13 June 2019

BA & RS QRC Technical and Analysis Support
Mission Partner: Air Force CDMC
Type: T&M

Clearance Level:

Does the company need to have a Facility Clearance? At what level?
☐ Unclassified ☐ Secret ☒ Top Secret ☐ Storage of Materials

Requires access to work in company SCIF? At what level?
No

Does the company need to provide cleared people? At what level?
☐ Unclassified ☐ Secret ☒ Top Secret (With favorable adjudication for SCI)

1.0 Place of performance

This effort will be performed at U. S. Government sites (but not limited to):

- Fairfax, VA 22030
- Fort Washington MD 20744
- Quantico VA 22134

TDY locations may include (but not limited to):

- Joint Base San Antonio, San Antonio TX 78236
- Air Combat Command, Joint Base Langley-Eustis, Hampton VA 23665
- Peterson AFB, Colorado Springs, CO 80915
- MIT, Lincoln Laboratory Boston MA 02421
- Northrop Grumman Xetron, Cincinnati, OH 45242
- Playas Training and Research Center, Playas, New Mexico 88009

2.0 Period of Performance:

- Twelve (12) months from contract award, and four twelve (12) month option periods

3.0 Description of Services/Scope of Work

3.1 **Background:** The Secretary of the Air Force, Administrative Assistant (SAF/AA) Concepts, Development, and Management (SAF/CDM) Office explores new concepts, develops emerging opportunities, and manages high-priority projects and programs to provide innovative solutions to Air Force and Department of Defense (DoD) challenges. SAF/CDM's

business operations directorate conducts planning and acquisition of cost-effective, long-term, critical capabilities in order to support the war-fighting mission of the combatant commanders. In order to meet current and projected workload requirements, CDM's Cyber & Strategic Enabling division (SAF/CDMC) must augment its military and civilian workforce with appropriate, highly-skilled, analytic and cyber-oriented technical professional services support.

3.2 Specific tasks include technical analyses for trade studies, cyber capability assessments, lab testing and tool evaluations, support to field test demonstrations, system performance tracking and documentation, vendor market surveys, supportability technical data development and training, transition planning and implementation of evolving new capabilities in support of a flexible enterprise system architecture environment. Support includes development of workflow solutions for the enterprise service management infrastructure involving a variety of classified and unclassified system data sources for the AF Cyber system architecture. This includes development and assessment of improved processes, as well as technical innovations, such as displaying operational system and support data for end-users, support providers, and Government stakeholders.

3.3 The Contractor shall adhere to and operate within imposed government official policies, regulations, instructions and directives; completing all steps required to achieve systems accreditations at various levels, to include: design, design documentation, technical development, developmental and operational testing, and operational documentation (operating manuals, user and administrator manuals, software design description, functional design/description document) through various certifications (e.g. security A&A, JITC). It is critical for the contractor to ensure the documents are completed throughout the project in a way that will satisfy the accreditation reviews at the end of the project.

3.4 **Scope and Tasks**:

3.4.1 **Program / Contract Management:** Contractor shall provide program management support under this Task Order. This includes the management and oversight of all activities performed by Contractor personnel, including Sub-Contractors, to satisfy the requirements identified in this work statement. The Contractor shall identify a Program Manager (PM) – Key Personnel – who shall provide management, direction, administration, quality assurance, and leadership of the execution of this task order. The PM need not be a Project Management Institute (PMI) certified Project Management Professional, but it is desirable. The Program Manager must possess the requisite skills to perform traditional

program management duties, to include the development of and adherence to a competent Program Management Plan. It is required that the duty location for the Program Manager (PM) be located at the Government (i.e. client) location for day-to-day execution of the contract and deliverables (see Key Personnel section 6.1).

3.4.1.1 **Orientation Briefing:** The Contractor shall schedule and coordinate a Project Kick-Off Meeting within 30 days of task order award at a location approved by Government. The meeting will provide an introduction between the Contractor personnel and Government personnel who will be involved with the task order. The meeting will provide the opportunity to discuss technical, management, and security issues, travel authorization, gain approval for program reporting formats and procedures. At a minimum, the attendees shall include contractor PM and other key personnel (i.e. key stakeholders critical to the success of the project), and relevant CDM Government personnel (the GTM, the security POCs, etc.).

