

ARMY GEOSPATIAL CENTER



BROAD AGENCY ANNOUNCEMENT (BAA)

SOLICITATION NUMBER

W5J9CQ-19-R-0004

OVERVIEW INFORMATION

- **Federal Agency Name:** Army Geospatial Center (AGC)
- **Funding:** RDT&E
- **Opportunity Title:** AGC Broad Agency Announcement
- **Announcement Type:** Initial Announcement
- **Funding Opportunity Number:** W5J9CQ-19-R-0004
- **Dates:**
 - Posting Date – 6 JUNE 2019
 - Closing Date – 365 calendar days from the original posting date (white papers and proposals are due by 4:00pm Eastern Standard Time on the closing date)
- **Concise description of funding opportunity:** The Army Geospatial Center (AGC) is soliciting white papers and proposals in accordance with Federal Acquisition Regulation (FAR) 35.016, Department of Defense Federal Acquisition Regulation Supplement (DFARS) 206.102(d)(2), and DFARS 235.016, which provides for competitive selection of basic and applied research, advanced technology development, and advanced component development and prototypes (hereinafter referred to as research). This announcement is general in nature and addresses multiple topic areas of research for the Systems and Acquisition Support Directorate and the Warfighter Support Directorate. Submissions in response to this announcement shall be for areas relating to the advancement of a wide variety of geospatial topics, which are listed herein. Accordingly, proposals selected for award are considered to be the result of full and open competition and fully compliant with Public Law 98-369, "The Competition in Contracting Act of 1984," DFARS 215.371-4(a)(4), and DFARS 235.006-71. This BAA is for procurement contracts (hereinafter referred to as contracts) only, and does not include grants, cooperative agreements, or other transactions.
- **Anticipated individual awards:** Multiple awards are anticipated; AGC reserves the right to select for award all, some, one, or none of the proposals received in response to this announcement.
- **Types of instruments that may be awarded:** Contracts only
- **Amendments:** Any amendments to this BAA will be posted via FedBizOpps at <https://www.fbo.gov>
- **Agency Contact:**

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PART I: FUNDING OPPORTUNITY DESCRIPTION:

The Army Geospatial Center (AGC), is soliciting proposals in accordance with FAR 35.016 relating to the advancement of the state-of-the-art and increasing knowledge or understanding in any of the geospatial research topic area identified in this solicitation.

This announcement is open for 365 days from the original posting date. Any white papers or proposals received during that time shall only be considered for award of a contract; not any other transaction, grant, or cooperative agreement.

AGC Background

The U.S. Army Geospatial Center (AGC) is a Major Subordinate Command (MSC) under the U.S. Army Corps of Engineers (USACE) located at the Humphreys Engineer Center in Alexandria, Virginia. The AGC focus is entirely on the Army's Geospatial Enterprise function from policy to Warfighting, supporting the Army's Battle Command Systems by facilitating dissemination of relevant geospatial information to every level across the operational environment.

AGC Mission

Coordinate, integrate and synchronize geospatial information requirements and standards across the Army; Develop and field geospatial-enterprise enabled systems and capabilities to the Army and the Department of Defense; and Provide direct geospatial support and products to Warfighters.

Roles and Responsibilities

- a) Execute policy and implement standards; monitor emerging technologies; validate Army Geospatial Enterprise (AGE) technical solutions.
- b) Conduct Research Development Test & Evaluation (RDTE) aimed at increasing the agility of Battle Command through characterization and application of Geospatial Data & Information (GI&S).
- c) Provide technical, acquisition integration and logistical support to the Army acquisition community and transitional technical capabilities under Joint Capability Technology Demonstration (JCTDs) and Quick Reaction Capabilities (QRCs), build and maintain a Ground – Warfighter Geospatial Data Model that provides a framework for common geospatial concepts and semantics required to share data and support common geospatial application services across the Army, other services, Department of Defense (DoD) organizations, and Coalition partners.
- d) Serve as the Army's Geospatial Center of Excellence, providing direct support to Geospatial Engineers (Geospatial Planning Cell down to Brigade Combat Team) as well as all other operating and generating forces that consume or produce geospatial information and services.

Research Topic Areas:

A. Systems and Acquisition Support Directorate

A.1. Enterprise Support Branch

Introduction:

The Enterprise Support Branch synchronizes AGC policies, priorities, programs, production requirements, strategies and technologies across the Army Acquisition Community (Program Executive Officers/Program Managers/Product Managers) to ensure the efficient integration of Geographic Information System (GI&S) technologies in systems acquisition. The branch also advises program management of Army acquisition programs, currently fielded systems and technology integration/demonstration programs on the integration of GI&S capabilities in a manner consistent with Headquarters (HQDA) approved policy, regulation and guidance.

Research Areas:

Army Geospatial Enterprise Operations (AGC-01).

The object of this topic is to conduct research on the technology, architecture and processes to support enterprise geospatial operations within the Army, from the individual platform to the theater level, and including support from outside theater. It also considers the efficient integration of GI&S technologies into weapons systems across and within computing environments.

Geospatial Standards (AGC-02).

The object of this topic is to conduct research on the appropriate standards to support geospatial information collaboration, content discovery, content delivery and visualization among Army mission command networks and systems. This research considers creators, consumers and managers of GI&S; and considers the needs of systems ranging from high-powered-to workstations and servers-to handhelds and embedded applications-to disconnected and disadvantaged users. It also takes into account Army data communications limitations, especially at the tactical level scanning and cartographic support equipment, techniques and management. It includes the metadata standards required to support data sharing and discovery services.

Geospatial Applications and Services (AGC-03).

The object of this research topic is to identify and define applications and services needed to support the AGE. These would include geospatially enabled applications to be implemented on multiple Army systems/platforms which improve Army capabilities, enhance geospatial synchronization, enhance the

capabilities of systems using geospatial data, decrease bandwidth requirements, or otherwise improve the functioning of the AGE.

Data Model Development (AGC-04).

The object of this research topic is to support development of Army-wide geospatial data model(s) that supports enterprise-wide geospatial services, and analyze the relation of that model to other Army and National System for Geospatial-Intelligence (NSG) models and data standards. It also includes research into the implementation of a geospatial data model in Army systems and programs.

Test and Certification (AGC-05).

The object of this research topic is to identify the experimentation, test, validation and certification strategies to directly support the Army Acquisition Community in ensuring the efficient integration of GI&S technologies and standards into Army acquisitions systems at the appropriate milestones defined by DoD Directive 5000 series. The research considers testing geospatial applications in both distributed and standalone environments.

Army Geospatial Enterprise Migration (AGC-06)

The object of this research topic is to support the evolution of the Army Geospatial Enterprise (AGE) to address emerging technologies, standards and changes to Army, Joint, and Coalition Operations. Prototypes and experiments should address enterprise migration strategies that include the requirements of a Standard and Sharable Geospatial Foundation (SSGF) and Mission Command Essential Capabilities. The research identifies migration issues for existing Army systems as well as novel implementation of technology to demonstrate AGE capabilities. Research areas include Open Geospatial Consortium Standards, Open Source Geospatial Software, 2-D and 3-D visualization software, globes, geospatial portfolio management and integration of multiple software packages. The research includes prototypes supporting geospatial applications in both distributed and standalone environments.

