NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY
7500 GEOINT Drive, Springfield, Virginia 22150

Commercial Solutions Opening (CSO)
Solicitation Number: HM047626SC001
Topic of Interest: Foundation GEOINT Change Detection

Problem Statement:

Annually, NGA Foundation GEOINT Operations Office receives hundreds of validated requirements for mapping and safety of navigation products with timely and accurate geospatial data from the National System for Geospatial Intelligence (NSG), Department of Defense (DoD) and Intelligence Community (IC). In addition to annually submitted requirements, NGA supports Non-combatant Evacuation Operations (NEO) and contingency operations worldwide with an authoritative "Listing of Products" for each of the over 600 NEO sites in 189 countries.

One major challenge in this process is determining how to most efficiently understand if change has occurred to prompt an update to our products. As Foundation Digital Twin (FDT) advances, accurate broad area change detection will drive data collection to maintain currency. Automated recurrent global change detection would inform future FDT data updates and indicate priority of current AOIs and sub-AOIs to improve efficiency. While localized change detection has become commonly available, it often requires the user to manually input images on a case-by-case basis requiring prior knowledge of where to conduct analysis. Automated broad area change detection, with little to no manual intervention, that is focused on foundation geospatial interests at the global coverage scale is rare.

To enhance and maintain both data and product currency, the DoD is interested in global indicators of change which would indicate necessity to update mapping, charting and Safety of Navigation products and their underlying data. Relevant change includes changes applicable to mapping, charting, and navigation such as land use/land cover; air, land, and sea transportation and navigation features and networks; urbanization indicators; and land/infrastructure change due to natural disaster. Non-relevant change includes changes related to time of day, seasonality, pattern of life, and order of battle. Note, our interest is not in the identification of features, only identification of change.

Specifically, the proposed solution should include:

- Vector indicators of change in open standard formats, attributed with metadata such as date, source, location, areal extent, and confidence score in standard formats.
- Change notifications should be scalable to global coverage which will provide a deliverable of relevant global changes detected over a 3 months period of time delivered quarterly.
- Change analysis on demand of a specified Area of Interest and over a specified time lapse – beginning and end dates, days to years.
- Change analysis based on ready access (2 days or less) to global data, both historical and current, to support a variety of change detection questions, including time-sensitive requests and historical comparisons.
- Detection of change over areas as small as 100 sq. meters.
- Continual process improvements through computer vision, and AI/ML technology advancements based on feedback.

- Transparent QA/QC process metrics ensuring the highest confidence in accuracy of the data.

Submission Requirements:

Questions are due by 10 July 2026 by 11:00am EST
Submission responses are due 14 July 2026 by 11:00am EST

Refer to the FG_CD_CSO_20260623 document Section B, Instructions & Procedures for Preparation and Submission of Solutions for specific instructions regarding the submission process and standard content requirements.

Solutions must be unclassified, commercial, and shareable with international partners.

Teaming is encouraged between commercial companies to offer the most holistic end-to-end solution, from data collection through exploitation.

Desired Solution Attributes:

Market research has identified growth in change detection technology and capabilities. This effort is more unique as it pursues automated broad area change that is focused on foundation interests at a global scale. The objective of this effort is to leverage collaborative commercial market solutions.

Key attributes which will mark success can be to the effect of, but not limited to:

- Notification/Identification of broad area FG-relevant change, while removing non-relevant.
- Provided in vector, open standard formats with metadata, such as polygons in GeoJSON format.
- Periodicity of detections should be executed as described in the problem statement, with the capability to adjust as needed.
- Leverage and continuously improve use of computer vision AI/ML technology.

Evaluation Criteria

Refer to the main CSO document (FG_CD_CSO_20260623) for a complete description of the evaluation criteria.