3.4.1.2 **Monthly Project Management Meeting and Monthly Status Report:** The Contractor Program Manager and any critical stakeholders shall meet with the GTM on a monthly basis to review progress on the requirements, discuss risks and issues, review deliverables, and review the financials. The contractor shall schedule these meetings. The contractor shall provide a Monthly Status Report that summarizes project and task progress to include milestones, associated risks, issues with mitigation plan or corrective action status, and financial reporting. The Contractor shall submit the Status Report (deliverable 4.2) each month via electronic mail to the GTM and submit to the COR and GSA via ITSS. The report shall be delivered every 30 days following contract award, by the 10th calendar day of each month for work accomplished the previous month.

3.4.1.3 **Travel/Trip Reports:** All Contractor travel shall be preapproved by the GTM (and contractor will submit the approved request into ITSS prior to travel). Trip reports will be submitted for each trip and capture an accurate accounting of the Government approved and funded trip. Written reports documenting the details of the trip shall be submitted by the contractor to the government GTM and COR (deliverable 4.5) within 5

business days of trip termination.

3.4.1.4 **Technical Performance Meetings (TPM):** The Contractor shall participate in technical performance meetings (TPMs) as necessary in the performance of any task. The content of the meeting can include the discussion of any information that has impact upon task activities, including documentation contents or format.

3.4.2 **Engineering and Technical Analysis Support:** Contractor shall provide engineering and technical enterprise service support, including, but not limited to, the preparation of feasibility studies, analysis of alternatives, provision of technical services during the construction or installation phase, inspection and evaluation of engineering projects, and related services supporting platform, tools, or capability instantiation. The Contractor shall make use of relevant DoD and AF guidance and Instructions during the execution of these tasks.

3.4.2.1 **Sustainment Engineering:** The Contractor shall provide engineering services that include but are not limited to system and technical in-service design, infrastructure (lifecycle refresh, addition, modification and retirement), communications, physical and logical components of services, and supporting software to improve reliability, maintainability, and affordability. Support tasks include, but are not limited to, production and implementation of technical service management models and appropriate AF documentation, support to technical review process standards and adaptation (e.g. AF Form 1067), and the implementation of prototype agile delivery models to rapidly modernize or update the global AF Cyber enterprise system. Contractor efforts will promote collaborative interaction between the System Program Office, operational sites, other contractors, service providers and Mission Partners. In doing so, the Contractor shall utilize a consistent and time-sensitive approach to the supportability design of mission essential services that are effective and efficient, adhere to DoD and AF requirements, and consider industry best practices. Contractors must apply the following: AF Strategic Plan, AF Master Standards List, AF Agile Center of Excellence, AF Risk Management; AF ACAT Level 3 Life Cycle Sustainment Plan (LCSP) Version 1.0, AF Blue Baseline and OTB (Own The Baseline), AF RMF

Process, and Security Impact Analysis.

3.4.2.2 **Change Management and Release Management:** The Contractor shall provide engineering services that involve but are not limited to the necessary planning and coordination to take a new or changed service, or a service to be decommissioned, through Change Management and Release Management and into the production environment. Contractors should apply best systems engineering practices, including applicable DoD system engineering guides, Project Management Professional Book of Knowledge (PMBOK) processes, and SAFE Agile principles for change management, integration, configuration control, and implementation of the Risk Management Framework.

3.4.2.3 **Integration environment support:** The Contractor shall provide engineering services that include but are not limited to engineering Subject Matter Expert (SME) support for the AF Cyber integration environments. SME support includes day-to-day process and system infrastructure operations, Root Cause Analysis (RCA) to eliminate recurring incidents and to minimize the impact of incidents that cannot be prevented, and Problem Management, including the activities required to diagnose the root cause of incidents, determining the resolution to those problems and providing workarounds. It is important to note that certifications related to the SAFe Agile process, while relevant to this scope of work, are not strictly required of prospective offerors. The Government anticipates that the CCSO Program Office will provide the successful offeror with steady guidance relevant to SAFe implementation strategies and practices. The ultimate goal is to provide mission-effective ART engineering and technical support within a continuous integration environment and meeting established process quality performance measures.