Geospatial Modeling & Simulation (AGC-07)

The object of this topic is to conduct research and engineering development into the production of digital terrain databases used in Modeling & Simulation (M&S). The research will consider processes for verifying and validating digital terrain databases and the processes used to develop these databases. The processes will undergo verification and validation on sample digital terrain databases.

Geospatial Experimentation (AGC-08)

The object of this research topic is to identify and define policies, procedures, instrumentation, and technologies required to conduct geospatial experimentation, to verify implementation of geospatial standards and profiles, and to measure performance parameters of battle command systems that utilize Geospatial Information.

Cloud Computing (AGC-09)

The object of this research topic is to explore various models of cloud computing in a geospatial enterprise and carry out experimentation pilot projects as necessary to validate the models. Research areas would include the optimal architecture to support cloud computing in a geospatial enterprise, the benefits and challenges of cloud computing at various nodes of the enterprise, how various geospatial data types would be stored, indexed, and served in the cloud, and challenges for low-bandwidth and periodically disconnected users, geospatial visualization, geospatial processing, content management, providing analytics as a service, and geospatial data as a service via cloud computing. Additional areas could include security issues in the cloud environment, crowd-sourced data in the cloud, data validation, data synchronization, data backup, maintaining the currency of and adding to geospatial data in a deployed cloud, and the use of existing DoD, Army, Commercial and Federal Cloud Computing services versus standing up a geospatial cloud capability.

Disconnected Intermittent Low-Bandwidth (DIL) (AGC -10)

The object of this research topic is to explore various methods/models of providing geospatial data and services to support the AGE under DIL network conditions. This work can take the form of pilot projects, demonstrations and integration of new Software (SW) technology into existing Army Hardware (HW), development of new HW SW to support this computing environment. Subject areas for this research would be security concerns, providing data back to the AGE, development of crowd sourcing methodologies, data synchronization when devices are connected, fast effective ways to load and manage data in android environments as well as loading multiple devices at one time. Beneficial outcomes of this research would reduce load times, increase data management efficiency and enable delivery of data back to higher Army echelons.

Geospatial Architecture (AGC-11)

The object of this topic is to conduct research topic and engineering to develop architectures supporting the exchange of Geospatial Information using file-based exchange and web services across all echelons from the National to Tactical level. These architectures must support the exchange, distribution, discovery, and processing of faster, feature, and elevation data for all computing environments in both a connected and disconnected environment. Additional areas of research could include cross domain architectures, connected and disconnected access to data, software application architectures, and data architectures. Research must consider multiple platforms, echelons, security issues, and both raster and vector data.

Geospatial Data Center Architectures (AGC-12)

The object of this topic is to conduct research and engineering to design architectures supporting geospatial big data repositories (SIPR, NIPR and JWICS) and experiment with workflows and procedures for efficient distribution of geospatial data from a data center through all echelons to a soldier with a handheld. The architectures should include approaches and considerations for updating geospatial data in a data center, synchronization of data centers with tactical units and NGA (including NSG partners); and exposing Geospatial Authoritative Data Sources (ADS) and non- authoritative data sources. The architecture research should include support for 2D, 3D and 4D capabilities. Research geospatial analytic services that could be rapidly delivered from a data center to all Computing

Environments (CEs). Identify emerging Big Data technologies that could be utilized in lieu of enterprise level service servers to support storage of massive data sets.

Geospatial Content Management Methods (AGC-13)

The object of this topic is to conduct research on geospatial content management tools, techniques and procedures for Army users, identify techniques and technologies for cross domain access to geospatial data – utilizing a build once paradigm and/or propose new and novel geospatial data Quality Assurance/Quality Control (QA/QC) and validation tools/techniques and procedures for Big Data. Research novel methods for copying, moving, distributing and managing large geospatial data sets, rating data for appropriateness of use and completeness, and providing commanders tools to rapidly build mission ready data sets for distribution. The scope of the research includes support to the full spectrum of operations, operating and generating force as well as humanitarian assistance.

A.2. Imagery Systems Branch

Introduction:

The Imagery Systems Branch (ISB) conducts advanced and engineering development in the areas of geospatial intelligence including tasking, processing, exploitation and dissemination and provides support for fielding, operations and maintenance of space-related, ground-based Army Tactical Exploitation of National Capabilities (TENCAP) systems. The ISB serves as the AGC interface to the Army TENCAP Office. The ISB provides engineering and program management support, consultation to Product Director (PD) Army TENCAP and other Army organizations, to include identification of emerging technologies and new concepts that have potential application to Army/TENCAP systems implementations and interfaces with elements of the National Intelligence Community dealing with geospatial intelligence systems and architectures.

Research Areas:

Advanced and Engineering Development (AGC-14)

The object of this topic is to conduct research on geospatial intelligence systems and architectures along with development of support systems for their fielding, operations and maintenance.

Emerging Concepts and New Technologies (AGC-15)

The object of this topic is to conduct research, development and systems engineering of technologies that facilitate primary data acquisition, exploitation & dissemination of Geospatial Intelligence (GEOINT) by tactical Army warfighters in potentially austere and bandwidth limited environments. Topics may include, but are not limited to, Non-Traditional Intelligence, Surveillance, Reconnaissance (ISR) Pseudo Satellite (Air/Space) applications (collection, computing & networking), ISR automation (including tasking and exploitation), machine learning applications for multi-INT exploitation systems (including Big Data), and Modular Architectures (open-IT, Microservices).

A.3. Systems Applications and Integration Branch

Introduction:

The Systems Applications and Integration Branch (SAIB) conducts research and development in the areas of Artificial intelligence techniques (machine learning, machine reasoning, pattern recognition, natural language processing), big data, Human Geography, Decision Support Systems (DSS), complex systems dynamics, environmental security, digital image acquisition, and intelligence data exploitation architectures in support of the Army to include the Army Futures Command/Cross Functional Support Teams, DoD, Joint Information Environment, Electronic Warfare (EW), Space and mission command networks and systems, i.e., Communications, Computers, Command and Control Intelligence surveillance and reconnaissance (C4ISR) programs.

