Technical Support Services Contract (TSSC): Science Division Steering Committee (SDSC)

Session 01 Retrospective

Background

The nature of Science Division development activities at the U.S. Geological Survey (USGS) Earth Resources Observation and Science (EROS) Center in Sioux Falls, SD has an abiding existence nearly as long as the history of Landsat itself. Launching and leveraging earth observation satellites to support civilian science missions subsequently positioned corresponding teams at EROS for well-composed purposeful roles as a result. Roles that merged on determination and service as a reflection of leadership guided by a vision for tomorrow. The impact, meaning, and changing environment setting for that work is important to consider for the future of science activities at EROS just as it has been for mapping a legacy to today.

EROS Science Division teams are composed of a range of staff expertise, including project managers, technical specialists, remote sensing data scientists, software and system engineers, web developers, communications specialists, and more. As evidenced over time, many projects and personnel contribute to an inherent community-based EROS Center of excellence founded in remote sensing science and engineering, collaboration, and accomplishment. The vision for the TSSC Science Division Steering Committee (SDSC) builds on these characteristics to help guide and equip the *future* of the Science Division for all, including mission-driven commitment to improving and enhancing our work efforts in order to strengthen EROS Science and its value in a changing world.

SDSC Vision: Powering premier science teams with EROS excellence for planetary reach and impact.

SDSC Mission: Pursue collaborative and fundamental science activities which enable data resources efficiencies, promote cross-project awareness and communications, and deliver excellence, innovation, and service to our colleagues, leaders, partners, and USGS EROS customers.

SDSC Session Overview

The inaugural session for the SDSC Charter was comprised of a 6-month Period of Performance (PoP) (September 1st, 2022 – February 28th, 2023) and supported by the following contract staff:

Saeed Arab, Science Team Lead
Chris Barnes, Technical Lead
Devendra Dahal, Remote Sensing Scientist
Patrick Danielson, Technical Lead
Mac Friedrichs, Remote Sensing Scientist
Audra Griebel, Sr. Technical Specialist
Cheryl Holen, Lead Software Engineer
Danny Howard, Project Manager
Inga La Puma, Technical Lead
Andrea Lloyd, SciComms Specialist
Kelcy Smith, Technical Lead

Lessons Learned

The purpose of this retrospective summary is to capture lessons learned from this inaugural committee session and document constructive feedback around things such as time, scope, quality, process, and morale. Expected outcomes include reflections and review for best practices considerations for future SDSC sessions or broader conclusions as a result. The following compilation is focused on three areas – Membership and Meetings, Initiatives and Deliverables, and Communications and Documentation. Summary components along with positive and negative results are recorded for each.

Membership and Meetings

SDSC meetings were established as bi-weekly 1-hour meetings (Fridays 12p). Virtual participation supported remote staff and two on-site/hybrid meetings were scheduled at the beginning and close of the Period of Performance. As determined in the Charter, members were to anticipate a commitment of 1-2 hours per week for SDSC thought leadership (discussions, planning, coordination, and documentation). Membership included up to ten (10) Science Division staff in addition to division management (Chair) representation. Note that during this Period of Performance two (2) staff were withdrawn from SDSC membership due to taking on alternate job opportunities.

Pros

- Representative of a range of technical staff roles and perspectives across Science Division
- Use of Microsoft Teams for communications, including virtual meetings, group chat, notifications, file storage, and meeting minutes
- Members engage on a variety of division-wide relevant topics and converge on initiatives through discussion
- Informal exposure to various projects (e.g., overviews, workflows, pain points, team makeup, etc.) enables broader introductions and collaboration with cross-project activities and colleagues

Cons

- Diverse work schedules and responsibilities creates inconsistent meeting attendance in practice
- Time commitment can be a challenge due to the volunteer/extrinsic nature of SDSC membership, but aided in part by keeping work aligned with projects

Recommendation:

Broadly speaking, SDSC membership generates a leadership space for thought exercise and action on subjects surrounding quality of work, peer relationships, collaboration environments, product engagement, and desired futures. Charter improvements could be considered for recruitment approaches such as a nomination or application process or dynamic membership rules. Better defined participation expectations for SDSC commitment and frequency, in addition to optimizing meeting times, may help increase pacing and momentum around committee activities. The committee also suggests one or more in-person/onsite/hybrid open meetings during the Period of Performance, thereby offering additional opportunity for anybody interested in learning about SDSC sessions or membership experience.

Initiatives and Deliverables

The SDSC was instituted with intention that typical initiatives take on a general scope in support of the following objectives: lead innovation, enable collaboration, and enhance communication and organization. Its main purpose driving strategic decisions is focused on realization of goals and objectives related to the TSSC Science Division organization and portfolio of USGS/EROS-approved projects. During this Period of Performance, the committee determined four (4) specific initiatives for SDSC Session 01 governance and execution.

