

Summary or Merger Recommendations and Resolutions

Resolutions / recommendations approved on 10/29/2021

1) Transition Period of Leadership and People from IRIS & UNAVCO into EarthScope by or before 30 September 2023:

The natural end of transitional provisions is the expiration of current contracts and availability of NSF funding.

The Joint Boards recommend that

- the EarthScope Board integrate the current presidents into the new organization to ensure continuity of facility management through to the hiring of the EarthScope lead manager.
- all IRIS and UNAVCO top-level/senior management (Director Level) positions should be mapped to EarthScope senior manager positions until the new EarthScope lead has completed searches for their leadership team.
- IRIS and UNAVCO staff below Director level will be offered corresponding positions in EarthScope without competition.

2) Joint Operations:

EarthScope must be in a competitive position to write the next NCEO proposal as early as Q2 of 2023; Operations in the respective directorates should be aligned as possible. For example, demonstrated operational cloud data handling and user documentation will be key to a successful proposal and to serve the community appropriately under current facility operations.

The Joint Boards recommend that

- UNAVCO Data Services and IRIS Data Services jointly commit to the goal of implementing the cloud platform for most data operations by the merger in December 2022.
- UNAVCO Data Services and IRIS Data Services jointly accelerate the documentation of our data users and uses as rapidly as is possible, and communication of these enhanced metrics to NSF (as recently communicated by our NSF program managers in the management review).
- UNAVCO Geodetic Infrastructure and IRIS PASSCAL as well as both Polar groups begin or continue cross-training engineers and integrating equipment, as advisable, including using targeted alignment suitable field operations during the 2022 season.

3) Joint Governance

The Joint Boards

- ask corresponding IRIS and UNAVCO committees (instrumentation, data, ECE, etc.) to schedule regular joint meetings through the end of 2022 to prioritize joint efforts and operational alignments before the merger.
- establish a joint Board-Community outreach program in Q1 2022, e.g. having IRIS/UNAVCO pairs of Board members (9 pairs) reach out directly to a subset of

the future EarthScope members (estimated to be about 185) with Board-approved talking points, and to solicit grassroots comments and ideas. One way to achieve this would be to meet with small invited sub-groups at a time. This effort might be coordinated by a lead pair of Board members, and be associated with the posting of appropriate information to the Joining Forces website and newsletter.

- hold an early Q2 2022 workshop of governance representatives to converge on a congruent and effective recommended EarthScope governance structure concordant with the general envisioned (matrix management, etc.) structure of EarthScope management and staffing. Core participation might encompass the two presidents, and two members (chair, one other delegate) from each of the Boards, and from all present IRIS and UNAVCO Advisory/Standing committees. (With a survey of the full community in advance to gather points of concern, interest, and governance priorities.)
- front-end EarthScope Board elections, including the establishment of nomination committee(s) to occur in Q2/3 of 2022 to establish the Board in waiting, and integrate/inform as appropriate in merger business.

Joint Boards session of January 10, 2022

These resolutions address sufficiently specific HR-related topics that they are only for joint Boards and not for public distribution - this entry should not be part of the public distribution but is included here just for tracking purposes.

Resolution 1: EarthScope end-state aspirational organizational structure

Resolution 2: Retention of senior managers

Joint Board Resolutions for March 1, 2022

Resolution 1: The compensation scale, salary grade structure, and position descriptions for the EarthScope Consortium will be constructed using national benchmarks and industry best practices that support a diverse workforce. For example, required qualifications for positions should include educational attainment OR equivalent work experience where appropriate. Salary ranges will be set using consistent percentiles of national compensation data for all positions, with mean EarthScope salaries as close to national averages as possible within overall budget constraints.

Resolution 2: With the understanding that some major current subawards will be ended and the work transitioned to direct EarthScope employees, current impacted subaward staff shall be offered a new position within the EarthScope Consortium to continue work on the SAGE or GAGE awards. As with all EarthScope employees, employment in the future is contingent on funding. IRIS and UNAVCO management shall develop detailed models for transitioning benefits and retirement from subawardee entities as possible, as well as sustainable models for labor transition costs.