SAIB develops and demonstrates capabilities to support improvements in the Army's DoD ability to conduct supporting joint operations relevant to the shaping, deterring, seize initiative, dominate, stabilize, and enabling civil authority mission domains. SAIB is focused on future innovation and concepts for capability development needs and opportunities. We seek to develop, refine, engineer, and produce developed solutions that are relevant to the Common Operating Environment. SAIB continues to develop and demonstrate innovation, acquisition support, prototype technology development, and training support for Joint Staff Directorates, Office of Secretary of Defense Directorates, and Special Operations Command with focus on Special Operations Forces (SOF) missions, Counter-terrorism, Counterinsurgency Operations (COIN), Stability and Support Operations and depth and simultaneous attack operations

SAIB integrates and demonstrates technologies prototyping required to better manage, develop, demonstrate and evaluate multi-domain and joint emerging and operational capabilities that address DoD priorities and promote the use and benefits of rapid prototyping throughout the DoD. SAIB continues to conduct proof-of-principle prototyping required to validate the technical feasibility of an envisioned capability and explores its operational value with high levels of confidence in delivering on the technical and operational promise for the warfighter.

SAIB integrates and demonstrates technologies to improve the representation of realistic synthetic environments in Army and Joint Simulations. Provides technical administrative and program management support as required, to execute the space intelligence and geospatial programs assigned by AGC, the Army, other customers and DoD. Conducts research and development in surveying and mapping to include the Global Positioning System (GPS), hydrographic surveys, and dam and lock measurement. Uses remote sensing as well as field and laboratory research to study spectral reflectance, luminescence and emittance for civil and military applications. SAIB develops, applies and fields the use of geospatial services, data, advanced analytics, storage mechanisms and Geospatial Intelligence (GEOINT) technologies for the warfighter needs. Executes Joint Capability Technology Demonstrations (JCTDs) within the mission space of AGC and missions assigned from other DoD customers. The emphasis is on research to develop new techniques, operational procedures, leverage disruptive technologies, and equipment for Geospatial Information, Geo-Analytics, in support of Army and Joint forces. SAIB places special emphasis on executing Joint Capability Technology Demonstrations for USACE Civil Works, Military applications, Environmental Security, Environmental Restoration and Military Construction applications; and transfers new technology in multiple engineering and science

disciplines to Warfighters, other Government agencies, USACE districts and divisions through reimbursable consulting, training and standards development.

Research Areas:

Artificial intelligence techniques (AGC-16)

SAIB conducts research and development in Artificial Intelligence (AI) techniques (machine learning, machine reasoning, pattern recognition, natural language processing) and AI systems performance for DoD user communities. These AI systems are widely accepted as a technology offering an alternative way to tackle complex and dynamic problems in urban studies; and is necessary to increase the understanding of how innovative AI approaches will enhance warfighter awareness in urban and land dynamics modeling processes for applied research and prototype development.

Artificial intelligence techniques (AGC-17)

SAIB conducts research and development in Artificial Intelligence (AI) techniques (machine learning, machine reasoning, pattern recognition, natural language processing) and systems. These AI systems are widely accepted as a technology offering an alternative way to tackle complex and dynamic problems in urban studies; and is necessary to increase the understanding of how innovative AI approaches will enhance warfighter awareness in urban and land dynamics modeling processes for applied research and prototype development.

(AGC-17.1) The objective of this topic will be to support the SAIB in the integration of AI derived applications and techniques in urban land dynamics domain as well as the emerging challenges they face to develop innovative Artificial intelligence techniques (machine learning, machine reasoning, pattern recognition, natural language processing) in order to examine source data and extract from the ontological models that best represent the decision domain and support requirements.

AGC- 17.2) The objective of this topic will be to enhanced capabilities to collect large volumes of geographic data (big data), development of new methods and tools that can intelligently and automatically transform geographic data representation, query processing, spatial analysis, and data visualization leveraging Artificial intelligence techniques (machine learning, machine reasoning, pattern recognition, natural language processing).

(AGC- 17.3) The objective of this topic will be to leverage Artificial Intelligence (AI) techniques (machine learning, machine reasoning, pattern recognition, natural language processing) required to enhance technical capabilities to extract, exploit, and visualize the implied and tacit knowledge stored within a large data repository of structured and unstructured content. This topic seeks to improve the warfighters ability to “VISUALIZE and DESCRIBE” the Operational Environment with critical understanding about emerging trends and relationships within the data store. The particular elements of this research should consider intelligence framework required to extract, analyze, and visualize entities and their relationships from the unstructured data, then fuse and visually display structured data (geospatial, temporal, and traditional database attributes) with unstructured data (free text narratives) in a User Defined Operational Picture (UDOP),

(AGC- 17.4) The objective of this topic will be to integrate applications of AI techniques in Ecosystem dynamics domain as well as the emerging challenges they face to develop innovative Artificial intelligence techniques (machine learning, machine reasoning, pattern recognition, natural language processing) in order to examine source data and extract from the new developed Water Security and other resiliency focused ontology models that best represent the anticipatory analytics required for Water, Food, and Energy emergent vulnerability mapping.

(AGC- 17.5) The objective of this topic will be to develop and integrate geospatial decision-support tools with hybrid AI systems to develop more holistic approaches to map and understand global trends that will affect Rapid Integrated Strategic Assessments, DoD strategic decision making, and Office of the Secretary of Defense planning policy.

(AGC- 17.6) The objective of this topic will be to develop and integrate AI capabilities focused on leveraging open source intelligence for early indicators and warnings to highlight and prioritize geographical areas of National Security interest deemed most at risk or in crisis and in need of security cooperation, foreign internal defense, and/or crisis repose. SAIB seeks to integrate AI applications to support both situational understanding and force allocation decisions for the Global Force Management Allocation Plan (GFMAP) and Theater Special Operations Command (TSOC) requests for forces.

(AGC- 17.7) The focus of this topic will be to conduct research and development of future 4D Data Visualizations, future Virtual Reality Applications for Terrain Analysis and Mission Command operational design and planning. This research topic will also include the innovation of techniques to visualize in 4D social media analytics for improving warfighters understanding of the cognitive aspects of the human security environment.

Advanced geospatial semantic web services (AGC-18)

The objective of this topic is to conducts research and development in Geospatial web services leveraging innovative geospatial web services, semantic web services, Web Service Modeling Ontology (WSMO), and AI planning with spatial data and processing capability over the internet. SAIB integrates research efforts seeking the combination of geospatial web services and generating composite web services out of atomic services in order to provide Joint and interagency users with a higher level of functionality.

(AGC-18.1) The objective of this topic will be to conduct research and development of future capabilities for automatic composition of geospatial web services that rely on semantic web services technology and Artificial Intelligence (AI) planning techniques to generate composite geospatial web services leveraging innovative Web Service Modelling Ontologies (WSMO) as the underlying semantic web service framework.

(AGC-18.2) The objective of this topic will be to conduct research and development into the geospatial technologies capable of to export and developing tools for the automatic transfer of data, processed information, and analysis from operational Intelligence, GEOINT and OSINT systems into the Semantic Knowledge Management Systems.

(AGC- 18.3) The object of this topic will be to conduct research and development of future Army Cloud Computing Enterprise Transformation required for geospatial web services and generating composite web services out of atomic services in order to provide Joint and interagency users with a higher level of functionality

Imagery Exploitation (AGC-19)

The objective of this topic is to conduct RDT&E in the areas of imagery exploitation, digital image acquisition, processing and dissemination and intelligence data exploitation architectures in support of Army/DoD space and Intelligence Electronic Warfare (IEW) programs and to conduct RDT&E in the areas of imagery collection, processing, exploitation and dissemination (CPED) process to include all dimensions including but not limited to two-dimensional (2D) and three-dimensional (3D) capability improvements.