3.4.2.4 **Architecture:** The Contractor shall support and provide recommendations for future architecture modifications including coordinated modernization and execution of AF Cyber architecture and integration tasks in close association with Mission Partners/Owners. The architecture recommendations should enable implementation of industry-standard and or best

architecture practices, as directed by the Government. The contractor shall support update of operational and system views, maintain standards lists and facilitate integration of architecture initiatives across DoD and in close collaboration with other DoD/IC Mission Partners. Contractors must be familiar with the following: DoDAF version 2.02, Model Based System Engineering (MBSE).

3.4.2.5 **Studies, Analysis and Assessments:** The Contractor shall provide engineering services to develop an efficient and effective methodology for assessing and evaluating technology solutions during the life cycle of CDM-managed segments of the AF enterprise system. These services include, but are not limited to, assessments and evaluations in support of the AF enterprise. The Contractor shall identify and evaluate current and emerging Government and commercial technologies and procedures that may offer improvements to capabilities and assist in the planning and implementation of technology insertions. Technology solutions and designs shall take into consideration the operational constraints and limitations of the receiving or requiring activity/customer. If applicable, design concepts shall include provisions for continuous technological improvement to maximize opportunities for product and capability improvement available from emerging technological advances in the Government and commercial market place. The Contractor shall provide systems engineering services to develop methodologies to enable OCEA to monitor commercial technology sectors for emerging risks to DoD. These services include, but are not limited to, assessments of available Government and commercial technical solutions for monitoring commercial markets.

3.4.2.6 **Process Improvement and Transition Planning:** The Contractor shall provide quality assurance for technical services as follows:

3.4.2.6.1 Innovative processes and procedures to ensure system operation is optimally effective, efficient and affordable supportable operational capability. Plans shall fully evaluate areas such as enterprise asset management and licensing considerations, how and when various levels of

validated Government requirements would be met.

3.4.2.6.2 Transition plans that identify how an initial prototype or pilot demonstrations could rapidly evolve to full system functionality and a supportable operational capability. Plans shall fully evaluate areas such as enterprise asset management and licensing considerations and how and when various levels of validated Government requirements would be met.

3.4.2.6.3 Engineering or technical services to correct or improve system issues with the goal of maintaining the required effective operations and maintenance performance of the weapon system, or to provide direct support to the weapons system that is essential to production, sustainment, integration, interoperability, and configuration management.

3.4.2.7 **Test Engineering:** The Contractor shall provide full system life-cycle test engineering capability support for automated test integration, including:

3.4.2.7.1 The Contractor shall have relevant expertise in AF, traditional, Scrum and scaled agile software development techniques, automated test processes in transition to a continuous integration environment leading to DevOps environment.

3.4.2.7.2 The Contractor shall coordinate training in best practices, perform operational and developmental tests and evaluation, verification testing with new/modernized automated test software applications, support technical exchange meetings (TEMs) and participate in quick reaction teams for time critical failure analysis and mishap investigation activities; coordinate risk assessment activities, mitigation and corrective action plans. Contractors must be familiar with the following: [Applicable AF standards for development, test, integration and delivery (i.e. AFSPCI 10-170 RTO&I, eMASS and XACTA docs, etc.)]

3.4.3 **Cyber Operations analysis:** The Contractor shall provide full spectrum intelligence analysis, collections, production support to CDM/CCSO. This includes but is not limited to the following: The Contractor shall perform intelligence analysis utilizing all-source intelligence data and employing a variety of techniques as can be found in, "Structured Analytic Techniques for Intelligence Analysis" (Heuer, McPherson), Intelligence Analysis: How to Think in Complex Environments" (Hall), "Intelligence Analysis: A Target-Centric Approach" (Clark), "Analyzing Intelligence: A National Security Practitioners' Perspectives" (George, Bruce) among others. The Contractor shall identify and document gaps in intelligence data from all source reporting. The Contractor shall generate, staff and monitor the results of intelligence collection requirements as they are communicated across the intelligence community. The Contractor shall generate, staff, and monitor the results of intelligence production levied against NASIC or other relevant intelligence production organizations according to the DIAPP. The Contractor shall generate on an as needed or more frequent basis a variety of internal intelligence products. These may include "quick looks", designed to answer relatively superficial or introductory level consumer requirements as well as "deep dives', involving significantly more involved explanations of highly complex and detailed subject matter. Periodic updates as they may pertain to specific technologies, project or threats may be also required, depending on the needs of the customer. The Contractor shall provide intelligence analysis that will be used to identify the potential outcomes of tools under development. This will include defining what observable effects may collected by the intelligence community – based on the various technical capabilities and limitations, locations and times those systems may be employed. The Contractor will also provide the customer with identifying additional opportunities for development of tools, in terms of 'branches and sequels' of related vulnerable systems, adversary capabilities and weapons that the original cyber capability could be modified to effect.