Resolution 3: After a thorough search and review, the EarthScope Consortium's Instrument Center will be located in a facility in Socorro, NM, with a transition beginning in 2023. Personnel assignment to the Instrument Center will be subject to position responsibilities; EarthScope Consortium will retain its commitment to remote and flexible work wherever possible. EarthScope shall enter into a lease arrangement with New Mexico Tech for the current PASSCAL Instrument Center space.

NB: lease rate table is redacted as it is proprietary to NMT.

Resolution 4: To ensure a smooth transition from IRIS and UNAVCO governance to EarthScope governance, the Joint Boards agree on the following timeline for the initial EarthScope Board of Directors election:

- May 2022 - Transition Nomination Committee representatives (see below) assemble and start the process of seeking nominations from IRIS (4 slots) and UNAVCO (4 slots) communities. This should be a very active process to ensure excellent returns of (self, and other) nominations from the community
- June 2022 - current board members transferring to the EarthScope board identified
- July 2022 - Nomination slate assembled
- August 2022 - Election for first Joint EarthScope board
- September 2022 - Election results are published, EarthScope Board begins to engage with IRIS and UNAVCO Boards in transitional activities as an Advisory Committee through to the merger.

- October 2022 - Joint meeting of the UNAVCO, IRIS and incoming EarthScope Boards to coordinate Board transitions and final merger actions.
- Seat EarthScope Board after legal merger (planned for Dec 2022 / Jan 2023)

As the Bylaws prescribe a transitional Board of Directors Provision (see below), but not a Nominating Committee provision (see below), the Joint Boards resolve that the 2022 Transition Nomination Committee shall be comprised of the standing UNAVCO Nominating Committee (4 members) and an equal number of members from the IRIS community as commonly determined for Board elections by the IRIS Board of Directors. The transition nominating committee will implement the Board Transition Provision for the 2022 election. The elected EarthScope Board of Directors once seated, will determine the regular Nominating Committee as described in Article VII, Section 5 of the EarthScope Bylaws (see below).

The EarthScope Bylaws do not restrict current UNAVCO and IRIS Board members from (self-) nomination to run for election to the EarthScope Board of Directors. The determination of the slate of candidates for the EarthScope Board election is under the authority of the Transition Nomination Committee.

Informational Material for Resolution 4:

Board Transition Provision from Bylaws (Article IV, Section 3)

BOARD OF DIRECTORS TRANSITION PROVISION. In accordance with the Agreement and Plan of Merger, two Directors from each of the existing boards of IRIS and UNAVCO immediately prior to the merger shall be appointed by the Chairs of those Boards to one-year terms as Directors on the Board of Directors. The Voting Members shall elect the remaining eight Directors, four from the IRIS community and four from the UNAVCO community. Two from each community shall be elected to two-year terms and two from each community shall be elected to three-year terms. One of the two-year term Directors shall be the person elected by the Voting Members to be the Chair of the Board. One of the three-year term Directors shall be the person elected by the Voting Members to be the Chair-Elect of the Board. The Nominating Committee (see Article VII, Section 5) shall identify in its proposed slate which nominees are designated to fill the various terms and positions. Subsequent Boards of Directors need not consist of equal representation from the IRIS and UNAVCO communities.

Nominating Committee from Bylaws (Article VII, Section 5):

The Nominating Committee shall consist of five members. The Chair shall be an ex-officio member. The other four Nominating Committee members must be Member Representatives, and shall be appointed by the Board of Directors to staggered terms of two years each. The Nominating Committee shall prepare a slate of one or more nominees for each Director and Nominating Committee position to be filled. The Nominating Committee should strive to identify at least two nominees for each Director position. The slate must comply with the provisions of