Mission Command Networks, Systems and ISR (AGC-20)

The objective of this topic is to conduct research and development supporting improvements in the Army's/DoD's ability to support mission command networks and systems with Intelligence, Surveillance, Reconnaissance (ISR), target acquisition, strike planning, weapons delivery and battle damage assessments in support of precision strike, early entry Advance Operating Forces, Special Operations Forces (SOF) missions, Counter-terrorism, Counterinsurgency Operations (COIN), and Stability Operations. Providing and integrating technologies including, but not limited to, high resolution terrain collection, biometric, electro optical, radar and hyperspectral sensors, collection management, other related non-imagery based Intelligence sensor development.

Joint Operational Technologies & Integration (AGC-21)

The objective of this topic is to conduct research into developing and maintaining methodologies, techniques, tactics and procedures (TTPs) and integration of C4ISR technologies for Warfighter (for all US Armed Services) use in: Counter Intelligence and Human Intelligence (CI/HUMINT), Geographic Intelligence (GEOINT); sciences and technologies related to Human geography and cultural information; Critical Infrastructure Protection (CIP), and Continuity of Operations (COOP); Biometric sciences and application; link analysis; analyses of various types; Information technology improvements in secure networks and multi-level security and dissemination; Humanitarian aid and SOF missions, counter-terrorism, COIN, stability and support operations technologies. This research topic is also used to develop methodologies and technologies for the collection, storing, analysis and dissemination of natural resources, specifically in the areas of Natural Resources Intelligence (NARINT) or environmental security.

Civil Military Operations (AGC-22)

The objective of this topic is to conduct RDT&E to support advanced Knowledge Management Systems (KMS), big data with machine learning capabilities designed to optimize computing systems for data-intensive environments improving decision making capabilities and how CMO organizations 'see', 'hear', 'read', 'understand', 'reason', 'interpret', 'learn' and 'recommend' from existing reports. This topic will include the networking science and graphing of high volumes of unstructured data, visualization,

dissemination and decision support capabilities for understanding the human aspects of the Civil-Military Operations (CMO). This also includes the geospatial analysis, and modeling for CMO resource allocation; social media analysis in support of measuring the operational impact of CMO; dissemination of geospatial and human geography CMO data products to interagency, intergovernmental organizations (IGOs), and non-governmental organizations (NGOs); development of a CMO ontology for knowledge management and inference; and subject matter expert support for disaster mitigation, preparedness, relief and recovery operations capabilities.

Joint Information Environment (AGC-23)

The objective of this topic is to conduct research and development required to prototype, test, evaluate, experiment with the collection, processing, exploitation and dissemination (CPED) of data required for the Joint Information Environment. This topic will also include the research, development, testing, and new modalities for training necessary for implementation, transition, and sustainment of prototype tools, new techniques, tactics, and procedures required to conduct strategic and operational level offensive and defensive information, public affairs, psychological, and civil affairs operations. This topic will include physical, informational, and cognitive aspects of the Joint Information Environment.

Note for definition: (The physical dimension includes the connective infrastructure that supports the transmission, reception, and storage of information. The informational dimension contains the content (or data) itself. It refers to the content and flow of information, such as text or images, or data that staffs can collect, process, store, disseminate, and display. The informational dimension provides the necessary link between the physical and cognitive dimensions. The cognitive dimension refers to the minds of those who are affected by and act upon information. This dimension focuses on the societal, cultural, religious, and historical contexts that influence the perceptions of those producing the information and of the targets and audiences receiving the information. In this dimension, decision makers and target audiences are most prone to influence and perception management. From a military standpoint, information enables decision making, leadership, and combat power; it is also key to seizing, gaining, and retaining the initiative, and to consolidating gains in an OE. Army commanders conduct information operations to affect the information environment. (See FM 3-13 for doctrine in the information environment and the various information-related capabilities available to commanders).

Army and Joint Simulations (AGC-24)

The objective of this topic is to integrate and demonstrate technologies to improve the representation of realistic synthetic environments in Army and Joint simulations to include related military installations, monuments, and memorials.

Database Development (AGC-25)

The object of this topic is to provide technical expertise and research to USACE HQ, districts, divisions, other Army and DoD customers in the definition and evolving of geospatial data standards, plans, policies and uses. In this research area, AGC identifies, develops, analyzes, reviews and evaluates applications and technologies that manipulate and process varying levels of topographic and hydrographic geospatial information. AGC seeks new or existing data base manipulation techniques,

application methods and procedures to manage information on, but not limited to, USACE projects, dams, river charts, harbors, C4ISR and other information of interest to the USACE Districts, Divisions, Military Engineers and National emergency with defense and civil objectives. Investigations include, but are not limited to, the use of information from new terrain sensors such as Interferometric Synthetic Aperture Radar (IFSAR) and LIDAR to populate databases. Activities also include data dissemination approaches and system development using web-based GIS and map applications.

Technology Implementation (AGC-26)

Development of Strategic Multilayer Strategy for the Operational and Strategic Adoption and implementation of innovative technical solutions (GOTS/COTS) for the Department of Defense.

The objective of this topic is to conduct research and development required to prototype, test, evaluate, experiment with the operational and strategic adoption and implementation of innovative geospatially related COTS and or GOTS technical solutions for decision making. This topic will also include the research, development, testing, and new modalities for doctrine, organization, training, and policy inclusions necessary for implementation, transition, and sustainment of prototype tools, new techniques, tactics, and procedures required to conduct strategic and operational level offensive and defensive strategies. This topic will include physical, informational, and cognitive aspects of the Technology Adoption Model (TAM) to establish the relationships between the level of technology acceptance and users factors which include perceived usefulness, perceived ease of use, attitude toward using, and actual usage behavior at the highest level of operational or strategic use.

