are built to account for Quality Control (QC) and required reviews. Resources are assigned to specific tasks, trained on underlying requirements, performance expectations, and current SOPs. Methods and checkpoints defined in the QCP are used to monitor schedule adherence, identify potential risks, and assess the efficacy of SOPs. Based on their observations and activities, employees begin building or refining SOPs to update the artifacts, improve their relevancy, and establish standards where they were previously absent.

Our QCPs outline specific methods and frequencies we use to monitor performance, schedules, and deliverable submissions, to include weekly schedule reviews and updates in preparation for our internal meetings. Led by Ashburn executives, our internal meetings are action-oriented and designed to promote active participation and shared accountability. To maximize efficiency, internal meeting agendas cover the following for each project: Good News; Review Objectives and Goals; KPI Updates; Client and Employee Highlights; Open Action Items; Risk Identification, Discussion, and Solutions (IDS); and Meeting Summary and Scoring. The bulk of an internal meeting is spent on Risk IDS sessions, in which we pool Ashburn’s collective brainpower to rapidly and effectively resolve challenges deemed most impactful to the company, our employees, clients, and projects. Action items are recorded and assigned during IDS with follow-up being conducted by Ashburn’s executives and team leads during monthly PMRs and quarterly employee one-on-one. A unique feature of our internal meetings is the scoring participants are required to provide after the meeting summary, which drives accountability for session participation and productivity.

Ashburn’s goal is to provide value-based IT staffing, solutions, and services to JMU. We will build an environment of teamwork and shared responsibilities dedicated to creativity, professional growth, and continued opportunities for all employees. We will ensure that customer satisfaction is the measurement of all our actions, both individually and collectively. Our customers benefit from the proven leadership and the performance capabilities of our technical resources that can support their IT goals. We have in place the necessary approaches, staff, and management procedures to ensure the lowest risk and highest quality service – outlined within this proposal are the key areas in which Ashburn brings deep experience, capability, and organizational skills for delivering IT consulting services to JMU.

Ashburn Consulting’s Depth and Breadth of Experience Performing IT Consulting Services

Ashburn brings over 20 years of expertise in building, modernizing, securing, and supporting IT Infrastructures for Federal, State and Local agencies, education institutions, and commercial customers. We’ve designed and implemented carrier-grade DWDM, MPLS, SD-WAN, and Enterprise Data Center Hybrid Cloud networks and architected, implemented, and secured Internet Perimeter and Internal networks, WiFi infrastructure, Video Collaboration technologies, and Next Generation first responder and 911 solutions. Ashburn’s organizational strength is as a trusted, long-term partner who brings integrity, depth of knowledge, and mission success with a proven track record delivering innovative IT solutions in complex public sector environments. Ashburn Consulting is staffed with IT, network, and security experts, holding a wide array of technical certifications (e.g., CCIE, CCNA, CISSP, ITIL, MCSE, Security+, Palo Alto, etc.). We take a vendor agnostic approach to technologies and recommend solutions based on client needs, integrating security into every service and solution, providing cost-effective, timely, and high-quality consulting and technical services to reduce service times, avoid inflated costs, reduce information security risk, and continually improve quality through automation and process improvement.

As part of our complete plan and methodology for providing the goods/services as described in Section IV. Statement of Needs of this Request for Proposal, Ashburn Consulting has strategically partnered with a Virginia-based large business consulting and staffing firm, **Apex Systems (“Apex”)**, that will work as an exclusive subcontractor to Ashburn, functioning as a trusted source of additional expertise and IT consultants to augment our staff teams providing support to JMU, as needed. Based on an established and existing business relationship between Ashburn and Apex, together as **Team Ashburn** our companies are ideally aligned to provide high-value, low-risk IT Consulting Services to JMU.

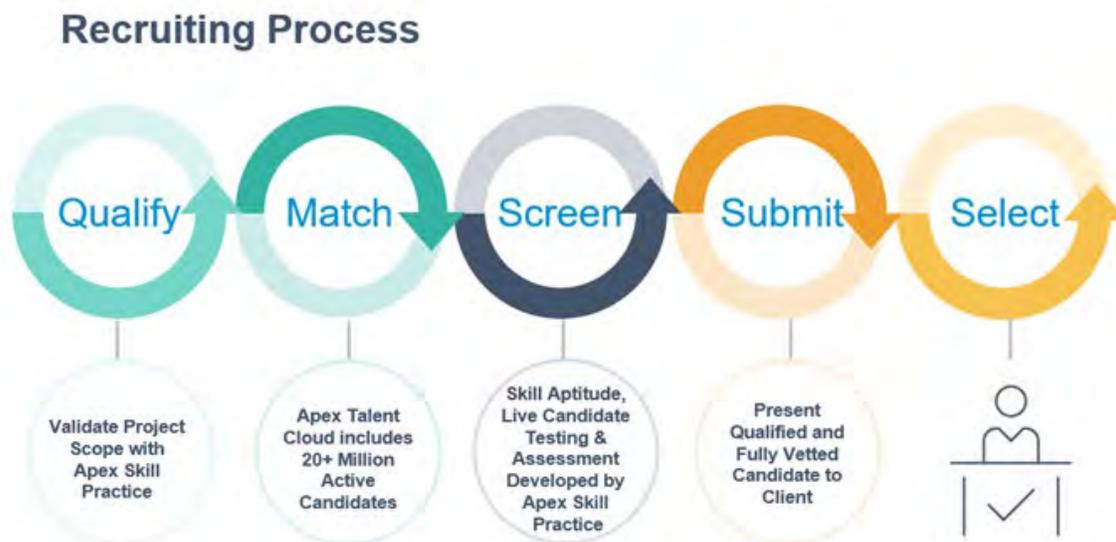


Apex Systems is a world-class technology services business that incorporates industry insights and experience to deliver solutions that fulfill our clients’ digital visions. Apex provides a continuum of service from workforce mobilization and modern enterprise solutions to digital innovation to drive better results and bring more value to clients. Apex transforms customers with modern enterprise solutions tailored to the industries they serve. Apex Systems was founded in 1995 in Richmond, Virginia and has been a division of ASGN, Inc. since 2012. Over the past 27 years, Apex has grown to be a leader in the IT services industry due to their ability to deliver high-quality consultants and solutions to solve clients’ issues.

On Team Ashburn, Apex’s staff augmentation and recruiting process provides multiple advantages to JMU, including:

- **Experienced Team** – Expert recruiters with extensive technical and delivery experience who maintain personal relationships with candidates.
- **Technology** – Multiple AI, machine learning, and process automation tools to augment and optimize the delivery process.
- **Elite Candidate Qualification Program** – Customized screening program to ensure technical aptitude of candidates.

The first step in the process is a thorough qualification to ensure an understanding of JMU requirements to discover the characteristics beyond the established job descriptions that will make our consultants successful. Then we use our best-in-class recruiting, screening, and compliance process to ensure that the candidates we are supplying are the best fit for the project:



2.1 Describe your corporate competencies/experience providing IT consulting services for one or more of the technologies listed below.

a. Oracle Core Technologies

EXPERIENCE CASE STUDY: Automating with ServiceNow CMDB

Prior to incorporating ServiceNow as their business automation system of choice, a large computer and software manufacturer was relying on manual processes and tools to manage the lifecycle and inventory of their internal IT assets. The organization needed to implement a Configuration Management Database (CMDB) to house relevant information needed to support and maintain their Hardware Asset Management (HAM) and Software Asset Management (SAM) solutions. The client's overall goal was to sunset their existing manual processes and replace them with "zero-touch" end-user computing (EUC) systems.

Technologies: Oracle, AWS, Google Cloud Platform (GCP), ServiceNow

Solution: Our proposed solution focused on implementing a group of specific ServiceNow products:

- Discovery - Identifying assets and configuration items to input to CMDB
- CMDB - Develop the foundation to support R1.0 SAM and HAM functionality, as well as a future round of functionality updates to include ITSM
- HAMPro and SAMPro - Implementation through ServiceNow
- Oracle and FileWave - Integrations with ServiceNow's CMDB for additional data needed to support HAM and SAM

Additionally, the company wanted to work towards introducing new process documentation to support its existing asset management systems. We proposed HAMPro and SAMPro Process Guides to ensure that users have a reference point for their post-implementation questions.

Results: We were able to meet the aggressive timeline for the implementation and delivery of the client's new ServiceNow processes. Over the course of 3.5 months, We provided their team with the formalized and documented SAM and HAM processes needed to drive consistency and accuracy across regions. Oracle's internal database also provided the opportunity to leave their manual spreadsheet-based processes behind and become fully automated with CMDB. The Discovery phase was completed across the company's US and China based data centers, with additional discovery centered on Amazon Web Services (AWS) and Google Cloud Platform (GCP) environments. As the project progressed, the client realized that many of their current manual tasks and tools could be eliminated via ServiceNow integration using the system's Oracle database.

EXPERIENCE CASE STUDY: Level 2 Support for Ecommerce Site

Our client's acquisition of a facility required expansion of their ecommerce business, requiring support for systems including a retail website, gift registry, kiosk and a contact center. Following construction phases, our client required installation of their network, server, telecommunications and desktop technology.

Technologies: Oracle, Java, Unix Scripting, Desktop Support

Solution: Our consulting team stood up and managed a process for 24x7 issue resolution, issue research, queries and day-to-day site monitoring. We also provided:

- Writing ad hoc queries against complex data models
- Unix scripting
- Debugging and troubleshooting of Unix, WebLogic, Java, JSP and Oracle platforms

Our team improved processes and created efficiencies. During off hours, the team developed a Java-based monitoring tool that our client still uses today to monitor the ecommerce environment.

Results: By adding an additional tier level of technical support, our client can utilize their own in-house team more efficiently, and thus no longer has a need for offshore support.

EXPERIENCE CASE STUDY: Oracle EBS Implementation

After a failed experience with a large System Integrator with an inflexible delivery model, our client sought an alternative engagement approach to support their implementation of Oracle EBS R12 and Oracle Retail. The client's goal was to engage a cost effective, flexible firm that could scale quickly and provide high quality, experienced resources to support multiple releases of their Oracle EBS program for North America, as well as eliminating travel cost challenges.

Technologies: Oracle EBS R12, Core Oracle FI Modules

Solution: We partnered with the client to understand the resource needs and provided a team of consultants to support their Oracle EBS and Oracle Retail programs. We created a co-managed implementation solution that included a customized regional recruiting strategy, on-boarding and training program, performance management setup and communication.

Results: We successfully sourced and on-boarded over 50 consultants to support the program over a two-year period. In collaboration with the client, we were able to successfully implement Oracle EBS and Retail in North America. Based on our ability to scale up in North America, the client increased the scope globally to include United Kingdom, Germany and Japan. Leveraging our internal travel department and implementing a forward-looking scheduling process, we were also able to decrease travel expenses by approximately 20%.

EXPERIENCE CASE STUDY: End-of-Life Storage Migration

Our client was in the process of migrating some of their applications, databases, and services from end-of-life storage equipment to new devices to mitigate security vulnerability risks. This project would allow the client to modernize their infrastructure and enhance service offerings to customers. Additionally, extending the life cycle of the current devices through extended warranties would be prohibitively expensive.

Technologies: SQL, Windows, Oracle

Solution: Our team included Project Managers as well as SQL, Windows, Oracle, and Storage engineers. Key accomplishments included:

- Exceeded storage migration targets by more than 300%
- Prepped and replicated applications and databases ahead of the migrations
- Executed migrations based on pre-approved runbooks
- Conducted migration validation and documentation
- Facilitated storage hardware decommissioning with the Operations and Data Center teams

We managed the migration and decommissioning of the end-of-life systems and coordinated that with other applicable client teams. Our team used the client's CMDB, which is utilized by each of the client's applications, servers, and databases. In addition, we partnered with the client's onsite facilities teams to power down, remove, and return hardware to either vendors or internal client departments, repurposing the old equipment whenever possible.

Results: We provided modernized solutions to migrate off end-of-life storage devices. This mitigated security and vulnerability risks tied to end of service life dates. In the process, the team alleviated outdated warranties, achieved software compatibility, and lowered operating costs associated to fixes and repairs. Our team exceeded the targets set by the client, completing 307% of the expected block storage migrations and 330% of the on-file storage migrations in the time allotted (our team was more than three times as efficient as expected).

b. Oracle/PeopleSoft Enterprise Solutions

EXPERIENCE CASE STUDY: Workday HCM Migration

Our client was moving away from their legacy PeopleSoft ERP system to a new Workday HCM solution. Specifically, they required a partner to support data migration from the legacy production system into the future-state Workday solution, and to assist with initial configuration. Configuration was required for our client's benefits, talent/performance management, compensation, HR and organizational platforms. In addition, custom report creation was needed.

Technologies: Workday HCM, Peoplesoft

Solution: We provided a project team of senior consultants to support the migration and configuration activities for each of the platform work streams. This included development and data services to extract production data from the existing/legacy PeopleSoft system, transforming and loading the data into Workday Templates for ingestion and configuration into the new production instance of Workday. Other project activities included:

- Providing recommendations and enabling final decisions around functionality
- Working alongside the integration team and external vendors to configure and test integrations between the Workday solution and third-party systems
- Creating documentation and artifacts required for each phase of the development lifecycle
- Developing test cases and peer review code of other developers
- Designing, building, testing, and deploying Workday HCM custom reports
- Providing production support

Results: Our project team was instrumental in helping our client to complete all integration and migration activities on schedule and within budget.

EXPERIENCE CASE STUDY: Security and Access Management

Our client needed to meet SLAs that included providing security authorization requests within 48 hours of first receiving a request (two hours for our client's Executive Team). We managed a support team for our client's IT security group, whose core function was to support and grant internal departments, vendors, and resellers access to our client's internal systems.

Technologies: PeopleSoft

Solution: Our team of IT security and data analyst professionals, performed the following scope of services:

- Verifying employment status and security class through analysis within PeopleSoft
- Analyzing and resolving open issues in front-end software, interfaces, and database software
- Working with client programmers and developers during UAT and Q/A testing
- Resolving trouble tickets regarding profile errors, compliance issues, and access to various systems and credits

We worked closely with client stakeholders to ensure our team was meeting or exceeding agreed upon SLAs. Activities included the following:

- Communicating with the program manager on a weekly basis to address and solve any potential issues
- Meeting with client stakeholders once a quarter to solicit feedback on team performance
- Working with client stakeholders to proactively prepare for ramp-ups or ramp-downs due to changes to the demand forecast and/or business requirements

Results: Our team of technical resources consistently met all key SLAs. As a result, we helped our client provide a best-in-class service to both their internal and external end business users without interruption in day-to-day operations, on time and within budget.

c. Desktop and Mobile Device Management

EXPERIENCE CASE STUDY: Seat Refresh

Our client needed to provide an enterprise-level seat refresh throughout the U.S. for their large federal government installations, as their current hardware was approaching lease end. The scope of work consisted of installing new computers, ensuring network connectivity and functionality, and repackaging old hardware for proper tagging and storage. The primary objective of this engagement was to perform cost-effective, migration services for the client that would enable a timely seat refresh with minimal business disruption.

Technologies: Hewlett Packard HW, Microsoft Office, Hardware/Software Support

Solution: We constructed a desktop deployment solution that provided:

- Agile and scalable demand planning which resulted in higher concentrations of localized resources and significant cost savings associated with travel to the 75+ sites
- Project management of timely machine deployments, resource capacity, attrition, and risk mitigation
- Security management to ensure stream-lined contractor on-boarding within federal and client regulations, including dedicated cleared Project Management resources to conduct site visits and in person performance management
- Workforce management, where we assumed responsibility for all consultant sourcing (120 technicians), on-boarding, logistics oversight and coordination, performance management and project completion
- Timely consultant deployments, by utilizing a real-time work/travel tracker and an easy-to-use travel system for consultants to routinely book travel within client guidelines
- Comprehensive training and development programs for contractors that included: mandatory security trainings, 8570 certification study guides and exam sponsorship and technical training and development of our team

Results: Our ability to provide technical resources that required limited management and ramp-up time for deployments contributed to timely migration completion. With a scheduled deadline to deploy 75,896 seats, our resources were able to successfully complete 78,123 seats (103% completion rate) and did so more than one month ahead of schedule. Additionally, the client gained efficiency within their processes that enabled them to be better equipped for timely deployment of future initiatives.

EXPERIENCE CASE STUDY: Enterprise-Wide Windows 10 Migration

A large regional healthcare provider required services to complete migration of Windows End User Devices (EUDs) to the Win10 operating system by a fixed deadline. The goal was to introduce new enterprise features to amplify productivity, protect against security threats, and improve user experience while promoting standardization. The effort was across 30 hospitals, 270 ambulatory locations and approximately 24,000 EUDs.

Technologies: Windows 10, Workstation Refresh, Desktop Support

Solution: We partnered with the client to understand the scope & impact of the migration activities and determined the right combination of resources to create independent teams for each region. Due to the large user base impacted we developed a multi- faceted communication strategy that targeted the C-Suites down to the individual users. We deployed 5 teams totaling approximately 40 primarily local technicians to minimize travel expenses. We also provided a centralized Program Manager to coordinate with leadership. A large volume of custom applications added a higher complexity which necessitated the creation of a training program with documentation used by the project team.

Results: Our delivery approach & execution, based on fixed monthly milestones, resulted in the completion of the project ahead of schedule and offered significant cost savings to the client. We were able to deliver approximately 24,000 migrations within 8 months. Executives viewed the program as a major success with minimal disruption and a satisfied userbase.

d. Microsoft Azure and M365

EXPERIENCE CASE STUDY: Azure Cloud Migration

Our client was seeking assistance with architecting, building, testing, and implementing an interoperability layer. Interoperability enables health information systems to work together and exchange data across organizations and boundaries to effectively deliver services. This layer would serve as a critical component in an overarching IT initiative to implement a microservices architecture and modernize systems.

Technologies: MS Azure

Solution: We provided a team of subject matter experts to deliver a highly functional interoperability layer on Microsoft Azure, while transforming their architecture from monolithic to microservices. The team used Scrum and Kanban methodologies, along with Azure PaaS offerings to accelerate the implementation. Key components of the project included:

- Developing a cloud native microservices architecture with API Management, Domain APIs, and ETL processes
- Implementing a hybrid cloud architecture with change data capture (CDC) for the delivery of messages to the interoperability layer
- Strategically embedding our principal consultants into Agile teams to provide leadership, mentorship, and guidance to ensure development best practices
- Implementing technologies in the Azure tenant, including Azure Functions for serverless computing and Azure DevOps for continuous integration and continuous deployment
- Performing knowledge transfer and providing Azure subject matter expertise to designated client DevOps and infrastructure personnel regarding subscriptions, platform, configurations, infrastructure as code, and more

Results: We successfully architected, designed, and implemented an interoperability layer with domain APIs having sub-second response times while eliminating dozens of point-to-point integrations. The solution improved our client's data transaction availability, scalability, and speed by transitioning 115 million claim transactions and expanding to processing around 50K transactions per day on average.

EXPERIENCE CASE STUDY: Modern Analytics Platform

Our client required a solution capable of streamlining and improving their process for data collection, access, analysis, and interactive visualization. Without a modernized platform, the existing process would continue to result in inconsistent and unreliable data, further impeding our client's ability to analyze data properly. The scope included the development and integration of an executive dashboard for our client to track high level strategic goals.

Technologies: Snowflake, SQL, MS Azure, Power BI

Solution: We provided a solution for integrating several data sources and delivering a dashboard interface, which included the following components:

- Agile approach to scale architectural and reporting solution
- Robust data pipelines in Azure Data Factory with metadata management and flexible schema changes
- Snowflake data architecture and modeling
- Power BI interactive visualizations for both executive reporting and self-service analytics
- Pyramid-driven data analysis approach, which organizes discrete analytics needs by data granularity, user audience and access pattern

Results: The new interface simplified and streamlined data collection, integration, and the tracking of key performance metrics. The new platform enabled our client to be more productive with improved data access, consistency/reliability, and integration, which resulted in better business collaboration, analysis, and data discussions critical to their company goals.

EXPERIENCE CASE STUDY: Machine Learning (ML) Platform as a Service

Our client was struggling with the legacy MLOps platform which provides DevOps services to ML models to construct, test, train, deploy and serve models using CI/CD pipeline automation. The platform was intended to be cloud agnostic, meaning this architecture should support any cloud. The MLOps platform uses Apache Airflow for scheduling workflows and leverages python API's to dynamically manage a cluster. They had challenges with their existing vendor in terms of platform delivery, management and support. The platform has violated various enterprise security best practices and did not leverage Azure AD authentication and authorization due to improperly configured Apache Airflow instances on Azure VMs. The desired cost optimization was not accomplished.

Technologies: MS Azure, Github, Terraform, Ansible

Solution: Our team completed the transition within a 3-month time frame and published a knowledge transition document. They also delivered a detailed technical debt tracking document on the current platform, created optimized terraform templates, externalized the majority of configuration, managed Terraform state configurations per environment and removed duplicate code. Our team developed CI/CD pipelines with Github Actions, implemented Terraform to Ansible integration and removed various manual steps in automation. There were various elements of sensitive information stored and distributed in Ansible configuration files which were moved to Azure Key Vault and our team created a seamless integration of configuration software using Ansible from terraform. The team successfully established developer onboarding documentation and processes and corrected various security and monitoring defects associated with high-risk design patterns and improved the current ML platform to an improved v2 platform.

Results: Our solution improved operational usage and it automates 90% of deployments and delivery. This platform is certified by enterprise architecture and provides monitoring and governance. It also provides cost-optimized solutions in terms of clusters. Our developer onboarding documentation simplified the communication iterations. Ultimately, our team delivered a new Azure native cloud machine learning platform to serve robust machine learning models across the enterprise.

EXPERIENCE CASE STUDY: Cloud Analytics for Health Information

Our client provides data software that helps assess community health and provides data analysis to healthcare providers, but the product lacked the functionality to allow users to compare data from other external data origination sources. Additionally, the client's existing on-premise system required their team to tear down and rebuild the data cube each day, a process that was unsustainable with increasing product growth and demand for speed and scalability. We were selected to help enhance their latest product with the goal of allowing healthcare providers to compare how they are doing against aggregate metrics from their peers. Additionally, the collected data would allow for benchmarking that provides state and local governments with relevant information to inform community health decisions.

Technologies: MS Azure, MS HDInsight, MS Polybase

Solution: We provided a cloud solution to help innovate and scale the product to become a leader in the marketplace. Our team implemented Microsoft Azure and Microsoft Data Platform tools including HDInsight to provide a secure, HIPAA compliant and scalable data lake that integrates with the company's current technology stack. This allowed our client to perform complex data and analytics workloads in the cloud while still combining with on-premise data sources when required.

Results: Our solution reduced the number of hours and internal resources needed to aggregate and compare this data, resulting in decreased operational costs and increased profits. The product provided a long-term, effective resolution to replace our client's unsustainable process with a platform that can scale to meet today's demands and tomorrow's fluid requirements. Our solution is a strategic product differentiator among our client's competitors, providing enhanced on-demand, real-time reporting that has been expanded across all programs and products.

f. Data Analytics/Visualization/Warehouse/Lake

EXPERIENCE CASE STUDY: Data Analytics on AWS

Our client, a leading international energy products provider, was using a legacy technology platform which analyzed data from solar panels. The legacy platform was causing issues with missed SLAs, low availability and high data center costs. Our client needed a platform that offered support for IoT, faster response times, and the ability to query trends over a larger historical data repository. Our client lacked expertise in the legacy applications as a result of personnel turnover, which resulted in a frozen legacy code base that needed modernization.

Technologies: .NET, Amazon Redshift, Amazon ElastiCache

Solution: The legacy application was Ruby-based on Linux Ubuntu. Our team proposed .NET with a new intuitive dashboard leveraging Amazon Redshift and Amazon ElastiCache for Redis. The modernization included data ingress, queue readers and storage. After data processing, the analysis layer recorded and analyzed the data. Our team's final deliverable utilized Elastic Load Balancer (ELB), Elastic Compute Cloud (EC2), Elastic Block Store (EBS), Relational Database Service (RDS) for PostgreSQL, Redshift, S3, ElastiCache and Route 53.

Results: The benefits of our solution included a new fleet dashboard powered by data with a real-time view of solar collectors globally. This solution reduced operating expenses and resulted in a reduced average time to resolve solar panel issues from four hours to four minutes. It also allowed creation of an unlimited data store to enable historical trend analysis, framework for configuration, and systematic change management. The data can now be turned into actionable insights to support the business mission.

EXPERIENCE CASE STUDY: Snowflake Data Warehouse on AWS

Our client wanted to design and build a centralized data platform and develop corresponding data ingestion services to perform key business analysis for member interactions and behaviors. During this initiative, the following challenges needed to be addressed:

- The data transformation process needed to simplify the collection and analysis of semi-structured web, as well as mobile, traffic data (page views, clicks/taps and interactions)
- Data needed to be processed and organized to serve a global audience
- The ingestion and processing of data needed to be readily responsive to an ever-changing business environment

Technologies: AWS, Snowflake, Matillion ETL/ELT

Solution: Our client wanted a scalable future state solution and unified single source of truth for member reporting and analytics. They needed a partner to supplement their own internal efforts and help build and implement this data solution. Our team has a long history with data and cloud transformation services. We worked together to build a cloud-based data warehouse on Snowflake, leveraging AWS services to provide a complete view of member activity. Some key solution components were:

- Migrate data transformation and processing into Matillion - a tool that natively supports structured and semi-structured data
- Create a single source of truth for data analysis that is easy to scale on demand while meeting support and security requirements
- Deploy Snowflake – a Cloud-based Data Warehouse – on AWS to consolidate enterprise data and support decision making

Results: Our team and the client architected, built, and deployed a modern, state of the art data analytics platform on AWS that allows information stakeholders to rapidly build and iterate dimensional models that feed business intelligence reports and visualizations. Additionally, the solution leverages many advantages of a Cloud-based environment. Finally, the solution data architecture is scalable, flexible, and extensible with the application of standards and best practices, robust data modeling, and high data quality standards.

g. Change Management Training, Services, & Certification

EXPERIENCE CASE STUDY: Salesforce Lightning Upgrade

Our client, an integrated marketing company, needed to migrate their systems from Salesforce Classic to Lightning. Specifically, they needed to fine-tune their Salesforce implementation to improve security and update configurations to align with Salesforce standards, including customized coding, as necessary. They were lacking the in-house expertise needed to complete the upgrades, which led to a backlog of second and third level support tickets. The client was seeking a partner with technical experience to help upgrade their systems, increase security and improve ticket resolution rates.

Technologies: Salesforce Classic, Salesforce Lightning

Solution: Initially, our Salesforce subject matter expert participated in discovery sessions with the client to gain a thorough understanding of the scope of the project. In those sessions, we quickly recognized that several critical updates needed to be made prior to the upgrade. In response, we created a role-based sharing setting structure, and updated session settings and login policies to improve protection against all levels of risk. Once the initial updates were complete, we built the case for transitioning to Salesforce Lightning including defining business and technical requirements, creating a rollout plan and change management strategy. Using this plan, our team completed the remaining upgrade activities, including custom coding and escalated support issues.

Results: With our solution complete, our client's security health increased from 46% to 97%. Salesforce baseline standards and all critical updates were activated without performance or usability impact. All custom and standard components were migrated from Classic to Lightning, and we created a super users group on Salesforce Lightning. Migration activities were completed under budget, allowing us to allocate more time to additional technical support. Our team handled and improved high-impact ticket resolution rates and create new functionalities as requested by our client, including automation processes and custom code.

EXPERIENCE CASE STUDY: Digital Business Transformation

Our client wanted to adopt and evolve the enterprise Spotify Model. Their goal was to evolve the model into something which would work for their organization and be an example model for the rest of the enterprise. To meet this goal, our client engaged our team to design and deliver a modern organizational and operational model which could scale globally.

Technologies: Jira, Confluence, Trello

Solution: Working closely with the client's executive management, we established weekly interactive executive coaching meetings and monthly design summits to reimagine their entire enterprise. Then, we developed an enterprise transformation framework to mobilize the modern organizational and operational model. We established Tribe, Squad and Coaching role activities. A coaching plan was rolled out to train all Scrum Masters and Scrum Master, Product Owner and Executive Summits were conducted across the globe.

Results: The major achievements for this engagement included a coaching and training plan for all squads, tribes and chapters, a modern Production Support Model, a Mindshift Leadership Training, upskilling Scrum Masters/Coaching Pods, Scrum Master/Tribe Engineer Summits, enterprise-scale change management and communication programs and Portfolio Management best practices and reporting. The Tribe and Squad Roadmaps have been adopted across our client's enterprise based on their practical approach. We established Squad Lead Training, Centers of Excellence and a Community of Practice to help our client sustain their success.

EXPERIENCE CASE STUDY: Enterprise Architecture Strategy

Our client, a Fortune 500 gas & electric utility, required assistance with the design and development of a revised Enterprise Architecture Strategy and a Technology Road Map, to serve as the foundation for a company-wide Digital Transformation. The client required a third party to lead the effort and provide an unbiased approach. The objectives included:

- Working directly with Senior Management, particularly the CIO, CTO, and Chief Enterprise Architect
- Establishing Future State, Architecture Frameworks, Workshop Frameworks and facilitating activities
- Leading development of Enterprise Business Architecture, based upon TOGAF Framework including Business Architecture, Data Architecture, Application Architecture & Technology Architecture
- Establishing an Architecture which is fully integrated as a ‘living, breathing document’ with a five-year time horizon that will be amended and reviewed quarterly and annually
- Building an Enterprise IT Technology Road Map of prioritized IT initiatives, with a focus on Digital Transformation including cloud initiatives

Solution: We worked with the client to agree on the desired architecture model and also utilized our IT Strategy Framework as the overall approach for organizing and conducting the analysis. Our team also collaborated with client’s existing Enterprise Architecture resources to gain a baseline understanding of their existing architecture, strategy, and 25 technology segments. The approach was framework and workshop driven, with combined and individual segment workshops. The workshop methods were intended to ensure segment ownership and buy-in, resulting in a sustainable and integrated architecture process. Through a collaborative approach, our project team led a series of workshops resulting in the following key deliverables: Future State Establishment – the ‘to be’ desired state; 28 Segment Architectures; Enterprise-wide Architecture; Enterprise-wide Technology Road Map; Architecture governance for ongoing review and updates.

Results: Our team worked closely with both senior leadership and the segment domain leaders to establish an ongoing Architecture which serves as the basis for IT decision making, funding, and the focus of key programs including technology selections and changes.

EXPERIENCE CASE STUDY: ITIL Strategy Project

We were engaged to perform an Information Technology Infrastructure Library (ITIL) Strategy consulting project focused on Problem Management. The project entailed conducting an “As Is” assessment of the current state, defining the “Future State” vision for the organization, as well as developing a “Road Map” of how to get there. Our Consulting Services engagement team’s primary objective was to establish a high-level process improvement roadmap for the existing Problem Management processes. Other key project activities included:

- Identifying, assessing, and documenting weaknesses in the process
- Designing improved processes for the ITIL Problem Management Track
- Implementing and integrating the processes into the client’s ITIL framework

Solution: We provided the following expertise, approaches, and best practices to meet the key project requirements:

- Established Problem Management Process performance objectives
- Established Process Improvement Plan
- Established Critical Success Factors and Key Performance Indicators
- Generated momentum so the client could move the initiative forward on a larger scale

Results: We provided overall recommendations for the future ITIL-related strategy by assessing the current state and maturity level of ITIL in the organization as a whole, and specifically for the Problem Management processes. The project was completed on time and within budget, meeting the overall project objectives.

h. Security and Federation Services

EXPERIENCE CASE STUDY: Security Engineering

A federal government client required an increased level of IT security for their enterprise. They wanted to deploy application-level firewalls from the previous stateful firewalls. The client also had a need to track user access for applications which resulted in a robust single sign-on solution for all applications, CyberArk.

Technologies: Next Generation Firewalls, SSL decryption and inspection services, Intrusion Detection Systems (IDS), Intrusion Prevention Systems (IPS), Secure Email delivery systems, Email encryption systems, Email malware inspection, Data Loss Prevention (DLP), Advanced Persistent Threat (APT) mitigation, Internet content filtering, log management and multiple operational security tools, zero-day threat detection and mitigation, demilitarized zone (DMZ), Public Key Infrastructure (PKI) Engineering, Mainframe security including ACF2 security and support of Security Monitoring reports for certification, Identity Management, Single Sign On (SSO), Extranet, Secure Socket Layer (SSL) Virtual Private Networks (VPNs)

Solution: We worked with Federal executives, Security Subject Matter Experts, and the agency's Computer Security Incident Response Team to deploy, engineer, maintain and support enterprise network security controls. We coordinated directly with security vendor resources for troubleshooting of complex issues and for advice on continuous improvements to the security posture of the agency. Our support included:

- Tier 3 cross-functional escalation leadership to investigate, analyze, discuss, troubleshoot, and resolve network security Infrastructure and custom applications availability and performance issues.
- Multi-vendor, multi-tier security platform support at the highest technical escalation level
- Development and deployment of all firewall policy rule changes
- End User Content Security and filtering
- Application aware security controls
- Automated Enterprise Password Vaulting technologies
- Support of Identity management-based security controls
- Support of SSL decryption services
- Support of IDS/IPS solutions
- Mainframe ACF2 security and support of Mainframe Access and Security Reporting
- Monitoring of consolidated security logs
- Configuration and support of encrypted Email transport services
- Identification and response to email-based security threats
- Assessment, analysis and release of suspicious quarantined email messages
- Analysis and troubleshooting of email delivery issues
- Evaluation and analyzing captured data using Netwitness, Palo Alto data plane debugging, Wireshark, and Riverbed Cascade.
- Support of Advanced Persistent Threat (APT) detection and mitigation solutions
- Development and maintenance of Standard Operating Procedure (SOP) documentation
- Mitigation of audit findings in Plan of Actions and Milestones (POA&M) documents

Results: We deployed, managed, and customized tools that poll and monitor infrastructure resources, provide situational awareness, provide comprehensive infrastructure asset discovery, asset management, configuration management, and incident management. Our team members deployed and managed multiple products like Solarwinds and Edge Technologies enPortal that enabled the situational awareness to increase Mean Time To Resolve (MTTR) operational incidents. We integrated infrastructure discovery via BMC/Tideway with IP/DHCP address management via Infoblox to enable the core attributes of the Configuration Management and Asset Management. This solution brought relevance to priorities within Incident Management and Problem Management.

EXPERIENCE CASE STUDY: Managed Security Services

Our client is a leading hospitality provider, they needed to establish and implement an entire Cybersecurity program with a Security Operations Center (SOC) delivered 24x7x365 to an organization operating in North America, Europe, Asia, Middle East, Africa, and Australia.

Technologies: Virtual SOC, SIEM, Data Loss Prevention, Vulnerability Management

Solution: We provided a security program assessment, security architecture design, and security tool selection to implement a PCI-DSS compliant program. Our solution included the following elements:

- Implementation and management of related solutions (Endpoint Security, SIEM, Web Security, Cloud Security, Data Loss Prevention, Endpoint Detection and Response, Database Security, SIEM, Log Analysis)
- Managed devices on-premise, in cloud (Azure, AWS, Rackspace) with special applications for POS (Point of Sale) terminals.
- Penetration testing for PCI-ASV compliance. Retain all data for 2 years for PCI compliance.
- Cloud and infrastructure hosting of all solutions in our co-location facility (99.9999% uptime) and private cloud delivered via Amazon Web Services (99.95% uptime)

Results: The major achievements for this engagement included a coaching and training plan for all squads, tribes and chapters, a modern Production Support Model, a Mindshift Leadership Training, upskilling Scrum Masters/Coaching Pods, Scrum Master/Tribe Engineer Summits, enterprise-scale change management and communication programs and Portfolio Management best practices and reporting. The Tribe and Squad Roadmaps have been adopted across our client's enterprise based on their practical approach. We established Squad Lead Training, Centers of Excellence and a Community of Practice to help our client sustain their success.

EXPERIENCE CASE STUDY: Cloud Security

Our client, a highly regulated organization, with global IT across US, Germany, Scotland, and Japan, needed to revamp their cloud security program. Existing issues that needed to be addressed included:

- Not being able to audit account access
- No audit trail
- Preventing corporate data residing on personal devices
- Encrypting data stored in approved cloud
- Preventing regulated data from being stored in any cloud

Our client is also subject to NIST 800-171 and GDPR compliance requirements and will be required to have CMMC alignment, so our solution had to meet all standards for each of these regulations.

Technologies: Managed Security Services, Cloud Data Security

Solution: We implemented a cloud access security broker and security analytics program. Our programs provided visibility into shadow IT/non-authorized cloud-based resources, AWS usage and security configuration, and data loss prevention for AWS/Office 365 for their 15,000 users. Our team provides ongoing engineering, cyber threat analysis, and program management for their cloud security program. We also provided initial Implementation and managed services for program sustainment.

Results: Our solution delivered a cybersecurity program that aligns with regulatory frameworks. On average, 1.5 billion events per week are ingested, evaluated and analyzed for Cybersecurity threats.

i. Cisco Technologies, Infrastructure Support, and Virtualization

EXPERIENCE CASE STUDY: CyberArk Integration with Cisco ASA

According to the Verizon 2021 Data Breach Investigations Report, credentials are the primary means by which a bad actor hacks into an organization, with 61% of breaches attributed to leveraged credentials. Passwords, especially those of privileged accounts are hackers most coveted target. These passwords protect the most critical assets of an organization from databases, application servers, to directory services such as LDAP or Active Directory and infrastructure components such as storage, network and security/firewall devices. A compromise of a single privileged account can result in direct access of sensitive data or enable a bad actor to circumvent security and deploy Advanced Persistent Threats. To mitigate credential-based risks, privileged accounts should be complex, unique and rotated frequently, ideally after every use. For IT teams to do this manually would be cost prohibitive and virtually impossible. Ashburn has expertise in CyberArk, the Gartner leading security tool for Privileged Access Management (PAM) which it has deployed to manage and vault privileged accounts and enable secure, password less access for all privileged sessions. However even the leading PAM product does not support all vendors or devices and even supported integrations can fall out of support as the vendor updates their product with new features or security requirements. Such was the case with the Cisco Firepower running the Adaptive Security Appliance (ASA) and CyberArk did not offer a plugin integration for the ASA to support automatic password rotation with verification.

Technologies: Cisco ASA, CyberArk

Solution: Verifying login using local credentials on Cisco firewall devices is commonly not supported due to integration with AAA (Authentication, Authorization & Accounting) services such as a TACACS+ server. With the AAA server enabled, access to the device is authenticated through a centralized authentication service, such as Active Directory or a multifactor system leveraging a hardware PKI token. The local credentials are configured but are allowed for login only in the scenario where the AAA server has failed. This is by design and the local credentials are needed for accessing the Cisco device, especially during catastrophic system failures. With automatic password rotation, it is important to verify the new password after reconfiguration to address the risk of a failure during the rotation process. As a workaround, CyberArk developed a solution for Cisco routers and switches comparing the password hash available in the ASA configuration file to a similar hash computed from the password stored in the CyberArk password vault. However, in the ASA, the password is not stored as a hash but rather as a derived key using PBKDF2 (Password-Based Key Derivation Function 2) as documented in Internet Engineering Task Force's RFC 2898.

Results: Ashburn Consulting builds, maintains, operates, and monitors comprehensive Privileged Access Management solutions based on a suite of CyberArk products including Privileged Access Manager, Credential Providers, Privileged Session Manager and Privileged Threat Analytics. These solutions are used to manage all privileged credentials, in most cases with full automation and for high value assets, with one time “check in / check out” use where the user cannot see the password and it is changed after every use. In the case of Cisco ASA integration, Ashburn engineers researched the cryptography algorithm used to compute the PKBDF2 derived key stored in the Cisco ASA configuration. As part of the research, Ashburn was able to contact a member of the Cisco ASA development team that built the cryptographic routine used to calculate the key. This research was then used to create a custom extension to the CyberArk Product, essentially a new plugin to the CyberArk product. This new plugin establishes a session to the Cisco ASA via secure shell, sets the local admin password according with organization policy and complexity requirements and verifies the password immediately following the configuration change. To verify the password, the plugin will read the Cryptographic Salt value and PKBDF2 key from the resultant Cisco configuration, then use the Salt and the password value stored in the CyberArk vault to compute the PKBDF2 key. If stored and computed keys are identical, the plugin verifies that the password change was successful and reports back to the CyberArk system.