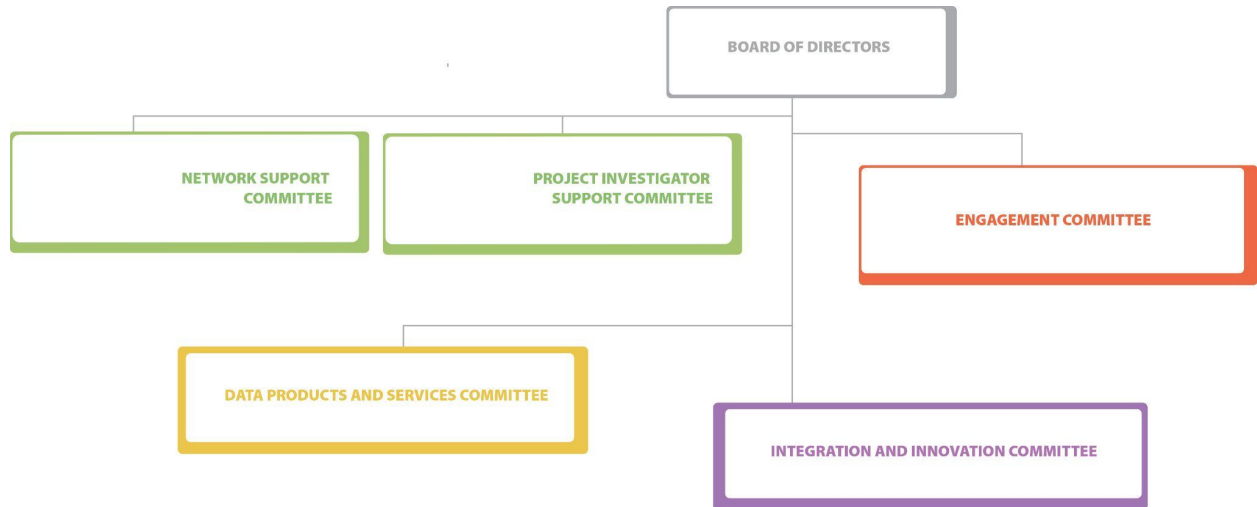
Section 2 of Article IV below. The Nominating Committee shall solicit the Directors and the Voting Members for the names of suggested nominees and may propose names of nominees themselves. Notwithstanding the above, a candidate shall be placed on the slate by the Nominating Committee upon receipt, at least 70 days before the election, of written nominations signed by at least ten percent of the Voting Members.

May 10, 2022

Resolution 1: The Joint Boards of Directors, on behalf of the Governance Workshop and Implementation Steering Committee recommend that the principles guiding EarthScope community governance, including the Board of Directors and all committees, subcommittees, and working groups shall be:

- A. Empower EarthScope to be agile and responsive to evolving mission (*a university consortium dedicated to transforming global geophysical research and education*) needs and opportunities through broadly solicited community input and ongoing strategic planning.
- B. Promote EarthScope identity, purpose, impacts, and scope of work independent of specific grants/projects.
- C. Ensure Advisory groups, Board, staff, and members have clear and well-defined roles, alignment, and accountability, reviewed annually.
- D. Operate under the highest standards of ethics, transparency, and open communications.
- E. Broaden the governance community through intentional recruitment to achieve balanced disciplinary, geographic, and demographic representation.
- F. Equip advisory groups and the Board for success through intentional onboarding and training (including DEI and culture), clear pathways for communication, and leadership development opportunities for community members of all career stages.
- G. Diversify the EarthScope community through education and outreach, especially to underrepresented groups.

Resolution 2: The Joint Boards of Directors, on behalf of the Governance Workshop and Implementation Steering Committee, recommend that the EarthScope Board of Directors create five Advisory Committees in a flat structure. The Joint Boards resolve that this structure be the working model for governance, with a 1-month period (upon adoption of this resolution and announcement to the community) for collecting additional input from the two Boards and community. After that period and incorporating modifications as required, the proposed structure will be provided as a recommendation to the EarthScope Board of Directors, once that Board is seated.