DoD Communities of Practice (CoP) and Communities of Interest (CoI) are an aggregate of individuals, organizations, and systems that collect, process, analyze, produce, disseminate, or act on information. These CoPs and CoIs are a heterogeneous global environment where humans and automated systems observe, orient, decide, and act on data, information, and knowledge. With the power and function of information as a conduit for influence on decision-making and command and control, the adoption and full implementation of technical solutions is a key component of the commander's operational environment. Characterized by ubiquitous on-demand media and interpersonal hyper-connectivity, today's geospatially relevant technical solutions enables collaboration and information sharing on an unprecedented scale. Within the current and future data rich environments, the United States can expect challenges across three interrelated dimensions: the physical, composed of command and control systems, and the supporting infrastructure that enables individuals and organizations to create information-related effects; the informational, composed of the content itself, including the manner by which it is collected, processed, analyzed, stored, disseminated, and protected; and the cognitive, composed of the attitudes, beliefs, and perceptions of those who transmit, receive, respond to, or act upon information. Effects in the physical and informational dimensions of the data rich environments ultimately register an impact in the human cognitive dimension, making it the central object of DoD's decision making cycles. The results of this research objective will be to provide multiple inputs from academic, industry, and USG provisioning a multilayer strategy and planning support necessary for the operational and strategic adoption critical to the implementation of innovative technical solutions (GOTS/COTS) for Commands with complex operational imperatives requiring multi-agency, multi-disciplinary solutions to include core Services/Agency entities across the USG. Further results from this research objective will be geared toward accelerating the OODA-loop and deploy new capabilities

within adversaries innovation-information-cycle, increased mission effectiveness, reduced blue-on-blue, shared situational awareness, and provisioning an efficiency in DoD responsive capability delivery & reduced IT costs

Gray Zone Challenge: (AGC-27)

The objective of this topic is to conduct research and development required to study, prototype, test, evaluate, experiment with the operational and strategic geospatially related solutions for identifying, mapping, and making decisions within a Gray Zone. This topic will also include the research, development, testing, and new modalities for (DOTMLPF-P) Doctrine development, Organization changes, Training required, Material (technical solutions) requirements, Leadership impacts, Personnel requirements for professional and military education, Facilities, and Policy inclusions necessary for implementation, transition, and sustainment of prototype tools, new techniques, tactics, and procedures required to identify, map, and conduct strategic and operational level offensive and defensive strategies within Gray Zones. This topic will include physical, informational, and cognitive aspects required to establish the technical approach and implementation for DoD and National Military Strategy objectives as inputs to the military component of interagency responses to gray zone conflicts.

Defining the Gray Zone Challenge

Gray zone security challenges, existing short of a formal state of war, present novel complications for U.S. policy and interests in the 21st Century. We have well-developed vocabularies, doctrines, and mental models to describe war and peace, but the numerous gray zone challenges in between defy easy categorization. For purposes of this paper, gray zone challenges are defined as competitive interactions among and within state and non-state actors that fall between the traditional war and peace duality. They are characterized by ambiguity about the nature of conflict, opacity of the parties involved or uncertainty about the relevant policy and legal frameworks.

Gray zone challenges can be understood as a pooling of diverse conflicts exhibiting common characteristics. Notably, combining these challenges does not imply a single solution, since each situation contains unique actors and aspects. It is also significant that there is not just one technical solution, one data source, nor one DoD warfighter information capable or available to the commanders and staffs to VISUALIZE and DESCRIBE the Operational Environment or operational framework relevant to the Gray Zone space. Overall, gray zone challenges rise above normal information systems capabilities to visualize and describe everyday peacetime geo-political competition, assess multiple perspective, and map the ambiguous nature of events, objectives, tertiary effects.

Recommended Reading for this topic include:

1. First is to study the Assessing Revolution and Insurgent Strategies Project at this link. The 46 case studies as well as the human factors and legal research provide a foundation for study of the phenomena that take place in the gray zone. Below are the selected or representative cases of the 5 types of revolutions categorized from 1962-2009.
2. George Kennan and his 1948 concept of political warfare.
3. Sam Sarkesian (Unconventional Conflicts in a New Security Era: Lessons from Malaya and Vietnam) on unconventional conflicts:
Asymmetric conflicts: For the US these conflicts will be limited and not considered a threat to its

survival or a matter of vital national interests; however, for the indigenous adversaries they are a matter of survival.

Conflicts with Political-Social Milieu Center of Gravity: The center of gravity will not be the armed forces of adversaries as Clausewitz would argue but more in the political and social realms as Sun Tzu espouses.

PART II: AWARD INFORMATION:

This BAA is for contracts. Accordingly, the Government may award any appropriate contract type under the FAR. This BAA supersedes all previous editions and shall remain in effect until superseded.

Multiple awards are anticipated as a result of this BAA. The amount of resources made available under this BAA will depend on the quality of the submissions received and the availability of Research, Development, Testing, and Evaluation (RDT&E) funds. The Government reserves the right to:

- Select for negotiation all, some, one, or none of the proposals received in response to this BAA, and to make awards with or without discussions with Offerors.
- Remove Offerors from award consideration should the parties fail to reach agreement on award terms, conditions and cost/price within a reasonable time or the Offeror fails to timely provide requested additional information.
- Have sole discretion to negotiate all contract clauses with selectees.
- Accept proposals in their entirety or to select only portions of proposals for award. In the event the Government desires to award only portions of a proposal, negotiations may be opened with the Offeror.
- Fund proposals in phases with options for continued work at the end of one or more of the phases.

Selection Notices/ Award Process for Contracts.

Offers may be submitted at any time during the open BAA solicitation period, as specified in Part I. The submission of a white paper is highly encouraged, but not required, before submitting a proposal to prevent undue effort on the formation and evaluation of a proposal not of interest to the Government and improbable for award. Once submissions (white papers and proposals alike) are evaluated, responses to Offerors will be provided via email notification from the Contracting Officer within 45 working days.

This is an open BAA and utilizes a two-step process:

Step 1: White papers may be submitted during the times specified in Part I. All white papers will be evaluated in accordance with the evaluation criteria identified in Section V. White paper responses will contain the Government evaluation board's opinion of whether the idea expressed in the white paper is likely to generate a successful proposal. All information necessary to submit a white paper is in this BAA; no additional information is available.

Step 2: Proposals may be requested by a formal Request for Proposal (RFP) when the Governments'

scientific or peer review committee's opinion of the idea expressed in the white paper is likely to generate a successful outcome; however, proposals may also be submitted initially. All proposals will be evaluated in accordance with the evaluation criteria identified in Section V. Proposal evaluations will be conducted without regard to any comments resulting from the review of a white paper. Proposal responses will contain the Government's intent to either pursue or not pursue an award based on the proposal. All information necessary to submit a proposal is in this BAA; no additional information is available.

PART III: ELIGIBLE APPLICANTS:

The offeror must be considered responsible in accordance with FAR 9.104. By submission of an offer or execution of a contract in response to this solicitation, the offeror certifies they are not debarred, suspended, declared ineligible for award of public contracts, or proposed for debarment pursuant to FAR 9.406-2. If the offeror cannot certify, or if the status of the offeror changes prior to award, the offeror must provide detailed information as to its current status.

The AGC highly encourages small business concerns, women owned small businesses, small disadvantaged business concerns, small businesses located in HUBZones, businesses participating in the Small Business Administration 8(a) program, service disabled veteran-owned small businesses, and veterans to submit research proposals for consideration. It is to be noted there will be no set-aside used for this BAA, and is considered full and open competition.

Awards of contracts to colleges and universities are permissible under this BAA in accordance with 10 USC 2361, and are highly encouraged to submit proposals for consideration.

Any white papers or proposals from United States Government facilities and organizations, or Federally Funded Research and Development Centers (FFRDCs) will not be considered under this announcement.