EXPERIENCE CASE STUDY: Base Area Network Modernization

A Fortune 50 communications services provider required an IT services partner with the technical skills, professional certifications, and government clearances needed to support rapid implementation of a wide area network (WAN) and base area network (BAN) at a US military base. The client needed an IT services partner that could quickly deploy an on-site project team, deliver the project using an agile approach, and provide a flexible workforce management framework to successfully deliver the project within their cost and schedule constraints. The scope of work supported the broader mission of a cutting-edge, fully modernized IT network that enhanced security, network availability, and reliability.

Technologies: Cisco

Solution: We deployed an on-site project team within seven (7) business days of contract award and rapidly implemented a Project Management Plan to guide the execution of the project. We engaged an experienced Project Manager to partner with the client to deliver the scope of work that included installation, configuration, and testing of 450+ Cisco networking devices across multiple buildings and communications closets within a four (4) month period of performance. Additionally, the team established performance goals to drive productivity and measure success. Our proven workforce management framework and project accelerators were utilized by the team to monitor performance, track and report metrics, and communicate weekly status updates on accomplishments, issues and risks, and project financials.

Results: Our team successfully delivered the scope of work within the client's cost and schedule constraints by rapidly deploying a project team with the technical skills, certifications, and government clearances needed to achieve the project goals. We proactively mitigated multiple external project risks including issues arising from COVID related base closures, inclement weather emergencies, and infrastructure gaps. As an example, we rapidly transitioned the project team from weekday support during standard business to a staggered four-day shift model to maintain productivity while complying with new base guidelines and policies. Upon project completion, the client executive sponsor summarized our performance as "Outstanding".

EXPERIENCE CASE STUDY: Infrastructure Operations Team

Our client needed to implement a new support model for their infrastructure operations team as part of a network modernization effort for transmission and distribution processes. They were seeking a partner with a flexible deployment model to help establish the new infrastructure team to streamline cost and mitigate risk in CIP designated facilities. We were chosen to support the project because of our scalable deployment model, demonstrated history meeting complex regulatory requirements, and our ability to support both high and low risk work sites as dictated by CIP compliance standards. This team supports the corporate, compute and storage, and utility communications networks.

Technologies: F5, Palo Alto, Juniper, Arista, Aruba, Azure, Chef, Ansible

Solution: We utilized a managed service approach to deploy four teams of more than 45 networking and data center consultants to support our client's communications networks. Throughout the engagement, we provided ongoing support and workforce management services including an on-boarding boot camp for consultants, ongoing safety training, ISN compliance, site safety checks, and employee development.

Results: Since the implementation of our solution, the client has reduced spend on niche consultants by nearly 15% and been able to fill aging resource gaps. The infrastructure operations team is now able to build fit-for-purpose teams to deploy on network and utility projects as needed. Additionally, the client's new team is now able to properly screen resources to ensure safety and compliance in critical infrastructure locations.

j. Audio Visual Technologies

EXPERIENCE CASE STUDY: AV Engineering & Systems Administration

Our client, a county government in Northern Virginia, requires ongoing IT consulting and AV Engineering & Systems Administration support services. We are responsible for systems administration, collaborative solutions support, overall coordination, status reporting and stability of project-oriented work efforts for audio visual projects for the County's Unified Communications team.

Specific Tasks:

- Management and Administration of Cisco Videoconferencing Core Infrastructure (VCS, TMS, Endpoints)
- Maintenance, Management and Operations of Acano/Cisco Meeting Servers
- Support for Pexip Cloud Video Interop for MS Teams
- Design, Implement and Manage Room Technology solutions for Video Collaboration
- Project Management of Countywide Video Conferencing Room Solution installation
- Work with AV vendors to validate and test functionality of all AV and integrated conference rooms
- Provide technical support to Fairfax Agencies on Collaboration solutions
- Provide technical support for Virtual Meetings (MS Teams, Zoom, Webex)
- Troubleshoot electronic systems and equipment to provide basic repairs and record findings and coordinate dispatch with AV Integrator if/when needed
- Responsible for escalating ALL "mission critical" break fix issues to external AV Integrators for resolution
- Provide tech support for virtual Board of Supervisor meetings and Channel 16
- Perform routine (daily or weekly) preventative maintenance to proactively resolve equipment issues before they arise
- Develop documentation for end user training and communication.
- Project Management of Countywide Video Conferencing Room Solution installation
- Work with AV vendors to validate and test functionality of all AV and integrated conference rooms
- Provide technical support to Fairfax Agencies on Collaboration solutions
- Provide technical support for Virtual Meetings
- Troubleshoot electronic systems and equipment to provide basic repairs and record findings and coordinate dispatch with AV Integrator if/when needed
- Responsible for escalating all "mission critical" break fix issues to external AV Integrators for resolution
- Perform routine (daily or weekly) preventative maintenance of Room Video Solutions to proactively resolve equipment issues before they arise
- Develop documentation for end user training and communication.
- Provide User Training with regards to operations of Video Conferencing equipment to agencies.

1. Other Technology

Team Ashburn brings the following technology partnerships to provide further value to JMU:

Amazon Web Services (AWS)

- Partner Type: Consulting Partner
- Partner Tier: Select
- Specializations: AWS Public Sector Partner

Microsoft (Competencies and Tier)

- Cloud Platform (Azure) Gold
- Data Analytics Gold
- Data Platform Gold
- Application Development Silver
- Application Integration Silver

Google Cloud Platform

- Partner Type: Services
- Partner Tier: Partner Level

Snowflake (Cloud Platform - Data)

- Partner Type: Services
- Partner Tier: Select

ServiceNow (Cloud Platform – Digital Workflows)

- Partner Type: Services
- Partner Tier: Elite Partner
- Elite Partner of the Year 2022

Salesforce (Cloud Platform – Sales, Service, Ecommerce, Marketing)

- Partner Type: Services
- Partner Tier: Registered

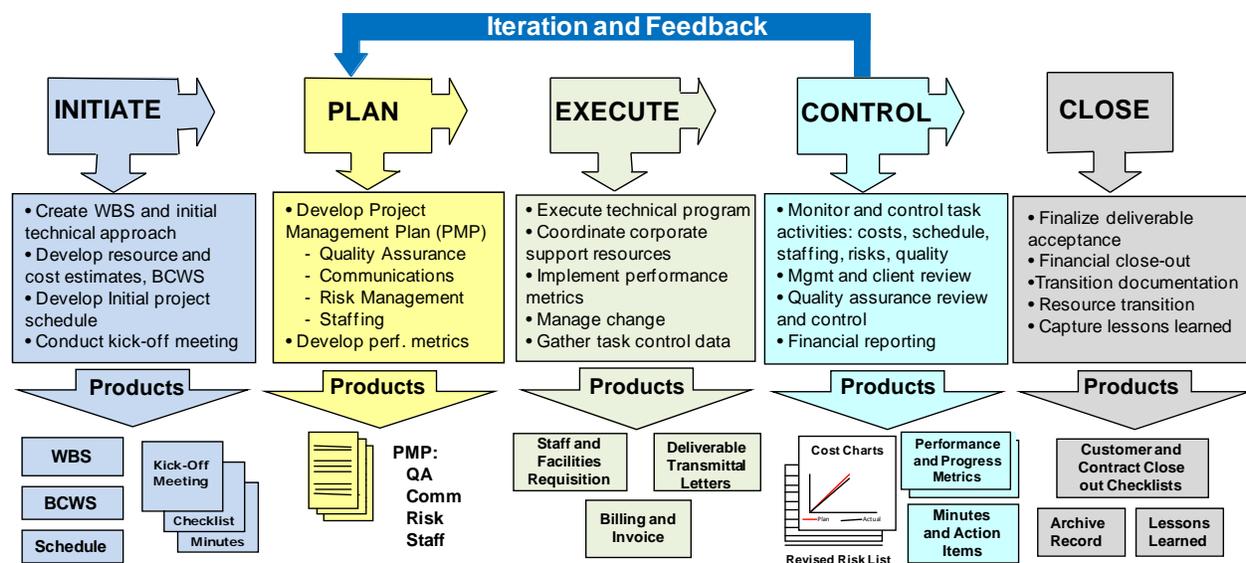
2.2 Describe approach and methodology that will be used to provide IT consulting services to James Madison University. Include how your firm would manage the scope of projects.

JMU requires a contractor with adaptability, flexibility, and the ability to quickly react to changes while remaining within budget and time constraints. Our proven, standardized task order management system – an iterative five-phase approach for both single and multiple task order engagements, outlined below – is designed to consistently support a Staffing Lifecycle Framework (Need, Analyze/Select, Obtain, Produce/Deploy/ Support) while providing the agility needed to manage a high volume, multiple contract type task order process. Our approach ensures that cost, schedule, and quality requirements of each order are tracked, communicated to the client, and ultimately attained. It employs a variety of automated tools, process expertise and other metrics, ensuring visibility and accountability through accurate, timely monitoring of status and deliverables; tracking of work product quality; and ability to gauge customer satisfaction.

Our approach and methodology will be guided by the highest ethical standards and integrity. Ashburn embraces the proven management methodology of the Project Management Institute’s Project Management Body of Knowledge (PMBOK) and rigorous ISO 9001:2015 quality standards to deliver services and results. We establish management processes and objectives, execute in close coordination with clients, and continuously improve our approach to managing the work, servicing our contracts, and developing relationships with our clients and employees. To provide our clients the highest caliber of IT support, Ashburn employs seasoned IT specialists, passionate about their craft and innovative in their use of technology. Our management approach empowers the staff and drives accountability through measurable objectives, communication, and collaborative problem solving. This framework is complemented by strategic recruiting to bring on top notch talent, performance-driven quality management, and continuous issue management and resolution to maximize operational readiness and continuity.

2.2.1 Approach and methodology for IT consulting services

Governed by the Ashburn ISO 9001:2015-certified Quality Management System (QMS) and refined by our numerous projects and lessons learned across 20+ years of experience, our approach and methodology is based on accepted and best practices from PMBOK, as outlined and described below.



Ashburn’s Task Order Management Process ensures an ability to successfully manage multiple task orders with varied requirements in a reasonable time and at a reasonable price.



Task Initiation and Planning: When a project is initiated, we first analyze the scope of work and prepare a work breakdown structure (WBS) and subsequently a Budgeted Cost of Work Scheduled (BCWS) to describe the work content, complexity, duration, technical approach and estimated resource needs and costs. We then prepare a project schedule using the WBS and BCWS, as well as schedule constraints presented in the SOW, using automated tools (e.g., MS Project) to prepare the schedule baseline. As part of our ISO-documented Contract Briefing System (CBS) process, we employ formal cost, technical, and risk mitigation reviews at the task planning stage. As soon as clients are available, we schedule a kickoff meeting to discuss the details of the proposed project approach and any possible risks. The results of the kickoff are used to create a formal Project Management Plan. This plan baselines our cost and schedule measurements and documents the following task-level planning activities: quality assurance planning (merging our processes with client standards), communications planning (establishing information distribution and reporting procedures), risk management planning (identifying potential project risks with mitigation strategies), and staffing planning (identifying and transitioning qualified resources).



Task Execution: We execute the Project Management Plan in close coordination with JMU and with our internal support resources (e.g., Finance, Contracts, Human Resources, Security). As work is managed, we also collect cost, schedule, and quality assurance data to review and assess during the Control phase of the task order management process. Our approach to task execution is based on the following key principles:

- Frequent and Open Communication
- Standards Integration
- Risk Assessment and Mitigation
- Detailed Project Planning and Execution
- Frequent Internal Reviews
- Structured Problem Resolution
- Structured Change Management

Our successful execution of highly relevant projects is a testament to our ability to conform to contract requirements while delivering high-level customer satisfaction. Our methodology is grounded in our One-Team approach to service – this means that all members of Team Ashburn are held to the same standards. Our Task Order (TO) Manager, or Project Manager (PM), is the single point of contract responsible for managing all organizational and contractual requirements, providing JMU a singular interface and point of control for project teams and staff. The PM will manage all activity and relationships and will ultimately be the point of accountability.

Ashburn's proven capability in allocating resources across multiple simultaneous efforts is truly unique as a prime contractor for JMU. Our history of dynamic IT staffing and consulting support has been exemplary in our ability to allocate and effectively manage highly technical IT resources across dozens of simultaneous tasks. Ashburn's approach provides significant leverage to meet the demands of simultaneous contract efforts. We have decomposed each labor category into its functional, education, and experience requirements, and have developed a preliminary Staffing Database. This allows us to rapidly identify, vet, and assign part-time and full-time resources to projects. Additionally, our approach allows us to rapidly draw down or scale up our ready bench of personnel to support any surge or backfill. As resources are allocated to task orders, our PM will work with our HR Department to ensure personnel are fully integrated in their applicable work streams. All Ashburn professionals are managed with our one-badge approach, providing JMU with consistent, high-quality expertise. Our PM will meet weekly with our staff to discuss ongoing work, new opportunities, employee performance, client priorities, contractual requirements, and resource availability. Through this weekly tag-up, resources are balanced, staff time is appropriately monitored and allocated, and any potential risks are assessed and dealt with in real-time so that there is no impact, downtime, or loss of productivity negatively impacting JMU.

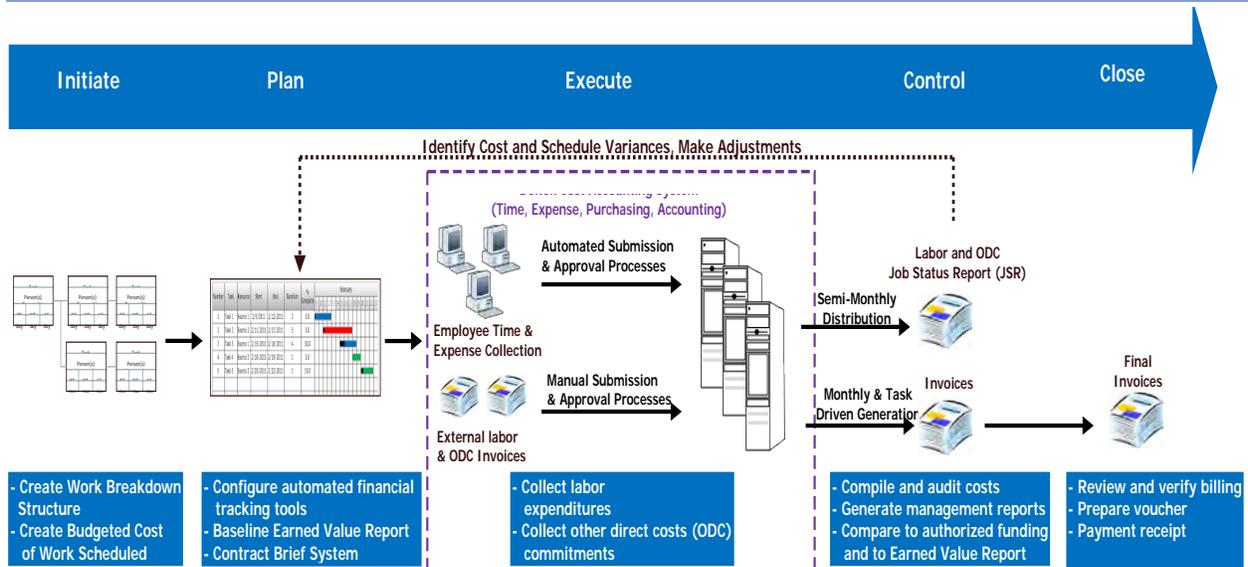


Task Control: We monitor and control all aspects of the task (e.g., cost, schedule, risk, quality assurance) through structured review processes and automated project management tools.

They rely on these activity results to guide future iterations of the Plan/Execute/Control process and may initiate various adjustments at this stage to ensure successful and timely task delivery. Scheduled internal progress reviews are held with the technical and management staff on each engagement. These reviews are held at applicable points in task execution, such as work product deliveries and milestones. As outlined in our ISO 9001 QMS, Ashburn has formal procedures for conducting progress reviews – work products, schedule, upcoming events, and overall status are reviewed and communicated to all stakeholders. Results of the meetings and issues identified are documented, published, and tracked. Task Order Project Managers are also responsible for preparing Monthly Project Reports (MPRs) for each active task. The MPR assesses progress across seven categories: Funding, Scope, Deliverables, Customer Satisfaction, Staffing, Technical Issues, and Risks. Each category is assigned a rating and narrative explanation. All MPRs are reviewed by Ashburn senior leadership to ensure appropriate progress and quality are maintained. Also integrated within these task control activities are semi-annual contract-level program reviews, monthly task order activity reports, and periodic data calls as needed. Examples of controls activities that Ashburn employs as part of our overall approach to high quality execution include, but are not limited to, the following:

Control Activity	Methodology Description
Client Outreach and Meetings	As a general practice, all Ashburn clients are provided direct contact information for their project lead and the company’s executive leadership team. This is to set a tone of accountability and cooperation between Ashburn and our customers. During regular client communication, we solicit feedback (positive and negative) on our performance, deliverable quality, and opportunities for improvement.
Internal Meetings	These accountability-driving sessions provide continuous feedback from company leaders and employees and establish an action-oriented operational tempo. The bulk of an internal meeting is often spent on Issue Identification, Discussion, and Solutions (IDS) sessions, in which we pool our collective brainpower to rapidly and effectively resolve challenges deemed most impactful to the company, our employees, clients, and projects. Action items are recorded and assigned during IDS with follow-up being conducted by Ashburn’s executives and team leads during monthly PMRs and quarterly employee one-on-ones. A unique feature of our internal meetings is the scoring participants are required to provide after the meeting summary, which drives accountability for session participation and productivity.
Monthly Project Management Reviews (PMRs)	To keep updated with each client and contract obligations, company executives meet with each project lead monthly for an in-depth analysis of contract spend, staffing, performance, and deliverables.
Quarterly Employee One-on-Ones	Our team leads and executives meet with Ashburn employees each quarter. This provides understanding of client challenges from those working on the solutions each day and allows employees to recommend improvements. These sessions help identify resources needed to empower employees and allows us to track staff progress on assigned action items and professional development goals.
Partner Feedback	When teaming with other companies, we engage directly for added inputs on quality delivery.
Shareholder Semi-Annual Reviews	Executive leadership and company owners connect twice a year outside of operational settings to examine our projects, including accomplishments and progress on strategic initiatives.

In addition, a critical component of our task control phase is financial tracking, reporting, and invoicing. As illustrated below, our PROCAS Accounting System is an essential element for monitoring and controlling costs on task orders, as well as for the delivery of timely and correct invoices.



Integration of our PROCAS Accounting System into our structured task order financial tracking process ensures cost monitoring and control are maintained from project initiation through invoicing and closure.



Task Close: Upon task completion, we obtain necessary approvals for deliverable acceptance.

We ensure final invoicing is complete, return any equipment, discuss future needs, and prepare resources for transition. This includes assuring that any IT staff or end user training is successful. We also prepare task documentation to ease the burden of any internal or external knowledge transfers that may be necessary in the future. Closing the project with organized documentation ensures seamless, smooth transitions that are performed on time and delivered to meet or exceed expectations.

2.2.2 Managing the scope of projects

As new projects are identified and initiated, our team helps create the necessary project plans, schedules, task assignments, and reporting templates needed to accurately monitor scope and measure performance, cost, and schedule progress and risks. We conduct or participate in weekly, monthly, or ad-hoc meetings to validate project status, manage configurations, review requirements, coordinate tasks and activities, monitor risks, and identify opportunities for improvement to people, processes, and tools. To maintain documentation, we utilize knowledge management systems and document repositories (i.e., Microsoft Teams, SharePoint, etc.), so that all team members and stakeholders may view, update, and consume project artifacts that help in daily activities.

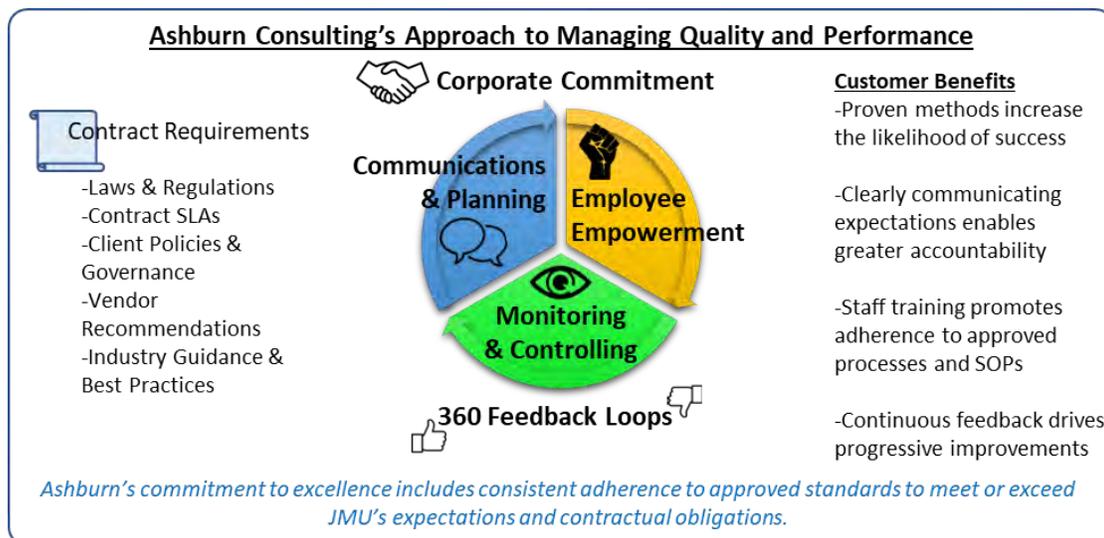
A Project Scope Statement is created as a formal document stating the project requirements by describing objectives, deliverables, boundaries, and acceptance criteria. “Decomposition” is used to break down the Project Scope Statement (i.e., project deliverables) into progressively smaller activity pieces to create a WBS, enabling better estimating of cost and time requirements, assignment of resource, and tracking of technical elements and performance for each deliverable. As needs or requirements may evolve over the course of a project, the scope is managed and controlled through Project Change Requests (PCRs) and adjustments made to project schedule and cost, as required.

The Scope Baseline is developed and managed over the course of the project, combining the original WBS, WBS dictionary, and Project Scope Statement plus all approved changes. The methodology below highlights our PMBOK based approach to scope planning and management in a highly visible, fast-paced, time-sensitive, IT driven environment.

Approach to Scope Planning & Management

Element	Project Phase					
	Plan				Monitor & Control	
Process	Plan Scope Mgmt	Collect Requirements	Define Scope	Create WBS	Validate Scope	Control Scope
Inputs	<ul style="list-style-type: none"> ➢ Project Charter ➢ PM Plan 	<ul style="list-style-type: none"> ➢ Project Charter ➢ Scope Mgmt Plan ➢ Rqmnts Mgmt Plan ➢ Stakeholder Register 	<ul style="list-style-type: none"> ➢ Project Charter ➢ Scope Mgmt Plan ➢ Rqmnts Doc. 	<ul style="list-style-type: none"> ➢ Project Scope Statement ➢ Rqmnts Doc. 	<ul style="list-style-type: none"> ➢ Rqmnts Doc. ➢ Rqmnts Traceability Matrix ➢ Verified Deliverables 	<ul style="list-style-type: none"> ➢ Rqmnts Doc. ➢ PM Plan ➢ Work Perf. Data
Tools	<ul style="list-style-type: none"> ➢ Expert Judgment ➢ Meetings 	<ul style="list-style-type: none"> ➢ Facilitated Workshops ➢ Elicitation Techniques ➢ SME and Customer Inputs 	<ul style="list-style-type: none"> ➢ Facilitated Workshops ➢ Alternatives Generation ➢ Product Analysis 	Decomposition	<ul style="list-style-type: none"> ➢ Inspection ➢ Decision Making Techniques 	<ul style="list-style-type: none"> ➢ Variance Analysis
Outputs	<ul style="list-style-type: none"> ➢ Scope Mgmt Plan ➢ Rqmnts Mgmt Plan 	<ul style="list-style-type: none"> ➢ Rqmnts Doc. ➢ Rqmnts Traceability Matrix 	<ul style="list-style-type: none"> ➢ Project Scope Statement 	Scope Baseline	<ul style="list-style-type: none"> ➢ Accepted Deliverables ➢ PCRs 	<ul style="list-style-type: none"> ➢ Work Perf. Info ➢ PCRs

Ashburn Consulting believes consistent success comes from a commitment to quality and continuous improvement. To ensure timely delivery and exceptional customer service that meets or exceeds customer expectations, Ashburn Consulting has developed a tiered approach to managing quality. Pooling best practices from industry standards such as ISO 9001:2015 and PMBOK as well as contract lessons learned and customer input, our approach centers around proactive communication, diligent execution, and continuous feedback loops. Our approach to quality control starts with company leadership promoting core values across the organization to drive individual, team, and corporate accountability, to each other and our clients. Our methodology establishes clear expectations, lines of communication, empowers employees to achieve successful results, uses straightforward metrics to measure accomplishments, and incorporates feedback loops to drive continuous improvement.



2.3 Provide the names, qualifications, and experience of personnel to be assigned to James Madison University. Designate who would be assigned as the primary contact for the account.

To provide the highest value to JMU, Ashburn Consulting has formed a **JMU Steering Committee** of our critical IT consultants and engineers who will be assigned to the account, with Robert Shields, Ashburn’s Director for Public Accounts – State, Local & Educational, assigned as the primary contact for the account. An overview of the names, qualifications, and experience of these personnel who are to be assigned to JMU is included below. **These individuals collectively average 25+ years of relevant experience, and together bring 180+ years of experience.** Additional details on the qualifications and experience of these personnel can be found in their professional resumes, presented within this proposal in **Section 3. Specific Personnel Resumes.** Ashburn will assign additional personnel to JMU based on the final scope of work for each project. We will assign staff with the required education, experience, qualifications, and certifications to complete each task, vetted through our internal processes and approved by JMU to perform on the project.

Name	Expertise	Experience	Qualifications, Skills & Certifications
Robert Shields <i>*Primary contact for the account</i>	Sr. Network Engineer / Account Manager [Director, Public Accounts – State, Local & Educational]	28 years’ experience / 16 years with Ashburn	<ul style="list-style-type: none"> ➤ Cisco Certified Internetworking Expert - CCIE #12096 – Routing and Switching ➤ Cisco Certified Specialist – Enterprise Core ➤ Palo Alto Networks Certified Network Security Administrator – PCNSA ➤ FortiNet Network Security Expert 3 – NSE 3 ➤ AWS Certified Cloud Practitioner
Daniel Veloce	Sr. Cybersecurity, Network, & System Infrastructure Architect	24 years’ experience / 15 years with Ashburn	<ul style="list-style-type: none"> ➤ Zscaler (ZCSE, ZCSP, ZSC) ➤ Palo Alto (Prisma Cloud Fundamentals, ACE)
James Burris	Sr. Network Security Engineer / Program Manager	35 years’ experience / 18 years with Ashburn	<ul style="list-style-type: none"> ➤ Check Point Certified Systems Instructor NG, 4.1, 4.0 (CCSI) ➤ Check Point Certified Systems Engineer NG, 4.1, 4.0, 3.0 (CCSA/CCSE) ➤ Cisco Certified Network Associate (CCNA) ➤ Cisco Certified Network Professional (CCNP) – Advanced Routing ➤ RSA Secure ID/Ace Server
Brian Kwitchoff	Sr. Network Architect & Engineer	30 years’ experience / 10 years with Ashburn	<ul style="list-style-type: none"> ➤ CCNP (Recertified 2021, #431564181716IRWH) ➤ CCNA (Recertified 2021) ➤ ITIL Foundation Certified (Cert # GR671404920BK)
Deryck Cary	Sr. Network & Security Engineer	17 years’ experience / 12 years with Ashburn	<ul style="list-style-type: none"> ➤ PCNSE 2019 ➤ CCNP Routing and Switching 2021 (CSCO13268360) ➤ CCNA Routing and Switching 2021 ➤ Blue Coat Certified Proxy Administrator, 2008 ➤ ITILv3 2009
Ed Lassotovitch	Sr. Network Engineer	25 years’ experience / 3 years with Ashburn	<ul style="list-style-type: none"> ➤ CCNA, CCNP, BCNE, CMNO, Netscout Entry, AWS Cloud Practitioner
David Kim	Sr. Network Security Engineer	25 years’ experience / 15 years with Ashburn	<ul style="list-style-type: none"> ➤ Cisco Certified Network Professional (CCNP Security) ➤ Microsoft Certified Azure Solutions Architect Expert ➤ AWS Certified Solutions Architect Associate ➤ Fortinet Certified Network Security Professional (NSE4) ➤ Cisco Certified Network Administrator (CCNA) ➤ Cisco Certified Specialist - Security Core

2.4 Describe the ability to provide continuity of consultants throughout the duration of a project.

Fundamental to our performance philosophy is the high value we place on attracting and retaining highly motivated, smart, and engaged professionals. Neither JMU nor Ashburn Consulting is well served by a revolving door of talent, and we have had long term success in the recruitment and retention of quality employees who remain on a project until the position ends. We offer numerous advantages that have been put in place to attract and retain quality employees. We offer a technically challenging work setting with an emphasis on initiative, innovation, and sustained high performance. We stress career planning and provide opportunities for leadership and advancement. Above all, we emphasize our core values, culture, and respect for our professional employees.

Successful Retention of IT Staff

Demonstrating our ability to retain top talent in support of our clients:

- ✓ Current Ashburn employees average 6+ years working for the company.
- ✓ Over 35% of Ashburn staff have been with the company for 10+ years.
- ✓ The consultants who form our JMU Steering Committee have collectively been with Ashburn for almost 90 years.

We also offer competitive compensation and benefits programs that respond to rapidly changing market conditions and provide flexibility to accommodate varying employee objectives and perspectives. We understand that annual salary, while important, is not the only “carrot” that attracts quality staff. Examples of our programs include high-quality, low-cost health insurance, dental insurance, and vision care; life and disability insurance; retirement programs with corporate matching; performance recognition and incentive programs; performance bonuses; and education benefits, such as tuition reimbursement, certification programs, and training. We offer highly competitive fringe benefits programs to attract and retain the highest quality employees. Fringe benefits packages are available to full-time employees, dependent upon a variety of factors, including employee classification; part-time employees may be eligible for some components of the fringe benefit program, including Life Insurance, Short Term Disability, Long Term Disability, and Accidental Death and Dismemberment (AD&D). Our employee benefits are described below:

- Health, Dental and Vision Insurance with Employer Contributions
- 401K with Employer Match
- Paid Time Off (PTO) - Vacation, Personal and Sick Leave, and Holidays
- Certification and Renewals Programs
- Training and Education Assistance Programs
- Internet and Cell Phone Allowance and Reimbursement Programs
- Employee Recognition and Performance Bonus Programs
- Employee Referral Programs
- Employee Assistance Programs
- Transportation Reimbursement Programs
- Computer Hardware and Software

In addition to our corporate retention policies, we firmly believe that the best way to retain highly motivated, smart, and dedicated professionals is to have them engaged on programs with meaningful mission objectives. Many of our staffing programs operate on the front lines of serving our communities. These missions are energizing for our staff who want to be involved in leading-edge information technology and want to make a difference in their communities. When we succeed in providing our professionals with opportunities to work on such programs, we rapidly enrich our retention capabilities and enhance program delivery.

2.5 Describe IT consulting services available from your firm. Examples of services may include, but are not limited to, the following:

a. Implementation

At our core, Ashburn Consulting is a network engineering company. For 20+ years, we have implemented, maintained, and optimized enterprise-level infrastructures and networks for performance, security, and compliance. We identify tools and technologies which deliver the capabilities and capacity an organization needs for optimal IT performance in support of business and mission operations. We use micro-segmentation, multiple boundaries, and least privilege design principles to address business, compliance, technology, and security requirements; minimize lateral network movement; and enable identity, asset, and workflow management. The resulting Zero Trust Architecture (ZTA) design prioritizes High Value Asset (HVA) protection, promotes cybersecurity solutions that are seamless to end users, and enables phased implementation to progressively move your organization towards Zero Trust. Ashburn Consulting's IT consulting implementation services include, but are not limited to, the following examples:

Ashburn Consulting has successfully helped our clients implement multifactor authentication (MFA)-based Identity, Credential, and Access Management (ICAM) solutions which enable Single Sign-On (SSO) across multiple enterprise networks, enabling real-time collaboration, data sharing, and centralized credential management. In support of **Fairfax County, Virginia**, Ashburn provides network engineering and strategic cybersecurity support to the county's internal network and the National Capitol Region Network (NCRNet), which enables cross-jurisdictional collaboration for time-sensitive first responder services, e.g., police, fire, and ambulances. Our team engineered, implemented, and sustains ICAM through multi-cloud, Homeland Security Presidential Directive 12 (HSPD-12)-compliant solutions with centralized role-based access control (RBAC) to enable single sign-on (SSO) authentication and authorization to access network infrastructure, services, applications, systems, and data. Our enhancements to their ICAM solutions enable real-time Computer-Aided Dispatch (CAD)-to-CAD collaboration across jurisdictions to improve and accelerate life-saving emergency service provider response times, while helping them transition to Zero Trust Architecture (ZTA). By first helping clients understand their operational ICAM requirements, existing tools and technologies, and applicable regulations, Ashburn Consulting provides objective analysis and sound recommendations for immediate and phased implementation of ICAM solutions. Product and vendor agnostic, our strategies account for budget and technology constraints and include realistic timelines for designing, developing, testing, and implementing sustainable ICAM tools, processes, and Standard Operating Procedures (SOPs) for Operations and Maintenance (O&M). Our diligent planning and engineering minimize potential interruptions to client operations and makes changes transparent to end users on the way to ZTA.

Helping optimize and modernize the **Federal Deposit Insurance Corporation (FDIC)** infrastructure and cybersecurity posture, Ashburn Consulting engineers enhanced ICAM capabilities and implemented RBAC to enable micro-segmentation to network services, applications, and data. We also integrated ICAM data with FDIC's instance of Splunk to improve situational and risk awareness, user behavior monitoring, and Security Information and Event Management (SIEM) to enable continued progress towards ZTA.

In addition, for the **Virginia Department of Transportation (VDOT)**, Ashburn assists in evaluating software-defined wide area network (SDWAN) capabilities to be implemented by the Virginia IT Services Agency (VITA) as part of a modernization for all state agencies. This VDOT Network Architecture Support contract provides networking expertise, assessment, testing, and support services for VDOT and its 200-plus sites around the Commonwealth of Virginia. Ashburn supports a variety of implementation tasks for VDOT, including:

- Documenting testing activities for VDOT personnel to execute in order to assess pre-and post-SDWAN implementation at a VDOT site.
- Crafting, designing, implementing, and monitoring automated test routines within Cisco ThousandEyes concerning the responsiveness of the network and certain web-based applications.

Ashburn Consulting has also provided implementation services to the **Department of Homeland Security (DHS)** for the relocation of the Homeland Security Enterprise Network (HSEN) core infrastructure from a Data Center in Clarksville, VA to a facility that provides both an interconnection platform and co-location (COLO) services with a presence on the East and West Coast. The HSEN core infrastructure consists of the DHS HSEN Policy Enforcement Point (PEP), Trusted Internet Connection (TIC), Enterprise Cloud Access Point (ECAP), Network Management System (NMS), Internal Domain Name Service (DNS), and EMSG/EOP infrastructure. The primary driver of this effort was the expiration of the Data Center, and the increasing cost benefits to move to a COLO facility where there are numerous service provider options and zero-hop to the cloud. Ashburn staff assisted in the install, stand-up, and cutover to the system, conducting the following activities for the implementation:

- Create a detailed step-by-step implementation plan that lists the system/environment that will be migrated, the impacted devices, time required for each task, dependencies, assumptions, back-out plan, and test plan
- Provide network connectivity to EMSG and ESOC systems
- Coordinate, configure, migrate and test an average of 10 Reverse Proxy URLs per week
- Coordinate, configure, migrate and test Forward Proxy users by Component
- Coordinate, configure, migrate and test Remote Access VPN users by Component
- Coordinate, configure, migrate and test Extranet connections for each Component and/or Partner
- Coordinate, configure, migrate and test PEP connections for each Component hub
- Coordinate, configure, migrate and test Internal DNS users by Component
- Coordinate and test network connectivity for all ESOC deployed infrastructure in HSEN environment
- Coordinate, configure, migrate and test Spectrum traffic and users
- Coordinate, configure, migrate and test CA Performance Manager traffic and users
- Coordinate, configure, migrate and test CA NFA traffic and users
- Coordinate, configure, migrate and test HP NA traffic and users
- Coordinate, configure, migrate and test NetScout traffic and users
- Coordinate, configure, migrate and test Dynatrace traffic and users
- Coordinate, configure, migrate and test TACACS or like technology traffic and users
- Coordinate, configure, migrate and test Proxy Pac traffic and users
- Coordinate, configure, migrate and test RSA traffic and users
- Coordinate, configure, migrate and test TVPN traffic and users
- Create a CONOPS document that communicates the system characteristics of the HSEN system and how it functions per DHS requirements
- Create a Methods of Procedure (MOP) document for operators and engineers to support, maintain, and operate the HSEN system
- Submit results from the operations readiness and testing phase for government approval
- Provide a Ready for Use (RFU) letter to the customer that specifically states the lab and production environments are ready for use by Components
- Assist the Government in planning for any unforeseen issues resulting from the infrastructures of Components that remain in the Data Center beyond target date; activities required to resolve issues or provide new solutions will be conducted under a separate task order
- Participate in gate review and present CONOPS, MOP, Operations Readiness Review and Acceptance, and RFU Letter deliverables

In addition to modernizing and migrating DHS Servers and Services, we also ensured full implementation of new architecture components to optimize security and performance. This included Palo Alto firewalls, ZScaler for secure remote access and secure Internet & Web gateway, Akami for Content Delivery Network (CDN) with Kona Site Defender, and a mix of Juniper, Cisco, and VMWare to ensure Wide Area Network (WAN) and Virtual Private Network (VPN) connectivity, performance, and security. Our efforts embraced and accounted for defense-in-depth principles to enable Zero Trust Architecture and operations.

b. Development

CBP's Office of Air and Marine Operations has a sustained requirement for near real time video surveillance capabilities to monitor U.S. borders; air, land, and sea transportation; and areas impacted by natural disasters. Ashburn Consulting designed, developed, implemented, and continues to support the operations and maintenance (O&M) of BigPipe as a cross-domain, browser-based application and infrastructure to provide situational awareness and first responder intelligence to CBP and other law enforcement organizations. In recent years, Ashburn has enhanced BigPipe capabilities to include data from additional aircraft, e.g., helicopters and Unmanned Aerial Vehicles (UAVs), blue force tracking, and a collaborative chat function. Ashburn manages the hybrid cloud/on-premise production and pre-production environments to ensure new feature, functions, updates, and approved changes are thoroughly tested prior to promoting to operational systems, thus minimizing the potential impact to supported CBP operations. Ashburn engineers also developed a video stream manager for maximum data processing efficiency and security.

Our team drives network and infrastructure planning and management by providing strategic thought leadership and sound engineering practices to collate requirements, identify dependencies, and align initiatives to ensure synergy and separation of production and pre-production environments. Adhering to DHS's System Engineering Lifecycle (SELC) and Agile development principles, Ashburn uses JIRA to capture requirements, plan releases and sprints, and track progress of changes and upgrades. Amazon Web Services (AWS) has been incorporated to expand BigPipe capabilities and capacity, while ensuring separation and integrity of the separated environments. The team applies IT Infrastructure Library (ITIL) best practices to manage configurations, changes, incidents, and problems impacting BigPipe's network operations and security. Ashburn engineers are involved in the triage of critical incidents and emergency change requests to ensure rapid resolution of issues and maximize systems availability, performance, and security compliance.

