**Abstract:**

**What are CEOS’s Essential Questions, and How Do We Answer Them?**

**Purpose of the Session:**

What are the overarching, strategic-level Essential Questions that underlie CEOS’s mission and overall goals, and that therefore also determine the structure CEOS needs to achieve those goals? The focus of this session is to come to agreement on what these questions are, and then to prepare for a follow-on session scheduled for the September SIT Technical Workshop, at which the CEOS membership will answer them.

**Context and Rationale:**

One of the keys to implementing the accepted recommendations from the CEOS Self-Study is that addressing strategic recommendations will not take place all at once. Implementation of some recommendations (like the refocusing of meeting agendas) has already begun, while others require additional discussion among members. The Essential Questions are an example of the latter category: the conversation began at the 2011 Plenary, will continue through SIT-27, and will be concluded later in the year. The purpose of extended discussion is to ensure that the maximum number of voices is included in the discussion over time, so that CEOS benefits from the widest possible range of its members’ experience and perspective.

The tasks that comprise this part of the CSS implementation are: 1) to identify the set of Essential Questions; and 2) to develop answers that reflect the input of CEOS members. Prior to SIT-27, you will receive a White Paper that will set up the discussion by suggesting some, but not all, of the Essential Questions. The first two of these questions were identified in Michael Freilich’s presentation at the 2011 Plenary:

1. What constitutes “Success” for each type of CEOS activity? (and when will an activity end?)
2. What constitutes CEOS scope and strategy? To what extent should CEOS:
   1. conduct sustained, long-term, routine data provision, vs.
   2. demonstrate feasibility and generate a proposal to another organization as to how long-term operations could be carried out)

One additional question was elucidated as a result of the Membership and Participation Study:

1. What is the Value Proposition for CEOS?
2. What benefits, tangible or otherwise, does an organization gain through CEOS membership?
3. What benefits, tangible or otherwise, do governments and society gain through the existence of CEOS?
4. In both cases, are those benefits commensurate with the level of investment (in time, human capital, financial commitments)?

The three Essential Questions presented here are neither definitive nor exclusive. Additional questions may emerge through the White Paper, or in the discussions at SIT-27. The common thread among them will be that they are big questions, and both the questions and their answers will be essential to inform CEOS’s future planning and to ensure viability at both the strategic and tactical levels.

**Goals and Expected Outcomes:**

By design, the goal for SIT-27 is to emerge from the session with agreement on what the full suite of Essential Questions includes, but not necessarily to answer the questions at this time. Answers to the questions will be the subject of an ongoing conversation over the summer, and coming to decision regarding the answers will be the goal of a follow-on session scheduled for the September SIT Technical Workshop. Those answers, in turn, will set the stage for the development of the Strategic Guidance, Implementation Plan, and 3-year Work Plan that have been called for as the core of the implementation of the 2011 CEOS Self-Study recommendations.

**White Paper: What are CEOS’s Essential Questions?**

*“The most serious mistakes are not being made as a result of wrong answers. The truly dangerous thing is asking the wrong questions.”*

*-Peter F. Drucker*

In response to the findings of the CEOS Self-Study, the SIT Chair laid out three top-level documents that should be developed in order to implement accepted recommendations, and chart the course for CEOS over the coming years:

• Strategic Guidance Document (10-12 year longevity)

• Implementation Plan (5-7 year longevity)

• Work Plan (3-year longevity, updated annually)

Faced with the need for such documents and the structural and strategic guidance they will provide, the temptation for any organization would be to eagerly move directly into their production. In the case of an evolving organization like CEOS, however, the first step is not to write; it is to identify what the overarching, strategic-level Essential Questions are that underlie CEOS’s mission and overall goals, and that therefore also determine the structure CEOS needs to achieve those goals.

In a nutshell, the Essential Questions add up to this: *Who are we, and what is our mission?* Over the past 25 years, CEOS has evolved from a small space-based coordination group to a much larger organization that encompasses both internal and external relationships, coordination, tasks, and goals. When it was first formed, the three primary objectives of CEOS were:

1. To optimize benefits of space-borne Earth observations through cooperation of its Members in mission planning and in development of compatible data products, formats, services, applications and policies;
2. To serve as a focal point for international coordination of space-related Earth observation activities; and
3. To exchange policy and technical information to encourage complementarity and compatibility of observation and data exchange systems.

The world in which CEOS now operates is more complex, with many more satellites and a much larger number of participating CEOS members. Similarly, the user community has grown in quantity as well as sophistication, complexity, and diversity, and they now coordinate and deliver their requirements through other coordinating bodies, including but not limited to GEO, GCOS, and UNFCCC.

Correspondingly, CEOS has matured and expanded as an organization. CEOS now finds itself a “go-to” organization internationally for numerous tasks related to the internal and external coordination of satellite-based Earth observations, and creation of a multitude of products associated with that coordination. The original three objectives, while still highly valuable, could not anticipate or be inclusive of the breadth of activities in which CEOS is now engaged.

Thus, this dialogue to frame the “Essential Questions” for CEOS is the means to inform the development of CEOS’s next generation of strategic and structural guidances. The focus of this session at SIT-27 is to come to agreement on what these questions *are*, so as to be ready for a follow-on session scheduled for the September SIT Technical Workshop, at which the CEOS membership will answer them.

**What are the characteristics of a “CEOS Essential Question?”**

* It is strategic, not tactical (i.e. it does not descend into processes or particulars)
* It is relevant to and consistent with, but not constrained by, the original CEOS objectives
* It is answerable (i.e. has realism and specificity)

**Three Essential Questions that have been identified are:**

1. What constitutes “Success” for each type of CEOS activity? (and when will an activity end?)
2. What constitutes CEOS scope and strategy? To what extent should CEOS:
   1. conduct sustained, long-term, routine data provision, vs.
   2. demonstrate feasibility and generate a proposal to another organization as to how long-term operations could be carried out)
3. What is the Value Proposition for CEOS?
   1. What benefits, tangible or otherwise, does an organization gain through CEOS membership?
   2. What benefits, tangible or otherwise, do governments and society gain through the existence of CEOS?
   3. In both cases, are those benefits commensurate with the level of investment (in time, human capital, financial commitments)?

The three Essential Questions presented here are neither definitive nor exclusive. Additional questions may emerge in the discussions at SIT-27. The common thread among them will be that they are big questions, and both the questions and their answers will be essential to inform CEOS’s future planning and to ensure viability at both the strategic and tactical levels.

**Additional Example / Candidate CEOS Essential Questions:**

The following is a list of examples (for discussion) that may be worthy of consideration as candidate “Essential Questions.” Attendees for SIT-27 are enthusiastically encouraged to reflect on and propose others:

* What are the key things that CEOS absolutely must do well to achieve its goals?
* What are the most valuable outcomes that CEOS provides/enables for its user communities?
* What conditions would pose the greatest risk to CEOS achieving its objectives now, or in the future?
* How sustainable are CEOS’s activities?
* What big accomplishments does CEOS want to look back on, ten years into the future?

**When Do We Answer The Essential Questions?**

This session’s goal is to come to agreement on the Essential Questions. Answering them will be the subject of an ongoing conversation over the summer, and coming to decision regarding the answers will be the goal of a session scheduled for the September SIT Technical Workshop. Those answers, in turn, will set the stage for the development of the Strategic Guidance, Implementation Plan, and 3-year Work Plan that have been called for as the core of the implementation of the 2011 CEOS Self-Study recommendations.