All Offerors and proposed subcontractors must affirm whether they are providing scientific, engineering, and technical assistance (SETA) or similar support to any USACE Component through an active contract or subcontract. All affirmations must state which office(s) the Offeror supports and identify the prime contract numbers. Affirmations shall be furnished at the time of proposal submission. All facts relevant to the existence or potential existence of organizational conflicts of interest must be disclosed. The disclosure shall include a description of the action the Offeror has taken or proposes to take to avoid, neutralize, or mitigate such conflict. Without prior approval, a contractor cannot simultaneously be a SETA and related research and development performer. Proposals that fail to fully disclose potential conflicts of interests or do not have acceptable plans to mitigate identified conflicts will be rejected without technical evaluation and withdrawn from further consideration for award.

All Offerors - If a prospective Offeror believes that any conflict of interest exists or may exist (whether organizational or otherwise), the Offeror should promptly raise the issue with AGC by sending his/her contact information and a summary of the potential conflict by e-mail to the Agency Contact identified herein, before time and effort are expended in preparing a proposal and mitigation plan. If, in the sole opinion of the Government after full consideration of the circumstances, any conflict situation cannot

be effectively avoided or mitigated, the proposal may be rejected without technical evaluation and withdrawn from further consideration for award under this BAA.

Foreign or foreign-owned Offerors are advised that their participation is subject to foreign disclosure review procedures. If the offeror anticipates the efforts of foreign nationals on any proposal submitted hereunder; the foreign national's name, nationality and extent of involvement in the proposed research must be provided. Foreign nationals cannot work under a contract or any instrument unless all AGC-required security clearances and approvals have been obtained. There are no exceptions to these requirements.

PART IV: WHITE PAPER AND/OR PROPOSAL SUBMISSION INFORMATION:

In preparing white papers and proposals, it is important that the offeror keep in mind the characteristics of a suitable proposal acceptable for formal evaluation, including the focus on scientific study and experimentation directed toward advancing the state-of-the-art or increasing knowledge or understanding. It should include all the information specified in this announcement in order to avoid delays in evaluation. White papers will be responded to within 45 working days of receipt, either with a formal RFQ or advising denial. All offeror's submissions shall be sent to the AGC BAA Proposals Mailbox at AGCBAAProposals@usace.army.mil.

All proposals should include the information specified in this BAA solicitation in order to avoid delays in evaluation. Be sure to specify the Commercial and Government Entity (CAGE Code), Duns and Bradstreet Data Universal Numbering System (DUNS Number) and the Tax Identification Number (TIN) with offeror's submission. Completion of the Representations and Certifications as well as registration in the DoD's System for Award Management (SAM) Database are mandatory before receiving an award. Registration can be completed at <https://www.sam.gov>.

Offerors are requested to provide their e-mail address upon submission of proposal and also the name, address, and phone number of their cognizant Defense Contract Audit Agency (DCAA) office, if known.

It is to be noted that should an award be funded with military funds, contractor and subcontractor manpower reporting is required through The Office of the Assistant Secretary of the Army (Manpower & Reserve Affairs), at <https://cmra.army.mil>.

Offerors shall follow the instructions below pertaining to the type of document they are submitting.

White Paper Submission Instructions

- a) White paper submissions shall be submitted to the AGC BAA Proposals mailbox at AGCBAAProposals@usace.army.mil.
- b) White papers shall not contain classified data. Offerors are expected to appropriately mark each page of their submission that contains proprietary information; do not provide submissions marked "classified," "confidential," "secret," etc.

- c) The offeror's white paper shall not exceed 5 (five) pages and shall address the topic area (i.e. AGC-21), of which they are submitting their white paper for. White paper contents should consist of:
 - a. A title descriptive of research to be performed
 - b. The name and phone number of the principal investigator or senior researcher tentatively supervising the project. Include the estimated duration and a cost/price rough order of magnitude (ROM).
 - c. One or more paragraphs describing the objective(s) or goals of the proposed research to include a statement of the working hypothesis to be proved or disproved, if appropriate
 - d. One or more paragraphs describing the technical approach to be taken in the course of the research. If experimental, it should include a description of the scope of the testing program. If analytical, it should include key assumptions to be made, the scientific basis for the analysis, and the numerical procedures to be used
 - e. One or more paragraphs describing the potential military and/or civil payoffs that might ultimately derive from the proposed research to the Corps of Engineers
 - f. A one-page curriculum vitae of the principal investigator

Proposal Submission Instructions

- a) The proposal is the only vehicle available to the offeror for receiving consideration for award. The proposal must stand on its own merit; only information provided in the proposal can be used in the evaluation process leading to an award. The proposal should be prepared simply and economically, providing straightforward, concise delineation of capabilities necessary to perform the proposed work. The technical proposal must be accompanied by a fully supported cost/price proposal, as cost and technical considerations are reviewed simultaneously.
- b) Proposal submissions shall be submitted to the AGC BAA Proposals mailbox at AGCBAAProposals@usace.army.mil.
- c) Proposals containing data that is not to be disclosed to the public for any purpose or used by the Government except for evaluation purposes shall include the following statement on their cover page.
 - a. "The proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed - in whole or in part - for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this offeror as a result of, or in connection with, the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this

restriction are contained in sheets _____.”

- d) The offeror shall also mark each sheet of data it wishes to restrict with the following legend:
- a. “Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this proposal.”
- e) The offeror’s proposal shall contain at minimum, a cover page, table of contents, list of illustrations/tables, an executive summary, and no more than 30 pages. The offeror is required to address what topic area(s) they are submitting their proposal against (e.g. AGC-15), and shall address 4 (four) main volumes (i.e. categories) consisting of the 1. Technical Proposal, 2. Quality Control Plan (QCP), 3. Cost/Price Proposal, and 4. Additional Representations and Certifications. Use the numbering system below when submitting proposals:

Proposal Contents/Checklist:

- i Cover Page
- ii Table of Contents
- iii List of Illustrations/Tables
- iv Executive Summary

VOLUME I - Technical Proposal

- 1.1 Technical Approach
- 1.2 Technical Discussion
- 1.3 Technical Program Summary
- 1.4 Risk Analysis and Alternatives
- 1.5 References
- 2.1 Special Technical Factors
- 2.2 Capabilities and Relevant Experience
- 2.3 Previous or Current Relevant Independent Research and Development (IR&D) Work
- 2.4 Related Government Contracts
- 2.5 Facilities/Resources
- 3.1 Schedule
- 3.2 Time Line Chart by Task
- 4.1 Program Organization
- 4.2 Organization Chart(s) with Key Personnel
- 4.3 Management and Technical Team
 - 4.3.1 Prime Contractor Responsibilities
 - 4.3.2 Subcontractor(s) Responsibilities
 - 4.3.3 Consultant(s) Responsibilities
- 4.4 Resumes of Key Personnel
- 5.0 Appendix (ces)

VOLUME II – Quality Control Plan (QCP)