Ashburn Consulting provided critical security engineering and support to get and maintain an Authority to Operate (ATO) for BigPipe. Our team identified and implemented security controls from the Committee on National Security Systems (CNSS) Instruction 1253 to ensure BigPipe meets or exceeds federal and DHS cybersecurity requirements. This includes developing and updating the System Security Plan (SSP) and associated Risk Management Framework (RMF) artifacts, e.g., Security Assessment Plan (SAP), Security Assessment Report (SAR), Risks Assessment Report (RAR), and Plan of Actions and Milestones (POA&M). Ashburn continues to support A&A activities through active monitoring and scanning of the system to ensure continued implementation and effectiveness of applicable security controls, in accordance with the Information Security Continuous Monitoring (ISCM) Plan, and ongoing updates to RMF artifacts.

Ashburn engineered the BigPipe application, its infrastructure, the user-facing web portal, and the stream manager which uses AWS Elemental to collate, disseminate, and manage multi-screen data feeds to authorized users at approved locations. BigPipe leverages Role-Based Access Control (RBAC) and secure routing to provide Identity, Credential, and Access Management (ICAM) at authorized locations for near real time access to selected broadcasts and focused data feeds. Ashburn adheres to DHS's SELC and uses Agile best practices to manage application and web portal development projects, with JIRA as the requirements repository and primary tool for tracking release progress and sprint completion.

c. Project Management

Ashburn Consulting provides engineering and project management resources in support of IT policy, architecture, hardware and software configuration, network management methodologies and tools, and existing network improvement projects. As part of our offered support, Ashburn commits the resources necessary to meet all of client priorities and ongoing needs, such as network and security architecture operations, network management, performance monitoring services, network engineering, infrastructure migration support, technical project management, and administrative support. Our refined project management procedures and methodologies ensure that we provide industry-leading designs and full professional implementation services. Our experience in managing IT projects within diverse customer environments enables us to effectively identify configuration and implementation issues, provide resolution recommendations that conform to industry best practices, provide documentation of all findings and prescribed remedies, and implement high performance, secure solutions that delight our customers.

For **Fairfax County Public Schools (FCPS)**, Ashburn's project managers oversee and manage multiple technology projects impacting cross-organizational departments to ensure deliverables are coordinated to support successful implementations using multiple types of project management frameworks and methodologies (such as Agile, Scrum or Kanban); serve as the primary liaison between technology staff, product owners, and business sponsors to fully define the requirements and software specifications to ensure the desired outcome and value for all technology deliverables; and collaborate with project teams and technical teams to support continued improvement and delivery through service and product lifecycles. Our FCPS project managers are certified Project Management Professionals (PMPs) from the Project Management Institute (PMI) and hold Agile certifications such as PMI-ACP, CSM, and SAFe. They are project management experts with knowledge and expertise in the following areas:

- Knowledge of best practices with respect to customer service and customer-oriented account management.
- Knowledge of business and information technology practices and trends by comparable school systems or businesses.
- Knowledge of technology-related issues and how they might impact on assigned customers.
- Knowledge of appropriate local, state, and federal laws and regulations dealing with technology.
- Skilled in multiple types of project management frameworks and methodologies (such as Agile, Scrum, Kanban).
- Ability to implement technology solutions, work with multi-disciplinary teams, and to function as a team leader.
- Ability to communicate effectively, both orally and in writing.

Typical tasks and duties for our team of project managers supporting FCPS include, but are not limited to, the following:

- Serve as the subject matter expert in the development, management, and implementation strategy of IT project plans.
- Coordinate with project stakeholders and product owners to ensure appropriate interests/value are represented, functional requirements are included in the analysis and design, and business practices are addressed.
- Define the project's strategy through business analysis, stakeholder management, requirements gathering, contract management, risk management, functional design, and change management.
- Translate business needs into technical solutions and recognize the relationships and impacts between business interests and technical solutions.
- Engage with product owners and technical leads to proactively manage stakeholder expectations, project scheduling, user communication, risk management, benefit analysis, quality reviews, and implementation strategies.

- Lead project requirements gathering through business analysis and workflow design approach involving stakeholder interviews, functional design, workflow modeling, change management, and use case development.
- Establish partnerships with all stakeholders to develop, implement, and deliver innovative solutions.
- Identify and manage conflicts, project performance related concerns, and collaborate with project teams and stakeholders to resolve issues.
- Conduct and document software pilots and feasibility studies to support the acquisition process.
- Report project status and provide communications and development standards across all project development efforts.
- Develop and deliver briefings, project plans, risk assessments, and other deliverables to senior management.
- Capture project metrics and develop reports for various audiences.
- Identify and manage customer's requirements; oversee necessary training.
- Identify technology resources required to implement administrative technology initiatives.
- Serve as liaison between the business and IT organization to develop request for proposals.
- Serve on and/or coordinate technology products or service selection panels.
- Oversee vendor and contract management including working on the scope definition and implementation of project planning techniques.
- Perform related duties as required or assigned.

In addition, for **Montgomery County, Maryland**, Ashburn provides project management services and technical leadership for multiple complex IT projects (e.g., building out and migrating to redundant data centers, networking technical refresh, and replacement of end-of-life equipment). Ashburn's project managers build, update, manage, and report on project plans and schedules, which include resource assignments, due dates, and inter-task dependencies. Managing project schedules and monitoring progress for critical success items, we identify potential risks to project costs, timelines, and deliverable submissions. Where risks are identified, we communicate them to Montgomery County stakeholders and collaboratively work out resolutions and mitigation strategies to keep projects on track. Applying Kanban Agile methodologies, we build high-level project plans which are adaptive to daily priority adjustments to address issues which our DevSecOps team may have to address (i.e., network performance degradation, outages, or new threats and vulnerabilities). Leveraging our project management expertise, we build realistic project schedules that account for anticipated delays, interruptions, and operational obligations.

Ashburn Consulting has also supported **Arlington County, Virginia** since 2009, leading Arlington County Government (ACG) major network optimization and modernization efforts to increase network capabilities and capacity, ensuring Arlington first responders, schools, and other county employees have the bandwidth and security they require. With over 3,700 employees, including fire and police departments, public schools, and county offices, the ACG network provides connectivity and protection for Arlington public services essential for day-to-day county operations. Ashburn's O&M efforts have been complemented by phased enhancements to the ACG network to stay current with emerging technology and evolving threats. Ashburn provides administrative program and project management along with network architecture and engineering for end-to-end ACG network Systems Development Lifecycle (SDLC) planning, design, development, and sustainment support services. Ashburn provides comprehensive program and project management support following sound Plan, Do, Check, Act (PDCA) principles for multiple, simultaneous ACG activities:

- Plan – Participate in surveys, meetings, and other data collection and correlation efforts to identify, categorize, and prioritize requirements for ACG programs and projects.
- Plan – Coordinate acquisition, construction, and technology issues with authorized vendors and across internal ACG staff, to include purchase orders with delivery tracking.
- Planning – Develop dependency-based schedules for ACG programs and projects.
- Do – Documenting project plans, schedules, requirements, and performance expectations.



- Do – Train end users and supporting staff on new policies, technologies, and other changes to ACG IT operations.
- Do – Facilitate and participate in recurring and ad hoc project planning, status, and brainstorming meetings, to include coordinating and planning agendas, locations, and participants; taking and disseminating minutes with action items; and following up with action items to ensure timely task completion and documentation.
- Do – Identifying departmental Points of Contact (POCs) to be accountable for ACG IT and Audio Visual (AV) equipment.
- Check – Monitoring project performance in accordance with established plans, schedules, and performance expectations.
- Check – Reporting project status to ACG stakeholders through Monthly Status Reports (MSR) and immediately escalating emergency/critical and high impact risks.
- Act – Evaluate project performance to identify shortcomings, identify opportunities to improve performance, processes, and services.
- Act – Recommend improvements to streamline processes, automate procedures, and enhance technology to provide better IT and services to ACG employees.

Furthermore, for the **DHS Office of the Chief Information Officer (OCIO)**, Ashburn is experienced providing Homeland Security Enterprise Network (HSEN) Program Management Support Services. HSEN enables information sharing across thousands of sites for all 22 DHS components through intranet, internet, and extranet services. One of Ashburn’s primary functions on this effort is providing the Project and Technical Management support that drives optimal performance, enables near real time transparency, and assures compliance, while demonstrating achievement of contract objectives and deliverables. Ashburn Consulting also provides metrics-based business and process analysis to promote opportunities for continuous improvement across all contract tasks. Our specific project management support for DHS OCIO includes the following tasks:

Task	Description
HSEN Program/Project Management	Ashburn provides the full range of strategic and tactical Program and Project Management support required to operate as an effective and efficient organization. This includes coordinating efforts across programs and projects to ensure scope and schedule alignment, with consideration of fiscal responsibilities and constraints. Our technical management support includes Project Managers and Technical Leads who continuously collaborate with the engineering teams and industry to facilitate timely, comprehensive, and compliant task execution and stakeholder response. Through online DHS program management tools (i.e., email, ServiceNow, Teams, SharePoint), we consistently address OCIO-directed priorities to assure full Systems Engineering Lifecycle (SEL) support to network projects. We also integrate Information Technology Infrastructure Library (ITIL) and Project Management Institute (PMI) principles to infuse accountability and Quality Assurance (QA) that minimizes risks to project cost, schedule, and performance.
Project Planning	To ensure operations, change management, logistics, and security of HSEN projects are fully addressed in the planning of new efforts and changes to ongoing ones, our Tactical and Strategic Project Managers (PMs) employ PMI and ITIL best practices to facilitate coordination with DHS stakeholders and HSEN engineers. On the strategic side, our PM helps the client codify and articulate the vision and long-term objectives for enterprise network services, security, and support through technology optimization, modernization, and transformation. We accomplish this through comparative analysis of alternatives, feasibility studies, and vendor demonstrations to evaluate viability of potential solutions for DHS. As an example, we supported the conceptualization of the Data Center Relocation initiative. We evaluated strategic alternatives (including preliminary costs and timelines) for relocating and deploying HSEN systems from the Data Center. Our analysis focused on technical feasibility, long-term network objectives, and modernization and transformation of HSEN current capabilities. DHS used this data to move the HSEN core infrastructure out of one of the two DHS data centers and deploy a modernized, scaled-down, and virtualized solution that improved performance, reduced costs, reduced carbon footprint while integrating Cloud Services for enhanced efficiency. On the tactical side, our PM and other personnel shepherd DHS HQ and component project stakeholders through the ServiceNow Service Request (SR) process to ensure requests are complete and can be promptly actioned upon.



	<p>submission. By developing Standard Operating Procedures (SOPs) and other job aids, Ashburn Consulting has supported the improvement in SR submissions and fulfillment. For both strategic and tactical projects, Ashburn Consulting uses Microsoft (MS) Project to develop project plans and Integrated Master Schedules (IMS) to account for project scope, dependencies, and objectives. This includes coordinating communication with stakeholders to integrate new and existing technologies with current or additional resources that will meet or exceed performance expectations with minimal risk. On average, our team supports the planning and changes of five (5) ongoing projects at any given time ranging in value of \$1M to \$20M and from three (3) months to two (2) years, to include resource assignment and management of three (3) to ten (10) technical resources.</p>
Requirements Analysis and Documentation	<p>When DHS HQ and components submit a ServiceNow SR, our team assesses the data provided to 1) evaluate the completeness of the request, 2) understand the intention(s) and objective(s) of the SR, and 3) identify if HSEN already possesses/provides a viable solution. If more information is required, our engineer and PM will collaborate with the submitter to gather additional data needed to enable appropriate actions. When HSEN has a solution which may meet the SR objectives, we coordinate meetings, demos, and training to connect and educate the appropriate stakeholders. Where a new solution is required, we pull market research through existing vendors and open-source resources, e.g., Gartner and Forrester reports, to identify and evaluate available products and services to meet customer requirements. We provide our analysis to the Enterprise Engineering Division (EED) leadership with recommendations for prioritization, any known risks, and other considerations for interoperability, performance, compliance, and security which may impact HSEN cost, schedule, and performance.</p>
Project Cost Planning and Analysis	<p>Our PMs and supporting staff provide Cost Benefit Analysis (CBA) for projects by evaluating Total Cost of Ownership (TCO), Return on Investment (ROI), and opportunity costs associated with proposed changes, upgrades, and investments. This includes looking at initial and long-term project costs, budgets required, and Bills of Material (BOM) across various technologies, and specific criteria provided by the Government. We've developed cost proposals of the projects and solutions conceptualized and delivered, ranging from \$4M to \$20M projects. For Service Requests, we evaluate the requirements provided and determine if they meet the criteria to assign as a formal project on which additional planning and costs are warranted to complete the solution requested.</p>
Project Schedule	<p>Using ServiceNow, MS Project, Excel, and PowerPoint, we develop projected timelines for engineering projects. We base our schedules on technical input from engineers and integrators using the processes, procedures, and milestones outlined in the DHS SELC. We manage and update the IMS for larger projects each week using automated dependencies across multiple organizations, projects, and their respective schedules to identify and accurately report the potential impact of proposed changes, completed tasks, and delays. We also use the IMS to identify potential risks associated with resource and schedule conflicts which may impact achievement of milestones and/or submission of deliverables.</p>
Risk Management	<p>Applying PMI, Agile, and ITIL principles, we track, manage, and report risks each week within our status report deliverable. Our team provides risk details to include potential impact to services, DHS Component(s), mission(s), and duration of the impact if the risk should occur. Working closely with DHS, we develop mitigation plans to minimize the likelihood that risks will occur and contingency plans in the event that they do.</p>
Project Control & Monitoring	<p>As new projects are identified and approved by the OCIO, our team helps create the necessary project plans, schedules, task assignments, and reporting templates needed to accurately monitor scope and measure performance, cost, and schedule progress and risks. Our resources have supported many diverse organizational projects that span across DHS OCIO. We use ServiceNow Service Requests and SharePoint to collaborate with stakeholders to ensure requirements are accurately captured and fully addressed. We conduct or participate in weekly, monthly, or ad-hoc meetings to validate project status, manage configurations, review requirements, coordinate tasks and activities, monitor risks, and identify opportunities for improvement to people, processes, and tools. To maintain our documentation, we utilize SharePoint for our knowledge base and document repository so that all team members and stakeholders may view, update, and consume project artifacts that help in daily activities.</p>
Perform SELC Activities	<p>Strictly adhering to DHS's SELC and guidebook, we develop and upload HSEN Change Requests, configuration, and QA artifacts to the Infrastructure Change Control Board (ICCB) ServiceNow Change Management system in advance of the twice a week ICCB meetings to review network implementations/changes that may potentially impact enterprise service availability and/or performance. As part of this process, our Engineers and PMs work collaboratively to provide a high-level description of proposed changes and problems to include technical description, potential impacts, risks, and anticipated benefits. We update applicable documentation in advance of SELC planning,</p>



	design, readiness, and technical reviews, and at the completion of projects we conduct lessons learned sessions to closeout each effort with a review of project successes and to identify opportunities for improvement.
Development and Organization of Project Activities	Our team assesses the scope of projects and SRs to provide a summary of tasks to be completed, skillsets needed, and time required to complete the project scope and deliverables. Where feasible, we maximize the utility of resources by matrixing them across tasks in conjunction with existing assignments and priorities, as detailed in the IMS. To efficiently manage projects and SRs, we prioritize tasks based on DHS priorities, technical complexity, understanding of client needs, and risks involved in executing tasks within proposed timelines. Each engineer balances three (3) to five (5) projects or SRs each week unless there was an emergency request associated with the task (this is the only time resources are dedicated to a single priority). During normal operations, our workload is organized and managed by DHS Component submitting SRs with skillsets required and priority of the requirement being requested. In a normal week, each resource will allocate 30% of time to each project/SR, with a 10% buffer for administrative tasks and escalated incidents where resources may be required to support troubleshooting an issue. When less-complex projects are requested, resources can balance closer to five (5) each week. In supporting these projects and SRs, the PM and Engineers supply documentation that is retained and updated on the DHS HSEN SharePoint site. This provides the teams easy access to see the most current document for reference, review, and collaboration.
Development of Project Performance Reports	Improving on previously unstructured reports, our team developed and manages a Device Management Tracker and Configuration Management Database (CMDB) that includes the network inventory across the WAN and TIC. The team manages CMDB changes and enhances the information and attributes to provide the most powerful and robust source of network assets data for the DHS enterprise. Our PMs and engineers follow SELC process and procedures to ensure the proper quality, visibility, and governance are upheld while providing weekly reports on SR and project status. We monitor and update these reports to ensure the most up to date statuses, issues, risks are tracked, and recommended next steps are at the forefront for DHS stakeholders. For larger projects, we use SELC gate reviews to ensure we're communicating and collaborating on project deliverables, milestones, risks, issues, and other items so to provide the best quality and success in delivering the required solutions.
Coordinate and Support Project Meetings:	Our team embraces the importance of program and project collaboration, to include troubleshooting, tasks and activities, design proposals, and component SR reviews. Our PMs, architects, and engineers participate and support meetings to ensure collective understanding of, focus on, and adherence to organizational objectives. As requested, we coordinate and manage meetings with calendar invites that include agendas and readahead material, by taking and distributing minutes and actions items, and by following up with action items. We employ daily standups in alignment with Scrum principles for Agile project management, and support weekly, monthly, and quarterly project team meetings to cover pre-defined topics of interest for different stakeholder groups who require updates on HSEN projects to facilitate their own operational obligations and deliverables
Program and Enterprise Quality Assurance and Management	Applying PMI and ITIL principles to drive continuous improvement, efficiency, and innovation for HSEN, we formed a group to review the technical feasibility and quality of proposed technical solutions to the network. This became DHS's Architecture Review Board (ARB). Our PMs and Architects meet twice a week to review change requests and provided feedback on proposed modifications as related to interoperability, performance, security, and compliance. The analysis and recommendations provided by the ARB accelerate changes and improve success by enabling informed decision making by DHS stakeholders. The success rate of changes reviewed by the ARB stands at 98% with a reduction in management processing from three (3) weeks to 1.5 weeks to obtain approval for implementation.
Transition Out Activities	Our team helped develop and update critical program and technical artifacts to enable Day 1 productivity by any subsequent support efforts from the government or another vendor. Ashburn remained poised to prepare, support, and train a new team to take over day-to-day operations. We developed processes, SOPs, and job aides that are agnostic to the people and companies supporting Operations and Maintenance (O&M). We also maintained accurate, up-to-date status of all project plans and ServiceNow SRs to ensure a new service support provider can easily grasp the status and be able to continue the work with knowledge of outstanding and top priority tasks.

d. Architecture and Design

With over 9,000 sites, 360,000 users, and 600 extranet connections, **DHS HSEN** requires high availability, security, and performance. Ashburn provides full lifecycle architecture, engineering, and operational support for the Forward and Reverse Proxy solution which ensures security and availability of outbound Internet access and Inbound applications services are available to the Internet. By identifying, designing, engineering, deploying, and supporting network security solutions for HSEN, Ashburn enables the first responder, law enforcement, and intelligence activities performed by DHS. Specifically, Ashburn Consulting has led architecture, design, and engineering efforts for HSEN infrastructure and networks, to include:

- Architecting for Network Performance
- Enterprise Architecture
- Architectural Changes and Transitioning
- Architecting Emerging Technologies and Services
- Architectural Support for LAN/WAN Operational Issues
- Architectural Support for WAN Infrastructure

Ashburn Consulting's Project Managers, Engineers, and Architect manage and drive the DHS Architecture Review Board (ARB), which oversees HSEN design, development, performance and security optimization, and modernization. Consisting of an MPLS cloud backbone at two Data Centers (DCs) and global TIC connections, HSEN leverages a defense-in-depth architecture strategy to integrate and achieve Zero Trust Architecture (ZTA) and Operations (ZTO) objectives. Ashburn also helped develop customize VPN solutions to meet each external customer's specific needs and helped architect and establish DHS's first cloud system on Amazon Web Services (AWS) in 2014.

For **FDIC**, Ashburn Consulting personnel help architect, design, and engineer enterprise-level IT and cybersecurity solutions to improve performance, harden FDIC's IT security posture, reduce operating costs, and improve risk and situational awareness. Ashburn is intimately involved in the design, development, and modernization of FDIC boundary protection, authentication support, and infrastructure services. We review and propose changes to the architecture and governance (i.e., policies, processes, SOPs, and training) to:

- Identify threats to and vulnerabilities within the enterprise architecture,
- Ensure configuration and procedural compliance with applicable Federal and FDIC regulations,
- Maximize defense-in-depth security posture to drive zero trust operations,
- Make cybersecurity as seamless to the end user as possible, and
- Ensure FDIC leadership understands the risks associated with their infrastructure, connections, systems, applications, and data solutions.

For example, Ashburn helped design, architect, develop, and implement a Single Sign On (SSO) solution using CyberArk's Privileged Access Manager (PAM) and Privileged Session Manager (PSM). Our solution provides seamless access to network resources for authorized users who log in using Homeland Security Presidential Directive 12 (HSPD-12) compliant credentials. It integrates with FDIC's existing Microsoft's Active Directory Federation Services (MS-ADFS) and Security Assertion Markup Language (SAML) tokens to allow authenticated identities and credentials to be passed authorized service providers on the network. Through our reviews of FDIC requirements, Department of Homeland Security (DHS) Continuous Diagnostics and Mitigation (CDM) DEFEND objectives, proposed options, and potential technologies, we were able to identify and recommend a more appropriate, cost effective, and higher-performing solution.

In addition, Ashburn is responsible for architecting, engineering, and operating the **Arlington County Government (ACG)** network, ensuring network availability, security, and performance. We apply National Institute of Standards and Technology (NIST) guidance, Information Technology Infrastructure Library (ITIL) principles, vendor recommendations, and industry best practices for the Operations and Maintenance (O&M) of the ACG infrastructure, wireless network, and Storage Area Network (SAN).

Ashburn has progressively enhanced and continues to sustain the performance, security, and availability of the ACG fiber optic network, and its Palo Alto and Cisco networking devices, to include:

- Redundant Data Center Operations – Ashburn helped ACG architect, design, develop, and manage the implementation of a secondary and fully redundant data center. This was part of the effort to move from a cohort-owned infrastructure to one fully owned by the County.
- Architecture Redundancy Redesign – Ashburn redesigned and configured the routing of ACG’s network using micro-segmentation to eliminate the data center as a single point of dependency. By implementing hub sites, security zones, and controlled internet access through the DMZ, Ashburn improved data sharing and communication speeds between sites across the county.
- Backbone and Edge Bandwidth Increases – Ashburn first upgraded ACG’s network from a 1GB to 10GB backbone, and has since begun increasing the backbone to 100GB, with 10GB connectivity to edge devices.
- Wireless Network Design, Development, and Implementation – Ashburn built, tested, and installed a hybrid wireless network using Cisco and Aruba Access Points (APs).
- Network Monitoring, Troubleshooting, and Incident Resolution – Ashburn serves as Tier III support for the ACG network and uses SolarWinds to monitor network resources, bandwidth, CPU usage, and memory, and WhatsUp Gold (WUG) to monitor device availability. We manage communications with vendors to ensure timely, comprehensive response to unexpected network outages, capability degradation, or other performance issues. Results are documented and reported to ACG stakeholders, with recommendations for minimizing the likelihood of recurrence or impact to ACG operations.
- Azure Cloud Migration Planning – Ashburn is coordinating efforts within ACG to leverage Azure as a cloud-based solution for improved performance, availability, and cost savings.

Ashburn also supports **Fairfax County, Virginia** with Network Architecture and Engineering services. We primarily support two networks for Fairfax County – the first is the County’s Internal Network (I-Net) and the second is the National Capital Region Network (NCRNet). Ashburn has provided subject matter expertise, strategic planning, and architecture and design support to optimize network capabilities, capacity, security, and performance since 2009:

- Perform end-to-end Agile-based SDLC support on I-Net and NCRNet
- Identified needs and architected changes for I-Net, to include:
 - Redundant data centers
 - Redundant, high-capacity backbone (100GB) and end point (10GB) connectivity
 - Authenticated remote accessibility
 - Routing Computer Aided Dispatch (CAD) to CAD (CAD2CAD) using automated scripts to route calls to the appropriate resources for accelerated response times
 - Integrated Blue Force tracking on CAD displays for real time operations support
- Created and maintain architecture diagrams
- Designed, defined, and implemented secure Ports, Protocols, and Services (PPS) for I-Net connected systems, to include NCRNet
- Designed, developed, and manage the controlled access for authorized NCRNet partners and customers, to include Northern Virginia Emergency Response System (NVERS) access and data sharing for first responders
- Coordinated and continue to plan Fairfax County’s cloud migration and optimization efforts (primarily Azure), using cloud solutions to improve I-Net and NCRNet performance, availability, and capacity

During the re-design and upgrades to I-Net, Ashburn integrated cybersecurity and privacy considerations at every step of the SDLC. In the early stages of I-Net architecture design, our cybersecurity review ensured defense-in-depth capabilities were built into Computer Network Defense (CND) boundary protections and internal Continuous Diagnostics and Mitigation (CDM) functions. Improvements included a redundant data center for operational continuity, ZScaler for micro-segmentation, and Splunk for Security Information and Event Management (SIEM) and Information Security Continuous Monitoring (ISCM).

e. Capacity Planning

For the **Department of Homeland Security (DHS)**, Ashburn provides design, engineering, and architect support to manage the HSEN WAN infrastructure including technical requirements analysis, wireless and satellite requirements, traffic modeling, IP address administration, design and implementation of network security, and conducting performance analysis and management. Specific tasks include:

- Capturing, analyzing, base lining network and application traffic.
- Conducting performance engineering.
- Performing application and network capacity planning.
- Developing and performing client/server applications testing.
- Analyzing system requirements and architectures.
- Devising and executing system test plans.
- Investigating and demonstrating how new technology tools and solutions can assist in the collaboration and sharing of IT.
- Developing prototypes that investigate designated network architectural topics.

We also provide the following HSEN network and security management technical supporting using government-provided tools and technologies:

- Remote access and diagnostic capability and early problem identification and resolution, which will integrate within the overall OneNet architecture and vision.
- Capability to capture baseline and on-going network and application traffic data for use in capacity planning, troubleshooting, and support performance engineering through the use of analytical or simulation modeling.
- Capability to provide configuration changes and upgrades for the Network Operations Center (NOC) and Security Operations Center (SOC).

Ashburn's performance is measured via Network Capacity and Availability Health Reports provided on a monthly basis to DHS prior to the monthly Program Management Review (PMR).

f. Installation and Configuration

With over 60,000 employees, additional support personnel, and contractors supporting offices across the country, **U.S. Customs and Border Protection (CBP)** is one of the largest law enforcement agencies in the world. CBP relies heavily on secure network connectivity and support services to accomplish their mission. On the Network Management Support Services (NMSS) contract, Ashburn Consulting enables CBP's operational readiness through Tier 2 and 3 engineering, administration, configuration, and troubleshooting support to critical networking and Computer Network Defense (CND) tools. Ashburn's engineers provide real time monitoring, configuration, preventative operations and maintenance (O&M), and continuous improvement services to CBP's firewalls and load balancers to ensure optimal performance, availability, and security.

Ashburn Consulting's on-site network engineers provide strategic planning and tactical execution of the O&M processes and standard operating procedures (SOPs) used to manage CBP network components. This includes Tiers 2 & 3 event, incident, and problem management for CBP firewalls and F5 Load Balancers to maximize network availability and performance in response to and anticipation of evolving threats, CBP priorities, and other mission-driven initiatives.

To deliver high network availability, performance, and security, Ashburn engineers refined and continue to update CBP-approved network O&M processes and SOPs for the load balancers and firewalls. We leverage NIST 800-series guidance, ITIL principles, vendor recommendations, and relevant threat intelligence to drive SOP updates. Changes are reviewed and approved by CBP stakeholders prior to updating the documents and training impacted personnel on the tool and/or procedural refinements. We maintain firewall and load balancer configurations and manage device changes in accordance with CBP's Change/Configuration Control Board (CCB), to include submission and review of Change Requests (CRs), developing and testing updates, and deploying changes to production environments.

In addition, for **Montgomery County, Maryland**, reporting directly to the Manager of Network Services, Ashburn provides configuration, deployment, monitoring, troubleshooting, and analysis of Wide Area Networks (WAN), Local Area Networks (LAN), and Wireless infrastructure services to deliver voice, video, and data applications. This includes all approved wireless networks and access points in the county. Primarily operating with Aruba Access Points (APs), the wireless network delivers authorized users access to the internet and County resources at hundreds of facilities throughout Montgomery County.

Ashburn is also helping Montgomery County employ defense-in-depth strategies to protect against known external and potential internal threats to the network, County operations, and protected data. As part of upgrading the network security posture, Ashburn helped configure and deploy redundant pairs of Palo Alto Next Generation firewalls at both data centers. Monitoring network status and performance, Ashburn has established network baselines and acceptable performance thresholds. Using automated alerts, we notify personnel when performance exceeds or drops below acceptable levels to initiate trend and Root Cause Analysis (RCA) investigative and troubleshooting procedures. As needed, we develop and submit Change Requests (CRs) with recommendations to change configurations, integrate new capabilities, and enhance performance for improved Customer Experience (CX).

Furthermore, for **DHS OCIO**, we support integration and tests of device configurations required to implement approved security and vendor updates and patches. Ashburn also installs and configures associated networking and security hardware/software, as designed, to meet changing configurations and end-user requirements, and to leverage emerging technologies. We provide refreshes, updates, or modifications of configurations for supported hardware and software to incorporate ongoing operations, new releases, support center maintenance, or requirements into the DHS environment to include Domain Name System (DNS), firewalls, routers, switches, active directories, Intrusion Detection and Prevention.

g. Performance and Scalability

Ashburn has provided thought leadership, planning, and execution for enhancements to performance and scalability to the **Montgomery County, Maryland** FiberNet3 network and the County's associated WAN, LAN, and Wireless networks. This includes helping re-design the infrastructure to use a MPLS backbone, adding a second data center (DC) for redundancy, upgrading Computer Network Defense (CND) tools (i.e., Palo Alto firewalls) and wireless Access Points (APs), and ensuring business continuity through cloud-based platforms and storage. In addition, integrating Microsoft Azure for Infrastructure as a Service (IaaS) and Platform as a Service (PaaS) capabilities increased Montgomery County's scalability and storage capacity. Ashburn's enhancements to performance and scalability, including Continuity of Operations Planning (COOP), for the County included:

- Fully-Redundant Active-Active Data Centers
- HCI between data centers with Hybrid cloud services for immediate availability and surge capacity
- Redundant common services active at both DCs (DNS, DHCP, AD, VPN, MFA)
- Application failover orchestrated through Zerto, SRM, and Azure Site Recovery
- Secure data storage with virtual machine replication and 100% immutability against alteration and external encryption
- Integrated security for remote access, secure backups, and Zero Trust Architecture (ZTA) scalability
- Using Cisco 9606R routers to provide 100GB infrastructure backbone capacity
- Leveraging layered firewalls with Next Generation Palo Altos on the perimeter and CISCO FirePower firewalls internal traffic management

h. Conversion

When the **Department of Homeland Security (DHS)** came upon a requirement to build its next generation, highly virtualized Point of Presence (PoP) to serve as a West Coast security nexus, Ashburn resources led the way. During the course of the entire engagement, we performed a thorough review of several competing vendor solutions in the virtualization infrastructure, Software Defined Wide Area Network (SD-WAN), and Secure Access Service Edge (SASE) technology areas. A highly flexible and secure architecture was then designed and deployed in several phases to complete the DHS transformation into its next generation. In the initial phase, Ashburn led a multi-vendor team of contractors in evaluating several technologies and designing the physical and logical infrastructure. The leading SD-WAN, SASE, and Network Function Virtualization (NFV) solutions were evaluated and rated based upon a requirements matrix that included over one hundred criteria. Considering the requirement to virtualize as many elements of the solution as possible, key components of the evaluation included performance, flexibility, and scalability.

In parallel with the vendor evaluation, our architecture team meticulously designed the next generation infrastructure and connectivity to the existing on-prem, Private Cloud, and GovCloud environments. A Nutanix AOS and AHV foundation was selected to power the NFV portion of the solution. Nutanix AOS on solid-state disk (SSD) provides a very highly available and performing data storage environment, while AHV provides a high performance, extensible, and programmable hypervisor element. In addition, VMware's ESXi was incorporated into the solution to serve as a home for the various central DHS application services, layered over the Nutanix AOS foundation. Physical connectivity between the Nutanix infrastructure elements is powered by Cisco's Application Centric Infrastructure (ACI). The ACI solution is a high throughput, highly programmable fabric that provides the flexibility needed for secure segmentation of DHS components.

Built upon this strong foundation, a virtualized network architecture of NFV appliances, including the Cisco 8000V for DMVPN and SD-WAN connectivity and Palo Alto VM series firewalls are configured for high availability, scalability, and the maximum throughput possible in a virtualized environment. Palo Alto VM series firewalls serve as the application layer, threat aware defense layer that segments the various sub-networks protected by centralized DHS Headquarters Information Technology. The solution is flexible enough to support both legacy DMVPN interconnectivity as well as next generation SD-WAN to provide a clean transition between technologies. Additionally, virtualized F5 local and global load balancers and Bluecoat malware prevention services help to secure DHS hosted applications. The main benefits of an NFV environment include flexibility in physical hardware maintenance, horizontal capacity and scale, and central physical resource visibility and management.

A common cybersecurity and networking challenge that was highlighted in the COVID pandemic is the exhaustion of centralized security resources for a large remote and mobile workforce. In addition to a highly decentralized physical presence, such as that of DHS, these connections back into a central data center for cybersecurity, which comes at a high cost in terms of bandwidth consumption and lower than desired performance. With the inclusion of SD-WAN and SASE, these problems are circumvented. For the DHS use case, Cisco SD-WAN and Zscaler SASE provide the distributed cybersecurity apparatus that optimizes the network traffic path from any DHS affiliate to the network. The SD-WAN architecture is designed to secure and centralize network traffic destined for the DHS data center, while sending Internet bound traffic directly to the Zscaler SASE for ZeroTrust access control to Cloud and Internet environments. Additionally, the Zscaler SASE solution serves as a ZeroTrust VPN replacement for remote access to DHS internal applications for the remote workforce.

Taken together, all of the technology solutions evaluated, designed, and implemented for DHS represent the next generation in securing internal network segments, cloud environments, and internet access. In the execution of this project, our consulting and engineering resources demonstrated fluency in all areas vital to ensuring that organizations keep pace with the evolving network and cybersecurity landscape.

i. Monitoring, Administration and Upgrades

Supporting the **U.S. Patent and Trademark Office (USPTO)**, Ashburn Consulting provides network performance and security optimization expertise. The project covers architecture, engineering, and sustainment of USPTO's network (PTONet) infrastructure, Data Centers (DCs), and cloud-based solutions. Ashburn's network engineers provide strategic planning, architecture, design, development, and Tier III Operations and Maintenance (O&M) support services. Through a highly redundant and secure network design, Ashburn enables high network availability, and the team brings expertise implementing and managing tools to drive performance optimization.

Our support helps to maintain, enhance, and modernize PTONet, which supports over 10,000 end users across more than 20 offices and other remote locations. This includes a 10GB wired infrastructure, wireless networking, secure Virtual Private Networks (VPNs), and non-production environments for pre-operational engineering, testing, and other services. Along with O&M of legacy systems, Ashburn supported USPTO's transition to Juniper networking appliances and is supporting the move to new DCs. Ashburn's SDLC and O&M support includes the following services:

- Infrastructure planning and architecture support, to include support for IPv6 initiatives and upgrades
- Vendor and product security and performance analysis and recommendations
- Application testing support in the lab and in transition to operational platforms
- Remote access and access control engineering and support services
- Operational transition and application integration support
- 24x7 Tier III on-call operational support
- Change, configuration, and upgrade management support, to include End-of-Life (EOL) services
- Network security and accreditation support
- End user, support staff, and Tier I and II training

Ashburn engineers continue to help plan the optimization and modernization of PTONet. This includes migrating to Juniper-based networking equipment and using Riverbed's SteelHead products to identify opportunities to streamline data, transport, and application performance for full network elasticity. Additional network optimization initiatives include the migration from Bluecoat to F5s for Mobile Device Security (MDS), integrating F5s with FireEye and InfoBlox, enabling Data Loss Protection (DLP), and providing web-based antivirus protection for protection against email and internet-based attacks.

We also provide expert-level engineering and optimization support to PTONet, specifically on Riverbed, Cisco, and Juniper networking devices. While adhering to the USPTO SDLC, the team has provided recommendations to enhance the PTONet while providing continuous network O&M to include performance monitoring and troubleshooting outages, performance and capacity degradation, and any security incidents impacting the network.

j. Training Development

CBP BigPipe: Ashburn adheres to CBP-approved O&M processes and Standard Operating Procedures (SOPs) to deliver BigPipe availability, performance, and security. Ashburn reviews SOPs annually, at a minimum, to ensure accuracy and relevancy, and to identify opportunities for improvements. Where feasible, we recommend streamlining processes and automating repetitive manual procedures to drive O&M efficacy. When approved, we update processes and SOPs to reflect the changes, and we train impacted personnel on the refined workflows, tools, and performance expectations.

CBP Network Management Support Services: To deliver high network availability, performance, and security, Ashburn Consulting engineers refine and update CBP-approved network O&M processes and SOPs for the load balancers and firewalls. We leverage NIST 800-series guidance, ITIL principles, vendor recommendations, and relevant threat intelligence to drive SOP updates. Changes are reviewed and approved by CBP stakeholders prior to updating the documents and training impacted personnel on the tool and/or procedural refinements.

Arlington County Government (ACG): Ashburn trains end users and supporting IT staff on new policies, technologies, and other changes to ACG IT operations.

FDIC: Ashburn Consulting is intimately involved in the design, development, and modernization of FDIC boundary protection, authentication support, and infrastructure services. We review and propose changes to the architecture and governance (i.e., policies, processes, SOPs, and training) to:

- Identify threats to and vulnerabilities within the enterprise architecture,
- Ensure configuration and procedural compliance with applicable Federal and FDIC regulations,
- Maximize defense-in-depth security posture to drive zero trust operations,
- Make cybersecurity as seamless to the end user as possible, and
- Ensure FDIC leadership understands the risks associated with their infrastructure, connections, systems, applications, and data solutions.

Fairfax County: Ashburn Consulting promotes defense-in-depth design principles to help Fairfax County, Virginia achieve Zero Trust network architectures and operations. Our approach includes training to empower personnel, adopting sound governance, supporting Assessments and Authorization (A&A), automating processes, and consistently driving technical improvements by incorporating updated threat intelligence. We specifically develop documentation for end user training and communication on our projects supporting the County.

USPTO: We provide end user, support staff, and Tier I and II training as part of our Security and Network Engineering (SANE) support to help maintain, enhance, and modernize PTONet, which supports over 10,000 end users across more than 20 offices and other remote locations.

k. Operations Metrics

We provide weekly and monthly status reports consisting of a summary of accomplishments for each project; milestones achieved or missed, performance metrics, status of implementation activities, issues and risks with applicable impact and mitigation, and planned accomplishments for the preceding week. We also provide a weekly service request and change management metrics report.

Operations Metrics may include, but are not limited to, the following:

- Project schedule adherence and task completion
- Achievement of milestones, due dates, and deliverables
- Network availability / up-time
- Number of tickets
- Ticket response time
- Ticket resolution time
- Reduction of infrastructure/carbon footprint
- Virtualization of services
- Reduction in operations costs (power consumption, rental space, labor, hardware/software)
- Asset decommissions or repurposes
- SLA measurements

2.6 Describe training options and specify associated costs in Section X. Pricing Schedule. Include a catalog of training offerings and differentiation between technical staff and end-user training.

Ashburn Consulting provides training offerings to ensure our solutions are properly integrated into the JMU IT environment, infrastructure, systems, and culture. Our catalogue of training offerings is included below:

Training Offerings:

- ***Expert Trainer / Project Manager:*** Develops and conducts training and educational programs of a complex nature related to specific requirements. Creates teaching outlines where established guidelines may not exist; selects and/or develops instructional aids, such as handouts, reference materials, or audio/visual supports; maintains records and statistical information on training; monitors training program by reviewing and analyzing student course evaluations; and makes recommendations to management on customer training needs. Experienced in hands-on training techniques and computer-based training. Manages and oversees the training team.
- ***Senior Trainer / Senior Engineer:*** Plans, develops, and coordinates technical and end-user training programs for support personnel and customers. Obtains information needed to prepare in-house training programs; prepares training materials; develops course content; determines methodology; and coordinates the development of training aids. Conducts training sessions and develops criteria for evaluating effectiveness of training activities. Continuously revises lesson plans to meet new training requirements and to keep information up to date. Coordinates with other trainers to plan, implement, and deliver training.
- ***Trainer / Engineer:*** Organizes, prepares, and conducts training educational programs for business processes and systems. Maintains records of training activities, employee progress and program effectiveness. Maintains and enhances training curriculum. Reviews existing or develops new documentation, reference guides, training manuals, business plans, and other training material as may be required.