3.4.4 **Developmental Technical Project Support (R&D):** Contractor shall provide engineering and technical enterprise project development support, including, but not limited to, the development of a holistic approach to instantiation of a multi-domain effects environment in the conduct of R&D activities, Development Test and Evaluation (DT&E) and Operational Test and Evaluations (OT&E), preparation of feasibility COA analysis for tradeoff and risk drivers in development of installation and activities in the conduct of R&D projects, analysis of alternatives,

formation and integration of technical requirements for proof of concept demonstrations during development of constructs supporting multi-domain effects. The contractor shall inspect and evaluate engineering projects to meet cyber/radio frequency spectrum effects requirements, and related integration of supporting platform, tools, or capability instantiation to create new capabilities. The Contractor shall make use of relevant DoD and AF guidance and Instructions during the execution of these tasks.

Base Support

- **O&M Base CLIN**: Bid Tasks 3.4.1-3.4.3 (bid for all contract years).
- **R&D Base CLIN**: Bid Tasks 3.4.4 (bid for all contract years).

Surge Support

The Government may require surge support during the performance of this PWS and will do so by way of the delivery of the Surge Labor CLINs identified in the Schedule as Option items. The Contracting Officer may exercise a surge option by written notice to the Contractor within 30 days. Delivery of added surge labor shall continue at the same rate as like labor negotiated in the order, unless the parties otherwise agree.

- **O&M Surge CLIN**: The support is estimated as two (2) FTE at the Senior Operations Research Analyst labor category (19-15-2031) and one (1) FTE at the Senior Manager Group 2 Architectural and Engineering Manager (75-11-9041). This support provides additional capacity to support the Program / Contract Management (3.4.1), Engineering and Technical Analysis Support (3.4.2), and Cyber Operations Analysis (3.4.3) tasks above. This surge option is applicable to all Option Years 1-4.

- **R&D Surge CLIN**: The support is estimated as one (1) FTE at the Senior Operations Research Analyst labor category (19-15-2031). This support provides additional capacity to support the Developmental Technical Project Support (3.4.4) task above. This surge option is only applicable to Option Years 1-3.

4.0 Deliverables: All deliverables shall be submitted to the Government Technical Manager via email and to the Contracting Officer, GSA Program Manager and Contracting Officer Representative (COR) through GSA Assisted Services Shared Information System (GSA ASSIST), Post Award Collaboration (PAC) Tool. Delivery format for reports, documentation presentations, briefings, and diagrams shall be via electronic media in the Microsoft Office 2013 software suite or later versions. Graphical formats of sufficient quality to render required readability detail, such as gif, jpg, bmp, tif, png, etc. are also acceptable for diagrams. All technical documentation and data exchanged between the contractor and the USG shall be protected from public disclosure

with marking contained therein (i.e., classified in accordance with appropriate DoD and CDM approved security classification directives and guides).

GSA ASSIST is an online, web-based purchase order system designed to facilitate the development of delivery and purchase orders within FAS programs.

Deliverables are subject to review and, if warranted, may be returned within ten (10) business days to the contractor for revision. Upon receipt of Government Comments, the contractor will provide the final revised deliverable according to a schedule provided by the Government.

Deliverable ID#	Title	Frequency	Description
4.1	Financial Report	Monthly	Delivered monthly, including, at a minimum, labor and other direct costs (ODCs) incurred for the current period, cumulative costs for the contract period, remaining funds available, and labor hours expended; include graphics (e.g., line charts) showing actual costs against planned costs and explain all variances exceeding 5%.
4.2	Status Report	Monthly - 10th day of the month	The monthly activity report shall include progress toward major milestones, significant accomplishments, and convey areas of risk or concern and mitigating strategies. In addition, the contractor shall include other information as requested by the Government Technical Manager and information which has been directed and/or authorized by the Contracting Officer (CO). The monthly status reports shall cover monthly project activities, development results, and projected schedules for each task requirement when applicable. The report shall be delivered every 30 days following contract award, by the 10th calendar day of each month for work accomplished the previous month.
4.3	Incident	ASAP	Delivered no later than (NLT) 1 hour