VOLUME III – Cost/Price Proposal

- 1.0 Proposal Cover Sheet for Total Proposal
- 2.0 Summary by Cost Element and Profit or Fee for Total Proposal
- 3.0 Cost Summary Breakout and Supporting Detail

VOLUME IV – Additional Representations and Certifications

- f) A SF 33 must be completed by each offeror and submitted with each full proposal

Contents of proposals

VOLUME 1: Technical Proposal

The technical portion of the proposal shall contain the following and any other information the offeror considers necessary to address the evaluation criteria in Part IV, Evaluation criteria.

i. Cover Page: The cover page should include the BAA number, R&D topic and reference number, name and telephone number for the principal points of contact (both technical and contractual), and any other information that identifies the proposal. The cover page should also contain the proprietary data disclosure statement, if applicable.

ii. Table of Contents: The offeror should follow the proposal contents/checklist provided in this and the above section, and use it for a final quality-control checklist.

iii. List of Illustrations/Tables: This list is a quick reference of charts, graphs, and other important information. A separate list of tables is recommended.

iv. Executive Summary: The executive summary allows the offeror to present briefly and concisely the important aspects of its proposal to key management personnel. The summary shall present an organized progression of the work to be accomplished, without the technical details, such that the reader can grasp the core issues of the proposed program. The executive summary should rarely exceed two pages.

1.1 Technical Approach: In this section, the offeror should provide as much technical detail and analysis as is necessary or useful to support the technical approach it is proposing. One must clearly identify the core of the intended approach. It is not effective to address a variety of possible solutions to the technology problems.

1.2 Technical Discussion: A complete discussion stating the background and objectives of the proposed work, the approaches to be considered, the proposed level of effort, and the anticipated results/products, to include the proposed reports and deliverables to be furnished. No technical approach is without its limitations or shortcomings. Every issue should be identified and compared with the successes/failures of previous approaches. A tradeoff analysis is a good way to make this comparison and should be supported by theory, simulation, modeling, experimental data, or other sound engineering and scientific practices. If the offeror has a “new and creative” solution to the problem(s), that solution should be developed and analyzed in this section. The preferred technical

approach should be described in as much detail as is necessary or useful to establish confidence in the approach.

1.3 Technical Program Summary: This section summarizes the above technical discussion in an orderly progression through the program, emphasizing the strong points of the proposed technical approach.

1.4 Risk Analysis and Alternatives: Every technology has its limitations and shortcomings. The proposal evaluator(s) will formulate a risk assessment and it is in the best interest of the offeror to have its own understanding of the risk factors presented. Critical technologies should be identified along with their impact on the overall program as well as fallback positions that could still improve on existing approaches.

1.5 References: Any good technology discussion must present the basis for and reference the findings cited in the literature. Include the names, brief biographical information, experience, and a list of recent publications of the offeror's key personnel who will be involved in the research.

2.1 Special Technical Factors: In this section, the offeror should describe any capabilities it has that are uniquely supportive of the technology to be pursued. The following subparagraphs are offered as possible areas to be addressed.

2.2 Capabilities and Relevant Experience.

2.3 Previous or Current Relevant Independent Research and Development (IR&D) Work. Include the names of other agencies to which the proposal has also been submitted.

2.4 Related Government Contracts. Past performance information to include the name, address, point of contact, phone number, email address, contract identification number, contract award date and amount for a minimum of three (3) customers for whom the offeror has performed similar services in the last three (3) years.

2.5 Facilities/Resources.

3.1 Schedule: The schedule represents the offeror's commitment to perform the program tasks in an orderly and timely manner.

3.2 Time Line Chart by Task: Each major task identified must appear as a separate line on the program schedule. Planned meetings, such as kick-off, presentations (including final), technical interchange meetings, etc., must be included in the time line. The time line must also indicate the anticipated meeting site.

4.1 Program Organization: A brief description of the offeror's organization, to include name, address, phone numbers, and email addresses. In this paragraph, the offeror should present its organization's ability to conduct difficult technical programs. Any pertinent or useful information may be included in this paragraph, but a minimum recommended response should address the following subparagraphs:

4.2 Organizational Chart(s) with Key Personnel: Include prime contractor and subcontractor organization charts.

4.3 Management and Technical Team: This should specifically identify what tasks will be performed by which party and why each subcontractor, if any, was selected to perform its task(s).

4.4 Resumes of Key Personnel: Include the resumes of the prime contractor, subcontractor and consultant personnel to include the names, a brief biography, and a list of recent publications of the offeror's key personnel. Documentation of previous work or experience in the field of the proposer is especially important.

5.0 Appendix(ces): Appendices may include technical reports, published papers and referenced material. A listing of these reports/papers with short descriptions of the subject matter is usually adequate. Do not provide commercial product advertising brochures; these are unwanted.

VOLUME II: Quality Control Plan (QCP)

Quality control activities are associated with the creation of project deliverables and services being offered under the suggested BAA topic. Quality control is used to prevent and resolve errors in project deliverables and services under the resultant contract. Quality control verifies that deliverables and services are of acceptable quality and meet the standards of the criteria established.

The offeror shall implement a documented Quality Control Plan (QCP) that identifies and results in correction of potential problem areas throughout the entire scope of the contract. The QCP shall be submitted as part of the proposal.

The offeror's QCP shall:

Contain procedures of written and verbal communication with the Government regarding performance of the work.

Contain procedures for handling corrective action without dependence upon Government intervention.

Contain, at a minimum, specific surveillance procedures for each proposed deliverable and/or service identified in the proposal. These surveillance procedures shall identify who will perform the surveillance, the frequency, the method, listing of items under surveillance, and corrective actions that will be taken to correct deficiencies. - Provide a plan for maintenance of records of all quality control checks and corrective actions.

For each deliverable and/or service, describe the quality control activities you will execute.

Examples of quality control activities:

- Quality control check list
- Deliverable review
- Structured walkthroughs

- Statistical sampling
- Testing process

VOLUME III: Cost Proposal

Content of Cost Proposal. The cost portion of the proposal should contain a cost estimate or a firm fixed price for the proposed effort sufficiently detailed by element of cost for meaningful evaluation. The estimate should be detailed for each task of the proposed work. For proposal pricing purposes, an offeror should assume a contract start date of ninety (90) days after submission of the proposal.

The cost proposal should be limited to the minimum number of pages necessary to satisfy the specific requirements set forth herein. Submission of volumes of computer-generated data to support the cost proposal is not necessary or desired. If computer-generated data is essential to support the cost proposal, it may be submitted as an addendum and must be clearly cross-referenced to the material it supports in the cost proposal.

Cost proposals should represent the offeror's best response to the solicitation. Any inconsistency, whether real or apparent, between promised performance and cost or pricing data must be fully explained in the proposal. Failure to explain any significant inconsistencies may demonstrate the offeror's lack of understanding of the nature and scope of the work required. Accordingly, cost proposals must be sufficient to establish the reasonableness, realism and completeness of the proposed cost/price. Further, any modifications made to the initial proposal must likewise be thoroughly supported in writing regardless of whether such changes are made during negotiations or at the time of a proposal revision.