As outlined below, technical staff training and end-user training are two distinct types of training programs offered by Ashburn Consulting that serve different purposes within an organization.

Technical Staff Training: Technical staff training is designed for employees who are directly involved in designing, developing, implementing, maintaining, and troubleshooting technical systems, processes, and infrastructure within an organization. This type of training is typically more specialized and advanced, focusing on in-depth technical knowledge and skills. Some key points about technical staff training include:

- **Audience:** Technical staff training is aimed at employees with specific technical roles, such as IT professionals, engineers, developers, system administrators, and technicians.
- **Content:** The training content is often more complex and detailed, covering advanced technical concepts, programming languages, software tools, hardware components, networking protocols, security practices, and more.
- **Objectives:** The primary goal of technical staff training is to enhance the skills and expertise of these professionals, allowing them to effectively manage and optimize technical systems, troubleshoot issues, and implement solutions.
- **Delivery:** Technical staff training can take various forms, including workshops, hands-on labs, certifications, online courses, and instructor-led sessions.
- **Focus:** The focus is on deep technical knowledge, problem-solving, and practical application of technical concepts in real-world scenarios.
- **Outcome:** The outcome of technical staff training is a highly skilled workforce capable of managing complex technical tasks and maintaining the organization's technical infrastructure.

End-User Training: End-user training is focused and geared toward non-technical employees who use the organization's systems, software, or tools as part of their daily tasks. The goal of end-user training is to ensure that these employees can effectively use the technology provided to them without needing extensive technical expertise. Some key points about end-user training include:

- **Audience:** End-user training is intended for employees who are not directly involved in technical roles but need to use specific software, applications, or tools as part of their job functions.
- **Content:** The training content is user-friendly and focuses on basic and essential functionalities of the technology being used. It typically covers tasks such as data entry, report generation, communication tools usage, etc.
- **Objectives:** The main objective of end-user training is to empower non-technical employees to use the provided technology efficiently, improving their productivity and reducing the need for external technical assistance.
- **Delivery:** End-user training can be delivered through user manuals, video tutorials, online guides, in-person workshops, and interactive training sessions.
- **Focus:** The focus is on ensuring that end-users can perform their tasks without being overwhelmed by technical complexities.
- **Outcome:** The outcome of end-user training is a workforce that is capable of using the organization's technology tools effectively to fulfill their job responsibilities.

In summary, technical staff training targets employees with technical roles, providing them with advanced technical skills and knowledge, while end-user training targets non-technical employees, helping them effectively use technology tools relevant to their job functions. Both types of training are essential for an organization's overall success, ensuring that technical systems are well-maintained and that all employees can utilize technology efficiently in their work.

2.7 Provide examples of recent projects at higher education institutions comparable to James Madison University. Describe the project, time frame, end result, etc.

Project Description: Since 2009, Ashburn has provided expert-level network design consultation and implementation services to American University in support of a 12,000-node network which spans multiple campuses in Washington, DC and at a remote data center. Additionally, Ashburn develops network and security blueprints in conjunction with American University Network Engineering, Systems Engineering, and Information Security staff. Specific project examples include:

- Full lifecycle support of a complete wired network overhaul which allowed a migration away from a legacy collapsed core network design to a best practices fully routed design. Areas covered included network design services (end to end VRF-Lite, OSPF routing, PIM-SM & MSDP multicast), project management counsel, documentation, and configuration guidance, review, & implementation.
- Network augmentation to support new Cisco NAC Layer 3 OOB architecture constraints. Network configuration enhancements resulted in a reliable, load-sharing configuration which allowed traffic to symmetrically traverse Cisco NAC managers in three geo-diverse locations for full N+1 redundancy with dynamic failover.
- Design and deployment of a full-scale, 1200+ access point 802.11a/g/n WiFi network architecture to replace a legacy WiFi deployment, to include select site surveys, 802.1x/RADIUS configuration, and role-based access design & configuration.
- Design and implementation of a dual site data center architecture to support both primary services and disaster recovery operations. New architecture includes best practice security segmentation of services into multiple security zones, load balancing capabilities, and high throughput network infrastructure, to include the Cisco Nexus 7000 switches and ASR edge services router for Internet connectivity.

Project Time Frame: 2009 – Present (ongoing)

Project End Result: Ashburn Consulting has formed a key strategic partnership with American University; we provide on-site professional IT Consulting Services to American University for network engineering services, to include architecture design, project planning, support, implementation, and advanced technical troubleshooting. Our consultants act as high-level advisors to the American University network design team to help assess new technologies, IT requirements, security developments, and other factors which have potential future impact to the University network. Additionally, Ashburn Consulting aids the American University Information Technology team in the implementation and troubleshooting of advanced campus network solutions. Finally, Ashburn Consulting provides a technical security net to American University, providing off-hour, emergency support as needed.

American University's network has evolved from a single Gigabit Ethernet, inefficient collapsed core design to a well-organized, tiered 10-Gigabit Ethernet distributed routing design which supports QoS, centralized ACL-based security configuration, multicast traffic distribution, and highly secure and redundant data center services. Core and data center network availability has increased to 99.999%, while the average link utilization has been reduced to roughly 10-20% of capacity through targeted link upgrades and re-architecture. Through the flexibility gained from our support, American University's Information Security team has been given the freedom to maneuver between three NAC implementations (Cisco NAC L2 in-band, Cisco NAC L3 out-of-band, Impulse SafeConnect).

2.8 Describe the ability to provide for a thorough transfer of knowledge to JMU IT on any given project.

Ashburn's Project Manager will lead the effort to work with JMU IT and outgoing staff to establish a knowledge transfer team, establish milestones, submit and refine a Knowledge Transfer Plan (KTP), close out all project work and deliverables, and ensure close collaboration with JMU IT and other stakeholders to hand over project support responsibilities and maintain continuity.

Ashburn appoints a knowledge transfer manager to oversee the transfer of knowledge and ensure all areas are accounted for. Prior to the transfer of knowledge, Ashburn develops a draft KTP and presents it to JMU IT within the first 15 business days after project initiation. The KTP identifies the contractor resources and roles involved in the transfer process, provides a list of risks and mitigation strategies for the transfer, and contains a detailed resource balanced project schedule developed with Microsoft Project. The project schedule identifies tasks, dependencies, deliverables, and milestones.

JMU IT will review the draft KTP and provide comments to Ashburn. If needed, JMU IT and Ashburn will then meet to discuss the comments, after which Ashburn incorporates the agreed-upon changes and delivers a final KTP within five working days of the JMU IT's feedback.

Ashburn's key representatives will meet with JMU IT stakeholders bi-weekly (twice a month) to discuss the progress and status of knowledge transfer. This includes, but is not limited to the following:

- Supporting team members and other JMU IT staff working on the assignment.
- Sharing information and considerations necessary for the decision-making process.
- Mentoring the assigned JMU IT staff in development of the skills needed on any given project.
- Maintaining documentation of standards and procedures for ongoing maintenance of the project.

To successfully manage and transfer knowledge at the end of performance, we will capture an inventory of services, tasks, and deliverables; update and finalize the inventory of services, tasks, and deliverables with JMU IT feedback and input; and oversee the transition of inventory and knowledge to JMU IT. On any given project, we provide for a thorough transfer of knowledge to JMU IT, including, but not limited to, the following:

- Knowledge transfer of technical skills and lessons learned to JMU IT staff upon completion of deliverables and work products.
- Monitor and report system performance and workload.
- Transfer of complete documentation for all delivered functionalities. Deliverables will be in softcopy and hardcopy format, as requested, and be the sole property of JMU. The format of deliverables will be provided in a format which will allow JMU IT to modify and update when/if necessary.
- Knowledge transfer of configurable data including usernames and passwords and application settings.
- Training material, if appropriate.
- All technical support, activities and documentation should be transferred to enable JMU IT personnel to effectively continue the current level of support and activities.

DESIRED OUTCOME – Ashburn provides a thorough knowledge transfer from contractor to JMU IT personnel. Ashburn provides support, without interruption in service, that enables JMU IT staff to assume responsibility for continued operations. Ashburn will conduct training sessions with training materials, as needed, to ensure uninterrupted performance of the on-going support activities. Ashburn assures that JMU IT-identified staff receive the knowledge and skills needed to maintain projects that Ashburn has designed, maintained, tested, and implemented. Knowledge transfer may include an on-site experience with the systems by JMU IT-identified staff working with Ashburn staff, as well as informal training which Ashburn may perform during the project. The Ashburn Project Manager will work closely with our team members to ensure standard procedures and best practices are optimally captured by outgoing staff to help ensure a smooth transition.

2.9 Describe your approach to project management.

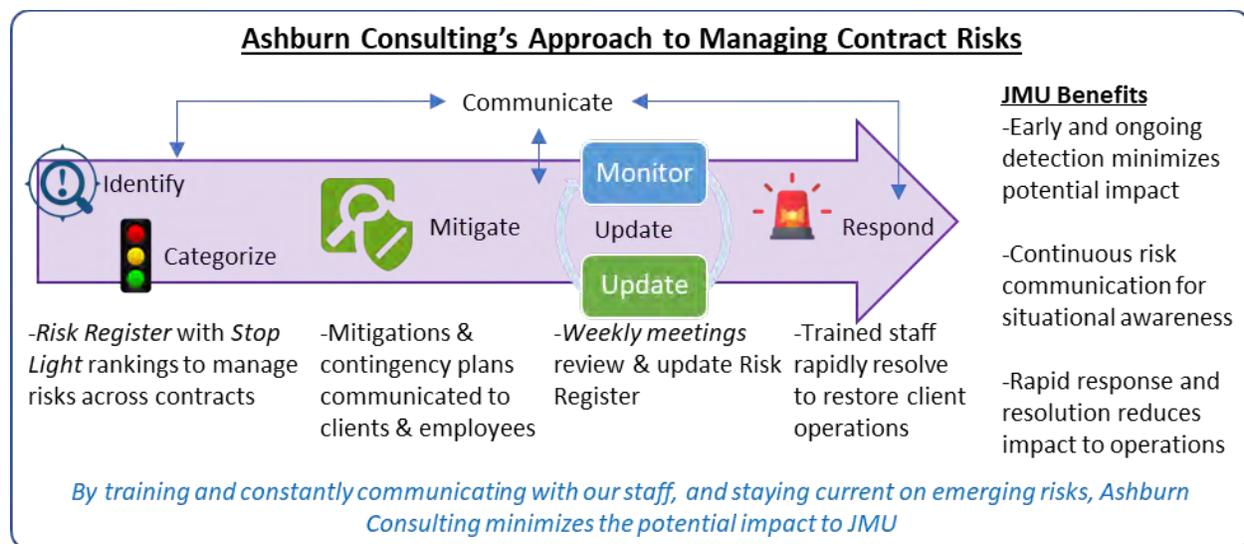
As previously described within this proposal in *Section 2.2. Describe approach and methodology that will be used to provide IT consulting services to James Madison University*, Ashburn Consulting utilizes the Project Management Institute (PMI) Project Management Body of Knowledge (PMBOK) as the management framework for all our projects. Guided further by our ISO 9001:2015-certified Quality Management System (QMS), we provide strategic and tactical Project Management support required for JMU projects to operate effectively and efficiently. This includes developing scope, schedule, and cost baselines, and integrating and coordinating efforts across projects to ensure scope and schedule alignment, with consideration to fiscal responsibilities and constraints. Our technical management support includes Project Managers and Technical Leads who continually collaborate with IT teams, stakeholders, end-users, and industry to facilitate timely, comprehensive, and compliant project management and integration. With adherence to the PMBOK standard, we infuse accountability and Quality Assurance (QA) that minimizes risks to project cost, schedule, and performance.

For both strategic and tactical projects, Ashburn Consulting uses MS Project to develop project plans and Integrated Master Schedules (IMS) to account for project scope, dependencies, and objectives. This includes coordinating communication with stakeholders to integrate new and existing technologies with current or additional resources that will meet or exceed performance expectations with minimal risk. A Project Management (PM) Plan is created as a formal, approved document defining how the project is managed, executed, and controlled. Scope, Schedule, and Cost Baselines are incorporated in the PM Plan and are finalized as we create a Work Breakdown Structure (WBS), develop the schedule, and determine the budget, respectively. Throughout project execution, we continue to monitor project performance, schedule, and costs against established baselines to ensure the validity of our planning and make any readjustments for successful delivery, as needed. As the work is executed, monitored, and controlled, the PM Plan, baselines, and other documents are continually updated and matured. The methodology below highlights our PMBOK based approach to project management planning in a highly visible, fast-paced, time-sensitive, IT driven environment.

Approach to Project Integration Planning & Management

Element	Project Phase					
	Initiate	Plan	Execute	Monitor & Control		Close
Process	<i>Develop Project Charter</i>	<i>Develop PM Plan</i>	<i>Direct & Manage Project Work</i>	<i>Monitor & Control Project Work</i>	<i>Perform Integrated Change Control</i>	<i>Close Project or Phase</i>
Inputs	<ul style="list-style-type: none"> ➤ Project SOW ➤ Business Case 	<ul style="list-style-type: none"> ➤ Project Charter ➤ Outputs from other processes 	<ul style="list-style-type: none"> ➤ PM Plan Approved ➤ Approved Project Change Requests (PCRs) 	<ul style="list-style-type: none"> ➤ PM Plan ➤ Work Perf. Info ➤ Cost & Schedule Forecasts 	<ul style="list-style-type: none"> ➤ PM Plan ➤ Work Perf. Reports ➤ PCRs 	<ul style="list-style-type: none"> ➤ PM Plan ➤ Accepted Deliverables
Tools	<ul style="list-style-type: none"> ➤ Expert Judgment ➤ Facilitation Techniques 	<ul style="list-style-type: none"> ➤ Expert Judgment ➤ Facilitation Techniques 	<ul style="list-style-type: none"> ➤ Expert Judgment ➤ Meetings ➤ PM Info System (PMIS) 	<ul style="list-style-type: none"> ➤ Expert Judgment ➤ Meetings ➤ PMIS 	<ul style="list-style-type: none"> ➤ Expert Judgment ➤ Meetings ➤ Change Control Tools 	<ul style="list-style-type: none"> ➤ Expert Judgment ➤ Meetings ➤ Analytical Techniques
Outputs	<ul style="list-style-type: none"> ➤ Project Charter 	<ul style="list-style-type: none"> ➤ PM Plan 	<ul style="list-style-type: none"> ➤ Deliverables ➤ Work Perf. Data 	<ul style="list-style-type: none"> ➤ PCRs ➤ Plan & Doc. Updates 	<ul style="list-style-type: none"> ➤ Approved PCRs ➤ Change Log 	<ul style="list-style-type: none"> ➤ Final Transition

Applying PMBOK, Agile, and ITIL principles, we track, manage, and report risks in status report deliverables and during Project Management Review (PMR) Meetings. Our team provides risk details to include potential impact to services, stakeholders, missions, and duration of the impact if the risk should occur. Working closely with JMU, we will develop mitigation plans to minimize the likelihood that risks will become issues, and contingency plans in the event that they do. Effective risk management requires continuous situational awareness, early risk detection, and strategies to eliminate, mitigate, and execute contingencies, as needed. Committed to exceptional service delivery, our risk management approach focuses on issues impacting costs, schedules, and performance. When we identify potential risks to one or more of these categories, we catalog each in a Risk Registry, annotating potential impacts, mitigation strategies, contingency plans, and Points of Contact (POCs), as applicable. The Risk Registry is updated as risks are identified or resolved, reviewed weekly, and distributed to applicable stakeholders. We regularly assess threats common to IT and cybersecurity service industries and those specific to our clients, contracts, and employees. Examples of common threats include those from the current global pandemic, supply chain concerns, staffing challenges, adopting new technology, and addressing cybersecurity needs. Specific threats can include geographical weather and natural disasters; changing client budgets, regulations, and leadership; and contract-specific staffing, technology, and supply chain issues. When we identify any of these threats, we categorize and describe them according to their potential impact to contract costs, schedule, and/or performance. When risks come to fruition, we assess the impact and apply contingency strategies to contain the impact, resolve the issue, and restore effected operations. We also update formal project documentation, as required.



Ashburn Consulting provides superior IT project management services for commercial, educational, and government customers. Ashburn is highly experienced in full life cycle systems design, development, implementation, and on-going support. We have extensive experience in managing and overseeing diverse technology projects, such as network infrastructure, information security, and systems implementations. We work well with cross-functional teams and departments to clearly define requirements and set expectations, and we leverage various project management frameworks and methodologies (such as Waterfall, Agile, Scrum, Kanban, or Hybrid methodologies) to ensure successful project outcomes and satisfied customers. Our extensive experience in managing IT system projects has given us the capability to be able to assess and engineer the right solution using the latest technologies and methods.

2.10 Describe how your firm would propose a functional staffing plan indicating the number, characteristics, and schedule for the consultants.

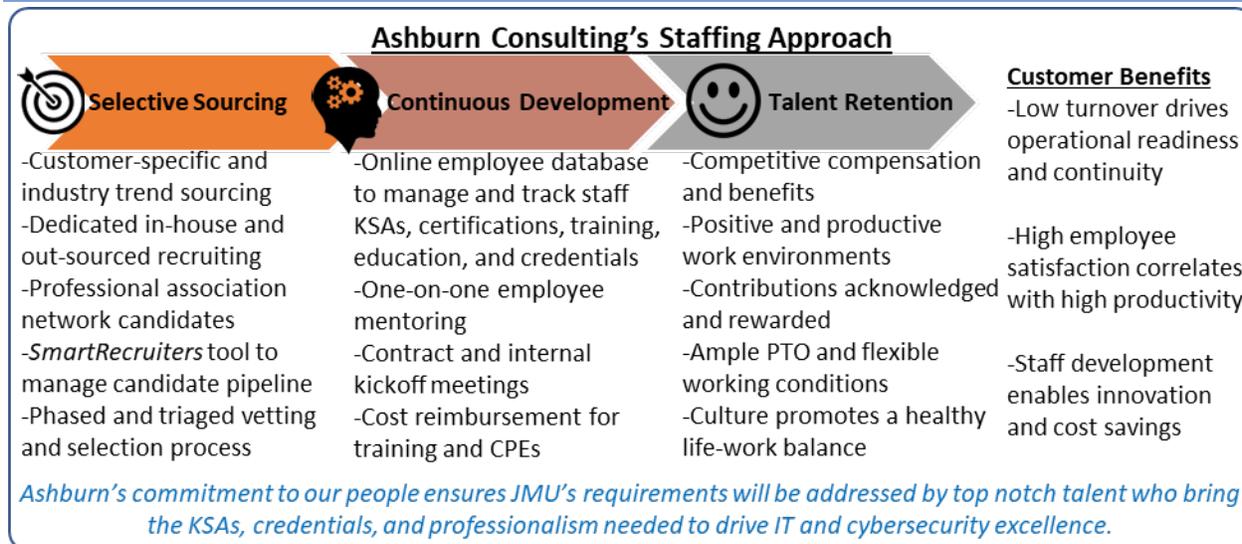
Ashburn Consulting will provide a functional staffing plan based on the final scope of work for each project. We will assign consultants with the proper education, experience, qualifications, and certifications to complete each task, who will work at the locations and times as designated by JMU – including on-site, as needed, during normal business hours for activities such as internal assessments, interviews, and any physical reviews, and off-site for approved tasks to be completed remotely, such as virtual delivery, external assessments, and reporting.

Ashburn Consulting brings to JMU a proven staffing process that has been refined over our 20+ years of experience staffing IT positions in support of local clients in the Commonwealth of Virginia and the Metropolitan DC area. Ashburn staffs our company and contracts with people who share our passions for innovation, efficiency, and accountability, and who demonstrate commitment to our core values: **Technical Excellence, Integrity, Exceeding Expectations, Client Success, Proactivity, and Being a Team Player**. We continuously execute across all three phases of our staffing approach, *Selection, Development, and Retention*, to attract and retain top notch talent who will deliver their best to our clients. Our staffing process and procedures apply metrics, tiered reviews, and checks-and-balances to objectively vet candidates, incentivize professional growth, and ensure we consistently reward our employees' contributions.

2.10.1 Ashburn's staffing and recruitment process

Specializing in IT consulting and technical services, we maintain open searches for high-caliber staff, triage background and reference checks, conduct team interviews, and use competency evaluations when appropriate to help inform our selection process. Our rigor has proven successful in helping identify and place staff on contracts where they are successful and form long-term relationships with our clients; the current average tenure of an Ashburn Consulting employee is over six years with our company. To attract candidates, we develop and post Position Descriptions (PDs) on our website. We develop contract-specific PDs based on client requirements regarding knowledge, skills, abilities (KSAs), and other credentials (i.e., clearances and education), as outlined for each project. Along with open positions on our website, we employ a full-time technical recruiter, use several recruiting services if needed, and incentivize employees to recruit candidates for openings. We have had great success identifying, securing, and retaining highly productive staff through the professional networks and relationships of our existing staff. Along with the benefit of influencing who they get to work with, we reward employees with referral bonuses for successful new hires. As we identify and vet potential candidates, we track KSAs, credentials, interest, and availability in *SmartRecruiters*, an enterprise talent acquisition suite which enables on-demand hiring. This allows us to build and sustain a pipeline of candidates and helps align timing of candidate availability with specific client opportunities.

We consistently exceed industry averages on employee retention by hiring smartly, compensating fairly, creating positive working environments, and promoting positive life-work balance. All employees are provided and encouraged to take a Personal Time Off (PTO) each year, in addition to time off for sick leave and federal holidays. We maintain low overhead costs to continuously invest in our employees and their professional development. With all executives and employees working from home or embedded with clients, we cover associated operational costs, e.g., internet and mobile phone bills, and provide flexible working conditions to the extent feasible with project obligations. Our dedicated resources to manage corporate back-office functions, e.g., Human Resources (HR) and Accounting, enable employees on contract to focus on achieving client objectives.



Our recruitment process, tailored to recruiting and staffing IT positions, enables us to quickly identify and place best-athlete candidates, provide them with continual training, and retain team members to ensure continuity of mission tasks. **Our weekly internal Recruiting Check-In Meeting ensures we remained aligned with our clients goals, needs, and requirements.**

2.10.2 How Ashburn sources applicants for a contract position

We utilize efficient and integrated recruiting and hiring procedures to obtain qualified personnel. We have formal, proven processes in place to design and distribute job descriptions on a variety of online and print advertising media, post internal job requisitions, solicit and process employee referrals, conduct college recruiting, and host open houses and recruiting fairs. We also have a robust Internet communications strategy that includes user-friendly company homepages for job openings and ongoing relationships with leading career websites. All of our recruiting procedures rely upon frequent and open communication between our recruiting staff and our hiring managers to appropriately forecast resource requirements and rapidly staff projects with qualified personnel. These procedures enable us to respond quickly to the staffing demands created by high-volume IT contracts without jeopardizing schedules or performance.

In addition to our dedicated recruiters, we leverage recruiting tools like Monster Fusion, LinkedIn, Indeed, ZipRecruiter, and America's Job Exchange; sourcing applicants from trusted partners and subcontractors; attendance at conferences and job fairs; and use of each team member's personal networks to build a pipeline and pool of qualified IT personnel. Our recruiters maintain a pool of potential candidates, enabling us to vet suitable candidates and plan for/resolve staffing gaps. We share requirements with our team, pre-pipeline candidates, and deconflict any duplicate resumes. This proven and comprehensive strategy enables us to source well-qualified candidates within hours or days of requirement identification. We also carefully vet personnel for capacity, ability, and interest to operate in fast-paced working environments, as well as professional and technical agility to adapt and grow with projects.

2.10.3 How Ashburn verifies the candidate for placement has the skills to be a successful fit

Qualified candidates are put through a rigorous evaluation process. We conduct reference checks and verify previous employment, education, and security credentials. Benefits, employment terms, employment applications, and evaluation checklists are included in recruitment packages, which are distributed to interested and qualified candidates. Candidates are interviewed by experienced Managers and professional Human Resources staff. Those who are selected receive formal offers of employment. As part of the onboarding process, new employees are led through a new-hire orientation by a member of the Human Resources staff. During orientation, all employees receive a comprehensive employment package that includes company policies, procedures, and benefits.

Using a phased approach, we analyze candidates' KSAs and their fit for a specific opportunity and environment. Phase one is conducted by Recruiters, who evaluate the individual's communication, character, and other soft skills; verify resume data; contact references and previous employers; and request background investigations. The second phase involves a technical interview with one or more of our SMEs on the specific technology and tools the candidate will be working on. The final round of interviews is conducted by a team made up of the Project Manager, an individual with firsthand knowledge of the client environment and needs, and a member of our executive leadership team. This approach facilitates informed hiring decisions by soliciting feedback from multiple perspectives.

2.10.4 Ashburn's process of measuring if the placement was successful

The value we provide for our clients is directly related to our staff's competency and our ability to anticipate changes and prevent risks from impacting operations. Existing and new employees are provided with project orientation when hired or at project kickoff to ensure all client requirements and objectives are clearly defined, understood, and acknowledged. We use customized scorecards and accountability charts in *Employee Analyzer*, an internal performance evaluation tool, to drive monthly, quarterly, and annual performance analysis, align staff with our core values, and promote professional growth. We use one-on-one meetings to mentor employees and align their goals with our needs, client priorities, and industry trends. We then facilitate continued training, new certifications, and professional association participation to maintain and expand our employees' credentials. This includes financial reimbursement for education, certifications, conferences, and other Continuing Professional Education (CPE) credits required for many technical credentials.

Ashburn maintains procedures for reviewing employee performance against company and client goals on a regular basis, including monthly, quarterly, and annually, as appropriate. We establish communication and common understanding between the manager and the employee regarding expectations, roles, and responsibilities and look to continually improving transparency with staff so that they are aware of the goals and vision for their role, team, and larger organization. The goal of the performance review is for both the employee and the manager to communicate their assessments of the employee's performance based on the position requirements and core values of the company, for the manager to listen to the employee and their concerns (if any), and to jointly develop attainable goals for the future.

Performance evaluations are conducted periodically by the PM. The employee will be evaluated with respect to the specific role that they are performing. The appraisal will be discussed, and both the employee and manager will sign the form to ensure that all strengths, areas for improvement and job goals for the next review period have been clearly communicated. Performance evaluation forms will be retained in the employee's personnel file. A positive performance review does not always guarantee an automatic salary increase or continued employment. The employee's overall performance and salary level relative to his/her position responsibilities are evaluated to determine if a salary increase would be warranted. Increases, if given, are based on several factors, not limited to Ashburn Consulting's performance and profitability, individual, department or group performance. Outside of the Performance Evaluation, supervisors and employees are strongly encouraged to discuss job performance and goals on an informal, day-to-day basis. Formal performance evaluations are conducted to provide both supervisors and employees the opportunity to discuss job tasks, identify and correct weaknesses, encourage and recognize strengths, and discuss positive, purposeful approaches for meeting goals. Furthermore, objective situational awareness and constructive criticism are crucial to driving continuous improvement. Ashburn Consulting uses "360 feedback loops" from our clients, partners, management, and employees to drive quality control as well as innovation, including enhancements to existing solutions and investments in new ones. By examining our performance from all angles, we are better able to identify how and where we can improve.

2.11 Describe the functions that may be provided by a subcontractor of your firm. Specify the expertise and credentials required from the subcontractor.

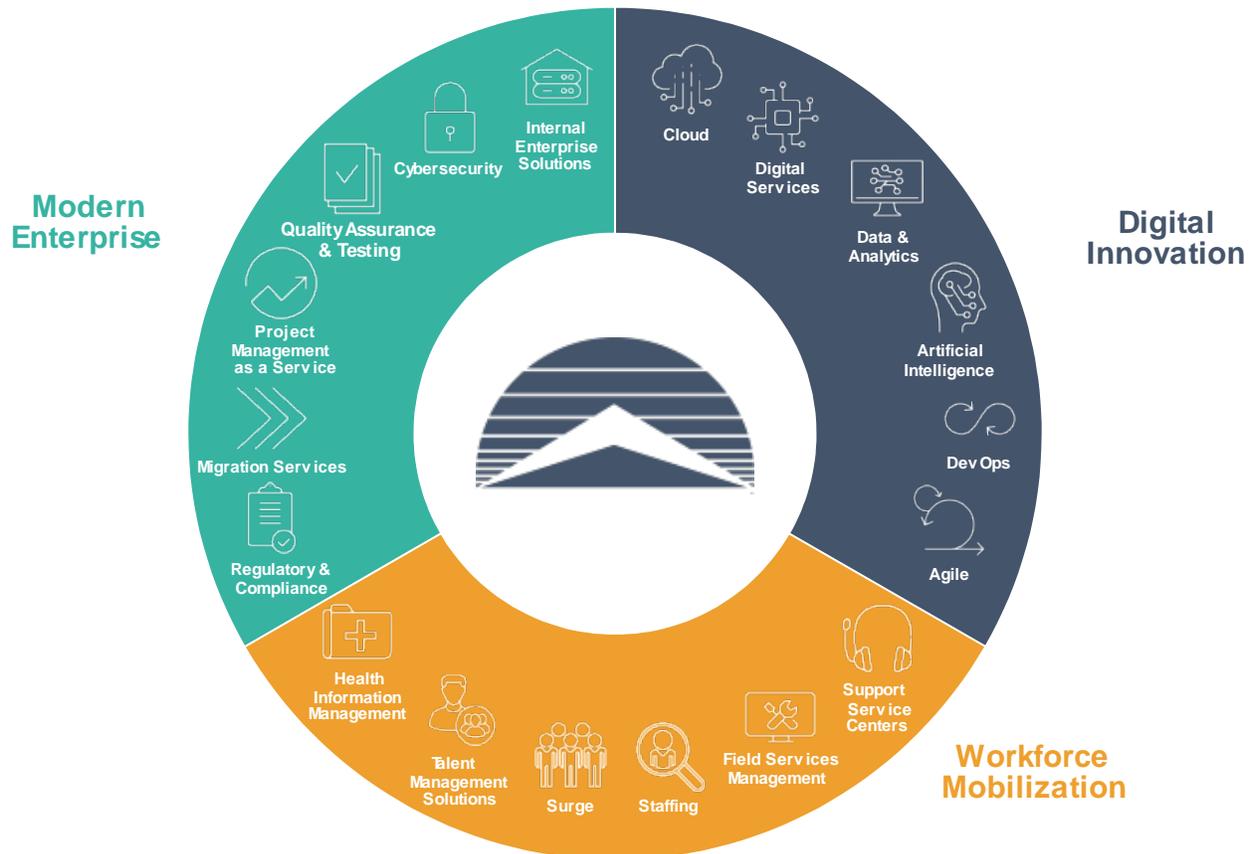
Ashburn Consulting has strategically partnered with a Virginia-based large business IT consulting and staffing firm, Apex Systems, that will work as an exclusive subcontractor to Ashburn, functioning as a trusted source of expertise and IT consultants to augment our teams providing support to JMU, as needed.



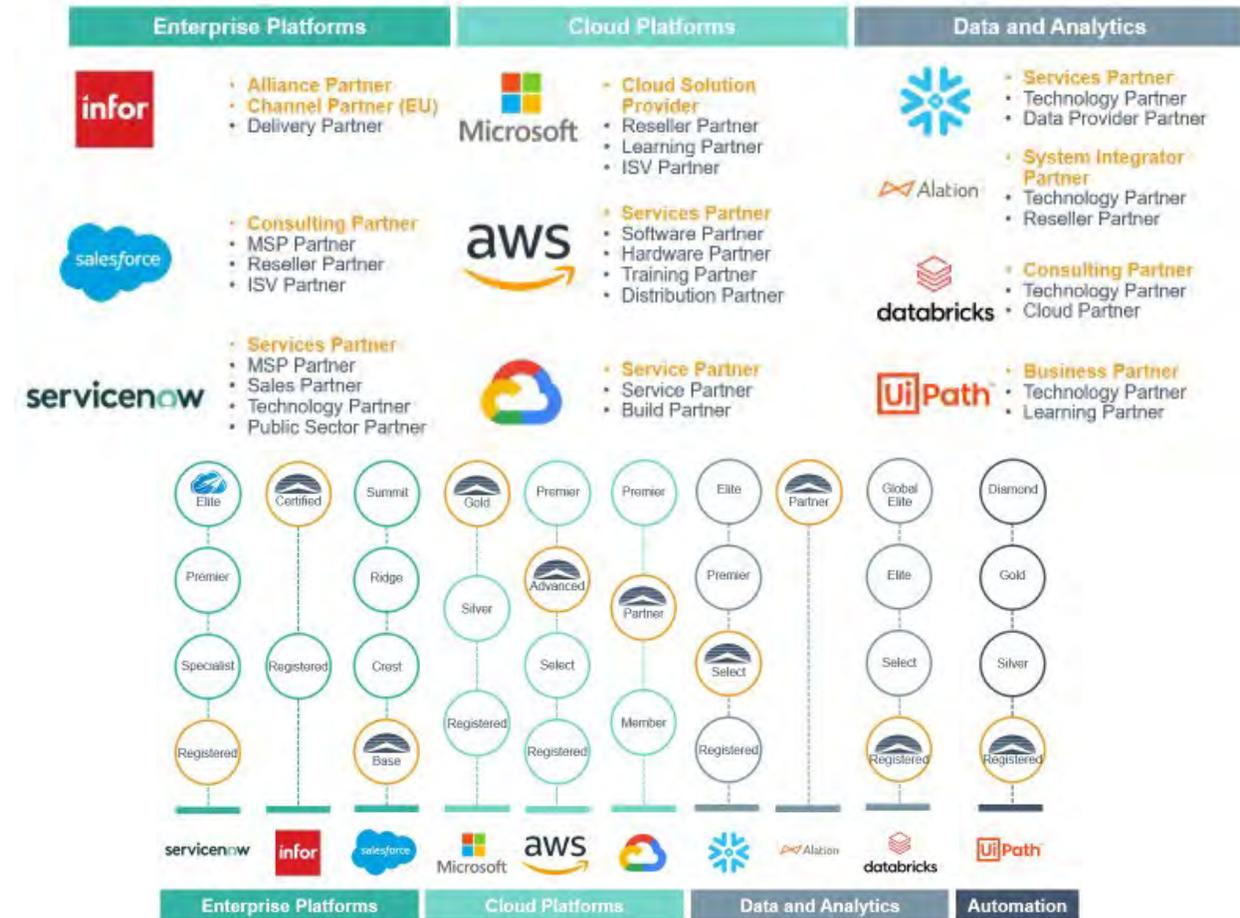
Apex Systems (“Apex”) is a world-class technology services business that incorporates industry insights and experience to deliver solutions that fulfill our clients’ digital visions. They provide a continuum of service from workforce mobilization and modern enterprise solutions to digital innovation to drive better results and bring more value to our clients. Apex transforms customers with modern enterprise solutions tailored to the industries they serve. Apex Systems was founded in 1995 in Richmond, Virginia and has been a division of ASGN, Inc. since 2012. Over the past 27 years, Apex has grown to be a leader in the IT services industry due to their ability to deliver high-quality consultants and solutions to solve clients’ issues.

The expertise and credentials required from subcontractor include, but are not limited to: ORACLE, PeopleSoft, Enterprise Support, Desktop Management, Microsoft Azure and M365, Data Analytics, Change Management, Security Services. Cisco Technologies & Infrastructure, and Audio Visual.

Apex Systems – Subcontractor Expertise:



Apex Systems – Subcontractor Credentials:



Apex Systems’ support structure and commitment to excellence strengthens our client relationships and helps us deliver quality services specifically designed to support our clients’ unique organizational objectives. For example, as a result of their quality service, **Apex Systems was named to ClearlyRated’s Best of Staffing® Client Satisfaction List for the eleventh year in a row and received the Best of Staffing® Client Satisfaction Diamond Award in 2022.**

Apex has grown to be an industry leader by providing only the highest quality resources to clients. With 70+ offices nationwide and a recruiting engine of over 800 skill-focused recruiters, we can meet the needs of IT staffing requirement for JMU. We leverage our skill-focused recruiting and screening expertise to provide resources with the requisite skills and experience for each client. Apex’s skill-focused methodology provides JMU with the following advantages:

- **Higher Caliber Candidates** - Skill-focused recruiters have a complete understanding of technical requirements leading to better candidate screenings.
- **Stronger Talent Pipelines** - Skill-focused recruiters have a greater ability to evaluate the appropriate technical aptitude of candidates.
- **Shorter Response Time**– Skill-focused recruiters are familiar with the characteristics of strong candidates within their respective disciplines and build pipelines of qualified candidates.

Apex’s skill-focused recruiting methodology is the backbone of their organization and provides significant advantages for our clients. On average, Apex can provide qualified candidates to our clients within 48 to

72 hours by utilizing a skill-focused recruiting approach and development of a JMU pipeline. In addition, as a part of Apex employees’ continued development, all recruiters are required to complete technology training. Recruiters must complete an intensive four-week technical training course and pass an online assessment before they are assigned to a specific skill area. Once assigned, recruiters focus solely on sourcing top notch candidates within their skill focus areas. Key skill sets are shown in the graphic below.



Process for new potential subcontractors, including Small Businesses: As needed, or as JMU’s IT requirements and new technologies evolve, Ashburn will identify, vet, and add new subcontractors and partners with robust IT staff augmentation capabilities and offerings to complement our existing team. Our success is built on strong, lasting relationships with our partners and clients. The combination of our highly qualified staff and flexible teaming approach provides the critical skills needed to deliver any project on time, on budget, and beyond expectations. We look to our partner community as a key element in how we deliver IT staffing and consulting support. In addition to internally prepared source listings to help us identify potential new partners for IT staffing engagements, Ashburn also uses various source listings made available by agencies, states, trade organizations and professional associations. For example, we may leverage the Department of Small Business and Supplier Diversity (SBSD) to find local Small, Women- and Minority-owned Businesses certified under Virginia’s “SWaM” Procurement Initiative to partner with, to meet JMU’s needs as they emerge over time. Vendor source listings are made available to the appropriate Ashburn personnel (i.e., Project Managers, Business Development and Partnership staff, and Procurement Specialists) to aid them in locating and recruiting potential new team members. We then research a potential partner using open-source information (company websites, LinkedIn, etc.) to determine if they can provide the appropriate talent. After researching the company, we will perform new vendor outreach to introduce Ashburn, the work at hand, and to gauge interest in the opportunity. We have extensive experience researching, meeting, networking, and working with other local companies and we are always looking to expand our network of trusted business partners. If there is an opportunity beyond our team’s collective capacities, we will not hesitate to engage new partners, with JMU’s approval, to gain the necessary knowledge and expertise to meet JMU’s requirements.

3. A written narrative statement to include, but not be limited to, the expertise, qualifications, and experience of the firm and resumes of specific personnel to be assigned to perform the work.

Ashburn Consulting LLC (“Ashburn”) -- founded in 2002 and based in the Washington, DC metropolitan area -- specializes in providing Network Engineering, Cybersecurity, and Data Center/Cloud solutions in complex environments to federal, state, and local government clients; educational institutions; and commercial organizations. Ashburn Consulting is a minority-owned small business and ISO 9001:2015 Quality Management certified business, to give confidence in our high-quality service delivery. We have supported public and private clients for over two decades, including government agencies, public and private universities, and commercial customers, providing network operations and maintenance (O&M), optimization, and modernization support to numerous complex IT networks. Our IT staffing and consulting support experience includes network architecture and engineering, wireless network engineering, network security, and data center O&M. Our deep capability and organizational skills for delivering best-in-class services include the following distinguishing features for JMU:

- **Highly Skilled Consultants & Engineers** – Experienced experts in cutting-edge technologies, Ashburn staff hold 100+ relevant IT certifications, allowing us to engineer optimized, comprehensive solutions.
- **Trusted Advisors** – We are a technology partner that can help assess your current state and map to industry best practice architectures.
- **Ability to Execute** – We bring a proven track record implementing innovative technologies and IT solutions; we efficiently deliver solutions, enabling projects to be completed on time and within budget.
- **Vendor Agnostic** – Independent approach to selecting technologies based on client needs.