Resolution 3: The Joint Boards of Directors, on behalf of the Governance Workshop and Implementation Steering Committee, recommend that the EarthScope Board of Directors create five Advisory Committees [with purpose, scope, and practices as described in the separate supplementary document \(*Governance model synthesis*\)](#). The Joint Boards of Directors resolve that this synthesis be the working model for EarthScope governance, with a 1-month period (upon adoption of this resolution) for collecting additional input from the two Boards and community. After that period and incorporating modifications as required, the proposed synthesis will be provided as a recommendation to the EarthScope Board of Directors, once that Board is seated.

| | Network Instrumentation Support Committee | PI Instrumentation Support Committee | Integration and Innovation Committee | Data Products and Services Committee | Engagement Committee |
|------------------------------------|--|--|--|--|---|
| Purpose | The Network Instrumentation Support Committee: 1. supports programmatic geophysical network deployments; seeks to continually innovate to advance the frontier of network performance that benefits science; 2. ensures network operations with the highest standards of reliability, data access, and data quality; 3. coordinates with staff to set standards for and periodically review data quality, and fosters relationships with stakeholders, partner agencies and local communities requiring or hosting observational equipment. | The PI Instrumentation Support Committee: 1. provides ongoing community guidance on new directions in instrumentation, instrument availability and maintenance, operational instrumentation monitoring, investigator training (including practices related to decolonized science), logistical and field support, data quality control, and archival support; 2. coordinates with staff to document stakeholders, users, and applications of community investigator projects; 3. actively solicits a diverse and representative range of community inputs on the scientific directions and instrumentation needs associated with PI-driven deployments; 4. remains informed about new communities interested in using this facility and ensuring adequate representation of new ideas and needs. | The Integration and Innovation Committee: 1. evaluates overarching opportunities, evolution, and impacts driven by evolving science and enabling broader community capacity; 2. seeks (large-scale) funding opportunities; 3. seeks engagement with incipient community initiatives, new technologies, and scientific directions; 4. catalyzes and engages domestic and international partnerships; 5. advises on strategic government relations; 6. fosters new stakeholder engagement; 7. assesses overall organizational strategic planning. The products of this committee may not result in immediate action by the Board, but provides advisory depth to advance long-term EarthScope Consortium planning and agility. | The Data Products & Services Committee: 1. guides and documents the production and delivery of data and data products in response to community needs; 2. provides recommendations regarding the provision of data, development of new products; and 3. advises on data and product access tools. | The Engagement Committee: 1. advises on education and training materials and activities, including those that build community capacity; 2. advises on public outreach activities that advance the goals of the EarthScope Consortium; 3. advises on and supports workforce development and community building through internships, mentorship tools, workshops, and meetings; 4. works collaboratively with staff to ensure DEI goals are being met internal to the EarthScope Consortium and externally within the geophysics community; 5. promotes engagement activities of the EarthScope Consortium; 6. seeks regular input from scientific and educational stakeholders to ensure effective representation of broad interests; 7. establishes and promulgates best practices (including to other committees) for strategic and representative recruitment that ensures inclusivity; 8. fosters relationships with stakeholders, partner agencies, and local communities; 9. assists EarthScope in decolonizing scientific and educational practices. |
| Purview | The group sets priorities for all aspects of network technology, including but not limited to instrumentation for geophysical measurements, geographic network configuration, communications, power, etc. The group also monitors sensor or deployment deprecation and emerging new technologies in sensors, network design, and other aspects of instrumentation and supporting hardware. | The group sets priorities and identifies leading practices for project instrumentation, including emerging sensor technologies and applications. | The group provides strategic direction, including guidance on emerging applications and technologies, guidance on leading practices in science support, and identification and strategy related to new or major revenue sources. | The group advises on data and metadata standards and quality for all geophysical data and datasets in EarthScope Consortium's Data Services, advises on whether EarthScope Consortium Data Services should request and/or accept certain data into its holdings and care, and reviews policies and effectiveness of the program in meeting commitments to its user community and in achieving the goals set in strategic plans. | The groups advise on education, workforce development, outreach, community engagement, inclusion, and representation. |