- a. Proposal Cover Sheet for total proposal.
- b. Summary by cost element and profit or fee for total proposal (Fixed Price or Cost).
- c. Labor summary for total proposal by categories, rates and hours, including a description of labor categories, defined by Training, Education, Experience and Professional Certification. For firm fixed price proposals submit fully loaded labor rates.
- d. Explanation of how labor rates are computed including base rates (actuals) and escalation, if any.
- e. Interdivisional Transfers (detailed breakout of costs), if applicable
- f. Identification of indirect rates by fiscal year and explanation of how established and base to which they apply.
- g. Bill of Materials detailing items by type, quantity, unit price, total amount and source of estimate. Provide vendor written quotes.
- h. Summary of all travel by destination, purpose, number of people and days, air fare, per diem, car rental, etc.
- i. Consultants by name, rate and number of days or hours. Furnish copy of consulting agreement, and identify prior agreement(s) under which the consultant commanded proposed rate.
- j. Computer use by type, rate and quantity.
- k. Other direct costs by type, amount, cost per unit and purpose (specifically identify any costs for printing or publication).
- l. DD Form 1861 (if proposing facilities capital cost of money).
- m. Subcontractor's proposal, with the offeror's price/cost analysis of subcontractor's proposal. If subcontract was not competed, include justification.

- n. Forecast of monthly and cumulative dollar commitments for the proposed contract period.
- o. Proposed fee, if any.

Subcontractors' proposals must be similarly structured. All subcontracted work must be properly identified as such. If a subcontractor elects to submit an abbreviated proposal to the offeror, it is the offeror's responsibility to see that the subcontractor simultaneously submits a complete detailed proposal properly identified directly to the contracting officer. The offeror must ensure that the subcontractor adheres to the guidance set forth herein. FAR 15.404-3 requires that the offeror provide an analysis of the subcontractors' cost proposals. To that end, the offeror's proposal must:

1. Identify principal items/services to be subcontracted.
2. Identify prospective subcontractors and the basis on which they were selected. If non-competitive, provide selected source justification.
3. Identify the type of contractual arrangement contemplated for the subcontract and provide a rationale for same.
4. Identify the basis for the subcontract costs as included in the offeror's proposal (e.g., firm quote or engineering estimate, etc.).
5. Identify the cost or pricing data or information other than cost or pricing data submitted by the subcontractor.
6. Provide a price analysis of the proposed subcontract in accordance with FAR 15.404-1(b). The analysis should determine the reasonableness and completeness of each subcontractor's proposal. If the analysis is based on a comparison with prior prices, identify the basis on which the prior prices were determined to be reasonable. If price analysis techniques are inadequate or the FAR requires submittal of subcontractor cost or pricing data, provide a cost analysis in accordance with FAR 15.404-3(b). Cost analysis should include, but not be limited to, an analysis of materials, labor, travel, other direct costs and proposed profit rates.

Cost Element Summary Format. Cost elements which do not pertain to the offeror's proposal may be omitted. Do not lump elements together. Cost elements peculiar to a particular offeror which are not listed may be added. Elements may be rearranged to fit an offeror's pricing structure. Certified cost/pricing data is required for proposals valued at \$2M or greater, in accordance with FAR 15.403 and 15.406-2, and Class Deviation 2018-O0012.

VOLUME IV: Signed and dated Standard Form 33 and Additional Representations and Certifications.

Proposals shall be submitted with a completed Standard Form 33 available at:
<http://www.gsa.gov/portal/forms/download/116254> .

PART V: ADMINISTRATIVE INFORMATION

Evaluation Criteria

- a) Proposals submitted in response to this BAA will be evaluated in accordance with the following criteria:
 - a. The overall scientific and/or technical merits of the proposal, including how the

proposal meets the FAR requirements for scientific study and experimentation directed toward advancing the state-of-the-art or increasing knowledge or understanding, rather than focusing on a specific system or hardware solution.

- b. The potential contributions of the effort to the U.S. Army Geospatial Center mission.
 - c. The offeror's capabilities, related experience, facilities, techniques, or unique combination of these which are integral factors for achieving the proposal objectives.
 - d. The qualifications, capabilities and experience of the proposed principal investigator, team leader and other key personnel who are critical to the achievement of the proposal objectives.
 - e. The reasonableness and realism of proposed costs (and fees, if any) and prices.
 - f. The offeror's record of past performance.
- b) Upon receipt of a proposal, the AGC evaluators will perform an initial review of its scientific merit and potential contribution to the Army mission and also determine if funds are expected to be available for the effort. Proposals not considered having sufficient scientific merit or relevance to the Army's needs or those in areas for which funds are not expected to be available may be declined without further review.
 - c) It is the policy of AGC to treat all proposals as privileged information before award and to disclose the contents only for the purposes of evaluation. Proposals not declined as a result of initial review will be subject to an extensive peer review by highly qualified scientists from within the Government. The offeror must indicate on the appropriate proposal form, any limitation to be placed on Disclosure of Information contained in the proposal.
 - d) Each proposal will be evaluated based on the merit and relevance of the specific R&D proposed as it relates to the overall AGC research and development program, rather than against other proposals in the same general area.

Type of Contract

Contract type may be firm fixed price, fixed price level of effort, or cost plus fixed fee. Selection of the type of contract is based upon various factors as described in FAR Part 16.

Any contract awards resulting from this BAA will incorporate the most current FAR and DFARS references. Contracts awarded by AGC will contain, where appropriate, detailed special provisions concerning patent rights, rights in technical data and computer software, reporting requirements, equal employment opportunity, etc.

The Government will only award a contract to an offeror deemed responsible in accordance with FAR 9.1.

PART VI: OTHER

Awards

With the submittal of all required information as described herein and the favorable evaluation of your proposal, the Government may bilaterally award without discussions; therefore, it is in the offeror's best interest to review all requirements listed within. Note that contract clauses are self-deleting; therefore, there is neither a requirement nor need for a modification to the award if any clause is found not applicable. Performance after the receipt of an award signed by the Contracting Officer indicates your full acceptance of all terms and conditions within the award.

Awards will be made on a Standard Form 26. Awards will consist of all applicable clauses and contracts shall be in accordance with the Uniform Contract Format (UCF). Contract award will be made electronically.

Reporting Requirements

The number and types of reports will be specified in Section J of the contractual document. The reports will be prepared and submitted in accordance with DD Form 1423, Contract Data Requirements List.

This notice constitutes a BAA as contemplated in FAR 35.016. No additional written information is available, nor will a formal request for proposal (RFP) or other solicitation regarding this announcement be issued. Interested parties are invited to respond to this announcement. All responsible parties' responses will be considered.

PART VII: AGENCY CONTACTS

POC for this solicitation:

Lauren Secor
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7701 Telegraph Rd
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