Ashburn is highly qualified in full lifecycle design, development, implementation, and ongoing support of large-scale IT, network, and systems engineering projects. From circuit turn-up to optical switching to high availability services implementations, our organizational experience in performing similar IT engagements demonstrates our critical ability to successfully provide JMU with efficient, effective, and reliable IT staffing and consulting support.

Ashburn provides strategic thought leadership and reliable execution through our lessons learned, methods, and tools successfully implemented for higher education and government customers, including American University; George Mason University, Fairfax County, VA; Arlington County, VA; Loudoun County, VA; Montgomery County, MD; U.S Department of Homeland Security (DHS); U.S. Customs and Border Protection (CBP); Federal Deposit Insurance Corporation (FDIC); U.S. Patent and Trademark Office (USPTO); Internal Revenue Service (IRS); and the National Gallery of Art. Ashburn brings 20+ years of expertise building, modernizing, securing, and supporting IT Infrastructures for Universities and Federal, State and Local Government agencies, including:

Federal Clients	State, Local & Educational (SLED) Clients	
<ul style="list-style-type: none"> ✓ U.S. Department of Homeland Security (DHS) ✓ U.S. Customs and Border Protection (CBP) ✓ Federal Deposit Insurance Corporation (FDIC) ✓ U.S. Patent and Trademark Office (USPTO) ✓ Internal Revenue Service (IRS) ✓ National Gallery of Art 	<ul style="list-style-type: none"> ✓ Fairfax County, VA ✓ Arlington County, VA ✓ Loudoun County, VA ✓ Montgomery County, MD ✓ American University ✓ George Mason University 	<ul style="list-style-type: none"> ✓ Fairfax Water ✓ VA Army National Guard ✓ VA Department of Transportation ✓ Town of Vienna, VA ✓ Metropolitan Washington Airports Authority

Ashburn understands educational institutions like JMU and knows how to apply modern technologies to solve challenges. We are a proven, trusted, long-term partner who brings integrity, depth of knowledge, and mission success with a long track record delivering innovative IT solutions in complex public sector environments. Our longevity in this industry is credited to the professional approach that we bring to every client and engagement, and by winning the confidence and repeat business of our satisfied clients. Ashburn helps our clients architect and engineer enterprise-level IT and cybersecurity solutions to improve performance, harden IT security posture, reduce operating costs, and improve risk and situational awareness. Driving operational continuity and regulatory compliance, we leverage National Institute of Standards and Technology (NIST) Special Publication (SP) 800-series guidance, vendor recommendations, and a portfolio of government-approved tools and standard operating procedures (SOPs). For example, using a combination of on-

premise, multi-datacenter, and cloud-based solutions to create failover-ready, load balanced, and redundant, architecture, we have improved network, systems, application, and data availability to maximize operational continuity and readiness. We drive network and infrastructure planning and management through systems engineering practices to collate requirements, identify dependencies, and align initiatives to ensure synergy and separation of production and pre-production environments. Adhering to guidance including systems development life cycle (SDLC) and Agile development principles, we use Jira to capture requirements, plan releases and sprints, and track progress of changes and upgrades. Our teams apply ITIL best practices to manage configurations, changes, incidents, and problems impacting network operations and security, and our engineers are involved in the triage of critical incidents and emergency change requests to ensure rapid resolution of issues and maximize systems availability, performance, and security compliance. We also participate in IT change management processes, including Infrastructure Change Control Board (ICCB) and Architecture Review Board (ARB) for network architecture and design changes by providing presentations (e.g., briefings and white papers) for review and approval by the relevant governance boards. We communicate project and technical risks to leadership and manage with mitigation plans, alternative options, and mission impact assessments.

Ashburn's success is built on strong, lasting relationships. Much of our business is in the Commonwealth of Virginia, allowing us to react quickly and provide JMU with experienced people who live locally. Ashburn is staffed with IT, network, and security experts, holding a wide array of technical certifications (e.g., CCIE, CCNA, CISSP, ITIL, MCSE, Security+, Palo Alto, etc.). We take a vendor agnostic approach to technologies and recommend solutions based on client needs, integrating security into every service and solution, providing cost-effective, timely, and high-quality consulting and technical services to reduce service times, avoid inflated costs, reduce information security risk, and continually improve quality through automation and process improvement. The combination of our highly qualified staff and a flexible teaming approach provides the critical skills needed to deliver any project on time, on budget and beyond expectations. We look to our partner community as a key element of how we deliver our strategic business



Ashburn brings trusted, proven leadership to JMU, providing full lifecycle planning, design, development, implementation, and ongoing support for critical IT consulting and technical projects.



solutions. By seeking partners that share our client-centric values and use industry best practices, we create a seamless approach for solving challenges, ensuring quality service for JMU and delivery of the best possible solutions. The value we provide to our clients is directly related to our staff’s competency with evolving technologies, and our ability to anticipate changes and prevent risks from impacting operations. We facilitate continued training, new certifications, and professional association participation to maintain and expand our teams’ credentials and impact. This includes reimbursement for training, education, certifications, conferences, and other Continuing Professional Education credits required for many technical credentials. Investing in our people is one way we drive strategic initiatives related to supporting evolving technology; for example, Amazon Web Services (AWS), Azure, Zscaler, and Palo Alto certifications. Our employees rate our investment in their growth as a key factor in their job satisfaction, and our clients regularly recognize our employees as subject matter experts (SMEs) who are critical to their IT and cybersecurity modernization efforts and operations.

Highly Credentialed IT Staff

- 38 staff with network engineering certifications
- 28 staff with cybersecurity certifications
- CISSP (7 staff)
- PMP (5 staff)
- Security+ (5 staff)
- A+ (1 staff)
- CCNA (23 staff)
- Certified Scrum Master (2 staff)
- CEH (2 staff)
- GCIH (1 staff)
- AWS Cloud Architect Associate (4 staff)
- GCFA (1 staff)
- GNFA (1 staff)
- GREM (1 staff)
- Zscaler (2 staff)

Ashburn’s 20+ years of highly relevant experience providing IT staffing and consulting services to government clients and educational institutions enables us to support the College’s investment in technology by quickly and efficiently addressing skill gaps and short- and long-term resource needs. Ashburn’s 60+ full-time staff members bring expertise and field experience in large-scale environments, as well as backgrounds that encompass the full technology lifecycle: analysis, design, planning, development, implementation, and ongoing support. This, combined with ongoing training and certification in the latest technologies, allows us to engineer optimized, mission-focused client solutions and deliver proven capabilities. Our highly relevant experience includes continuous IT staffing support to American University since 2009, providing consulting for Network Architecture and Engineering Services for the Office of Information Technologies.

Ashburn Consulting currently supports American University with the following IT consulting services:

- Developing and presenting network architecture, policy, and equipment recommendations to AU Network Engineering group.
- On-going support services to ensure the stability of American University Enterprise Network. These services include support for the routing, switching, and IT security infrastructure configuration.
- Team direction, guidance, and high-level technical support for the Network Engineering group with regard to lifecycle AU network upgrades and architecture advancements. This support is to include device configuration and documentation services, as needed.

As demonstrated by our qualifications, capabilities, and experience as an organization, Ashburn Consulting is the high-value, low risk choice to provide the required IT Consulting Services to JMU. Ashburn is responsible; financially stable; has the necessary staff, equipment, ability, and experience to perform the work as stated in the specifications listed in this RFP; and continually demonstrates the ability to provide services that meet or exceed requirements and expectations.

Resumes of specific personnel to be assigned to perform the work, identified as Ashburn’s **JMU Steering Committee**, are included below.



Specific Personnel Resume: Robert Shields, Sr. Network Engineer & Account Manager

Name	Robert Shields
Education	B.S. Electrical Engineering, George Mason University, 1993
Yrs. Experience	27
Experience Overview	Mr. Shields is a seasoned Senior Network Engineer/Consultant with over 25 years of experience working within many types of enterprise and service provider network environments. He has worked on network designs and implementations for county governments, federal agencies, service providers, and commercial customers. He has worked on all phases of network deployments including network design, complex integrations within production environments, and continued operational support and troubleshooting. Over the past 13 years, he has worked with several MPLS-based networks supporting L2 and L3VPN technologies as well as with the latest Cisco data center technologies. Mr. Shields achieved CCIE status in August 2003 (CCIE #12096) and has maintained this status for over 18 years.
Citizenship	US Clearance Public Trust
Tools & Skills	<p><u>Network Vendors:</u> Cisco ASR (IOS-XR), Nexus (NX-OS), all types of Cisco routers & Switches (IOS & IOS-XE), Juniper routers & switches (JUNOS)</p> <p><u>Routing Protocols:</u> MP-iBGP, eBGP, iBGP, OSPFv2/3, EIGRP, ISIS, RIPv2</p> <p>Layer 3 – 4: TCP, UDP, IPv4/IPv6, L3VPN/VRFs, ICMP, IGMP, PIM, IPsec, LISP, VRRP, BFD, ICMP</p> <p><u>Layer 2:</u> VXLAN, ARP, Ethernet (IEEE 802.3), Trunking (IEEE 802.1Q), LCAP, PAgP, MPLS, PPP, STP, RSTP, L2TP, UDLD, NDP, EoMPLS</p> <p><u>Cisco Protocols/Technologies:</u> ACI, UCS Manager, vPC, GETVPN, OTV, IP SLA, CDP, VTP, VDC, SD-WAN</p> <p><u>Optical:</u> DWDM, CWDM, Cisco ONS 15454, Juniper BTI 7000 series</p>
Certifications	<p>Cisco Certified Internetworking Expert - CCIE #12096 – Routing and Switching (August 2003)</p> <p>Cisco Certified Specialist – Enterprise Core (April 2017)</p> <p>Palo Alto Networks Certified Network Security Administrator – PCNSA (April 2022)</p> <p>FortiNet Network Security Expert 3 – NSE 3 (January 2022)</p> <p>AWS Certified Solutions Architect – Associate (June 2023)</p> <p>AWS Certified Cloud Practitioner (June 2022)</p>
Additional Qualifications	<p><u>Other Hardware/Software Familiarity</u></p> <ul style="list-style-type: none"> • Firewalls: Palo Alto, Cisco ASA, Juniper SRX • F5 load-balancers: GTM & LTM • Infoblox • Solarwinds NPM, Live Action, Cisco ACS • VMWare vSphere • Network support for Storage Protocols: iSCSI, NFS, CIFS, NetApp SnapMirror
Work History, Experience & Accomplishments	
Senior Network Engineer	July 2007 – Present
<p><i>Ashburn Consulting, LLC (AC)</i></p> <p><i>Fairfax County Government (MCG) and Montgomery County Government (MCG)</i></p>	

- Lead engineer for new MPLS L3VPN for Montgomery County. Wrote design document, developed configurations, and deployed into 12 Hub sites. This also including interconnectivity to the legacy network and cut-over deployment strategy that migrated edge sites off EIGRP and over to eBGP. Currently over 440 sites have been cut-over to this new network out of the 600+ sites on the network. Current project includes designing new data centers for the existing data center as well as at Equinix for a hybrid cloud solution to achieve business continuity goals. Technology changes will include VXLAN to extend IP subnet between sites, Perimeter edge redesign, and new edge firewalls.
- Lead senior network engineer at Fairfax County Government (FCG) for over 14 years providing network design, implementation, and operations support. Current projects include extending MPLS to the edge routers, deploying Cisco VXLAN NX-OS mode solution in our primary data center, upgrading our DWDM Cisco ONS platform to Juniper BTI 7200 series, planning for an upcoming move of our primary Data Center to Equinix, and performing daily network engineering tasks. Also spec'ing new Cisco hardware upgrades at our main data center site for core router replacements and external switches upgrades to 10GigE capable switches.
- Implemented a new Cisco Nexus 9300 series Spine and Leaf architecture running VXLAN in NX-OS mode. This new data center design runs BGP-EVPN to support dynamic routing and MAC address learning to advertise the VXLAN information. The new data center architecture was stood up in parallel with the existing data center for migration purposes, with 802.1Q vPC connectivity to the older Nexus 7010 switches. In 2020 we expended this architecture at our main data center site to our Equinix site using Multi-site VXLAN. This allows VLANs/VXLANS to be extended between data centers.
- Completed the tech refresh project for the FCG WAN called the Institutional network (I-Net). The MPLS L3VPN backbone network was upgraded from Cisco 6500 series to Cisco ASR 9000 series routers. Internet routers were also upgraded from Cisco 7206VXR to 10-GigE capable ASR routers.
- Re-architecture of the FCG data center to support the server teams' transition to a virtualized infrastructure. Re-designed included going to a 10Gigabit Ethernet infrastructure using Cisco Nexus 7010s as core data center switches. Nexus 5500s and 2000 series fabric extenders also deployed, as well as continuing to support existing 6509s. Installation and configuration setup for Cisco UCS fabric interconnects. Juniper SRX 5800 series firewalls installed to support internal server farm DMZs. F5 GTM and LTMs added for global and local load-balancing functionality. Internal Server Farm firewall architecture is also being redefined as trusted zones and DMZs are being collapsed into common VMware ESX hosts, with separate NICs for external DMZ switch connectivity. HP Virtual Connect (HP-VC) Flex-10 Ethernet modules were also interconnected and configured for over 13 HP c7000 blade server chassis/enclosures supporting SAP for the County. All VLANs were created as Internal DMZs with tiered App/Portal and DB separation.
- Maintain Internet edge routing architecture for the County including receiving full Internet routing tables from three different ISP and performing load-sharing across Internet circuits and bandwidth available for each connection. Solution is fully redundant and tolerant to any single point of failure.
- Designed and implemented network and security components of the new Public Safety and Transportation and Operations Center (PSTOC) building for Fairfax County. This included a build out of Cisco 6509s to support a collapsed core/distribution with L3 routing to the closet 6509s. Integration to the I-Net included a VRF meet-me point firewall design where the 911 CAD network was secured within its own VRF and security policy. Firewall connectivity to the video network includes receiving multicast VDOT traffic streams. Anycast RP's with MSDP were utilized along with PIM-SM for multicast support.
- Worked with the voice group to provide I-Net services for the Avaya VoIP solution. VRFs were created to segregate and protect the different VLAN types that the Avaya equipment requires.

IP SLA configured to ensure network specs for voice traffic are met. QoS configured to support voice traffic across the I-Net backbone.

- Other responsibilities as an employee of Ashburn Consulting included providing oversight of network engineers on other projects, mentoring engineers, interviewing new candidates, participating in business development responses and meetings, providing first-in consulting for new projects/customers, etc.

Senior Network Engineer

August 2002 – July 2007

General Dynamics (GD) / Signal Corp.

U.S. Patent and Trademark Office (USPTO)

- Lead engineer in the design and deployment of a new IP data infrastructure for Fairfax County Government (FCG) referred to as the Institutional Network (I-Net). Despite FCG being an enterprise network, it was decided to utilize what was service provider technology at the time, to provide route segregation for specific agencies and applications that had stringent security requirements. Service provider technologies included deploying a Dense Wavelength Division Multiplexing (DWDM) core combined with MPLS L3VPN technology deployed throughout the I-Net routing architecture so each site could support Virtual Routing and Forwarding (VRF) tables. These technologies were deployed over a fiber network that comprised of a ring between core/distribution sites, and fiber between distributions sites to the remote sites. Critical edge sites were designed for I-Net redundancy via a Verizon TLS circuit which supported rerouting between the OSPF and the main FCG VRF routing domain. Today over 40 VRFs are supported on the network at over 200 sites. VRF technology was also extended across the Cox Communication cable-modem network to FCG sites by making redundant interconnects between these two MPLS networks. This allowed legacy ISDN and ATM T1 sites that did not have I-Net fiber to be able to be migrated to common technology with increased bandwidth.
- Once the I-Net with VRF technology was rolled-out, it became apparent the despite many networks having been isolated within a VRF, many common-services such as DNS, NTP, SNMP, etc. were still required from the main FCG network. A VRF Firewall “Meet-me Point” architecture was designed and deployed to allow VRFs to reach specific FCG services.
- Implementation of the entire network detailed design and redundancy testing was successful and completed within a year’s timeframe. The following Cisco Systems’ platforms were used within the different levels of the design, ONS 15454 for DWDM core, 6509-E with SUP720s for routing core and distribution, 3845 routers for the edge, and Firewall Switch Modules (FWSMs) for the Meet-me point.
- Other tasks that were performed for Fairfax County included redesigning the network core at the Government Center to eliminate any single points of failure, upgrading 6509s to SUP720 including migrating from CatOS to IOS, and implementing a multi-homed Internet solution using BGP.
- Initial years at GD were spent working for the U.S. Patent and Trademark Office (USPTO) and was responsible for designing and maintain perimeter and partner networks including all Internet router and DMZ switches. Also support the internal network as we transition from Crystal City to Alexandria. Supported Nortel 8600 Ethernet Routing Switches in the campus and network core, running OSPF and SMLT, and many different Cisco lower-end switches in the perimeter networks.

Senior Network Engineer / Consultant

June 2000 – August 2002

Greenwich Technology Partners (GTP)

- Designed a core IP transport infrastructure for Global Crossing’s new Financial Markets Extranet. This network was being designed for their customer, SWIFT, as the wire-transfer network for all major banks. The overall design included offering

financial application services over Closed User Groups (CUG). CUG functionality was achieved using both native IPv4 routing functionality with IPSec authenticated tunnels as well as simultaneously supporting the RFC 2547bis (BGP/MPLS VPN-IPv4) forwarding implementation.

- Responsibilities for this project included the designing and validation testing of the core of the network, utilizing Juniper M40 and M20 routers. Hierarchical design included ISIS as the IGP, using iBGP with route reflectors, MPLS for both traffic engineering and RFC2547 support, and QoS classification/queuing with WRED. A final Detailed Design documents including router configuration and testing results was completed for the customer.
- Authored *MPLS Migration Plan* document while consulting for UUNet/WorldCom's Traffic Engineering division. This required having a complete understanding of both the existing ATM network and the new MPLS network that was being deployed with AS701. Planning considerations involved tuning interconnect ISIS metrics between the two networks to incrementally move IP traffic from the ATM network backbone and onto the new MPLS backbone. Traffic engineering analysis was performed to calculate how much traffic was expected to transit the new network backbone during each of these metric tuning phases. Planning also included strategically selecting which POPs would be sequentially migrated based on immediate congestion needs, optimal throughput, as well as effective use of network bandwidth resources. While performing this task, traffic-engineering recommendations were also often made to Network Operations to resolving immediate congestion points on the existing ATM network.

Senior Internetworking Engineer

October 1999 – June 2000

Teleglobe Business Solutions

Network Consultant

May 1999 – October 2000

Network Architecture Implementation & Support

Network Engineer

May 1998 – May 1999

Network Evolutions, Inc.

Network Consultant

April 1995 – May 1998

Litton PRC, Inc.

Specific Personnel Resume: Daniel Veloce, Sr. Cybersecurity, Network, & System Infrastructure Architect

Name	Daniel Veloce		
Education	MS, Chemical Engineering, The Johns Hopkins University		
Yrs. Experience	23		
Experience Overview	<ul style="list-style-type: none"> Broad experience with the architecture, design, security, implementation, configuration, and support of enterprise technology infrastructure Strong executive, customer service, consultation, written and verbal communication, and project management skills 		
Citizenship	USA	Clearance	CBP, DHS Public Trust
Tools & Skills	<p><i>Operating Systems/Environments & Platforms</i></p> <ul style="list-style-type: none"> Windows (Workstation through 10 and Server through 2019), Sun Solaris, Red Hat Linux, CentOS, FreeBSD, Mac OS, Nortel/Avaya/Extreme CLI, ArubaOS, Cisco IOS/XE/XR/NXOS, Arista EOS, Cisco PIX/ASA, JunOS, Checkpoint NGX, Palo Alto PANOS, Ironport Web Security, F5 BigIP, Backtrack, Kali Linux Advanced knowledge of, and experience with, commonly deployed enterprise network infrastructure. This experience includes complex access list, prefix list, route policy, VRF, MPLS, and netflow configuration via the command line interface: Cisco 7600, 7500, 7200, ASR and ISR series routers, Nexus 3k, 5k, 7k, and 9k switches, Catalyst 9k, 680x, 650x, 450x, 3850, 3650, 2960x, and LightStream series (ATM) switches, ASA & FWSM/ASAM firewalls Arista 73xx, 75xx data center switching, and DANZ on various platforms Palo Alto Panorama & firewalls including PA-2xx, 5xx, 8xx, 2xxx, 3xxx, 5xxx, and 7xxx, VM series, software versions 4.x-10.x Juniper J, M, and MX series routers, ISG & SRX series firewalls, and the Pulse SSL VPN appliance Nutanix AOS & AHV, VMWare ESXi & NSX-T, Azure and AWS Cloud Services <p><i>Utilities & Applications</i></p> <p>Wireshark Network Analyzer, Checkpoint SmartConsole suite, Juniper NSM, Finisar Surveyor, NetIQ QCheck, IXIA Chariot, OPNET (Riverbed) AppResponse Expert, Avaya Device Manager, HP OpenView, Ipswitch WhatsUpGold, Solar Winds Orion & Network Configuration Manager, Infoblox DHCP/DNS, Nortel Infoblox IPAM/DNS/DHCP Appliances, Microsoft IIS, Microsoft SQL, Microsoft DNS & DHCP, Microsoft NPS, Radiator RADIUS server, Cisco ACS & ISE, Microsoft Visual Studio, Microsoft Visio, Apache Web Server, BIND DNS, PostgreSQL, MySQL, Multi-router traffic grapher (MRTG), Cacti, Flow-tools (Netflow collection agent), Router Audit Tool (RAT), Nmap security scanner, Tenable Nessus scanning system, GlobalProtect VPN, NetMotion mobility VPN, Squid Proxy, PerfSonar</p> <p><i>Programming/Scripting Languages</i></p> <p>Extensive development experience with Visual Basic, Visual Basic Script, Javascript, ASP, .NET</p> <p>General experience with PHP, C++, PERL, BASH shell scripting</p>		
Certifications	Zscaler (ZCSE, ZCSP, ZSC), Palo Alto (Prisma Cloud Fundamentals, ACE)		



Training	Various vendor led training (Cisco, Juniper, Arista, Palo Alto, Extreme/Avaya/Nortel, Zscaler, OPNET/Riverbed)
Work History, Experience & Accomplishments	
Ashburn Consulting LLC, October 2008 – Present	
<i>Director, General</i>	
<ul style="list-style-type: none"> • Manage consulting resources and customer relationships within several business sectors, including Federal, State and Local Government, Education, and Commercial entities • In addition to technical consulting roles outlined in section below, help to formulate strategic direction, staff organization, budget, and executive decisions for clients and internally within Ashburn Consulting • Assist with forming and maintaining vendor partnerships, general coordination of duties within Ashburn Consulting, resource screening, and hiring 	
<i>Director, State/Local Government & Education (SLED)</i>	
<ul style="list-style-type: none"> • Manage consulting resources and customer relationships within the SLED business sector, including Fairfax County INET (Government & Schools), Arlington County Government, American University OIT & Law School, Fairfax Water, City of Fairfax, NCRNet, and the Virginia Army National Guard • Provide expert level technical and project management support and guidance for over twenty staff augmentation engineering resources distributed within respective SLED client environments, including traditional enterprise LAN/MAN network environments, secure mobility deployments, and Public Safety & SCADA networks • Serve as de facto technical team lead within customer account engineering departments to provide leadership and guidance in the completion of major technical initiatives, to include several projects to provide geodiverse, active/active Internet border security and network redundancy, redundant data center and MPLS core networking infrastructure design and zero downtime implementation, full scale network and network security assessments and remediation, network and security architecture & engineering services, and mobile device management policy and deployment • Act as a client representative in interactions with product vendors, to include the precise communication of technical issues & functionality requests in order to promptly accomplish client technology solutions; this support includes advanced debugging of technical issues, and problem and/or feature request escalation within the vendor customer support organization up to the executive management level 	
<i>Senior Network Consulting Engineer</i>	
<ul style="list-style-type: none"> • Provided advanced level network, security, and system engineering advice & support to several clients in a range of roles, including full-time, on-site staff augmentation, part time ongoing, and project-based support • Designed, tested, and deployed a dynamic routing architecture to be deployed for inter-VRF redundancy between geographically distinct failover sites to ensure maximum uptime in the event of a single site catastrophic failure • Identified & isolated several deficiencies in the AT&T cellular data network and provided extensive information on these issues to AT&T cell network engineering in support of solutions to be deployed nationwide • Provided expert level systems & networking support to a Public Safety computer aided dispatch rollout. Support included the design & deployment of a multi-site, redundant mobility VPN solution, CAD software fault analysis, and scripting of fixes to several issues spanning various elements of the deployment • Acted as a key advisor in the data center networking & security design process for several clients, including helping to identify & specify the architectures and equipment to be deployed 	

- Served as a wireless network architect for several clients, including several large scale indoor and outdoor lightweight Cisco AP deployments
- Led efforts to organize documentation and to bring systems into compliance in support of a client's Cybertrust SMP security certification

December 2007 – October 2008

American University

Office of Information Technology

William Fleitz, wfleitz@american.edu, 202-885-6022

Network Team Lead

- Managed a staff of three network engineers in support of the 15,000 user University network. Support covered all aspects of network engineering, including network architecture design, deployment, operations, monitoring, and reporting.
- Led a major redesign of the University core network given several constraints, which included fiber availability limitations, sub-optimal budget, and an existing, universal Cisco NAC appliance deployment
- Planned and executed a phased migration/conversion of the University's nearly 200 Cisco autonomous access points to a new lightweight design to aid with roaming issues related the NAC infrastructure
- Designed, coordinated, and deployed the initial connection of the University network to the high speed, research oriented Internet2 network. This work included the design and implementation of a PIM-SM multicast IP network domain for the University, including the formation of a multicast peering relationship with the Internet 2 consortium via MBGP and MSDP

August 1999 – December 2007

George Mason University

Information Technology Unit

David Robertson

Senior Network Engineer

- Led efforts in the deployment of a Nessus-based vulnerability scanning solution. Project covered all aspects of implementation, including the creation of a scanning policy for the University
- Led major, high profile network security project (with a team of 3 engineers and 20 Resident Technicians) to help mitigate worm epidemics within the 5000+ node Residence Hall Network - MUST (Mason Update and Scanning Technology). Doubled as chief programmer and network architect for project. Presented solution and findings to several IT groups and conferences. Over its lifespan, MUST saved the University at least \$50,000 per year (when compared with similar retail solution) in software licensing fees
- Received several Outstanding Achievement Awards for accomplishments such as re-architecting the ATM network to resolve long standing operational issues with VTEL H.321 videoconferencing units and identifying/taking network-based measures to counter several worm attacks including the Code Red, Slammer, Blaster, and Welchia worms
- Took lead role in re-architecting the GMU network to add redundancy throughout the core, while reducing the overall network complexity by utilizing a three-tiered model and modular network design principles
- Led several network upgrade projects: GMU Internet Routers, Residence Halls, Science & Technology Building Core/Aggregation, Student Union I, Commerce Complex, and Innovation Hall



Specific Personnel Resume: James Burris, Sr. Network Security Engineer / Program Manager

Name	James Burris		
Education	M.S. Telecommunications Management and a B.S. Finance		
Yrs. Experience	25 years		
Experience Overview	<p>James Burris has 24 years of IT consulting experience. After completing his graduate studies at the University of Maryland – University College, he began his technical and management consulting career working as a Senior IT Consultant for Booz Allen and Hamilton’s high profile Government clients. After receiving valuable management consulting experience, Mr. Burris then pursued a technical path working as a Network and Security Consultant supporting UUNET/Worldcom/MCI’s large fortune 500 customer base providing Consultative and Implementation services to a wide variety of clients during the Internet boom.</p> <p>Mr. Burris has also worked for General Dynamics as a team lead that provided Network & Security services to the Fairfax County Government. From 2006 to 2012, he was one of the distinguished network engineers to undertake the overall network design, integration, and management support of Fairfax County’s carrier-class DWDM/MPLS INET network. Mr. Burris is currently the President and CEO of Ashburn Consulting, LLC and has exceptional management skills and is a recognized leader in his industry.</p>		
Citizenship	US	Clearance	Secret
Certifications	Check Point Certified Systems Instructor NG, 4.1, 4.0 (CCSI) Check Point Certified Systems Engineer NG, 4.1, 4.0, 3.0 (CCSA/CCSE) Cisco Certified Network Associate (CCNA) Cisco Certified Network Professional (CCNP) – Advanced Routing RSA Secure ID/Ace Server		
Work History, Experience & Accomplishments			
Subject Matter Expert – Program Manager		September 2005 – Present	
<p><i>Fairfax County Government, Airbus North America, Cambridge Associates</i></p> <ul style="list-style-type: none"> • Provided program management and subject matter expert advice on the design, integration, and migration from a Nutanix hyperconverged solution to a VMWARE NSX geo-diverse active/active datacenter strategy for the Fairfax County Government. • Provided program management and subject matter expert advice on the design, integration, and implementation services of the Nutanix/Multi-site Cisco VXLAN infrastructure supporting a geo-diverse active/active datacenter strategy for the Fairfax County Government. • Managed day to day operations of the Ashburn Consulting network and security teams with overall responsibility of supporting the Airbus Americas, Canada and Mexico based offices, including but not limited to two datacenters in Virginia. • Provided program management and subject matter expert advice on the Technology Assessment and IT services strategic plan for Cambridge Associates. The output of the assessment included setting the 3 year strategic direction for the IT organization and included but not limited to migrating all US and International sites to a global, redundant MPLS network, creating the high level design of an active-active fault tolerant geo-diverse datacenter, developing and executing IT processes to include Change and Process Management, Service Delivery and proactive NOC services and finally setting the path towards Unified Communication to meet the business needs and objectives. 			

- Provided program management and subject matter expert advice on the design, integration, and implementation services of the SAP/ERP financial system for the Fairfax County Government. The solution included the use of the Cisco Nexus 7010 (Core), Nexus 5548, and Juniper SRX firewalls to create separate DMZ areas for the Test/Development, QA and Production Systems as well as to segment the Web/App tier from the core database tier
- Provided program management and subject matter expert advice on the design, integration, and implementation services of the mobile solution for the new 911 system for the Fairfax County Public Safety Departments. The solution included the use of Netmotion to provide for IP Mobility, BGP to provide for the ISP carrier redundancy, and Cisco Firewall Services Module for the secure DMZ connectivity into the backend 911 system.
- Provided overall program management and subject matter expert advice to the National Capital Region (NCRNet) CAD2CAD project which allows the 911 Systems of Fairfax, Arlington, and Alexandria to communication across a private fiber optic network to share unit status for the Fire and Rescue departments.
- Provided program management and subject matter expert advice on the design, integration, and implementation services of the Cisco NEXUS 1000V and 5000 series switches to conduct a complete redesign of the Fairfax County Datacenter to include VMWare, Netapp, DataDomain and Netbackup services.
- Provided a detailed SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats) for the Arlington County Government executive management team in order to align their vision and strengths as an organization to realistic goals.
- Provided overall project management and senior level engineering support of the design, installation, and integration of the Fairfax County Government Institutional Network (INET) utilizing DWDM and MPLS technologies
 - CISCO ONS 15454 Chassis utilizing DWDM
 - Cisco Catalyst 6509E Chassis utilizing MPLS, BGP and OSPF technologies
 - Developed overall migration strategy to transition nearly 190 sites from managed ATM service to INET
- Provided overall project management and senior level leadership on the following initiatives:
 - Integration of backup TLS service between all mission critical INET sites
 - Tandberg Videoconferencing implementation over INET
 - Design, implementation, and integration of the Firewall Services Module for the VRF Meet-Me-Point
 - Integration of the NCR interconnection to the Fairfax County INET; Transition of the Fairfax County Videoconferencing system from private frame relay over to the NCR
 - 802.11 wireless efforts to support Mobile CAD at each of the Public Safety locations
- Manage day to day operations of the General Dynamics network security team with overall responsibility of supporting the Fairfax County Department of Information Technology.
- Entrusted advisor to the Chief Information Security Officer and Director of Information Technology at the Fairfax County Government Center
- Managed multi projects to include but not limited to the following:
 - Migration of both internal and external DNS servers to Solaris 10
 - Design, installation, and integration of the Public Safety Perimeter Architecture
 - Migration of various segments of the network from EIGRP to OSPF
 - Installation and integration support for the Juniper SSL VPN appliance

Team Lead – Senior Network Systems Architect

June 2003 – September 2005

General Dynamics

Fairfax County Government

- Lead Network System Architect with overall responsibility of transitioning the Fairfax County Government Network perimeter to industry best practice Cisco SAFE Blueprint. Consulting solutions emphasized high-availability, load balancing, and multi layered defense.
- Developed in depth defense strategies and security policies to protect the Fairfax County Government enterprise network and data.
- Designed, installed, and integrated multiple segments of the Fairfax County Network Architecture to include but not limited to the Alternate Emergency Operations Center (AEOC), segmentation of the Public Access Network from the Enterprise Core, Research and Development Network and the Internal Server Farm.
- Designed an innovative high availability and load balancing cluster solution for the Fairfax County E-Commerce DMZ segment utilizing the Cisco Content Services Switch, Cisco Catalyst 3550's and Cisco PIX firewalls.
- Identified as a lead Senior Network Engineer in the overall design of the Fairfax County Government Institutional Network (INET) utilizing DWDM and Gigabit Ethernet technologies.
- Designed and implemented multiple layers of Cisco Intrusion Detection Systems and ensured that all network events and alarms were sent to Netforensics correlation engine.
- Designed and implemented secure wireless access into the Fairfax County Government enterprise network utilizing the Cisco Aironet 1200's, Cisco Secure Access Control Server (ACS), and Cisco Catalyst 6500 series switches.
- Assisted with the overall layout and transition of the Fairfax County enterprise network to RFC 1918 Private IP address schema.
- Third-tier escalation for troubleshooting and resolving day to day issues concerning the enterprise network.

Senior Network Consultant**December 1999 – June 2003***UUNET Technologies INC*

- Conducted revenue generating network, application, and security consulting services for mission critical MCI Worldcom and UUNET customers.
- Traveled nationwide performing over 100 firewall integrations using Check Point Firewall-1 Solaris/NT, Cisco Pix firewalls, Nokia, and industry standard security best practices.
- Configured BGP and HSRP on customers and UUNET backbone Cisco routers for multi-homed, diverse, shadow, and dual ISP connections.
- Designed and implemented a high availability disaster recovery colocation hot site for 99.9% uptime.
- Implemented access control lists (ACLs) and rerouted denial-of-service (DOS) traffic on UUNET backbone routers.
- Successfully taught Check Point Firewall-1 CCSA and CCSE classes to customers on Solaris/NT.
- Setup multi-site fully meshed and remote user IPSEC VPN's using Check Point FW-1, Secureremote, Secureclient, Cisco Pix, Cisco Secure VPN.
- Assisted mission critical firewall customers in configuring, installing, and troubleshooting PKI based IPSEC VPN's.
- Extensive experience in troubleshooting enterprise firewalls and multi-site meshed as well as hub and spoke VPN networks.
- Performed extensive Microsoft Network troubleshooting in a firewall VPN and WAN environment.
- Investigated and tracked security breaches, hacker attacks, and denial of service incidents.
- Established strategic alliances with channel vendors and resellers.
- Assisted consultants in resolving advanced firewall and network issues.

Associate

March 1988 – December 1999

Booz-Allen and Hamilton

NASA

- Managed day to day operations of the network engineering staff at Booz-Allen and Hamilton.
- Responsible for deliverable efforts and overall project management of the Network requirements, Network Design, and Capacity planning for the NASA Wide Area Network in support the EOS Mission Set.
- Briefed top-level administrators within NASA and NASDA on the specific network requirements for various Earth Science Missions and the planned Wide Area Network support of those requirements.
- Assisted in marketing efforts of the Booz-Allen End-to-End Architecture Model (BEAM) toolset to other government agencies.
- Provided guidance and technical support for proposal efforts.
- Assisted in the overall design and maintenance of a SQL Server database to store NASA's Wide Area Network requirements.
- Provided guidance with the internal development of the Booz-Allen End-to-End Architecture Model analysis toolset.
- Responsible for the generation of network requirements for the entire NASA EOS mission set.
- Trained a group of network engineers on advanced networking technologies and how it would integrate within the BEAM toolset.
- Briefed NASA personnel on various plans to meet the increase in network requirements for the future EOS missions of LandSAT7, TRMM, EO-1, QuikSCAT, Terra, SAGE-III, Aqua, etc.
- Assisted in budgetary efforts and the charge back of Wide Area Network usage to the various departments within NASA.



Specific Personnel Resume: Brian Kwitchoff, Sr. Network Architect & Engineer

Name	Brian Kwitchoff		
Education	BA, International Business, Illinois State University (1994)		
Yrs. Experience	22		
Experience Overview	18 years of Large Enterprise Network experience in WAN development, architecture, and engineering. Lead virtualization and cloud projects that enhanced performance and shrunk the network’s infrastructure footprint, resulting in reduced total cost of ownership and improved service to end users. Experience designing and deploying COLO (Equinix) data center cages on the east and west coast.		
Citizenship	USA	Clearance	Active DHS Suitability/EOD
Tools & Skills	Equinix Colo, Equinix Cage Cross Connect, Cisco ACI, Cisco APIC, Cisco Nexus 9K, Cisco SD-WAN, Cisco ASA, AnyConnect VPN, DMVPN, Firewall, Routing/switching, Zscaler Private Access and Internet Access, Cloud Services (SCI, NetBond), Axis Network Cameras and server, AWS, Azure, Office365, CA Spectrum, Remedy, BlueCoat Proxy, F5, IPSEC, internet-based VPN, Remote Access VPN, LAN/WAN connectivity/admin, Managed & Hosted Services, MySQL, PHP, McAfee, Network and System Security, HSEN/OneNet WAN architecture, design, engineering, Palo Alto FW, Reverse/FWD proxy, ServiceNow, System Admin, Site-to-VPN, Cisco & Juniper VPN		
Certifications	CCNP (Recertified 2021, #431564181716IRWH) CCNA (Recertified 2021) ITIL Foundation Certified (Cert # GR671404920BK)		
Training	<ul style="list-style-type: none"> Implementing Cisco SD-WAN Solutions (ENSDWI) v2.0 Implementing Automation for Cisco Enterprise Solutions (ENAIUI) v1.2 		
Additional Qualifications	Operational Support; Maintenance and Upgrades; Infrastructure Management Services; Configuration Management; Network and Hardware Support; Tier 3 support; Backup and Recovery Management; Installation, Configuration, and Tuning; System Management; Firewalls; Operation and Maintenance Planning; Transformation Services; Continual Service Improvement; IT Infrastructure Optimization; Enterprise Application Integration; Gap Analysis and Benchmarking; Data Migration and Integration; Acquisition Support; Risk Assessment; Open Source Integration; Enterprise Data Management; Collaboration Tools; Business Process Reengineering; Test and Evaluation Services; Financial Analysis; Feasibility Studies; Requirements Analysis; System Design Alternative (SDA) Studies; Systems Engineering; Architecture Validation and Verification		
Work History, Experience & Accomplishments			
Sr. Network Architect & Engineer			06/2013-Present
Ashburn Consulting LLC DHS HSEN/OneNet Engineering			
<ul style="list-style-type: none"> Senior Network Engineer for DHS HSEN responsible for the architecture, design, and engineering of the DHS WAN and TIC for cross- component and external communication/data exchange. Lead engineer that managed and expanded the DHS Remote Access VPN capacity during the COVID-19 pandemic. Increased overall Anyconnect VPN capacity from 80,000 to 120,000 sessions. Creates designs for interconnections and Equinix cage cross connects with AWS and Azure as well as other commercial telco and government CSPs Heavily involved in the initial spec out and proposal and subsequent setup of the DHS HSEN Equinix Ashburn and San Jose cage. Primary lead on the overall cable plan and OOB management access that will allow for 100% remote management of equipment as well as remote power management. 			