1. Enhance Science Division Communications
2. Establish Focused Technical Exchange Opportunities
3. Support the Migration of Science Workflows to the Cloud
4. Increase Resource Organization and Awareness

The planning, implementation, and management of all initiatives is SDSC responsibility but can feature sub-groups external to the SDSC to assist in leading and establishing outcomes. A project management plan was developed and

framed within the context of the specific performance timeline, including detailed tasks and deliverables for each initiative such as resulting artifacts, activities, or actions.

Pros

- Committee discussions on proposed initiatives helps to identify areas of need and direction
- Collective understanding and distilling of initiatives ensure agreement, energy, and focus
- Implementing a prioritization and scoping exercise helps limit goals specific for each initiative, thereby creating a functional management plan that meets expectations with appropriate sizing of deliverables
- Highlight: Establish forward-looking Technical Working Group Community learning environment opportunities

Cons

- Prefer additional sourcing or gathering of initiative suggestions from various feedback groups (e.g., Task Management, Community of Practice, TSSC colleagues, etc.) in order to capture adequate representation and objective inclusion during the goal-setting process (this was advertised, but response was limited)
- Proper sizing and scoping of effective deliverables remains challenging within time and labor confines
- Difficult to establish immediate buy-in and collaboration support from external sources, which speaks to need to improve messaging and information sharing of SDSC deliverables – starting with Task Manager communications

Recommendation:
Due to the SDSC premiere and general lack of familiarity, it is reasonable that much of the initiative ideation was performed internally. In the future it is best to further expand initial awareness and request for comments/suggestions in order to fully integrate needs and ideas of everyone. Likewise, it is good practice to continually evaluate all initiatives and deliverables against the vision and mission set forth by the SDSC Charter and in congruence with division management. Regarding objectives formulation, the committee recognizes the challenge to appropriately balance ambition and needs. To increase task efficiency from the start of the goal setting process, focus on identifying the minimum viable product (MVP) or desired outcome for each initiative, building out from there as capacity allows. Another recommendation is for built-in self-assessment review intervals from which any adjustments and refocus can be achieved if necessary.

Communications and Documentation
A primary theme throughout the SDSC session lifecycle was communication. Recognizing both a need and desire for more staff touchpoints was a particularly important motivation to better serve a highly distributed, yet connected, remote workforce. One of the SDSC pillars of commitment – Transparent Operations – meant not only making available access to outcomes and artifacts generated by various initiatives but also SDSC project management documentation and subsequent communications, such as periodical reports or briefings on committee efforts.

Pros

- Leverage a consistent and central location of SDSC documentation (MS Teams/OneDrive)
- Develop and distribute concise single-page initiative highlights reports which include Charter alignment, impact, action plan, and deliverables schedule
- Ability to lean on and promote SDSC vision and strategy both to empower individual contributions and celebrate customer mission success as a team
- SDSC status waypoint presentations to TSSC Community of Practice audience pre/during/post Period of Performance

Cons

- Desire for even more communications out to Science Division: Receptive to suggestions, ideas, and feedback
- Committee session featured limited inclusion of Task Management in SDSC business. Greater involvement could benefit goal setting insights, task plan alignment, membership, customer perspectives, etc.

Recommendation:
As mentioned, SDSC objectives branch out from a baseline of communication needs and wants, suggesting a focus on simple things such as affirmation and reinforcement to drive our collective knowledge base, inspire growth avenues, and

create organizational awareness. Likewise, celebration creates this cause-and-effect relationship between individuals/teams and success. A prevailing recommendation is to continue building toward a collegial environment where collaboration and communication is constant. SDSC is positioned to lead initiatives that deliver on connecting a person's work with the science mission and reinforcing purpose with results.

Summary

SDSC first-session operations should be considered a success across many categories including Charter development, membership formulation, vision casting, and goal achievement. Of course, continuous improvement needs remain for increasing communications, linking staff empowerment with mission and Science Division direction, or promoting committee roles more intently to increase two-way Charter engagement, as examples. This 6-month Period of Performance featured well-captured purpose-driven initiatives made possible by a qualified committee of thought leaders inspired by an ability to help shape a distinguished work culture, cultivate more leaders, and build confidence in collaboration and technical innovation.

Additionally, participating SDSC members reflect on many personal takeaways over the course of the session. These include 1) Clearer understanding of division-wide challenges and trends, 2) Background and informed exposure to projects other than their own, 3) Making new connections and creating or extending work contacts, and 4) Developing confidence to engage more broadly and share contributions. By design, the Charter brings together experienced people who innately benefit from this leadership group and are also eager to create value and impact to teams and leaders around them.

Looking ahead, it is the hope of the SDSC to succeed and achieve even more, should a Session 02 take shape. Regardless, a retrospective view enlightens material value in ongoing Science Division staff development and connection. Two components of great team organization – coaching culture and peer learning – encourage giving voice to others, such as sharing experiences and insight. But in addition to communicating more effectively, a high level of importance still needs to be placed on execution in service to our customer. The Science Division has many emerging experts who are poised to lead in a time when every person has more autonomy over their own working environment than ever. It is wise to nurture confidence and encourage self-reliance while simultaneously promoting interaction and perhaps most importantly *identity* to the work of USGS EROS using a compelling vision for TSSC Science both now and into the future.