	Reports		event: The contractor shall report mishaps or incidents exceeding $1000 (material and labor) to USAF property entrusted by this contract within one hour during normal day shift hours. All other incidents will be reported as soon as possible, but NLT the next normal working day. Accidents/mishaps shall be reported to the CDM USG Project Lead, through the COR.
4.4	Meeting Minutes	As Required	Delivered NLT one (1) week after meeting. The contractor shall provide, and upon USG approval, disseminate meeting minutes for key forums such as Technical Exchange Meeting, Monthly Meetings and In-Progress Reviews. The meeting minute reports document will be in a format agreed to by the PM/COR.
4.5	Trip Reports	NLT five business days after completion of travel.	The contractor shall submit a brief written report of the visit. Each report shall include, at a minimum, the date and duration of visit; the purpose audience, location of the presentation, and a brief summary of activities, and any recommendations and/or observations.
4.6	Final Report	30 days before end of PoP	Shall be delivered NLT one month prior to the end of the Period of Performance (PoP). The contractor shall deliver to the PM/COR a Final Summary report of all activities that captures findings, lessons learned, and best practices, recommendations for future courses of action and all requirements.
4.7	Specialized Report	As Required	Specialized documentation, data, and reports shall be delivered as specified and outlined in the applicable with respect to project planning, technical diagrams, COA analysis, briefing slides, concepts of operation, or issue white paper.

5.0 Travel: CONUS travel is anticipated during the performance of this work assignment.

The contractor shall obtain approval from the Government Technical Manager prior to booking the travel via email and upload this approval to the ITSS Post Collaboration Tool (PAC). The contractor will make every effort to make requests a minimum of 2-weeks prior to travel and will provide estimated travel costs as part of the request.

Travel will be reimbursed in accordance with FAR 31.205-46.

The contractor will visit CONUS Government sites, test sites, equipment manufacturers and other locations as directed by the COR. The number of trips and personnel traveling will be limited to the minimum required to accomplish work. Travel shall be scheduled during normal duty hours whenever possible. Locations may include, but not limited to:

- Joint Base San Antonio, San Antonio TX 78236 x6
- Air Combat Command, Joint Base Langley-Eustis, Hampton VA 23665 x4
- Peterson AFB, Colorado Springs, CO 80915 x2
- MIT, Lincoln Laboratory Boston MA 02421 x2
- Northrop Grumman Xetron, Cincinnati, OH 45242 x2
- Playas Training and Research Center, Playas, New Mexico 88009 x3

Some specific trips expected include:

Travel Event	# Days	# Contractors Traveling	Potential Locations
SAFe Pre- and Post-Program Increment (PI) Planning Events	2	2	Various Locations
Technology Demonstrations	2	2-4	Boston, MA
Requirements Development Planning Meetings	2	2	Denver, CO

6.0 Manning: During the course of contract performance, the Program Office requires the contractor to provide the Government with two (2) weeks' notice of the impending departure of any employee. The contractor must then replace the departing employee with a qualified individual within a reasonable period following any departure. All replacement personnel require a Top Secret security

clearance, with eligibility to be "read in" to an SCI program upon being hired through the end of the option period PoP.

6.1 Key Personnel: The Contractor shall have a qualified individual and submit a resume for the following Program Manager position with the proposal. Some of the critical roles and qualifications of the Program Manager that should be filled on day one of the contract include:

6.1.1 PROGRAM MANAGER: It is desirable that the Program Manager have the following qualifications:

6.1.1.1 Project Management Professional [PMP] from the Project Management Institute (PMI) certification or equivalent

6.1.1.2 Certifications and/or degree in areas such as engineering, architecture, test or other task related functions.

6.1.1.3 Experience to effectively organize, direct, and manage contract support for complex DoD ISR and Cyber operational system functions involving multiple Government and industry stakeholders, and interrelated systems and project tasks.

6.1.1.4 The ability to effectively communicate at senior levels within a DoD System Program Office environment

6.1.1.5 Significant knowledge and experience derived from working with Air Force Offensive Cyber Programs and environment highly desired.