Similar level of involvement in the new DHS West Coast San Jose Equinix colo cage that is being setup.

- Lead engineer for the migration of the DHS TIC Extranet from the DHS DC2 data center to the DHS Equinix Ashburn Colo cage which involved the seamless migration of 500+ IPSEC tunnels to external non-DHS agencies.
- Researched and procured and deployed into production the AXIS security camera system within the San Jose DCAP2 Equinix Colo cage. Fine-tuned the camera server alerting zones and coordinated with the DHS NOC to take over the monitoring of the camera alerts.
- Zscaler – Engineered the network placement of the Zscaler Private Access virtual machines in order to assure optimal access to all internal network resources. Built path for internal computers to properly reach the Zscaler Internet Access Cloud nodes.
- Lead engineer for the DHS DC1/DC2 10Gb MPLS circuits and routers. Migrated MPLS circuit routers from Cisco 7600 series routers to Cisco ASR1006X routers.
- Lead escalation engineer for TIC Extranet related issues such as TSA Secure Flight, CBP Trade MQ and all the hundreds of other government agency and commercial extranet connections that HSEN built and maintain for DHS components.
- Lead engineer that meets with DHS Components to discuss new projects and understand requirements to provide customer with best and most cost-effective and reliable solution that fits within existing HSEN PEP or RTIC design parameters.
- Lead engineer that setup the DHS integration of the CISA/US Cert Einstein Internet monitoring hardware for monitoring of the DHS Internet circuits.
- Primary developer and admin of the DHS TIC VPN (TVPN) Intranet on-line MySQL database, with PHP frontend, that is the central repository of all DHS TIC Extranet VPN tunnel connections to other government agencies and commercial partners. This database is used on a daily basis with over 400 users and has been reliably serving DHS since 2005 at the absolute lowest cost of ownership.
- Proactively monitors the network for potential issues before the issues affect production, utilizing IP SLA capabilities to ensure best network performance and uptime.
- Developed HSEN modernization design proposal for the PEP and ECAP and the future Equinix Colo Data Centers that will utilize new network technology, shrinking the infrastructure footprint by virtualizing some functionality and adding automation by way of SDN/SD- WAN.
- Provides engineering consultation support for the initial deployment of Microsoft Azure, cloud-based Office365 service within DHS.
- Partners closely with network equipment vendors to ensure engineered solutions are tested and optimally deployed per vendor recommendations. Analyze new, proposed solutions from vendors and make recommendations to management.
- Designs, engineers, and provides level-4 troubleshooting support of the DHS active/active TIC internet gateways and the DHS HSEN WAN.
- Supports the HSEN Strategic planning activities as they related to transformation and modernization of the HSEN network.
- ARB (Architecture Review Board) voting member that ensures changes and solutions being implemented align with HSEN WAN and TIC architecture, design and security guidelines, as well as reviewing for configuration accuracy and feasibility. Makes recommendations for approval or denial.
- Engineered uplift of DHS TIC Firewalls and extranet ASR Routers to handle 2x10Gb port channel requirements and to provide next
- Designed and engineered the integration of Cisco Nexus devices into the core of the DHS TIC network.
- Created detailed network diagrams and assisted in the maintaining of the HSEN SharePoint document repository as well as the updating of SOP's and Detailed Design Documents.

- Provides extensive support in the engineering of the new DHS MTIPS+ internet Gateways with Verizon managed services teams.
- Led extensive design and engineering of the DHS TIC extranet and remote access VPN gateways that supports thousands of concurrent connections and uses L2L IPsec tunnels and RSA and PIV card-based user authentication via Cisco AnyConnect client.
- Deployed and maintain Next Generation Palo Alto Firewall application layer services.
- Led and managed extensive work with MPLS and internet service providers (Verizon and AT&T) to migrate from OC12 and OC48 POS circuits to 10Gig Ethernet MPLS in a large data center environment and to design fully redundant routing designs that ensure the highest level of network availability.
- Completed IPv6 pilot and testing utilizing DHS HQ field sites and HSEN core infrastructure.
- Worked with Verizon to design and deploy a private wireless cellular network (aka "Private Wireless Gateway") for DHS to use for its GFE Smartphones to secure the devices from the open internet.
- Designed and engineered the migration of SUP720 modules to SUP2T modules as well as the other accompanying modules. Handled entire Cisco 6500 chassis swap upgrades as well as Cisco ASR1006 module upgrades.
- 9+ years' relevant network development, architecture, and engineering experience for the DHS HSEN WAN.

Sr. Network Engineer**08/2008-05/2013**

ManageNET Inc.

DHS OneNet Engineering

- As a Sr. Network Engineer for DHS OneNet, designed and deployed the geographically redundant extranet VPN solution with more than 2,000 external connections, to which all of DHS migrated to part of the Government-wide TIC OMB mandate.
- Migrated DHS' TIC extranet firewalls from Cisco Firewall Service Modules to Palo Alto layer-7 application inspection firewalls.
- Migrated DHS' remote access telecommuter VPN endpoints from Cisco IPSEC-SPA modules to Cisco ASA 5580 VPN endpoints.
- Setup multiple DHS components with Cisco AnyConnect VPN client access for Windows 7 laptops as well as for Apple iPhone and Android devices.
- Relied upon to provide Technical Expert level tier-4 escalation troubleshooting services for the DHS enterprise network WAN, LAN, Remote Access VPN, Extranet VPN, and DMZ infrastructure.
- Engineered and deployed the DHS Data Center 3-tier Enterprise Application (DMZ) environment that is now part of the DHS TIC.
- In-depth knowledge and experience with DHS WAN designs, both legacy and next generation.
- Extensive work with MPLS and internet service providers (Verizon, Sprint, and AT&T) to bring in OC-48's and OC-12's into a large data center environment and to design fully redundant routing designs that ensure the highest level of network availability.
- Designed and implemented the network path for replication between the two DHS Data Centers.
- One of a few key engineers responsible for providing critical engineering and consultation review services for new DHS WAN designs, TIC related application hosting projects, and extranet VPN connections.
- Thorough knowledge of FISMA-mandated FIPS 140-2 and how it impacts a large enterprise WAN encryption environment.
- Extensive hands-on experience with BGP, EIGRP, and OSPF routing protocols, both design and troubleshooting.
- Designed and implemented the initial roll-out of Juniper SSL VPN appliances at the DHS TIC.

- Designed and implemented initial roll-out of Palo Alto Layer-7 Firewalls and Panorama management appliances in the DHS TIC.
- Interfaced with different Government agencies/external entities to design and establish new TIC-related, remote-access VPN, and extranet VPN based connections to DHS resources.
- Design, test, and implementation of multiple Cisco-based VPN Infrastructures that uses Cisco's high-end 7600 and 6500 series chassis with IPSEC Service Port Adapter Modules, Firewall Services Modules, Network Analysis Modules, ACE Load-Balancer Modules, Content Services Modules and Supervisor Engine 720 Modules.

Sr. Network Engineer**07/2004-07/2008**

ManageNET Inc.

CBP Network Engineering

- Relied upon to provide Technical Expert level tier-4 escalation troubleshooting services for the CBP enterprise network WAN, LAN, Remote Access VPN, Extranet VPN, and DMZ infrastructure.
- Extensive troubleshooting experience with IPSEC VPN gained via coordination of CBP's Trade Community's migration from legacy dial-up to internet based IPSEC VPN.
- Engineered and implemented the CBP Secure Freight Initiative global WAN Extranet environment.
- Created a PHP-based website for internal CBP that serves as the central database repository for trade partners that enroll in the CBP Trade VPN. Created a PHP-based web interface for monitoring and troubleshooting VPN connections that come into the Cisco routers via an automated cross-reference process between Cisco crypto-command output and the trade database repository. Greatly improved the ability for support personnel to quickly determine if a trade partner is connected.

Sr. Network Analyst**03/2000-07/2004**

Edward Hines Lumber Co.,

- In charge of deploying and administering Cisco routers and switches for branch locations. Primarily worked with Cisco 7200, 2600, and 1700 series routers, along with the 2900 and 3500 series switches.
- Deeply involved in deploying and administering the RedHat Linux servers that run the company's Progress Database-based ERP system. Migrated ERP system away from dual \$500,000 Unisys servers that ran UnixWare to a sub \$100,000 Dell PowerEdge server/EMC Clarion solution running RedHat Linux.
- Deployed and administered company's initial foray into the realm of wireless 802.11b networking. Migrated wireless infrastructure to the secure and robust 802.1x wireless standard that utilizes Active Directory and a certificate-based Radius server along with MS-CHAP PEAP authentication technology.
- Installed and configured CheckPoint NG Firewall/VPN. Created IPSEC-based CheckPoint SecureClient install package that was rolled out to all remote users. Researched, purchased, and set up the company's future VPN system which utilizes cutting-edge clientless SSL VPN technology and eliminates the administration overhead of maintaining static IPSEC VPN clients.
- Developed Citrix server from a simple test idea to a full production server that allowed company to eliminate antiquated terminals and to replace them with thin-clients that also provided e-mail, internet, and MS-Office apps.
- Supervised staff on various network projects to ensure quality work and on-time completion.
- Managed the procurement of nearly all IT hardware and software. Replaced previous system that relied on one vendor with a procurement method that bid out purchases to multiple vendors which ensured the lowest cost. Over a 3-year period, converted company to a standard level of quality for computers that provided full warranty coverage and long product life cycles.



Specific Personnel Resume: Deryck Cary, Sr. Network & Security Engineer

Name	Deryck Cary		
Education	A.A., Information Technology and Network Support, Computer Learning Center, Inc., 1999		
Experience Overview	19 years' experience.		
Citizenship	US	Clearance	DHS BI
Tools & Skills	For the past 19 years Deryck Cary has performed network architecture, design, and Tier III and IV network engineering within DHS in complex network environments and redundant DHS data centers. Mr. Cary has served as a lead Network Engineer in direct support to the Datacenter 2 (DC2) migration to Equinix colocation facility which enabled Components such as TSA to have a more efficient path and zero hop access to the Cloud Services Providers. This deployment provides a more secure and manageable environment for all DHS Components, removing the need for physical, on-site personnel, as well as including capabilities that increase the DHS security posture. Mr. Cary received the DHS Vigilance-Service-Integrity Award for his leadership in the Internet Datacenter (IDC) migration from CBP's National Datacenter (NDC) to Datacenter 1 (DC1). Mr. Cary's experience includes project and team management, network architecture and design, engineering and administration, infrastructure modernization, AAA framework, emerging technologies testing, installations, product rollouts, hands-on customer support, team leadership, and mentoring.		
Certifications	PCNSE 2019 CCNP Routing and Switching 2021 (CSCO13268360) CCNA Routing and Switching 2021 Blue Coat Certified Proxy Administrator, 2008 ITILv3 2009		
Work History, Experience & Accomplishments			
Sr. Network/Security Engineer, 2014 - Present Consulting Supporting Agency- DHS <ul style="list-style-type: none"> • Architected SSL decryption DNS sink-holing capability to comply with DHS CISO requirements. • Implemented F5 WAF ASM solution to provide OWASP compliance. • Support Tier 3 network troubleshooting of TSA's Secure Flight network connectivity by way of IPSEC tunnels. • Setup and maintain SSL Decryption utilizing the Palo Alto SSL decryption feature for the DHS Enterprise • Implement firewall rule updates and configurations for TSA, CBP, ICE, CIS and FEMA within WAN and TIC firewall environments • Consolidated Palo Alto firewalls from a physical appliance environment to a virtual/VM environment • Develop, implement, and maintain outbound and inbound Proxy environments while introducing new policy configurations for DHS Components such as TSA, CBP and ICE. • Create templates for Component Palo Alto firewalls so they can be centrally managed from the Panorama management console • Migrated legacy LAN-to-LAN (L2L), MPLS and other Extranet connections from Cisco 6500 extranet routers to extranet ASR1006 router infrastructure using DMVPN for DHS Components such as TSA, CBP, and ICE. 			

- Plan, design and implement migration of multiple DMZs on Cisco FWSM firewalls to Palo Alto firewalls by creating multi-context environments on the Palo Alto firewalls.
- Build and maintain site-to-site VPN tunnels with other business partners based on the business technical requirements.
- Utilize VRF technology to support all DHS Components on a single DMVPN network chassis.
- Troubleshoot Tier 3 incident escalations, design elements and technical issues related to Component interconnection points and respective network and security infrastructure, maintained by DHS OneNet to guide network and security operations teams toward resolution.

Sr. Network/Security Engineer, 2011 - 2014

Ashburn Consulting

Supporting Agency- DHS Data Center 2

- Built new firewall contexts and deployed firewall rule changes for over 100 Firewall Contexts and 200,000 Access Control Lists in support of DHS.
- Documented Firewall changes within design documents through Change Management approvals.
- Experienced with Cisco Firewall Service Modules (FWSM), Adaptive Security Appliance (ASA) firewalls, Palo Alto Next generation firewalls and Blue Coat proxies.
- Performed 3 Tier DMZ migration from Cisco FWSM's to Palo Alto 5050 firewalls as well as migrating from 1 gigabit uplinks to 10 gigabit uplinks. Performed migrations from Cisco Transparent mode to Palo Alto routed mode using Aggregate Ethernet (AE) interfaces.

Information Security Engineer (FED), 2010 - 2011

US Customs and Border Patrol

- Managed a team of five network engineers designing and implementing comprehensive security solutions built on standards-based requirements, best practices, and technical knowledge for redundant data centers to support all DHS components which includes USCG, USCIS, DHS HQ, FEMA, ICE, FLETC, USSS.
- Developed detailed designs using industry best of breed security equipment and solutions including Cisco ASA Firewalls, Blue Coat Proxies and Palo Alto firewalls; tests and installs latest network software releases for functionality enhancement.
- Implemented, supported, maintained, and monitored the security configuration of firewalls, VPN devices, routers and switches for stability, reliability scalability and compliance with security and regulatory requirements, established by industry partners and/or mandated by DHS components, i.e., USCG, USCIS, DHS HQ, FEMA, ICE, FLETC, USSS.
- Performed migrations for all DHS components to shift from a legacy CISCO PIX environment to a Virtual Policy Enforcement Point (PEP) using Palo Alto Layer 7 firewalls which includes application inspection.

Senior Network Firewall Engineer/Team Lead, 2008 - 2010

3H/QNA (formerly Apogen Technologies)

Supporting Agency- CBP

- As the senior network engineer team lead, manages a team of five network engineers designing and implementing comprehensive security solutions built on standards-based requirements, best practices, and technical knowledge for the DHS/CBP Network Operations Center (NOC).
- Developed detailed designs using industry best of breed security equipment and solutions including Cisco PIX and Blue Coat Proxies firewalls; tests and installs latest network software releases for functionality enhancement.
- Implemented, supported, maintained, and monitored the security configuration of firewalls, VPN devices, routers and switches for stability, reliability scalability and compliance with

security and regulatory requirements, established by industry partners and/or mandated by DHS components, i.e., TSA, USCG, USCIS, DHS HQ, FEMA, ICE, FLETC, USSS.

- Performed VPN implementations (IPSec) using Cisco Routers and Concentrators.
- Implemented security concepts embodied in the AAA (authentication, authorization, and accounting) framework effecting rigorous access control to computer resources, enforcing policies, and auditing usage. In addition, directs NOC team performing network traffic analysis to diagnose and resolve issues.
- Conducted network and systems forensic investigations on behalf of other CBP departments. Extensive knowledge of IT industry processes, standards, and best practices and the ability to consistently follow and enforce policy.
- Provided advanced technical expertise remotely to the Field Deployment Team to install and configure new/ replacement Cisco routers and switches and assist in identification and resolution of problems related to network interfaces.

Senior Network Engineer, 2006 - 2008

Total Networks Inc

Supporting Agency- CBP

- Installed/modified, configured, and maintain Cisco routers, switches, switch-routers, load-balancers, and Pix firewalls to meet CBP Standards.
- Performed network engineering support in CBP complex data center environments; handle Tier III problem escalations; coordinate networking equipment installations and maintenances, product rollouts and infrastructure changes with engineers and customer support.
- Proficiency in TCP/IP protocol suite and knowledge of Static, BGP, EIGRP and OSPF routing protocols, layer2 technologies (VLAN's, trunking, STP, etc.), redundancy (HSRP, GLBP, load-balancing), layer 3, Dynamic Multipoint VPN (DMVPN), Next Hop Resolution Protocol (NHRP) and MPLS.
- Provided support to test and install new network software releases for Cisco routers, switches, and PIX firewalls.
- Supported and maintained the data centers' network-related hardware, software, and network tools.
- Identified and resolved network problems and tracked Remedy service tickets with the NOC.
- Provided support to the Field Deployment Team to install and configure Cisco routers and switches and help identify the resolution of problems related to network interfaces.
- Monitored and collected network performance data from all communication systems supported and recommend solutions for any deficiencies found.
- Managed the TACACS server to provide access control for network devices and provide separate authentication, authorization, and accounting services.



Specific Personnel Resume: Ed Lassotovitch, Sr. Network Engineer

Name	Edward Lassotovitch		
Education	Loyola College Maryland, Bachelor of Business Administration/MIS		
Yrs. Experience	30		
Experience Overview	7 years as a systems administrator, 23 years as a network engineer. Hands on WAN TCP/IP routing and switching, network implementation, Internet and BGP implementation and troubleshooting/maintenance. Worked for large publicly owned corporations, Florida state government and now Federal government as a contractor.		
Citizenship	US	Clearance	Active Secret Clearance
Tools & Skills	Cisco routing and switching, Netscout, LINUX		
Certifications	CCNA, CCNP, BCNE, CMNO, Netscout Entry, AWS Cloud Practitioner		
Training	Cisco Routing, Switching, Troubleshooting, HP UNIX		
Work History, Experience & Accomplishments			
Performance Management Engineer			August 2020 – Present
<p><i>Ashburn Consulting</i> <i>Dept. of Homeland Security</i> Managed Netscout infrastructure. Applied best practices configuration and STIGs level security to Netscout equipment. Developed application performance management dashboards and alerting. Configured PacketFlow switches and PFS mesh for packet brokering. Created data feeds for security teams for security monitoring. Researched, developed and implemented design of advanced virtual cloud-edge datacenter network monitoring systems. Assisted with VPN implementation for foreign government partners. Built network and security monitoring system for west coast cloud access point datacenter.</p> <p><i>Virginia Dept. Of Transportation</i> Worked as a trusted network advisor on SD-WAN rollout, directly advising the VDOT CIO in multiple briefings. Worked with SD-WAN rollout team to enable performance management reporting to the VDOT. Collaborated across teams including VITA, VDOT and Verizon and subcontractors. Acquired skills and knowledge in the use of ThousandEyes, LiveNX and Verizon Enterprise Center. Developed dashboards and monitoring in Cisco ThousandEyes and LiveNX. Developed system to measure benefits of SD-WAN implementation. Advised SD-WAN implementation team on proper redundancy and fail-over design. Documented and standardized SD-WAN designs for VDOT. Built custom designed network monitor tool to measure network performance for PowerBI.</p>			
Network Engineer Consultant			November 2019-March 2020
<p><i>Kforce consulting</i> <i>Royal Caribbean</i> Supported Shiplab development environment. Rebuilt lab, migrating it off Cisco 6509's to Cisco 6880's. Built new environments to support application development of passenger phone app with Cisco 9404's. Built four simultaneous ShipLab environments to UCS-FI via VLAN mapping over Cisco 9500. Troubleshot multi-vrf MPLS networks. Maintained and implemented Lab wireless over Cisco and Meraki wireless. Moved lab to new datacenter. Resolved topology issues. Supported and implemented shipboard applications from vendors.</p>			
Network Engineer Consultant			June 2016-November 2019
<p><i>Apex consulting</i> <i>Johnson Controls</i></p>			

Implemented branch office corporate networks with Cisco ISR 4431, 4331 4321 routers, 3850 and 2960XR switches. Implemented wireless networks with Cisco 5508, 2504 WLC's, 3700 APs, and 2800 APs. Ensured wireless and WLC best practices in corporate offices and warehouses. Implemented corporate office, warehouse networks and wireless networks in Europe in conjunction with remote employees. Provided network consulting support for F5 VPN access, F5 virtual server access, Checkpoint, ASA and PaloAlto firewall access. Implemented and maintained Cisco Meraki networks branch offices. Built business partner VPN's and firewall rules on ASA's and Checkpoints. Performed dependency analysis for migrating systems to Azure with Stratozone. Allocated subnets, built NSG's and F5 policy VIP's in Azure. Implemented branch office networks on MPLS and DMVPN. Worked on the Integration Management Team to merge Tyco and Johnson Controls network. Developed and implemented Internet traffic offload strategy using Zscaler with broadband and Metro-E Internet circuits. Provided troubleshooting support for major network outages. Obtained secret clearance from Department of State.

Network Engineer Consultant**June 2008-June 2016***Modis consulting**Florida's Turnpike*

Maintained Florida Turnpike 10gigabit fiber-optic backbone on Brocade MLX equipment. Supported sunpass.com on Brocade ADX's. Assisted in resolving www.sunpass.com issues using Netscout Infinistreams. Implemented Netscout PM, nGeniusONE, and PacketFlow switch. Maintained data centers in Boca Raton and Orlando. Successfully prepared Sunpass for PCI tier 1 compliance. Maintained RSTP topology for datacenters and backbone fiber network. Implemented new VRF and VRF Lite circuits for cost savings. Built and managed Brocade Network Advisor server. Worked as a team member to implement new All Electronic Tolling system to Turnpike. Enabled redundant, dynamic BGP routing to DOT WAN and HSRP to Internet. Built network bandwidth and connection monitoring system for the public websites, www.sunpass.com, www.floridasturnpike.com, and www.tollbyplate.com using RRDTOOL. Assisted implementation of stretched high-speed FCIP clusters with Brocade 7500/48000/Hitachi, and snap-mirror Netapp SAN Clusters between Boca and Orlando on 10gig backbone. Implementing All-Electronic-Tolling infrastructure on Turnpike. Deployed enterprise Voip.



Specific Personnel Resume: David Kim, Sr. Network Security Engineer

Name	David Kim		
Education	B.S. Business – Virginia Tech		
Yrs. Experience	25 years		
Experience Overview	<p>With over 20+ years of experience in IT industry; focusing on IT network and cybersecurity. Experience includes implementation of public and private cloud, firewalls and IDS/IPS, design, testing, maintenance, administration, and system documentation. Thorough hands-on experience with Palo Alto Networks, Fortinet FortiGate, Juniper Networks, Checkpoint, and Cisco ASA/Firepower firewalls. Extensive experience with the F5 load balancers, Zscaler ZPA, ZIA, and ZDX, as well as Infoblox, Fire Eye MPS, Blue Coat proxy, multi-factor authentication. Thorough understanding of NetOptics network taps, directors, and aggregators. Manage Infoblox DHCP systems and DNS related changes. Used Riverbed network analysis tool to trouble shoot any applications, detect network anomalies, and respond to security incidents. Daily monitoring and network analysis using SIEM systems such as SPLUNK and Q1-Labs. Work closely with federal, state, local, and commercial clients to meet critical business requirements for Zero-Trust, PCI, and HIPAA compliance.</p>		
Citizenship	U.S. Citizen	Clearance	Public Trust
Certifications	<ul style="list-style-type: none"> ▪ Cisco Certified Network Professional (CCNP Security) ▪ Microsoft Certified Azure Solutions Architect Expert ▪ AWS Certified Solutions Architect Associate ▪ Fortinet Certified Network Security Professional (NSE4) ▪ Cisco Certified Network Administrator (CCNA) ▪ Cisco Certified Specialist - Security Core 		
Work History, Experience & Accomplishments			
Senior Security Engineer		Aug 2008 – Present	
<p><i>Ashburn Consulting</i> <i>Fairfax County, Montgomery County, Prince George’s County, National Gallery of Art</i> Provide comprehensive network security services. Audit, evaluate, update, and fine tune all perimeter and internal firewalls to make them run more efficiently and securely. Design, test, and implement secure connections using micro network segmentation for various federal and state agencies as well as public safety systems for police and fire-rescue. Recent accomplishments include securing Azure cloud connection. Implemented Palo Alto next gen firewalls to protect against malwares, URL filtering, and SSL decryption for better monitoring and filtering. Provided Zero-Trust setup for remote access setup using Zscaler ZIA and ZPA as well as Palo Alto Networks Global Protect. Work with management and network support team to setup and maintain PCI segmented network. Secured HIPAA and Financial data by implementing internal datacenter firewalls using Juniper SRX 5800s to segment and secure resources. Daily duties include but not limited to trouble shooting and fixing layer 1 -7 connection issues. In addition, using SIEM system Splunk and Q1-lab/ Juniper STRM for threat analysis and mitigation. Work closely with team of 6 senior level engineers where brainstorming and white boarding has been the key to successfully securing and maintaining a very complex environment.</p>			
Senior Security Engineer		Nov 1999 – July 2008	
<p>General Dynamics <i>US Commerce Department, Census Bureau</i> Consulting support for Cisco FWSM, ASA, Checkpoint firewalls, VPN, authentication. Design, install, upgrade, maintain, and troubleshoot multiple Cisco FWSM in Cisco Catalyst 6509e chassis. Set up multiple VPNs to federal, state, and local governments to secure title and PI data. Install, maintain, and</p>			

troubleshoot Secure ID servers and Cisco VPN remote users. Set up and install Cisco Content Engines, switches, and routers. Design and setup of Websense Enterprise v.6.2 integrated to Cisco FWSM in order to properly identify user activity and to provide detailed Internet usage. Install, maintain, and troubleshoot Cisco NAC in order to secure wireless and wired infrastructure.

Security Engineer

Nov 1998 – Nov 1999

T-Mobile/Sprint

Network Security Operations Center

24X7 managed network security operations services (SOC). Traveled to client site, designed network security plan, documented and processed changes. Testing and implementation of new client sites with Checkpoint or Raptor firewalls. Remotely managed over 200 firewall systems ranging from Checkpoint, Raptor, and Guntlet firewalls from Sprint security operations center. Setup and maintain RADIUS and Secure ID servers. Trained junior-level engineers and managed operations center work flow. Trouble shot and fixed network security issues, addressed new requests and met all SLA requirements.

4. Offeror Data Sheet, included as *Attachment A* to this RFP.

ATTACHMENT A

OFFEROR DATA SHEET

TO BE COMPLETED BY OFFEROR

- 1. QUALIFICATIONS OF OFFEROR:** Offerors must have the capability and capacity in all respects to fully satisfy the contractual requirements.
- 2. YEARS IN BUSINESS:** Indicate the length of time you have been in business providing these types of goods and services.

Years 21 Months 1

- 3. REFERENCES:** Indicate below a listing of at least five (5) organizations, either commercial or governmental/educational, that your agency is servicing. Include the name and address of the person the purchasing agency has your permission to contact.

CLIENT	LENGTH OF SERVICE	ADDRESS	CONTACT PERSON/PHONE #
American University	2009 – Present	4400 Massachusetts Ave, NW Washington, DC 20016	William Fleitz / 202-885-6022 wfleitz@american.edu
Montgomery County Government	2020 – Present	100 Rockville Ave Rockville, MD 20850	Joe Webster / 240-773-8133 (office) 240-268-4962 (cell) joseph.webster@montgomerycountymd.gov
Fairfax County Government	2007 – Present	12000 Government Center Pkwy Fairfax, VA 22035	Michael Dent / 703-324-2767 (office) 703-772-6435 (cell) michael.dent@fairfaxcounty.gov
Arlington County Government	2009 – Present	2100 Clarendon Blvd, Ste 500 Arlington, VA 22201	Jack Belcher / 703-228-3191 (office) 571-221-9152 (cell) jbelcher@arlingtonva.us
Virginia Department of Transportation (VDOT)	2022 – Present	1221 E Broad St Richmond, VA 23219	Theresa "Lynn" Hadden, CIO theresa.hadden@vdot.virginia.gov 804-877-5136

- 4.** List full names and addresses of Offeror and any branch offices which may be responsible for administering the contract.

Ashburn Consulting LLC

Physical Address: 42813 Forest Spring Dr, Leesburg, VA 20176

Mailing Address: 7201 Wisconsin Ave, Suite 440, Bethesda, MD 20814

- 5. RELATIONSHIP WITH THE COMMONWEALTH OF VIRGINIA:** Is any member of the firm an employee of the Commonwealth of Virginia who has a personal interest in this contract pursuant to the [CODE OF VIRGINIA](#), SECTION 2.2-3100 – 3131?

[] YES [X] NO

IF YES, EXPLAIN: _____



5. Small Business Subcontracting Plan, included as Attachment B to this RFP.

ATTACHMENT B

Small, Women and Minority-owned Businesses (SWaM) Utilization Plan

Offeror Name: Ashburn Consulting LLC **Preparer Name:** Ben Eiserike, Director, Proposals & Contracts

NOTE: Ashburn Consulting is working to become SBSB-certified as Small Business / Minority-Owned Business (AA) but is not yet certified as of the due date for receipt of proposals – our application to SBSB is in progress and we hope to be certified before contract award.

Date: 8/10/2023

Is your firm a **Small Business Enterprise** certified by the Department of Small Business and Supplier Diversity (SBSB)? Yes No

If yes, certification number: _____ Certification date: _____

Is your firm a **Woman-owned Business Enterprise** certified by the Department of Small Business and Supplier Diversity (SBSB)? Yes No

If yes, certification number: _____ Certification date: _____

Is your firm a **Minority-Owned Business Enterprise** certified by the Department of Small Business and Supplier Diversity (SBSB)? Yes No

If yes, certification number: _____ Certification date: _____

Is your firm a **Micro Business** certified by the Department of Small Business and Supplier Diversity (SBSB)? Yes No

If yes, certification number: _____ Certification date: _____

Instructions: Populate the table below to show your firm's plans for utilization of small, women-owned and minority-owned business enterprises in the performance of the contract. Describe plans to utilize SWaMs businesses as part of joint ventures, partnerships, subcontractors, suppliers, etc.

Small Business: "Small business " means a business, independently owned or operated by one or more persons who are citizens of the United States or non-citizens who are in full compliance with United States immigration law, which, together with affiliates, has 250 or fewer employees, or average annual gross receipts of \$10 million or less averaged over the previous three years.

Woman-Owned Business Enterprise: A business concern which is at least 51 percent owned by one or more women who are U.S. citizens or legal resident aliens, or in the case of a corporation, partnership or limited liability company or other entity, at least 51 percent of the equity ownership interest in which is owned by one or more women, and whose management and daily business operations are controlled by one or more of such individuals. **For purposes of the SWaM Program, all certified women-owned businesses are also a small business enterprise.**

Minority-Owned Business Enterprise: A business concern which is at least 51 percent owned by one or more minorities or in the case of a corporation, partnership or limited liability company or other entity, at least 51 percent of the equity ownership interest in which is owned by one or more minorities and whose management and daily business operations are controlled by one or more of such individuals. **For purposes of the SWaM Program, all certified minority-owned businesses are also a small business enterprise.**

Micro Business is a certified Small Business under the SWaM Program and has no more than twenty-five (25) employees AND no more than \$3 million in average annual revenue over the three-year period prior to their certification.

All small, women, and minority owned businesses must be certified by the Commonwealth of Virginia Department of Small Business and Supplier Diversity (SBSB) to be counted in the SWaM program. Certification applications are available through SBSB at 800-223-0671 in Virginia, 804-786-6585 outside Virginia, or online at <http://www.sbsd.virginia.gov/> (Customer Service).

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ATTACHMENT B (CNT'D)
 Small, Women and Minority-owned Businesses (SWaM) Utilization Plan

Procurement Name and Number: James Madison University – Information Technology Consulting Services, RFP# FDC-1175 Date Form Completed: 8/10/2023

Listing of Sub-Contractors, to include, Small, Woman Owned and Minority Owned Businesses
 for this Proposal and Subsequent Contract

Offeror / Proposer:

Ashburn Consulting LLC

Firm

42813 Forest Spring Dr, Leesburg, VA 20176

Address

Ben Eiserike, Director, Proposals & Contracts

240-997-0322 / beiserike@ashburnconsulting.com

Contact Person/No.

Sub-Contractor's Name and Address	Contact Person & Phone Number	SBSD Certification Number	Services or Materials Provided	Total Subcontractor Contract Amount (to include change orders)	Total Dollars Paid Subcontractor to date (to be submitted with request for payment from JMU)
Apex Systems, LLC 3190 Fairview Park Drive Suite 200 Falls Church, VA 22042	Tommy Quinn Account Manager Office: 703-775-7925 Cell: 703-678-8276 tquinn@apexsystems.com	N/A	IT Consulting Services	TBD	TBD
SWaM Businesses certified by SBSB: TBD Once a project has been identified, Ashburn Consulting agrees to meet the requested SWaM requirements	TBD	TBD	IT Consulting Services	TBD	TBD

(Form shall be submitted with proposal and if awarded, again with submission of each request for payment)

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6. Identify the amount of sales your company had during the last twelve months with each VASCUPP Member Institution.

Ashburn Consulting had no sales (\$0.00) during the last twelve months to any VASCUPP Member Institution:

VASCUPP Member	Ashburn Consulting sales during the last twelve months
Christopher Newport University	\$0.00
George Mason University	\$0.00
James Madison University	\$0.00
Longwood University	\$0.00
Norfolk State University	\$0.00
Old Dominion University	\$0.00
Radford University	\$0.00
University of Mary Washington	\$0.00
University of Virginia	\$0.00
Virginia Commonwealth University	\$0.00
Virginia Military Institute	\$0.00
Virginia Tech	\$0.00
William & Mary	\$0.00

7. Proposed Cost. See Section X. Pricing Schedule of this Request for Proposal.

Attachment D – Pricing Schedule

For each technology/category listed below, provide your company's hourly rate for each of the three roles listed. If you refer to the role by a different name, list it in the space provided next to the corresponding role. Onsite pricing must be inclusive of all billables (travel, lodging, meals, etc.)

******* The Offeror shall also provide onsite and offsite pricing for all other services/roles not listed below, including training offerings. *******

	Onsite	Offsite		Onsite	Offsite
Oracle Core Technologies			Change Management Training, Svcs, & Cert.		
Project Manager or Expert Consultant	\$196.00/hr.	\$190.00/hr.	Project Manager or Expert Consultant	\$180.00/hr.	\$174.00/hr.
Senior Engineer or Senior Consultant	\$193.00/hr.	\$187.00/hr.	Senior Engineer or Senior Consultant	\$164.00/hr.	\$158.00/hr.
Engineer or Consultant	\$165.00/hr.	\$159.00/hr.	Engineer or Consultant	\$136.00/hr.	\$130.00/hr.
Oracle/PeopleSoft Enterprise Solutions			Security and Federation Services		
Project Manager or Expert Consultant	\$213.00/hr.	\$207.00/hr.	Project Manager or Expert Consultant	\$178.00/hr.	\$171.00/hr.
Senior Engineer or Senior Consultant	\$206.00/hr.	\$201.00/hr.	Senior Engineer or Senior Consultant	\$170.00/hr.	\$164.00/hr.
Engineer or Consultant	\$184.00/hr.	\$178.00/hr.	Engineer or Consultant	\$146.00/hr.	\$139.00/hr.
Desktop and Mobile Device Management			Cisco Technologies, Infrastructure Support, and Virtualization		
Project Manager or Expert Consultant	\$162.00/hr.	\$155.00/hr.	Project Manager or Expert Consultant	\$180.00/hr.	\$174.00/hr.
Senior Engineer or Senior Consultant	\$139.00/hr.	\$133.00/hr.	Senior Engineer or Senior Consultant	\$164.00/hr.	\$158.00/hr.
Engineer or Consultant	\$130.00/hr.	\$124.00/hr.	Engineer or Consultant	\$136.00/hr.	\$130.00/hr.
Microsoft Azure and M365			Audio Visual Technologies		
Project Manager or Expert Consultant	\$167.00/hr.	\$160.00/hr.	Project Manager or Expert Consultant	\$147.00/hr.	\$140.00/hr.
Senior Engineer or Senior Consultant	\$159.00/hr.	\$153.00/hr.	Senior Engineer or Senior Consultant	\$131.00/hr.	\$125.00/hr.
Engineer or Consultant	\$147.00/hr.	\$141.00/hr.	Engineer or Consultant	\$111.00/hr.	\$105.00/hr.
Okta			Secure Research Enclaves		
Project Manager or Expert Consultant	\$163.00/hr.	\$157.00/hr.	Project Manager or Expert Consultant	\$178.00/hr.	\$172.00/hr.
Senior Engineer or Senior Consultant	\$152.00/hr.	\$145.00/hr.	Senior Engineer or Senior Consultant	\$160.00/hr.	\$154.00/hr.
Engineer or Consultant	\$140.00/hr.	\$134.00/hr.	Engineer or Consultant	\$144.00/hr.	\$138.00/hr.
Data Analytics/Visualization/Warehouse/Lake			Other Technology		
Project Manager or Expert Consultant	\$197.00/hr.	\$190.00/hr.	Project Manager or Expert Consultant	\$129.00/hr.	\$123.00/hr.
Senior Engineer or Senior Consultant	\$171.00/hr.	\$165.00/hr.	Senior Engineer or Senior Consultant	\$113.00/hr.	\$106.00/hr.
Engineer or Consultant	\$134.00/hr.	\$128.00/hr.	Engineer or Consultant	\$93.00/hr.	\$87.00/hr.

In addition to completing Attachment D, the Offeror shall also provide pricing for all other services, including training offerings.

	Onsite	Offsite
Training Offerings		
Expert Trainer or Project Manager	\$180.00/hr.	\$174.00/hr.
Senior Trainer or Senior Engineer	\$164.00/hr.	\$158.00/hr.
Trainer or Engineer	\$136.00/hr.	\$130.00/hr.
Information Technology (IT) Consultants		
Senior IT Subject Matter Expert (SME)	\$215.00/hr.	\$210.00/hr.
IT Subject Matter Expert (SME)	\$185.00/hr.	\$180.00/hr.
IT Architect	\$165.00/hr.	\$160.00/hr.
IT Administrator	\$115.00/hr.	\$110.00/hr.
IT Analyst	\$105.00/hr.	\$100.00/hr.
IT Technician	\$85.00/hr.	\$80.00/hr.

Ashburn Consulting LLC does not accept credit card payments at this time.

We accept electronic payment through our bank account in accordance with *Section IX. Method of Payment*. Ashburn Consulting LLC will enroll in your bank's Comprehensive Payable options: either the Virtual Payables Virtual Card or the PayMode-X electronic deposit (ACH) to our bank account so that payments are made electronically.

Contractors signed up for the Virtual Payables process will receive the benefit of being paid Net 15.

8. Attachment C: Sample of Standard Contract

ATTACHMENT C



COMMONWEALTH OF VIRGINIA STANDARD CONTRACT

Contract No. _____

This contract entered into this _____ day of _____ 20____, by _____ hereinafter called the "Contractor" and Commonwealth of Virginia, James Madison University called the "Purchasing Agency".

WITNESSETH that the Contractor and the Purchasing Agency, in consideration of the mutual covenants, promises and agreements herein contained, agree as follows:

SCOPE OF CONTRACT: The Contractor shall provide the services to the Purchasing Agency as set forth in the Contract Documents.

PERIOD OF PERFORMANCE: From _____ through _____

The contract documents shall consist of:

- (1) This signed form;
- (2) The following portions of the Request for Proposals dated _____:
 - (a) The Statement of Needs,
 - (b) The General Terms and Conditions,
 - (c) The Special Terms and Conditions together with any negotiated modifications of those Special Conditions;
 - (d) List each addendum that may be issued
- (3) The Contractor's Proposal dated _____ and the following negotiated modification to the Proposal, all of which documents are incorporated herein.
 - (a) Negotiations summary dated _____.

IN WITNESS WHEREOF, the parties have caused this Contract to be duly executed intending to be bound thereby.

