

Terms of Reference: CEOS Systems Engineering Office (SEO)

Purpose: The Committee on Earth Observation Satellites (CEOS) Systems Engineering Office (SEO) provides systems engineering leadership and support to CEOS through technical and management services and the development of tools and products that facilitate systems engineering solutions for societal benefit.

Organization: The SEO was conceived by NASA in 2007, as a contribution to CEOS, and is currently funded and led by NASA. Continued leadership and funding for the SEO will be addressed annually by the sponsoring organization. The SEO formally reports to the Strategic Implementation Team (SIT) Chair and its annual work plan is coordinated with the SIT Chair, but the SEO may also consider requests for work from the CEOS Chair. NASA currently utilizes a mix of NASA employees and contractors representing various CEOS agencies to meet SEO objectives. Participation from other Agencies is desired to meet the expanding efforts of the SEO.

Objectives: The SEO's objectives and intended outcomes are focused on management and technical services to CEOS.

Management

- The SEO will manage the CEOS website, including hosting and content. Website visits will be tracked and reported annually at the CEOS Plenary to optimize outreach potential.
- The SEO will update the CEOS mailing list servers with inputs provided by the CEOS Executive Officer (CEO), who will review and manage the CEOS contact list. These lists will be coordinated with the CEOS Chair and SIT Chair to maintain accuracy and efficiency in CEOS communications.
- The SEO will manage the CEOS-GEO Actions database. This includes hosting and coordination of content with the CEO to maintain accuracy and effectiveness.
- The SEO will work with the CEO to support the development of the *CEOS Work Plan*.
- The SEO will support CEOS-external stakeholder interfaces by working with CEOS leadership (Chair, SIT, CEO), Virtual Constellations (VCs), and Working Groups (WGs) on priority initiatives supporting those stakeholders.
- The SEO will support CEOS outreach and training activities, pending availability of funding. This support may include development of outreach materials, hosting of exhibition booths (e.g., GEO, International Geoscience and Remote Sensing Symposium [IGARSS], American Geophysical Union [AGU]) and training.

Technical

- The SEO will develop systems analysis tools to support the CEOS SIT, VCs and WGs. Examples of such tools include the CEOS Visualization Environment (COVE), the Essential Climate Variable (ECV) database, and the Data Policy Portal.
- The SEO will conduct systems engineering gap assessments (missions and measurements) and special studies to support the CEOS SIT, VCs, WGs, and Ad Hoc Teams.

- The SEO will support CEOS data acquisition planning initiatives. This support may include the development of measurement requirements, mission coverage and gap assessments, data volume assessments, cloud cover analyses, data policy assessments, and the coordination of mission data to optimize the use of Agency resources.
- The SEO will support the development and annual updates to the *Earth Observation (EO) Handbook* and the corresponding online database. This support includes prototyping new technical functions and reviewing development plans. The partnership between the SEO and Mission, Instrument and Measurement (MIM) team will improve the content and effectiveness of the MIM.

Planning and Reporting:

- The SEO will develop an annual SEO Work Plan and present the results at the CEOS Plenary meeting. The elements of this SEO Work Plan depend on available resources, SIT priorities, CEOS Chair priorities and SEO priorities.
- The SEO will present an annual report at the CEOS Plenary meeting. This report will summarize the key accomplishments of the SEO from the current year and the proposed SEO Work Plan for the following year.
- The SEO will present status reports, as needed, at CEOS meetings (i.e., Secretariat, SIT, Working Groups, Constellations) on topics related to their systems analysis tools, systems engineering assessments, and data acquisition planning assessments.

These Terms of Reference can be amended or modified only after consultation and agreement by the CEOS Chair and the SIT Chair. The amendment process should include a review of other CEOS guiding documents that will be affected by the amendment or modification to ensure that all of the guiding documents are consistent and mutually supporting.