6.1.1.6 The ability to coordinate with Air Force Offensive Cyber Program and project stakeholders in distributed locations to formulate and review task plans, deliverable items, and effectively execute in accordance with approved plans.

6.2 The Government requires the Contractor to provide the Program Management Office with a proactive, highly-capable team that is familiar with AF Cyber systems and protection of the Defense Industrial Base that will produce innovative approaches that enable effective and efficient task execution. The specified technical services required by SAF/CDMC include technical expertise and specialized consulting services in the areas of network and enterprise architecture, cyber capabilities, advanced analytics, technology research and development, systems engineering, information technology, computer science, information security, cyber security, program management, financial management and other related support utilizing best practices from public and private sectors.

6.3 The contractor team must provide skilled staff to lead new programs using AF Agile and Scaled Agile Framework (SAFe) practices. Additional support skills needed must include DoD acquisition management, the National Institute of Standards and Technology (NIST) and DoD Risk Management Framework, Cyber Security, and executive staffing experience (put together a formal correspondence package suitable for staffing and Executive staffing). Highly desirable qualifications include PMP, Certified Ethical Hacker (CEH), ~~Certified Special Events Professional (CSEP),~~ CASP, COMPTIA Certified Advanced Security Practitioner exam for CISSP Certified Information Systems Security Professional, Certified Information Systems Security Professionals (CISSP), and Scaled Agile Framework (SAFe) certifications or equivalent training.

6.4 All contract personnel shall be proficient (skillfully applied functional knowledge of the majority of the capabilities) within the Microsoft Office Suite (Word, PowerPoint, Excel), Adobe Acrobat Pro, and Microsoft Project. At least two individuals shall be proficient with advanced multimedia production (graphic design/editing, video creation/editing, and web page development applications) tools/software (e.g., Adobe Creative Tools). A minimum of two additional individuals shall be proficient with software providing a web-based, collaborative platform; document management and storage; and knowledge management and workflow solutions (e.g., Atlassian Suite, Microsoft SharePoint). All personnel shall be comfortable preparing professional briefing materials, reports, and e-mail communications. Contractor personnel may be required to learn other commercial or specialized computer applications germane to their work assignment with minimal training from the Government.

6.5 The contractor team shall collectively possess the following skills:

6.5.1 Previous exposure to or experience with the majority of the relevant capabilities, functions, missions, and processes (administrative, operational, policy, acquisition, maintenance, planning, etc.) of Department of Defense Service and Joint units, including but not limited to Combatant Commands (CCMDs), functional component commands, Joint Task Force, combat support agencies, interagency task force, or coalition headquarters, and the Joint Intelligence Operations Centers (JIOCs).

6.5.2 Previous exposure to or experience with some or all relevant tools, systems, networks, and applications (e.g. JIRA, Confluence, Exacta, Atlassian Suite of tools, Microsoft Suite, etc.)

6.5.3 Strong familiarity with the DOD's acquisition processes, specifically with the procedures and documentation within the Joint Capabilities Integration and Development System (JCIDS).

6.5.4 Past experience working closely with (or in) government organizations.

6.5.5 Past experience working in start-up environments or in new organizations.

6.5.6 Extensive knowledge and expertise about the security clearance process, to include investigation and adjudication activities.

6.5.7 Extensive knowledge and expertise on the Intelligence collection disciplines: signals intelligence (electronic, communications, foreign instrumentation signals), human intelligence, measurement and signature intelligence, geospatial/ imagery intelligence, technical intelligence, open-source intelligence, financial intelligence, cyber intelligence/digital network intelligence.

6.5.8 Understanding of the intelligence cycle, across all its functions and activities.

6.5.9 Extensive knowledge and expertise regarding the Defense Industrial Base, industrial health, risk assessment and risk mitigation best practices, defense critical technology issues, and foreign investment risk (i.e. the Committee on Foreign Investment in the United States).

6.5.10 Experience with advising, developing, and implementing enterprise information technology capabilities, either in industry or the federal government.

6.5.11 Proven ability to work effectively with personnel at all levels in a team environment and develop solutions to complex problems.

6.5.12 Excellent written and oral communication skills and demonstrated ability to conduct independent research and produce clear, logical, and concise products for senior leadership.

6.5.13 Understanding of project management principles.

6.5.14 Experience and comfort working through problems with unclear outcomes, creative thinking and problem solving, with an orientation toward results.