CONTRACTOR:

PURCHASING AGENCY:

By: _____
(Signature)

By: _____
(Signature)

(Printed Name)

(Printed Name)

Title: _____

Title: _____



Request for Proposal

RFP# FDC-1175

Information Technology Consulting Services

June 15, 2023



REQUEST FOR PROPOSAL
RFP# FDC-1175

Issue Date: June 15, 2023
Title: Information Technology Consulting Services
Issuing Agency: Commonwealth of Virginia
James Madison University
Procurement Services MSC 5720
752 Ott Street, Wine Price Building
First Floor, Suite 1023
Harrisonburg, VA 22807

Period of Contract: From Date of Award Through One Year (Renewable)

Sealed Proposals Will Be Received Until 2:00 PM on August 3, 2023 for Furnishing the Services Described Herein.

SEALED PROPOSALS MAY BE MAILED, EXPRESS MAILED, OR HAND DELIVERED DIRECTLY TO THE ISSUING AGENCY SHOWN ABOVE.

All Inquiries For Information And Clarification Should Be Directed To: Doug Chester, Buyer Senior, Procurement Services, chestefd@jmu.edu; 540-568-4272; (Fax) 540-568-7935 by July 20, 2023 by 5:00 PM EST.

NOTE: THE SIGNED PROPOSAL AND ALL ATTACHMENTS SHALL BE RETURNED.

In compliance with this Request for Proposal and to all the conditions imposed herein, the undersigned offers and agrees to furnish the goods/services in accordance with the attached signed proposal or as mutually agreed upon by subsequent negotiation.

Name and Address of Firm:

By: _____
(Signature in Ink)

Name: _____
(Please Print)

Date: _____

Title: _____

Web Address: _____

Phone: _____

Email: _____

Fax #: _____

ACKNOWLEDGE RECEIPT OF ADDENDUM: #1 _____ #2 _____ #3 _____ #4 _____ #5 _____ (please initial)

SMALL, WOMAN OR MINORITY OWNED BUSINESS:

YES; NO; *IF YES* ⇒⇒ SMALL; WOMAN; MINORITY ***IF MINORITY:*** AA; HA; AsA; NW; Micro

Note: This public body does not discriminate against faith-based organizations in accordance with the Code of Virginia, § 2.2-4343.1 or against an offeror because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment.

REQUEST FOR PROPOSAL

RFP # FDC-1175

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I. PURPOSE

The purpose of this Request for Proposal (RFP) is to solicit sealed proposals from qualified sources to enter into a contract to provide information technology consulting services for James Madison University (JMU), an agency of the Commonwealth of Virginia. Initial contract shall be for one (1) year with an option to renew for four (4) additional one-year periods.

II. BACKGROUND

James Madison University is a comprehensive university in Harrisonburg, Virginia and is part of the statewide system of public higher education in the Commonwealth. The university offers programs at the bachelor's, master's and doctoral levels with its primary emphasis on the undergraduate student. JMU's current enrollment is approximately 22,000 full and part-time students. The university employs approximately 4,000 faculty and staff. Further information about the University can be found at the following website: www.jmu.edu.

James Madison University's Office of Information Technology is responsible for technology initiatives for campus. JMU was an early adopter of PeopleSoft/Oracle's Campus Solutions product, serving as a beta for its development and implementation. Additionally, the University uses Oracle's PeopleSoft Financials, Human Resources, and the Interaction Hub for JMU's self-service portal. The University also currently uses Oracle's Identity Management suite. JMU actively manages Windows and Macintosh computer systems. The University's network is powered by Cisco technologies. A series of NEC Private Branch Enterprises (PBX's) and gateways constitute the Voice network.

James Madison University is currently utilizing the following technologies:

- Oracle Identity Management Suite 11g R2 P3
- Oracle/PeopleSoft Campus Solutions 9.2; PeopleTools 8.55.x
- Oracle/PeopleSoft Human Resources 9.2; PeopleTools 8.55.x
- Oracle/PeopleSoft Financial Management 9.2; PeopleTools 8.55.x
- Oracle/PeopleSoft Enterprise Application Portal 9.2; PeopleTools 8.55.x
- WebLogic
- Desktop Management: Microsoft Windows and Macintosh (SCCM, JAMF, Apple Enterprise Connect)
- Microsoft 365 (A5 license)
- Microsoft Active Directory
- Federation Services (Shibboleth, OpenID)
- Cisco technologies (including but not limited to network and video conferencing)
- Virtualization technologies (VMWare)
- Cherwell ITSM
- Salesforce (Enterprise CRM)
- NEC Voice and Collaboration Technologies
- Boomi

Additionally, JMU is engaged in a multi-year initiative ("Reengineering Madison") that will include implementing significant technology platforms such as an enterprise Customer Relationship Management (CRM) platform (Salesforce) and new data solutions for managing and visualizing JMU's data. Reengineering Madison will also involve replacing JMU's current PeopleSoft ERP (Enterprise Resource Management) platform, including Finance, Human Resources, and Student Administration applications, as well as current applications used for

managing the identities of JMU's constituents. For more information on Reengineering Madison, see <https://www.jmu.edu/computing/projects/reengineering-madison/index.shtml>.

The University is aware of other cooperative contracts awarded by higher education institutions in the Commonwealth. Firms currently on a cooperative contract with these institutions are not required to respond to this solicitation. The University reserves the right to request quotes from firms on other cooperative contracts, when it is deemed in the best interest of the University.

James Madison University reserves the right, when not in the best interest of the university, to decline award to any firm already on an existing VASCUPP cooperative contract in order to avoid duplication of contracts.

III. SMALL, WOMAN-OWNED AND MINORITY PARTICIPATION

It is the policy of the Commonwealth of Virginia to contribute to the establishment, preservation, and strengthening of small businesses and businesses owned by women and minorities, and to encourage their participation in State procurement activities. The Commonwealth encourages contractors to provide for the participation of small businesses and businesses owned by women and minorities through partnerships, joint ventures, subcontracts, and other contractual opportunities. Attachment B contains information on reporting spend data with subcontractors.

IV. STATEMENT OF NEEDS

James Madison University desires to contract with qualified firms to provide expertise and a range of services to support technologies used by the University. Contractor shall serve on special projects as a technology expert when requested and as needed. Reports shall be provided back to the University summarizing options and providing recommendations. Contractor shall serve as a technology advisor to understand, communicate, and propose solutions as requested. Contractor shall serve as a resource of research, implementation, troubleshooting, and other technical tasks to support the efforts of James Madison University Information Technology (JMU IT) staff. Functional consultants shall be represented by the Contractor as experts in the tasks and functions assigned. The University reserves the right to accept or reject any proposed or assigned consultant, without cause, at any time during the duration of the contract.

1. Describe your corporate competencies/experience providing IT consulting services for one or more of the technologies listed below.
 - a. Oracle Core Technologies
 - b. Oracle/PeopleSoft Enterprise Solutions
 - c. Desktop and Mobile Device Management
 - d. Microsoft Azure and M365
 - e. Okta
 - f. Data Analytics/Visualization/Warehouse/Lake
 - g. Change Management Training, Services, & Certification
 - h. Security and Federation Services
 - i. Cisco Technologies, Infrastructure Support, and Virtualization
 - j. Audio Visual Technologies

- k. Secure Research Enclaves
 - l. Other Technology
2. Describe approach and methodology that will be used to provide IT consulting services to James Madison University. Include how your firm would manage the scope of projects.
 3. Provide the names, qualifications, and experience of personnel to be assigned to James Madison University. Designate who would be assigned as the primary contact for the account.
 4. Describe the ability to provide continuity of consultants throughout the duration of a project.
 5. Describe IT consulting services available from your firm. Examples of services may include, but are not limited to, the following:
 - a. Implementation
 - b. Development
 - c. Project Management
 - d. Architecture and Design
 - e. Capacity Planning
 - f. Installation and Configuration
 - g. Performance and Scalability
 - h. Conversion
 - i. Monitoring, Administration and Upgrades
 - j. Training Development
 - k. Operations Metrics
 6. Describe training options and specify associated costs in *Section X. Pricing Schedule*. Include a catalog of training offerings and differentiation between technical staff and end-user training.
 7. Provide examples of recent projects at higher education institutions comparable to James Madison University. Describe the project, time frame, end result, etc.
 8. Describe the ability to provide for a thorough transfer of knowledge to JMU IT on any given project.
 9. Describe your approach to project management.
 10. Describe how your firm would propose a functional staffing plan indicating the number, characteristics, and schedule for the consultants.
 11. Describe the functions that may be provided by a subcontractor of your firm. Specify the expertise and credentials required from the subcontractor.

V. PROPOSAL PREPARATION AND SUBMISSION

A. GENERAL INSTRUCTIONS

To ensure timely and adequate consideration of your proposal, offerors are to limit all contact, whether verbal or written, pertaining to this RFP to the James Madison University Procurement Office for the duration of this Proposal process. Failure to do so may jeopardize further consideration of Offeror's proposal.

1. RFP Response: In order to be considered for selection, the **Offeror shall submit a complete response to this RFP**; and shall submit to the issuing Purchasing Agency:
 - a. **One (1) original and four (4) copies** of the entire proposal, INCLUDING ALL ATTACHMENTS. Any proprietary information should be clearly marked in accordance with 3.f. below.
 - b. **One (1) electronic copy in WORD format or searchable PDF (flash drive)** of the entire proposal, INCLUDING ALL ATTACHMENTS. Any proprietary information should be clearly marked in accordance with 3.f. below.
 - c. Should the proposal contain **proprietary information**, provide **one (1) redacted hard copy** of the proposal and all attachments with **proprietary portions removed or blacked out**. This copy should be clearly marked "*Redacted Copy*" on the front cover. The classification of an entire proposal document, line-item prices, and/or total proposal prices as proprietary or trade secrets is not acceptable. JMU shall not be responsible for the Contractor's failure to exclude proprietary information from this redacted copy.

No other distribution of the proposal shall be made by the Offeror.

2. The version of the solicitation issued by JMU Procurement Services, as amended by any addenda, is the mandatory controlling version of the document. Any modification of, or additions to, the solicitation by the Offeror shall not modify the official version of the solicitation issued by JMU Procurement services unless accepted in writing by the University. Such modifications or additions to the solicitation by the Offeror may be cause for rejection of the proposal; however, JMU reserves the right to decide, on a case-by-case basis in its sole discretion, whether to reject such a proposal. If the modification or additions are not identified until after the award of the contract, the controlling version of the solicitation document shall still be the official state form issued by Procurement Services.
3. Proposal Preparation
 - a. Proposals shall be signed by an authorized representative of the Offeror. All information requested should be submitted. Failure to submit all information requested may result in the purchasing agency requiring prompt submissions of missing information and/or giving a lowered evaluation of the proposal. Proposals which are substantially incomplete or lack key information may be rejected by the purchasing agency. Mandatory requirements are those required by law or regulation or are such that they cannot be waived and are not subject to negotiation.

- b. Proposals shall be prepared simply and economically, providing a straightforward, concise description of capabilities to satisfy the requirements of the RFP. Emphasis should be placed on completeness and clarity of content.
 - c. Proposals should be organized in the order in which the requirements are presented in the RFP. All pages of the proposal should be numbered. Each paragraph in the proposal should reference the paragraph number of the corresponding section of the RFP. It is also helpful to cite the paragraph number, sub letter, and repeat the text of the requirement as it appears in the RFP. If a response covers more than one page, the paragraph number and sub letter should be repeated at the top of the next page. The proposal should contain a table of contents which cross references the RFP requirements. Information which the offeror desires to present that does not fall within any of the requirements of the RFP should be inserted at the appropriate place or be attached at the end of the proposal and designated as additional material. Proposals that are not organized in this manner risk elimination from consideration if the evaluators are unable to find where the RFP requirements are specifically addressed.
 - d. As used in this RFP, the terms “must”, “shall”, “should” and “may” identify the criticality of requirements. “Must” and “shall” identify requirements whose absence will have a major negative impact on the suitability of the proposed solution. Items labeled as “should” or “may” are highly desirable, although their absence will not have a large impact and would be useful, but are not necessary. Depending on the overall response to the RFP, some individual “must” and “shall” items may not be fully satisfied, but it is the intent to satisfy most, if not all, “must” and “shall” requirements. The inability of an offeror to satisfy a “must” or “shall” requirement does not automatically remove that offeror from consideration; however, it may seriously affect the overall rating of the offeror’s proposal.
 - e. Each copy of the proposal should be bound or contained in a single volume where practical. All documentation submitted with the proposal should be contained in that single volume.
 - f. Ownership of all data, materials and documentation originated and prepared for the State pursuant to the RFP shall belong exclusively to the State and be subject to public inspection in accordance with the Virginia Freedom of Information Act. Trade secrets or proprietary information submitted by the offeror shall not be subject to public disclosure under the Virginia Freedom of Information Act; however, the offeror must invoke the protection of Section 2.2-4342F of the Code of Virginia, in writing, either before or at the time the data is submitted. The written notice must specifically identify the data or materials to be protected and state the reasons why protection is necessary. The proprietary or trade secret materials submitted must be identified by some distinct method such as highlighting or underlining and must indicate only the specific words, figures, or paragraphs that constitute trade secret or proprietary information. The classification of an entire proposal document, line-item prices and/or total proposal prices as proprietary or trade secrets is not acceptable and will result in rejection and return of the proposal.
4. Oral Presentation: Offerors who submit a proposal in response to this RFP may be required to give an oral presentation of their proposal to James Madison University. This provides an opportunity for the Offeror to clarify or elaborate on the proposal. This is a fact-finding and explanation session only and does not include negotiation. James Madison University will schedule the time and location of these presentations. Oral presentations are an option

of the University and may or may not be conducted. Therefore, proposals should be complete.

B. SPECIFIC PROPOSAL INSTRUCTIONS

Proposals should be as thorough and detailed as possible so that James Madison University may properly evaluate your capabilities to provide the required services. Offerors are required to submit the following items as a complete proposal:

1. Return RFP cover sheet and all addenda acknowledgements, if any, signed and filled out as required.
2. Plan and methodology for providing the goods/services as described in Section IV. Statement of Needs of this Request for Proposal.
3. A written narrative statement to include, but not be limited to, the expertise, qualifications, and experience of the firm and resumes of specific personnel to be assigned to perform the work.
4. Offeror Data Sheet, included as *Attachment A* to this RFP.
5. Small Business Subcontracting Plan, included as *Attachment B* to this RFP. Offeror shall provide a Small Business Subcontracting plan which summarizes the planned utilization of Department of Small Business and Supplier Diversity (SBSD)-certified small businesses which include businesses owned by women and minorities, when they have received Department of Small Business and Supplier Diversity (SBSD) small business certification, under the contract to be awarded as a result of this solicitation. This is a requirement for all prime contracts in excess of \$100,000 unless no subcontracting opportunities exist.
6. Identify the amount of sales your company had during the last twelve months with each VASCUPP Member Institution. A list of VASCUPP Members can be found at: www.VASCUPP.org.
7. Proposed Cost. See Section X. Pricing Schedule of this Request for Proposal.

VI. EVALUATION AND AWARD CRITERIA

A. EVALUATION CRITERIA

Proposals shall be evaluated by James Madison University using the following criteria:

1. Quality of products/services offered and suitability for intended purposes
2. Qualifications and experience of Offeror in providing the goods/services
3. Specific plans or methodology to be used to perform the services
4. Participation of Small, Women-Owned, & Minority (SWaM) Businesses
5. Cost

Allocation of points for evaluation criteria will be published to the eVA solicitation posting prior to the closing date and time.

AWARD TO MULTIPLE OFFERORS: Selection shall be made of two or more offerors deemed to be fully qualified and best suited among those submitting proposals on the basis of the evaluation factors included in the Request for Proposals, including price, if so stated in the Request for Proposals. Negotiations shall be conducted with the offerors so selected. Price shall be considered but need not be the sole determining factor. After negotiations have been conducted with each offeror so selected, the agency shall select the offeror which, in its opinion, has made the best proposal, and shall award the contract to that offeror. The Commonwealth reserves the right to make multiple awards as a result of this solicitation. The Commonwealth may cancel this Request for Proposals or reject proposals at any time prior to an award and is not required to furnish a statement of the reasons why a particular proposal was not deemed to be the most advantageous. Should the Commonwealth determine in writing and in its sole discretion that only one offeror is fully qualified, or that one offeror is clearly more highly qualified than the others under consideration, a contract may be negotiated and awarded to that offeror. The award document will be a contract incorporating by reference all the requirements, terms and conditions of the solicitation and the contractor's proposal as negotiated.

VII. GENERAL TERMS AND CONDITIONS

- A. **PURCHASING MANUAL:** This solicitation is subject to the provisions of the Commonwealth of Virginia's Purchasing Manual for Institutions of Higher Education and Their Vendors and any revisions thereto, which are hereby incorporated into this contract in their entirety. A copy of the manual is available for review at the purchasing office. In addition, the manual may be accessed electronically at <http://www.jmu.edu/procurement> or a copy can be obtained by calling Procurement Services at (540) 568-3145.
- B. **APPLICABLE LAWS AND COURTS:** This solicitation and any resulting contract shall be governed in all respects by the laws of the Commonwealth of Virginia and any litigation with respect thereto shall be brought in the courts of the Commonwealth. The Contractor shall comply with applicable federal, state and local laws and regulations.
- C. **ANTI-DISCRIMINATION:** By submitting their proposals, offerors certify to the Commonwealth that they will conform to the provisions of the Federal Civil Rights Act of 1964, as amended, as well as the Virginia Fair Employment Contracting Act of 1975, as amended, where applicable, the Virginians With Disabilities Act, the Americans With Disabilities Act and §10 of the Rules Governing Procurement, Chapter 2, Exhibit J, Attachment 1 (available for review at <http://www.jmu.edu/procurement>). If the award is made to a faith-based organization, the organization shall not discriminate against any recipient of goods, services, or disbursements made pursuant to the contract on the basis of the recipient's religion, religious belief, refusal to participate in a religious practice, or on the basis of race, age, color, gender, sexual orientation, gender identity, or national origin and shall be subject to the same rules as other organizations that contract with public bodies to account for the use of the funds provided; however, if the faith-based organization segregates public funds into separate accounts, only the accounts and programs funded with public funds shall be subject to audit by the public body. (*§6 of the Rules Governing Procurement*).

In every contract over \$10,000 the provisions in 1. and 2. below apply:

1. During the performance of this contract, the contractor agrees as follows:

- a. The contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, sexual orientation, gender identity, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the contractor. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
 - b. The contractor, in all solicitations or advertisements for employees placed by or on behalf of the contractor, will state that such contractor is an equal opportunity employer.
 - c. Notices, advertisements, and solicitations placed in accordance with federal law, rule, or regulation shall be deemed sufficient for the purpose of meeting these requirements.
2. The contractor will include the provisions of 1. above in every subcontract or purchase order over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.
- D. ETHICS IN PUBLIC CONTRACTING: By submitting their proposals, offerors certify that their proposals are made without collusion or fraud and that they have not offered or received any kickbacks or inducements from any other offeror, supplier, manufacturer or subcontractor in connection with their proposal, and that they have not conferred on any public employee having official responsibility for this procurement transaction any payment, loan, subscription, advance, deposit of money, services or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value was exchanged.
- E. IMMIGRATION REFORM AND CONTROL ACT OF 1986: By entering into a written contract with the Commonwealth of Virginia, the Contractor certifies that the Contractor does not, and shall not during the performance of the contract for goods and services in the Commonwealth, knowingly employ an unauthorized alien as defined in the federal Immigration Reform and Control Act of 1986.
- F. DEBARMENT STATUS: By submitting their proposals, offerors certify that they are not currently debarred by the Commonwealth of Virginia from submitting proposals on contracts for the type of goods and/or services covered by this solicitation, nor are they an agent of any person or entity that is currently so debarred.
- G. ANTITRUST: By entering into a contract, the contractor conveys, sells, assigns, and transfers to the Commonwealth of Virginia all rights, title and interest in and to all causes of action it may now have or hereafter acquire under the antitrust laws of the United States and the Commonwealth of Virginia, relating to the particular goods or services purchased or acquired by the Commonwealth of Virginia under said contract.
- H. MANDATORY USE OF STATE FORM AND TERMS AND CONDITIONS RFPs: Failure to submit a proposal on the official state form provided for that purpose may be a cause for rejection of the proposal. Modification of or additions to the General Terms and Conditions of the solicitation may be cause for rejection of the proposal; however, the Commonwealth reserves the right to decide, on a case-by-case basis, in its sole discretion, whether to reject such a proposal.

I. CLARIFICATION OF TERMS: If any prospective offeror has questions about the specifications or other solicitation documents, the prospective offeror should contact the buyer whose name appears on the face of the solicitation no later than five working days before the due date. Any revisions to the solicitation will be made only by addendum issued by the buyer.

J. PAYMENT:

1. To Prime Contractor:

- a. Invoices for items ordered, delivered and accepted shall be submitted by the contractor directly to the payment address shown on the purchase order/contract. All invoices shall show the state contract number and/or purchase order number; social security number (for individual contractors) or the federal employer identification number (for proprietorships, partnerships, and corporations).
- b. Any payment terms requiring payment in less than 30 days will be regarded as requiring payment 30 days after invoice or delivery, whichever occurs last. This shall not affect offers of discounts for payment in less than 30 days, however.
- c. All goods or services provided under this contract or purchase order, that are to be paid for with public funds, shall be billed by the contractor at the contract price, regardless of which public agency is being billed.
- d. The following shall be deemed to be the date of payment: the date of postmark in all cases where payment is made by mail, or the date of offset when offset proceedings have been instituted as authorized under the Virginia Debt Collection Act.
- e. Unreasonable Charges. Under certain emergency procurements and for most time and material purchases, final job costs cannot be accurately determined at the time orders are placed. In such cases, contractors should be put on notice that final payment in full is contingent on a determination of reasonableness with respect to all invoiced charges. Charges which appear to be unreasonable will be researched and challenged, and that portion of the invoice held in abeyance until a settlement can be reached. Upon determining that invoiced charges are not reasonable, the Commonwealth shall promptly notify the contractor, in writing, as to those charges which it considers unreasonable and the basis for the determination. A contractor may not institute legal action unless a settlement cannot be reached within thirty (30) days of notification. The provisions of this section do not relieve an agency of its prompt payment obligations with respect to those charges which are not in dispute (*Rules Governing Procurement, Chapter 2, Exhibit J, Attachment 1 § 53; available for review at <http://www.jmu.edu/procurement>*).

2. To Subcontractors:

a. A contractor awarded a contract under this solicitation is hereby obligated:

- (1) To pay the subcontractor(s) within seven (7) days of the contractor's receipt of payment from the Commonwealth for the proportionate share of the payment received for work performed by the subcontractor(s) under the contract; or

- (2) To notify the agency and the subcontractors, in writing, of the contractor's intention to withhold payment and the reason.
 - b. The contractor is obligated to pay the subcontractor(s) interest at the rate of one percent per month (unless otherwise provided under the terms of the contract) on all amounts owed by the contractor that remain unpaid seven (7) days following receipt of payment from the Commonwealth, except for amounts withheld as stated in (2) above. The date of mailing of any payment by U. S. Mail is deemed to be payment to the addressee. These provisions apply to each sub-tier contractor performing under the primary contract. A contractor's obligation to pay an interest charge to a subcontractor may not be construed to be an obligation of the Commonwealth.
 3. Each prime contractor who wins an award in which provision of a SWAM procurement plan is a condition to the award, shall deliver to the contracting agency or institution, on or before request for final payment, evidence and certification of compliance (subject only to insubstantial shortfalls and to shortfalls arising from subcontractor default) with the SWAM procurement plan. Final payment under the contract in question may be withheld until such certification is delivered and, if necessary, confirmed by the agency or institution, or other appropriate penalties may be assessed in lieu of withholding such payment.
 4. The Commonwealth of Virginia encourages contractors and subcontractors to accept electronic and credit card payments.
- K. PRECEDENCE OF TERMS: Paragraphs A through J of these General Terms and Conditions and the Commonwealth of Virginia Purchasing Manual for Institutions of Higher Education and their Vendors, shall apply in all instances. In the event there is a conflict between any of the other General Terms and Conditions and any Special Terms and Conditions in this solicitation, the Special Terms and Conditions shall apply.
- L. QUALIFICATIONS OF OFFERORS: The Commonwealth may make such reasonable investigations as deemed proper and necessary to determine the ability of the offeror to perform the services/furnish the goods and the offeror shall furnish to the Commonwealth all such information and data for this purpose as may be requested. The Commonwealth reserves the right to inspect offeror's physical facilities prior to award to satisfy questions regarding the offeror's capabilities. The Commonwealth further reserves the right to reject any proposal if the evidence submitted by, or investigations of, such offeror fails to satisfy the Commonwealth that such offeror is properly qualified to carry out the obligations of the contract and to provide the services and/or furnish the goods contemplated therein.
- M. TESTING AND INSPECTION: The Commonwealth reserves the right to conduct any test/inspection it may deem advisable to assure goods and services conform to the specifications.
- N. ASSIGNMENT OF CONTRACT: A contract shall not be assignable by the contractor in whole or in part without the written consent of the Commonwealth.
- O. CHANGES TO THE CONTRACT: Changes can be made to the contract in any of the following ways:
1. The parties may agree in writing to modify the scope of the contract. An increase or decrease in the price of the contract resulting from such modification shall be agreed to by the parties as a part of their written agreement to modify the scope of the contract.

2. The Purchasing Agency may order changes within the general scope of the contract at any time by written notice to the contractor. Changes within the scope of the contract include, but are not limited to, things such as services to be performed, the method of packing or shipment, and the place of delivery or installation. The contractor shall comply with the notice upon receipt. The contractor shall be compensated for any additional costs incurred as the result of such order and shall give the Purchasing Agency a credit for any savings. Said compensation shall be determined by one of the following methods:
 - a. By mutual agreement between the parties in writing; or
 - b. By agreeing upon a unit price or using a unit price set forth in the contract, if the work to be done can be expressed in units, and the contractor accounts for the number of units of work performed, subject to the Purchasing Agency's right to audit the contractor's records and/or to determine the correct number of units independently; or
 - c. By ordering the contractor to proceed with the work and keep a record of all costs incurred and savings realized. A markup for overhead and profit may be allowed if provided by the contract. The same markup shall be used for determining a decrease in price as the result of savings realized. The contractor shall present the Purchasing Agency with all vouchers and records of expenses incurred and savings realized. The Purchasing Agency shall have the right to audit the records of the contractor as it deems necessary to determine costs or savings. Any claim for an adjustment in price under this provision must be asserted by written notice to the Purchasing Agency within thirty (30) days from the date of receipt of the written order from the Purchasing Agency. If the parties fail to agree on an amount of adjustment, the question of an increase or decrease in the contract price or time for performance shall be resolved in accordance with the procedures for resolving disputes provided by the Disputes Clause of this contract or, if there is none, in accordance with the disputes provisions of the Commonwealth of Virginia Purchasing Manual for Institutions of Higher Education and their Vendors. Neither the existence of a claim nor a dispute resolution process, litigation or any other provision of this contract shall excuse the contractor from promptly complying with the changes ordered by the Purchasing Agency or with the performance of the contract generally.
- P. DEFAULT: In case of failure to deliver goods or services in accordance with the contract terms and conditions, the Commonwealth, after due oral or written notice, may procure them from other sources and hold the contractor responsible for any resulting additional purchase and administrative costs. This remedy shall be in addition to any other remedies which the Commonwealth may have.
- Q. INSURANCE: By signing and submitting a proposal under this solicitation, the offeror certifies that if awarded the contract, it will have the following insurance coverage at the time the contract is awarded. For construction contracts, if any subcontractors are involved, the subcontractor will have workers' compensation insurance in accordance with § 25 of the Rules Governing Procurement – Chapter 2, Exhibit J, Attachment 1, and 65.2-800 et. Seq. of the Code of Virginia (available for review at <http://www.jmu.edu/procurement>) The offeror further certifies that the contractor and any subcontractors will maintain these insurance coverage during the entire term of the contract and that all insurance coverage will be provided by insurance companies authorized to sell insurance in Virginia by the Virginia State Corporation Commission.

MINIMUM INSURANCE COVERAGES AND LIMITS REQUIRED FOR MOST CONTRACTS:

1. Workers' Compensation: Statutory requirements and benefits. Coverage is compulsory for employers of three or more employees, to include the employer. Contractors who fail to notify the Commonwealth of increases in the number of employees that change their workers' compensation requirement under the Code of Virginia during the course of the contract shall be in noncompliance with the contract.
 2. Employer's Liability: \$100,000
 3. Commercial General Liability: \$1,000,000 per occurrence and \$2,000,000 in the aggregate. Commercial General Liability is to include bodily injury and property damage, personal injury and advertising injury, products and completed operations coverage. The Commonwealth of Virginia must be named as an additional insured and so endorsed on the policy.
 4. Automobile Liability: \$1,000,000 combined single limit. *(Required only if a motor vehicle not owned by the Commonwealth is to be used in the contract. Contractor must assure that the required coverage is maintained by the Contractor (or third party owner of such motor vehicle.)*
- R. ANNOUNCEMENT OF AWARD: Upon the award or the announcement of the decision to award a contract over \$100,000, as a result of this solicitation, the purchasing agency will publicly post such notice on the DGS/DPS eVA web site (www.eva.virginia.gov) for a minimum of 10 days.
- S. DRUG-FREE WORKPLACE: During the performance of this contract, the contractor agrees to (i) provide a drug-free workplace for the contractor's employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the contractor that the contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.
- For the purposes of this section, "drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a contractor, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the contract.
- T. NONDISCRIMINATION OF CONTRACTORS: An offeror, or contractor shall not be discriminated against in the solicitation or award of this contract because of race, religion, color, sex, sexual orientation, gender identity, national origin, age, disability, faith-based organizational status, any other basis prohibited by state law relating to discrimination in employment or because the offeror employs ex-offenders unless the state agency, department or institution has made a written determination that employing ex-offenders on the specific contract is not in its best interest. If the award of this contract is made to a faith-based organization and an individual, who applies for or receives goods, services, or disbursements provided pursuant to this contract objects to the religious character of the faith-based organization from which the individual receives or would receive the goods, services, or

disbursements, the public body shall offer the individual, within a reasonable period of time after the date of his objection, access to equivalent goods, services, or disbursements from an alternative provider.

- U. eVA BUSINESS TO GOVERNMENT VENDOR REGISTRATION, CONTRACTS, AND ORDERS: The eVA Internet electronic procurement solution, website portal www.eVA.virginia.gov, streamlines and automates government purchasing activities in the Commonwealth. The eVA portal is the gateway for vendors to conduct business with state agencies and public bodies. All vendors desiring to provide goods and/or services to the Commonwealth shall participate in the eVA Internet eprocurement solution by completing the free eVA Vendor Registration. All offerors must register in eVA and pay the Vendor Transaction Fees specified below; failure to register will result in the proposal being rejected. Vendor transaction fees are determined by the date the original purchase order is issued and the current fees are as follows:

Vendor transaction fees are determined by the date the original purchase order is issued and the current fees are as follows:

1. For orders issued July 1, 2014 and after, the Vendor Transaction Fee is:
 - a. Department of Small Business and Supplier Diversity (SBSD) certified Small Businesses: 1% capped at \$500 per order.
 - b. Businesses that are not Department of Small Business and Supplier Diversity (SBSD) certified Small Businesses: 1% capped at \$1,500 per order.
2. For orders issued prior to July 1, 2014 the vendor transaction fees can be found at www.eVA.virginia.gov.
3. The specified vendor transaction fee will be invoiced by the Commonwealth of Virginia Department of General Services approximately 60 days after the corresponding purchase order is issued and payable 30 days after the invoice date. Any adjustments (increases/decreases) will be handled through purchase order changes.

- V. AVAILABILITY OF FUNDS: It is understood and agreed between the parties herein that the Commonwealth of Virginia shall be bound hereunder only to the extent of the funds available or which may hereafter become available for the purpose of this agreement.

- W. PRICING CURRENCY: Unless stated otherwise in the solicitation, offerors shall state offered prices in U.S. dollars.

- X. E-VERIFY REQUIREMENT OF ANY CONTRACTOR: Any employer with more than an average of 50 employees for the previous 12 months entering into a contract in excess of \$50,000 with James Madison University to perform work or provide services pursuant to such contract shall register and participate in the E-Verify program to verify information and work authorization of its newly hired employees performing work pursuant to any awarded contract.

- Y. CIVILITY IN STATE WORKPLACES: The contractor shall take all reasonable steps to ensure that no individual, while performing work on behalf of the contractor or any subcontractor in connection with this agreement (each, a "Contract Worker"), shall engage in 1) harassment (including sexual harassment), bullying, cyber-bullying, or threatening or violent conduct, or 2) discriminatory behavior on the basis of race, sex, color, national origin, religious belief,

sexual orientation, gender identity or expression, age, political affiliation, veteran status, or disability.

The contractor shall provide each Contract Worker with a copy of this Section and will require Contract Workers to participate in training on civility in the State workplace. Upon request, the contractor shall provide documentation that each Contract Worker has received such training.

For purposes of this Section, "State workplace" includes any location, permanent or temporary, where a Commonwealth employee performs any work-related duty or is representing his or her agency, as well as surrounding perimeters, parking lots, outside meeting locations, and means of travel to and from these locations. Communications are deemed to occur in a State workplace if the Contract Worker reasonably should know that the phone number, email, or other method of communication is associated with a State workplace or is associated with a person who is a State employee.

The Commonwealth of Virginia may require, at its sole discretion, the removal and replacement of any Contract Worker who the Commonwealth reasonably believes to have violated this Section.

This Section creates obligations solely on the part of the contractor. Employees or other third parties may benefit incidentally from this Section and from training materials or other communications distributed on this topic, but the Parties to this agreement intend this Section to be enforceable solely by the Commonwealth and not by employees or other third parties.

VIII. SPECIAL TERMS AND CONDITIONS

- A. AUDIT: The Contractor hereby agrees to retain all books, records, systems, and other documents relative to this contract for five (5) years after final payment, or until audited by the Commonwealth of Virginia, whichever is sooner. The Commonwealth of Virginia, its authorized agents, and/or State auditors shall have full access to and the right to examine any of said materials during said period.

- B. CANCELLATION OF CONTRACT: James Madison University reserves the right to cancel and terminate any resulting contract, in part or in whole, without penalty, upon 60 days written notice to the contractor. In the event the initial contract period is for more than 12 months, the resulting contract may be terminated by either party, without penalty, after the initial 12 months of the contract period upon 60 days written notice to the other party. Any contract cancellation notice shall not relieve the contractor of the obligation to deliver and/or perform on all outstanding orders issued prior to the effective date of cancellation.

- C. IDENTIFICATION OF PROPOSAL ENVELOPE: The signed proposal should be returned in a separate envelope or package, sealed and identified as follows:

From: _____

Name of Offeror	Due Date	Time

Street or Box No.	RFP #	

City, State, Zip Code	RFP Title	

Name of Purchasing Officer: _____

The envelope should be addressed as directed on the title page of the solicitation.

The Offeror takes the risk that if the envelope is not marked as described above, it may be inadvertently opened and the information compromised, which may cause the proposal to be disqualified. Proposals may be hand-delivered to the designated location in the office issuing the solicitation. No other correspondence or other proposals should be placed in the envelope.

- D. LATE PROPOSALS: To be considered for selection, proposals must be received by the issuing office by the designated date and hour. The official time used in the receipt of proposals is that time on the automatic time stamp machine in the issuing office. Proposals received in the issuing office after the date and hour designated are automatically non responsive and will not be considered. The University is not responsible for delays in the delivery of mail by the U.S. Postal Service, private couriers, or the intra university mail system. It is the sole responsibility of the Offeror to ensure that its proposal reaches the issuing office by the designated date and hour.
- E. UNDERSTANDING OF REQUIREMENTS: It is the responsibility of each offeror to inquire about and clarify any requirements of this solicitation that is not understood. The University will not be bound by oral explanations as to the meaning of specifications or language contained in this solicitation. Therefore, all inquiries deemed to be substantive in nature must be in writing and submitted to the responsible buyer in the Procurement Services Office. Offerors must ensure that written inquiries reach the buyer at least five (5) days prior to the time set for receipt of offerors proposals. A copy of all queries and the respective response will be provided in the form of an addendum to all offerors who have indicated an interest in responding to this solicitation. Your signature on your Offer certifies that you fully understand all facets of this solicitation. These questions may be sent by Fax to 540/568-7935.
- F. RENEWAL OF CONTRACT: This contract may be renewed by the Commonwealth for a period of four (4) successive one year periods under the terms and conditions of the original contract except as stated in 1. and 2. below. Price increases may be negotiated only at the time of renewal. Written notice of the Commonwealth's intention to renew shall be given approximately 90 days prior to the expiration date of each contract period.
1. If the Commonwealth elects to exercise the option to renew the contract for an additional one-year period, the contract price(s) for the additional one year shall not exceed the contract price(s) of the original contract increased/decreased by no more than the percentage increase/decrease of the other services category of the CPI-W section of the Consumer Price Index of the United States Bureau of Labor Statistics for the latest twelve months for which statistics are available.
 2. If during any subsequent renewal periods, the Commonwealth elects to exercise the option to renew the contract, the contract price(s) for the subsequent renewal period shall not exceed the contract price(s) of the previous renewal period increased/decreased by more than the percentage increase/decrease of the other services category of the CPI-W section of the Consumer Price Index of the United States Bureau of Labor Statistics for the latest twelve months for which statistics are available.
- G. SUBMISSION OF INVOICES: All invoices shall be submitted within sixty days of contract term expiration for the initial contract period as well as for each subsequent contract renewal period. Any invoices submitted after the sixty day period will not be processed for payment.
- H. OPERATING VEHICLES ON JAMES MADISON UNIVERSITY CAMPUS: Operating vehicles on sidewalks, plazas, and areas heavily used by pedestrians is prohibited. In the unlikely event a driver should find it necessary to drive on James Madison University

sidewalks, plazas, and areas heavily used by pedestrians, the driver must yield to pedestrians. For a complete list of parking regulations, please go to www.jmu.edu/parking; or to acquire a service representative parking permit, contact Parking Services at 540.568.3300. The safety of our students, faculty and staff is of paramount importance to us. Accordingly, violators may be charged.

- I. COOPERATIVE PURCHASING / USE OF AGREEMENT BY THIRD PARTIES: It is the intent of this solicitation and resulting contract(s) to allow for cooperative procurement. Accordingly, any public body, (to include government/state agencies, political subdivisions, etc.), cooperative purchasing organizations, public or private health or educational institutions or any University related foundation and affiliated corporations may access any resulting contract if authorized by the Contractor.

Participation in this cooperative procurement is strictly voluntary. If authorized by the Contractor(s), the resultant contract(s) will be extended to the entities indicated above to purchase goods and services in accordance with contract terms. As a separate contractual relationship, the participating entity will place its own orders directly with the Contractor(s) and shall fully and independently administer its use of the contract(s) to include contractual disputes, invoicing and payments without direct administration from the University. No modification of this contract or execution of a separate agreement is required to participate; however, the participating entity and the Contractor may modify the terms and conditions of this contract to accommodate specific governing laws, regulations, policies, and business goals required by the participating entity. Any such modification will apply solely between the participating entity and the Contractor.

The Contractor will notify the University in writing of any such entities accessing this contract. The Contractor will provide semi-annual usage reports for all entities accessing the contract. The University shall not be held liable for any costs or damages incurred by any other participating entity as a result of any authorization by the Contractor to extend the contract. It is understood and agreed that the University is not responsible for the acts or omissions of any entity and will not be considered in default of the contract no matter the circumstances.

Use of this contract(s) does not preclude any participating entity from using other contracts or competitive processes as needed.

- J. SMALL BUSINESS SUBCONTRACTING AND EVIDENCE OF COMPLIANCE:

1. It is the goal of the Commonwealth that 42% of its purchases are made from small businesses. This includes discretionary spending in prime contracts and subcontracts. All potential offerors are required to submit a Small Business Subcontracting Plan. Unless the offeror is registered as a Department of Small Business and Supplier Diversity (SBSD)-certified small business and where it is practicable for any portion of the awarded contract to be subcontracted to other suppliers, the contractor is encouraged to offer such subcontracting opportunities to SBSBD-certified small businesses. This shall not exclude SBSBD-certified women-owned and minority-owned businesses when they have received SBSBD small business certification. No offeror or subcontractor shall be considered a Small Business, a Women-Owned Business or a Minority-Owned Business unless certified as such by the Department of Small Business and Supplier Diversity (SBSD) by the due date for receipt of proposals. If small business subcontractors are used, the prime contractor agrees to report the use of small business subcontractors by providing the purchasing office at a minimum the following information: name of small business with the SBSBD certification number or FEIN, phone number, total dollar amount subcontracted, category type (small, women-owned, or minority-owned), and type of product/service provided.

This information shall be submitted to: JMU Office of Procurement Services, Attn: SWAM Subcontracting Compliance, MSC 5720, Harrisonburg, VA 22807.

2. Each prime contractor who wins an award in which provision of a small business subcontracting plan is a condition of the award, shall deliver to the contracting agency or institution with every request for payment, evidence of compliance (subject only to insubstantial shortfalls and to shortfalls arising from subcontractor default) with the small business subcontracting plan. **This information shall be submitted to: JMU Office of Procurement Services, SWAM Subcontracting Compliance, MSC 5720, Harrisonburg, VA 22807.** When such business has been subcontracted to these firms and upon completion of the contract, the contractor agrees to furnish the purchasing office at a minimum the following information: name of firm with the Department of Small Business and Supplier Diversity (SBSD) certification number or FEIN number, phone number, total dollar amount subcontracted, category type (small, women-owned, or minority-owned), and type of product or service provided. Payment(s) may be withheld until compliance with the plan is received and confirmed by the agency or institution. The agency or institution reserves the right to pursue other appropriate remedies to include, but not be limited to, termination for default.
 3. Each prime contractor who wins an award valued over \$200,000 shall deliver to the contracting agency or institution with every request for payment, information on use of subcontractors that are not Department of Small Business and Supplier Diversity (SBSD)-certified small businesses. When such business has been subcontracted to these firms and upon completion of the contract, the contractor agrees to furnish the purchasing office at a minimum the following information: name of firm, phone number, FEIN number, total dollar amount subcontracted, and type of product or service provided. **This information shall be submitted to: JMU Office of Procurement Services, Attn: SWAM Subcontracting Compliance, MSC 5720, Harrisonburg, VA 22807.**
- K. AUTHORIZATION TO CONDUCT BUSINESS IN THE COMMONWEALTH: A contractor organized as a stock or nonstock corporation, limited liability company, business trust, or limited partnership or registered as a registered limited liability partnership shall be authorized to transact business in the Commonwealth as a domestic or foreign business entity if so required by Title 13.1 or Title 50 of the Code of Virginia or as otherwise required by law. Any business entity described above that enters into a contract with a public body shall not allow its existence to lapse or its certificate of authority or registration to transact business in the Commonwealth, if so required under Title 13.1 or Title 50, to be revoked or cancelled at any time during the term of the contract. A public body may void any contract with a business entity if the business entity fails to remain in compliance with the provisions of this section.
- L. PUBLIC POSTING OF COOPERATIVE CONTRACTS: James Madison University maintains a web-based contracts database with a public gateway access. Any resulting cooperative contract/s to this solicitation will be posted to the publicly accessible website. Contents identified as proprietary information will not be made public.
- M. CRIMINAL BACKGROUND CHECKS OF PERSONNEL ASSIGNED BY CONTRACTOR TO PERFORM WORK ON JMU PROPERTY: The Contractor shall obtain criminal background checks on all of their contracted employees who will be assigned to perform services on James Madison University property. The results of the background checks will be directed solely to the Contractor. The Contractor bears responsibility for confirming to the University contract administrator that the background checks have been completed prior to work being performed by their employees or subcontractors. The Contractor shall only assign to work on the University campus those individuals whom it deems qualified and permissible

based on the results of completed background checks. Notwithstanding any other provision herein, and to ensure the safety of students, faculty, staff and facilities, James Madison University reserves the right to approve or disapprove any contract employee that will work on JMU property. Disapproval by the University will solely apply to JMU property and should have no bearing on the Contractor's employment of an individual outside of James Madison University.

- N. INDEMNIFICATION: Contractor agrees to indemnify, defend and hold harmless the Commonwealth of Virginia, its officers, agents, and employees from any claims, damages and actions of any kind or nature, whether at law or in equity, arising from or caused by the use of any materials, goods, or equipment of any kind or nature furnished by the contractor/any services of any kind or nature furnished by the contractor, provided that such liability is not attributable to the sole negligence of the using agency or to failure of the using agency to use the materials, goods, or equipment in the manner already and permanently described by the contractor on the materials, goods or equipment delivered.

- O. ADDITIONAL GOODS AND SERVICES: The University may acquire other goods or services that the supplier provides than those specifically solicited. The University reserves the right, subject to mutual agreement, for the Contractor to provide additional goods and/or services under the same pricing, terms, and conditions and to make modifications or enhancements to the existing goods and services. Such additional goods and services may include other products, components, accessories, subsystems, or related services that are newly introduced during the term of this Agreement. Such additional goods and services will be provided to the University at favored nations pricing, terms, and conditions.

- P. SUBCONTRACTS: No portion of the work shall be subcontracted without prior written consent of the purchasing agency. In the event that the contractor desires to subcontract some part of the work specified herein, the contractor shall furnish the purchasing agency the names, qualifications and experience of their proposed subcontractors. The contractor shall, however, remain fully liable and responsible for the work to be done by its subcontractor(s) and shall assure compliance with all requirements of the contract.

- Q. PRIME CONTRACTOR RESPONSIBILITIES: The contractor shall be responsible for completely supervising and directing the work under this contract and all subcontractors that he may utilize, using his best skill and attention. Subcontractors who perform work under this contract shall be responsible to the prime contractor. The contractor agrees that he is as fully responsible for the acts and omissions of his subcontractors and of persons employed by them as he is for the acts and omissions of his own employees.

- R. CONFIDENTIALITY OF PERSONALLY IDENTIFIABLE INFORMATION: The Contractor assures that information and data obtained as to personal facts and circumstances related to students, faculty, and staff will be collected and held confidential, during and following the term of this agreement, and will not be divulged without the individual's and the agency's written consent and only in accordance with federal law or the *Code of Virginia*. Contractors who utilize, access, or store personally identifiable information as part of the performance of a contract are required to safeguard this information and immediately notify the agency of any breach or suspected breach in the security of such information. Contractors shall allow the agency to both participate in the investigation of incidents and exercise control over decisions regarding external reporting. Contractors and their employees working on this project may be required to sign a confidentiality statement.

IX. METHOD OF PAYMENT

The contractor will be paid based on invoices submitted in accordance with the solicitation and any negotiations. James Madison University recognizes the importance of expediting the payment process for our vendors and suppliers; we request that our vendors and suppliers enroll in our bank's Comprehensive Payable options: either the Virtual Payables Virtual Card or the PayMode-X electronic deposit (ACH) to your bank account so that future payments are made electronically. Contractors signed up for the Virtual Payables process will receive the benefit of being paid Net 15. Additional information is available online at:

<http://www.jmu.edu/financeoffice/accounting-operations-disbursements/cash-investments/vendor-payment-methods.shtml>

X. PRICING SCHEDULE

The Offeror shall provide onsite and offsite hourly rates broken down by position type for the proposed services. Onsite hourly rates shall include all billables (e.g. travel, lodging, meals, etc.). See Attachment D.

In addition to completing Attachment D, the Offeror shall also provide pricing for all other services, including training offerings.

Specify any associated charge card processing fees, if applicable, to be billed to the university. Vendors shall provide their VISA registration number when indicating charge card processing fees. Any vendor requiring information on VISA registration may refer to <https://usa.visa.com/support/small-business/regulations-fees.html> and for questions <https://usa.visa.com/dam/VCOM/global/support-legal/documents/merchant-surcharging-qa-for-web.pdf>.

XI. ATTACHMENTS

Attachment A: Offeror Data Sheet

Attachment B: Small, Women, and Minority-owned Business (SWaM) Utilization Plan

Attachment C: Standard Contract Sample

Attachment D: Pricing Schedule

ATTACHMENT A

OFFEROR DATA SHEET

TO BE COMPLETED BY OFFEROR

- 1. **QUALIFICATIONS OF OFFEROR:** Offerors must have the capability and capacity in all respects to fully satisfy the contractual requirements.
- 2. **YEARS IN BUSINESS:** Indicate the length of time you have been in business providing these types of goods and services.

Years _____ Months _____

- 3. **REFERENCES:** Indicate below a listing of at least five (5) organizations, either commercial or governmental/educational, that your agency is servicing. Include the name and address of the person the purchasing agency has your permission to contact.

CLIENT	LENGTH OF SERVICE	ADDRESS	CONTACT PERSON/PHONE #

- 4. List full names and addresses of Offeror and any branch offices which may be responsible for administering the contract.

- 5. **RELATIONSHIP WITH THE COMMONWEALTH OF VIRGINIA:** Is any member of the firm an employee of the Commonwealth of Virginia who has a personal interest in this contract pursuant to the [CODE OF VIRGINIA](#), SECTION 2.2-3100 – 3131?

YES NO

IF YES, EXPLAIN: _____

ATTACHMENT B

Small, Women and Minority-owned Businesses (SWaM) Utilization Plan

Offeror Name: _____ Preparer Name: _____

Date: _____

Is your firm a **Small Business Enterprise** certified by the Department of Small Business and Supplier Diversity (SBSD)? Yes_____ No_____

If yes, certification number: _____ Certification date:_____

Is your firm a **Woman-owned Business Enterprise** certified by the Department of Small Business and Supplier Diversity (SBSD)? Yes_____ No_____

If yes, certification number: _____ Certification date:_____

Is your firm a **Minority-Owned Business Enterprise** certified by the Department of Small Business and Supplier Diversity (SBSD)? Yes_____ No_____

If yes, certification number: _____ Certification date:_____

Is your firm a **Micro Business** certified by the Department of Small Business and Supplier Diversity (SBSD)? Yes_____ No_____

If yes, certification number: _____ Certification date:_____

Instructions: *Populate the table below to show your firm's plans for utilization of small, women-owned and minority-owned business enterprises in the performance of the contract. Describe plans to utilize SWAMs businesses as part of joint ventures, partnerships, subcontractors, suppliers, etc.*

Small Business: "Small business " means a business, independently owned or operated by one or more persons who are citizens of the United States or non-citizens who are in full compliance with United States immigration law, which, together with affiliates, has 250 or fewer employees, or average annual gross receipts of \$10 million or less averaged over the previous three years.

Woman-Owned Business Enterprise: A business concern which is at least 51 percent owned by one or more women who are U.S. citizens or legal resident aliens, or in the case of a corporation, partnership or limited liability company or other entity, at least 51 percent of the equity ownership interest in which is owned by one or more women, and whose management and daily business operations are controlled by one or more of such individuals. **For purposes of the SWAM Program, all certified women-owned businesses are also a small business enterprise.**

Minority-Owned Business Enterprise: A business concern which is at least 51 percent owned by one or more minorities or in the case of a corporation, partnership or limited liability company or other entity, at least 51 percent of the equity ownership interest in which is owned by one or more minorities and whose management and daily business operations are controlled by one or more of such individuals. **For purposes of the SWAM Program, all certified minority-owned businesses are also a small business enterprise.**

Micro Business is a certified Small Business under the SWaM Program and has no more than twenty-five (25) employees **AND** no more than \$3 million in average annual revenue over the three-year period prior to their certification.

All small, women, and minority owned businesses must be certified by the Commonwealth of Virginia Department of Small Business and Supplier Diversity (SBSD) to be counted in the SWAM program. Certification applications are available through SBSD at 800-223-0671 in Virginia, 804-786-6585 outside Virginia, or online at <http://www.sbsd.virginia.gov/> (Customer Service).

RETURN OF THIS PAGE IS REQUIRED

ATTACHMENT B (CNT'D)
Small, Women and Minority-owned Businesses (SWaM) Utilization Plan

Procurement Name and Number: _____

Date Form Completed: _____

Listing of Sub-Contractors, to include, Small, Woman Owned and Minority Owned Businesses
for this Proposal and Subsequent Contract

Offeror / Proposer:

_____ Firm

_____ Address

_____ Contact Person/No.

Sub-Contractor's Name and Address	Contact Person & Phone Number	SBSD Certification Number	Services or Materials Provided	Total Subcontractor Contract Amount (to include change orders)	Total Dollars Paid Subcontractor to date (to be submitted with request for payment from JMU)

(Form shall be submitted with proposal and if awarded, again with submission of each request for payment)

RETURN OF THIS PAGE IS REQUIRED

ATTACHMENT C



COMMONWEALTH OF VIRGINIA
STANDARD CONTRACT

Contract No. _____

This contract entered into this _____ day of _____ 20____, by _____ hereinafter called the "Contractor" and Commonwealth of Virginia, James Madison University called the "Purchasing Agency".

WITNESSETH that the Contractor and the Purchasing Agency, in consideration of the mutual covenants, promises and agreements herein contained, agree as follows:

SCOPE OF CONTRACT: The Contractor shall provide the services to the Purchasing Agency as set forth in the Contract Documents.

PERIOD OF PERFORMANCE: From _____ through _____

The contract documents shall consist of:

- (1) This signed form;
- (2) The following portions of the Request for Proposals dated _____:
 - (a) The Statement of Needs,
 - (b) The General Terms and Conditions,
 - (c) The Special Terms and Conditions together with any negotiated modifications of those Special Conditions;
 - (d) List each addendum that may be issued
- (3) The Contractor's Proposal dated _____ and the following negotiated modification to the Proposal, all of which documents are incorporated herein.
 - (a) Negotiations summary dated _____.

IN WITNESS WHEREOF, the parties have caused this Contract to be duly executed intending to be bound thereby.

CONTRACTOR:

PURCHASING AGENCY:

By: _____
(Signature)

By: _____
(Signature)

(Printed Name)

(Printed Name)

Title: _____

Title: _____

Attachment D – Pricing Schedule

For each technology/category listed below, provide your company's hourly rate for each of the three roles listed. If you refer to the role by a different name, list it in the space provided next to the corresponding role. Onsite pricing must be inclusive of all billables (travel, lodging, meals, etc.)

******* The Offeror shall also provide onsite and offsite pricing for all other services/roles not listed below, including training offerings. *******

	Onsite	Offsite		Onsite	Offsite
Oracle Core Technologies			Change Management Training, Svcs, & Cert.		
Project Manager or _____	_____/hr.	_____/hr.	Project Manager or _____	_____/hr.	_____/hr.
Senior Engineer or _____	_____/hr.	_____/hr.	Senior Engineer or _____	_____/hr.	_____/hr.
Engineer or _____	_____/hr.	_____/hr.	Engineer or _____	_____/hr.	_____/hr.
Oracle/PeopleSoft Enterprise Solutions			Security and Federation Services		
Project Manager or _____	_____/hr.	_____/hr.	Project Manager or _____	_____/hr.	_____/hr.
Senior Engineer or _____	_____/hr.	_____/hr.	Senior Engineer or _____	_____/hr.	_____/hr.
Engineer or _____	_____/hr.	_____/hr.	Engineer or _____	_____/hr.	_____/hr.
Desktop and Mobile Device Management			Cisco Technologies, Infrastructure Support, and Virtualization		
Project Manager or _____	_____/hr.	_____/hr.	Project Manager or _____	_____/hr.	_____/hr.
Senior Engineer or _____	_____/hr.	_____/hr.	Senior Engineer or _____	_____/hr.	_____/hr.
Engineer or _____	_____/hr.	_____/hr.	Engineer or _____	_____/hr.	_____/hr.
Microsoft Azure and M365			Audio Visual Technologies		
Project Manager or _____	_____/hr.	_____/hr.	Project Manager or _____	_____/hr.	_____/hr.
Senior Engineer or _____	_____/hr.	_____/hr.	Senior Engineer or _____	_____/hr.	_____/hr.
Engineer or _____	_____/hr.	_____/hr.	Engineer or _____	_____/hr.	_____/hr.
Okta			Secure Research Enclaves		
Project Manager or _____	_____/hr.	_____/hr.	Project Manager or _____	_____/hr.	_____/hr.
Senior Engineer or _____	_____/hr.	_____/hr.	Senior Engineer or _____	_____/hr.	_____/hr.
Engineer or _____	_____/hr.	_____/hr.	Engineer or _____	_____/hr.	_____/hr.
Data Analytics/Visualization/Warehouse/Lake			Other Technology		
Project Manager or _____	_____/hr.	_____/hr.	Project Manager or _____	_____/hr.	_____/hr.
Senior Engineer or _____	_____/hr.	_____/hr.	Senior Engineer or _____	_____/hr.	_____/hr.
Engineer or _____	_____/hr.	_____/hr.	Engineer or _____	_____/hr.	_____/hr.



July 25, 2023

ADDENDUM NO.: One

TO ALL OFFERORS:

REFERENCE: Request for Proposal No: **RFP# FDC-1175**
Dated: **June 15, 2023**
Commodity: **Information Technology Consulting Services**
RFP Closing On: ~~Thursday, August 3, 2023, at 2:00 p.m.~~
Tuesday, August 15, 2023, at 2:00 p.m.

Please note the clarifications and/or changes made on this proposal:

James Madison University has extended the RFP closing date to Tuesday, August 15, 2023 at 2:00 p.m.

Due to the volume of questions received, an additional addendum may be posted at a future date.

1. Question – On the 3rd page of the solicitation it states the period of performance is from date of award through one year (renewable). How many renewals periods does JMU expect in terms of being renewable?
Answer – Section VII. Special Terms and Conditions, Item F states that JMU has the option to extend the original contract for four (4) successive one-year periods.
2. Question – How many FTEs are estimated to be needed onsite versus remote?
Answer – This would depend on the nature of the engagement.
3. Question – In order to be awarded this project, does at least one (1) team member need to be SWaM certified? Do sub-contractors need to be small business and SWaM certified?
Answer – SWaM certification is not a requirement for award; however, JMU tries to work with SWaM vendors whenever possible. Evaluation points will be given to vendors that are a SWaM vendor or that use SWaM sub-contractors. Additionally, all vendors should complete the SWaM Utilization Plan in the RFP document.
4. Question - Is there a page limit to RFP response?
Answer – No; however, proposals should be prepared simply and economically (see section V.A.3.b.).
5. Question – What industry partner currently performs this work? What is the incumbent contract number and total dollar value if there is one? Please confirm if we can get the previous proposals or pricing of the incumbent(s).
Answer – The University currently has contracts in place with the following vendors - Unicon, Inc., Sierra-Cedar, Inc., Securance Consulting, HyperGen, Inc, Plante & Moran, PLLC, Cherry Bekaert Advisory

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LLC, Highstreet IT Solutions, LLC, Nautiquos Business Solutions, LLC, Assura, Inc., and Planet Technologies, Inc. Previous spend can be found at www.eva.virginia.gov. Current contracts with the firms listed above can be found at <http://cipag.jmu.edu/cipag/>.

6. Question - Is remote only pricing an option? Will proposals be considered if only remote pricing is provided?
Answer – All proposals will be considered, including remote only pricing.
7. Question – Can vendors only provide pricing for select areas as opposed to all areas?
Answer – Offerors may provide pricing for one or more of the technologies/categories listed in the RFP (see Section IV.1.). Offerors should identify their firm’s technology specializations in their proposal.
8. Question – Is hosting included as part of the services required?
Answer – The scope may include hosting services, depending on the specific project.
9. Question – Is operations and maintenance – patching, vulnerability scanning, remediation, etc. included as a part of the services requested?
Answer – The scope may include operations and maintenance services, depending on the specific project.
10. Question – Given that Oracle’s Identity Management is currently used at JMU, how does JMU anticipate using Okta?
Answer – The University has selected Okta as its future Identity Management solution.
11. Question – What is meant by Secure Research Enclaves?
Answer - Using Microsoft’s definition, the Secure Enclave for Research (also known as the Secure Research Enclave) is a reference architecture for a remotely-accessible environment for researchers to use in a secure manner while working on restricted data sets.
12. Question – Does the scope of the contract include the design and implementation of any hybrid cloud infrastructure?
Answer – The scope may include the design and implementation of cloud/hybrid cloud infrastructure, depending on the specific project.
13. Question – What criteria does the University use to accept or reject proposed or assigned consultants, and how does this impact the contractor’s role and responsibilities throughout the duration of the contract?
Answer – Consultants assigned to the University may be rejected based on a variety of reasons including, but not limited to, lack in professionalism, responsiveness, timeliness, knowledge and experience, etc.
14. Question – Is the work expected to be SOW based or hourly based?
Answer – That will depend on the nature of the engagement; however, it is reasonable to expect that either could apply.
15. Question – It is mentioned that sealed proposals will be received. Is there any that a vendor can submit a proposal online?
Answer – No. JMU is not set up to receive electronic responses through eVA or emailed proposal responses.

16. Question – What is the annual spend at JMU for IT consulting services?
Answer – Previous spend can be found at www.eva.virginia.gov.
17. Question – Assuming an offeror currently holds a contract with a VASCUPP higher education institution, such as the University of Virginia or George Mason University, how does that impact our status on this RFP?
Answer – The last paragraph of the *Section II. Background* section states: “James Madison University reserves the right, when not in the best interest of the university, to decline award to any firm already on an existing VASCUPP cooperative contract in order to avoid duplication of contracts.”
18. Question – Will you prefer vendors with a branch office presence in Harrisonburg? We are only present in Northern Virginia.
Answer – A branch office in Harrisonburg, VA is not required.
19. Question - Are there specific technologies within the listed categories (such as Oracle Core Technologies, Microsoft Azure, etc.) that require specialized expertise or are of higher priority in the context of JMU’s Reengineering Madison?
Answer – See RFP *Section II. Background*.
20. Question - Can you provide more information about the typical scope and size of projects at James Madison University? Are there any specific project management methodologies or frameworks that the university prefers? Do you have any major projects in progress?
Answer – The University’s major technology projects can be found at <https://www.jmu.edu/computing/projects-and-initiatives.shtml>.
21. Question - What is the expected duration of the projects? Will the assignments be short-term or long-term?
Answer – The expected duration will depend on the specific project and may be short-term or long-term.
22. Question - Are there any specific certifications or qualifications required for the assigned personnel?
Answer – Required certifications or qualifications will vary based on the specific project. Offerors should include the qualifications and experience of the personnel who may be assigned to perform work for the University in their proposals (See RFP *Section IV.3*).
23. Question - Can you provide more details on the expected level of involvement and responsibilities of the primary contact for the account?
Answer – Expected level of involvement and responsibilities will vary based on the project.
24. Question - Can you provide more information about the evaluation criteria for assessing the similarity of projects at higher education institutions?
Answer – Offerors should provide examples of recent projects at higher education institutions comparable to James Madison University. See RFP *Section II. Background* for more information about the University.
25. Question - Are there any specific reporting or documentation requirements for IT consulting services?
Answer – Reporting and documentation requirements will vary depending on the project.
26. Question – Allocation of points for evaluation criteria will be published to the eVA solicitation posting prior to the closing date and time. When will this be posted?
Answer – The points will be posted the day before the RFP closes.

27. Question - Does the scope include advising and strategic planning support for the technologies listed?
Answer – The scope may include advising and strategic planning support, depending on the specific project.
28. Question - What will be the engagement model for Vendors that are awarded this contract? Will JMU issue statements of work for the selected vendors to compete? Will the statements of work be for hourly staff augmentation or will it also include fixed price strategic engagements? Can you provide additional information on the anticipated level of collaboration and coordination between the successful bidder and JMU IT staff?
Answer – As information technology consulting needs arise, the University will contact a firm(s) on contract to discuss the project for which the University requires assistance. A statement of work will be requested from the vendor based on contract terms and pricing, and additional discussions will occur.
29. Question - What will be the maximum number of awardees under this contract? Please confirm the anticipated number of awards.
Answer – The University does not have an anticipated or maximum number of awards for this RFP.
30. Question – For this RFP, are resources expected to be on-site or remote in Harrisonburg, VA? Given the skill sets, we’re assuming it’s fully remote, but wanted to verify
Answer – Remote is usually acceptable; however, it would depend on the nature of the engagement.
31. Question - How many users are on Office 365? What license do they have? Provide a license count.
Answer – Approximately 30,000 accounts. The majority have A5 licenses with a few having A3 licenses.
32. Question - Are the licenses being purchased directly with Microsoft or through a Microsoft Partner?
Answer – SHI.
33. Question - Do you currently use Microsoft Teams and/or Microsoft SharePoint?
Answer – Yes.
34. Question - Is there a software in place currently to manage endpoints remotely? If so, what product(s) are being used?
Answer - JAMF Pro, Microsoft Intune, and Microsoft Endpoint Configuration Manager are used.
35. Question - How often are the devices and endpoints being updated? Monthly/quarterly/etc. basis?
Answer – Endpoint patches are deployed typically the same month they become available.
36. Question - Do you have employees working remotely that use a company device?
Answer – Yes.
37. Question - Do you offer Bring Your Own Device (BYOD) to employees?
Answer – No.
38. Question - Is there a Mobile Device Management (MDM) solution deployed?
Answer – Yes, for JMU owned devices.

39. Question - How many desktops/laptops/mobile devices are you supporting?
Answer – JMU IT actively manages roughly 4,500 Windows devices, 2,500 Mac devices, and 1,000 mobile devices.
40. Question - Which version of Windows are the desktops/laptops running on?
Answer – Primarily Windows 10 22H2.
41. Question - Are user devices being backed up? If so, how often, and do you have retention policies in place?
Answer – User devices are not centrally backed up.
42. Question – Are the servers on-site or on the cloud? Hybrid?
Answer - Servers are onsite.
43. If you have a cloud environment, is it Azure/AWS/other?
Answer – The University has applications in both Azure and AWS.
44. Question - How many servers do you have? What operating system are they on? Do you have any Windows Server 2012/2012R2? Any Linux Servers? Microsoft is sunsetting Windows 2012 servers in October. Is there a plan to upgrade/replace your current 2012 servers? Please provide details.
Answer – The University has approximately 500 servers. Windows and Linux.
- **2012R2 (26 servers - all slated to decom by October, with the potential exception of 3 belonging to Card Services, which they handle on their own and are in discussions with IT-Sec about)**
 - **2016 (89 servers)**
 - **2019 (93 servers)**
 - **2022 (7 servers)**
 - **Linux (210 Servers) primarily running RHEL 7 & 8**
 - **16 - VMware Host servers, and 3 management servers, running VMWare version 7. (13 normal hosts, 3 VDI hosts, 2 VCenter servers and the VRealize server)**
 - **54 - additional servers are being tracked, but are either security servers (OS not maintained by us), Other Linux (CentOS) or OVAs (Virtual appliances)**
45. Question - Is there a Disaster Recovery plan in place? What is the infrastructure at the fail over location?
Answer - Yes. Disaster Recovery plans exist for critical systems. There is geographical, power, and HVAC redundancy at the failover location, as well as off-site backups in the event of whole data center loss.
46. Question - How many databases are you using? Please specify which ones.
Answer – See RFP Section II. Background.
47. Question - What are some of the critical applications being used today? Any ERP applications?
Answer – See RFP Section II. Background.
48. Question - What is the network topology currently used, and how are these locations communicating to each other?
Answer - On campus locations are serviced via single mode fiber. Off campus locations are a combination of DIA circuits and wireless bridges.

49. Question - Is there a VPN in place for remote access? Is there a firewall?
Answer - Yes to both.
50. Question - What is the speed of the network connection to the internet? Do you have a backup connection?
Answer - Two 8Gbs pipes in active/active state.
51. Question - How many Routers, Switches, and Firewalls are in your network?
**Answer - L2 switches: 855
L3 switches/routers: 10
Firewalls: 4**
52. Question - How many buildings/locations?
Answer – The University has approximately 185 buildings on 750 acres. The campus is divided by interstate 81 and the C&P railroad.
53. Question - How big is your current IT department, if any?
Answer - Approximately 150 employees
54. Question - Please provide the brand for the switches, network devices, laptops, desktops, and printers.
Answer - Cisco Routers and switches for the wired network. The wireless network is Aruba. Laptop/Desktops are a mix of Dell and Apple. Printers vary, but a significant number are leased KM Bizhub devices.
55. Question - Do you have any cameras to support?
Answer: Yes. Cameras are managed by Facilities Management.
56. Question - Do you currently have a VOIP solution? Who is your VOIP provider? What is the brand of your desktop phones? How many extensions/DID numbers?
Answer – The University is currently deploying an NEC VoIP solution with Black Box Network Services, and have approximately 8,000 user and service type extensions. Phones are NEC.
57. Question - Do you have ticketing system in place? Estimate of tickets per month/quarter?
Answer - Yes. The University uses Cherwell as its ITSM ticketing system and receives approximately 49,189 tickets per year.
58. Question - Do you require someone to be on-site all the time?
Answer - That would depend on the nature of the engagement.
59. Question - Is this a multi-vendor or single vendor award?
Answer – This is anticipated to be a multi-award contract.
60. Question - Is there Change Management system in place?
Answer - Technical hardware or software changes are managed through the University's ITSM.
61. Question - Is there an Information Technology Asset Management (ITAM) solution in place?
Answer – Not as such. The University uses Cherwell ITSM for CMDB, and JAMF Pro and Intune for MDM.

62. Question - What applications are currently in use?

Answer – See RFP Section II. Background.

63. Question - The RFP has some focus on Salesforce in the opening. But I see that Huron was awarded a contract for Salesforce work less than 6 months ago. Is JMU looking to understand other options that can support the Salesforce deployment if needed?

Answer – Yes, the University is interested in other Salesforce resources and skillset augmentation options.

64. Question – Are there any pain points of issues with the current vendor(s)?

Answer – No.

Signify receipt of this addendum by initialing “*Addendum #1* _____” on the signature page of your proposal.

Sincerely,

Doug Chester
Buyer Senior
Phone: 540-568-4272



August 3, 2023

ADDENDUM NO.: Two

TO ALL OFFERORS:

REFERENCE: Request for Proposal No: **RFP# FDC-1175**
Dated: **June 15, 2023**
Commodity: **Information Technology Consulting Services**
RFP Closing On: **Tuesday, August 15, 2023, at 2:00 p.m.**

Please note the clarifications and/or changes made on this proposal:

1. Question - How far along is the Reengineering Madison project? When is the new system expected to go live?
Answer - See RFP Section II. Background.
2. Question - Can you please share the portfolio of projects/initiatives that will be executed under the Reengineering Madison program?
Answer - See RFP Section II. Background.
3. Question - Can you provide ticket volumes that you are currently experiencing for PeopleSoft for the last one year, preferably by severity?
Answer - No. Ticket volume alone is not a good indicator.
4. Question - What is the size of the existing support team supporting PeopleSoft?
Answer - 10 people.
5. Question - Will existing support team members be moved to the Reengineering Madison project?
Answer - Yes, in part.
6. Question - Can you provide the architecture diagram for your PeopleSoft application and its deployment?
Answer - This information may be provided depending on the engagement and after the execution of a SOW.
7. Question - What is the current PUM level for each of the PeopleSoft application pillar?
Answer - This information may be provided depending on the engagement and after the execution of a SOW.
8. Question - What is the number of environments that exist for each PeopleSoft application pillar (example – DEV, TEST, DMO, UAT etc.)?
Answer - 4 environments.

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9. Question - What is the size of the production database for each of the PeopleSoft application pillar?
Answer - This information may be provided depending on the engagement and after the execution of a SOW.
10. Question - Does Oracle Core Technologies mean the Oracle DBA skill set? If not, please provide more details.
Answer - Yes.
11. Question - What skills are required in Desktop and Mobile Device Management?
Answer - Required skills, certifications, or qualifications will vary based on the specific project. Offerors should include the qualifications and experience of the personnel who may be assigned to perform work for the University in their proposals (See RFP Section IV.3.).
12. Question - Please provide details of the services expected in the following technologies:
a. Security and Federation Services
b. Microsoft 365 (M365)
c. Audio and Visual Technologies
d. Secure Research Enclaves
Answer - Services may vary depending on the nature of the engagement.
13. Question - What is expected from Svcs and Cert in Change Management? What are the roles of Senior Engineer/Engineer in Change Management?
Answer - See RFP Section IV. Statement of Needs and Section D. Pricing Schedule. If your firm refers to a specific role by a different name, list it in the space provided next to the corresponding role.
14. Question - Does onsite pricing refer to work specifically performed on campus (in person), and does offsite work pertain to work conducted within the US but off-campus, remote?
Answer - Yes.
15. Question - What positions are you looking to fill immediately? Is there current or future project you are expecting?
Answer - See RFP Section II. Background.
16. Question - For onsite services, we find that a base billable rate is suitable for most of our clients, and hotel/travel expenses charged as actuals later. Would you still like a single blended hourly charge for these positions including all expenses?
Answer - Yes.
17. Question - What are the Oracle core technologies focused on consulting services like OBIA, OBIEE, ODI, OAC, etc.?
Answer - Unavailable at this time.
18. Question - Is there a preferred cloud provider like AWS, GCP, or Azure for a data lake/data warehouse solution?
Answer - No.
19. Question - Is the data warehouse/data lake solution in place that required migrating to a new tool stack or a new solution is expected?
Answer - See RFP Section II. Background.

20. Question - Is there a preferred visualization tool for analytics?
Answer - No.
21. Question - Has Fluid UI been implemented in your PeopleSoft Application?
Answer - No.
22. Question - Is the Boomi atom/molecule installed on-premises or in the cloud?
Answer – On-premises.
23. Question - What Salesforce modules have been implemented/utilized?
Answer - Implementation is just beginning. See RFP Section II. Background.
24. Question - Is it mandatory to showcase the amount of sales our company had during the last twelve months with each VASCUPP Member Institution? Can we skip this portion if we do not have an existing/ previous VASCUPP cooperative contract? Will the proposal be deemed non-responsive if we do not have sales during the last twelve months with each VASCUPP Member Institution?
Answer - A response to the question is required. If the answer is none/zero, indicate that as your answer. Previous sales/experience with a VASCUPP Member Institution is not a requirement for submitting a proposal or being awarded a contract.
25. Question - Please confirm whether the "Secure Research Enclave" category includes CMMC readiness testing? Or, is this category meant for the development/implementation of the architecture for these enclaves?
Answer - Secure Research Enclave could include CMMC readiness or the development/implementation of the architecture for these enclaves.
26. Question - How does JMU define "Consulting Services" and "technology advisor"?
Answer - See RFP Section IV. Statement of Needs.
27. Question - Is this a new requirement or an existing requirement?
Answer - This RFP is to replace an existing contract with multiple vendors.
28. Question - What are your Key Performance Indicators?
Answer - Key performance indicators will vary depending on the project.
29. Question - If we have a teaming agreement with a subcontractor, does the subcontractor's experience count as experience for us?
Answer - The experience of a subcontractor specified in a proposal may be considered in the evaluation of the qualifications and experience of the Offeror.
30. Question - Do we need to submit only one response including the price schedule?
Answer - Vendors should submit one (1) original and four (4) copies, and electronic copy in WORD format or searchable PDF (on a flash drive) of the entire proposal, INCLUDING ALL ATTACHMENTS. The original, copies, and electronic version should all be the same and include the pricing schedule.

31. Question - As a firm registered on eVA, do we have to pay the fees before the submission of the proposal (i.e. this stage) or after award? Please also clarify that the subcontractor also has to pay this fee.
Answer - eVA fees are only paid upon receipt of a purchase order issued through the eVA system. eVA fees are paid by the vendor listed on the issued purchase order. If a subcontractor is issued a purchase order directly, they would have to pay the associated eVA fees; however, if the purchase order is issued to the prime contractor, and the subcontractor is working under the prime contractor, the subcontractor would not pay the associated eVA fees. The University typically issues purchase orders to the prime contractor.
32. Question - Do we need to submit provided RFP Cover Sheet as a Cover Page of the proposal?
Answer - The RFP cover sheet does not need to be submitted as the cover page of a proposal.
33. Question - Is there any local preference for this contract?
Answer - No.
34. Question - Is it mandatory to have experience with higher education institutions?
Answer - Experience with higher education institutions is not required.
35. Question - Please confirm whether security assessment and consulting services are included on this contract. If so, should we price this under the category "Security and Federation Services" on the Pricing Schedule?
Answer - The scope may include security assessment and consulting services, depending on the specific project. In addition to completing *Attachment D*, Offerors should also provide pricing for all other services.
36. Question - Is there any flexibility in the initial contract duration of one year? Is it safe to assume that the same terms and conditions will remain same when the project is renewed? Are there any pre-defined criteria to be met by the vendors to get the renewal of contract?
Answer - JMU typically issues contracts for one year with subsequent one-year renewals. The terms and conditions of existing term contracts are reviewed at the time of renewal. Contract terms may be negotiated and modified as necessary. See RFP *Section VIII.F*.
37. Question - Can you please specify the list of all technologies in each technology area under Section IV? Example: Do we need to consider Oracle Database, Fusinon Middleware, SOA, BPM, Identity Management, MDM, Webcenter-Sites, Portal, Content, Social, OBIEE, Golden Gate and ODI when you refer to Oracle Core Technologies? Similarly, can you call out all technologies under each area?
Answer – See RFP *Section II. Background*.
38. Question - Can you provide more information about the technologies listed in Section II of the RFP, such as Oracle Core Technologies, PeopleSoft Enterprise Solutions, Microsoft Azure, Okta, etc.? What level of expertise and experience is JMU looking for in these areas?
Answer – The level of expertise and experience required will vary based on the specific project. Offerors should include the qualifications and experience of the personnel who may be assigned to perform work for the University in their proposals (See RFP *Section IV.3*).

39. Question - What are the expected outcomes of the trainings that a vendor needs to provide to the staff? How much training must be provided in a month? What will be the number of attendees in each session? Will it be a virtual or classroom training?
Answer – Training outcomes, frequency, number of attendees, format, etc. will vary depending on specific training needs and agreed upon SOW.
40. Question - Can you provide more details about the weightage or scoring system that will be used to evaluate proposals based on the criteria stated in the RFP? How will the award decision be made?
Answer - See RFP Section IV. Evaluation and Award Criteria. Allocation of points for evaluation criteria will be published to the eVA solicitation posting prior to the closing date and time.
41. Question - Can you provide more information on the Virtual Payables options mentioned? How can vendors and suppliers enroll in these options?
Answer - Offerors may contact the JMU Accounts Payable office, at acctspayable@jmu.edu or (540) 568-7397 to discuss payment enrollment options.
42. Question - Please list all the technologies/tools that needs to be replaced/transformed as part of Reengineering Madison program. Are there specific projects the vendor team will be involved if selected?
Answer - See RFP Section II. Background.
43. Question - Does the University anticipate any of its current implementation partners will act as a Systems/Services Integrator and an offeror submitting a proposal in response to this solicitation act as subcontractor if selected?
Answer - No.
44. Question - Are you engaged with any cloud service provider? What is the scope of cloud-based solutions in this RFP?
Answer - See RFP Section II. Background.
45. Question - What are your expectations for the level of service that you would like to receive from the IT consulting firm? How would you measure the success of the IT consulting project?
Answer - Expectations and measurements of success will vary depending on the engagement.
46. Question - What are your expectations for the level of security that you would like to have in place?
Answer - JMU follows the ISO standard. When needed other standards are used depending on the need, regulations, requirements, etc.
47. Question - What are the specific challenges that you are facing with your current IT infrastructure compelling to go through Re-engineering Initiative?
Answer - See RFP Section II. Background.
48. Question - Could you provide more information about the anticipated scope of special projects where the contractor will serve as a technology expert? What are some examples of these projects and their objectives? Can you elaborate the expected deliverables and milestones for the projects covered in the scope this RFP?
Answer - See RFP Section II. Background.

49. Question - Is there any preference for local or regional vendors?

Answer - No.

50. Question - Is it safe to assume that offsite means offshore?

Answer - No. For the purpose of this solicitation, offsite means remote work performed not on campus.

51. Question - Resources working offshore need to align with client working hours as per US time zones?

Answer - Yes.

52. Question - Will JMU provide laptops to the vendor consultants?

Answer - No.

53. Question - Will any additional travel costs be considered in the pricing?

Answer - No. See RFP Section X. Pricing Schedule.

Signify receipt of this addendum by initialing "*Addendum #2* _____" on the signature page of your proposal.

Sincerely,

Doug Chester
Buyer Senior
Phone: 540-568-4272