| Products | The committee delivers strategic recommendations to the Board and an annual assessment of network performance. | The committee provides strategic recommendations to the Board and an annual assessment of instrument pools and PI support activities. | The committee provides strategic recommendations to Board, develops an annual Government Relations strategy, participates in annual workshops and meetings to collect community input on priorities, and serves in a leadership role in proposal development as needed. | The committee provides recommendations to the Board on issues related to archiving, distributing, and enhancing the utilization of geophysical data covered by EarthScope's Data Services, as well as on the timely inflow of new data and prompt outflow of requested data and data products. | The committee provides strategic recommendations to the Board, develops annual assessment of engagement activities, identifies leading practices in inclusion and diversity for guidance to other committees, and identifies leading practices in governance recruiting for guidance to other committees. |
| Relationship to Board | The committee: 1. makes recommendations to the Board and relevant program managers on policies to operate the networks and to ensure that high-quality data are consistently collected and disseminated; 2. responds to requests for input from the Board; and 3. provides representatives to a joint subcommittee or working group with the PI Instrumentation Support Committee to consider common issues of hardware. | The committee: 1. reports to the Board on performance of project support activities; 2. makes recommendations on project support operations; 3. conveys community needs and emerging science directions; and 4. provides representatives to a joint subcommittee or working group with the Network Instrumentation Support Committee to consider common issues of hardware. | The committee: 1. makes recommendations to the Board on strategic direction; and 2. charges specific working groups or task forces in coordination with the Board related to funding, community-building, or novel programmatic initiatives. | The committee provides advice to the Board on the development of data activities. | The committee provides guidance to the Board on scope mission and direction of EarthScope in the domain of engagement. |
| Relationship to Staff | The committee provides support to the staff, especially in the Instrumentation Directorate, through guidance pertaining to establishing principals or priorities in network operations. | The committee provides technical assessments, performance assessments, guidance on priorities for emerging technologies and applications, and guidance on deprecation of technologies and applications as necessary, particularly to the Instrumentation Directorate. | The committee coordinates with the CEO and senior management team on strategic assessment and directions. | The committee provides advice on the development of data activities to staff, provides expert guidance on data and metadata standards and uses, and advises EarthScope Consortium Data Services on when and how to provide data services, such as computing services, software services, educational services (e.g. seasonal community schools or training and working with interns who are early-career geophysicists), to the community. | The committee provides expert domain knowledge related to the committee purpose, provides strategic direction for staff activities, serves as a liaison to the broader community, and works collaboratively with staff to ensure that DEI goals are being met internally in the EarthScope Consortium and in governance. |
| Membership | Members of the scientific community who have an interest and/or expertise in the successful operation of networks that collect geophysical data for scientific or related purposes. Non-voting members: 1 Board liaison, VP for Instrumentation. | Users of the instrumentation facility who are diverse and broadly representative of scientific uses and interests. Non-voting members: 1 Board liaison, VP for Instrumentation. | CEO, Board Chair or designate liaison; community members; may regularly invite senior management / other AC chairs or designate staff liaisons as appropriate. | Facility users; diverse and broadly representative of scientific uses and interests non-voting members: 1 Board liaison, VP for Data Services | Community members, broadly understood, representing scientific disciplines, education, and DEI. Membership of the committee should strive for representation of expertise outside of geophysics in education, inclusion, or outreach. It is expected that this committee contains multiple non-R1-institution-faculty members, including but not limited to student, post-doc, K-12 teacher, and DEI-focused staff or researchers. Non-voting members: 1 Board liaison, the VP for Engagement, and EarthScope DEI staff. |
| Other | These two groups should regularly collaborate through subcommittees or ad-hoc working groups. | | COI disclosure and management is of particular importance to this committee. The Board retains authority in setting the actual strategic plan of the organization. | This committee may establish short-term working groups for specialized needs. | This committee will especially collaborate with staff to create a public-facing annual summary of EarthScope Consortium activities. The committee may stand up short-term working groups for specialized needs. |
| COMMON AMONG ALL COMMITTEES | | | | | |
| Duration | Ongoing with annual review of purpose by Board. | | | | |
| Members | 8-12 members, 3 year terms (initial composition appropriately staggered with 1, 2, 3 year appointments); maximum of two consecutive terms or eligible for subsequent terms at the discretion of Board; bound by https://www.unavco.org/community/policies_forms/UNAVCO_Committees_Governance_Participation_Policy.pdf | | | | |
| Member Selection | The Board appoints committee members, relying on nominations from the committee, management, the Board, and others as necessary through their ongoing recruitment efforts. The Board Chair annually appoints or reappoints the committee chair. | | | | |
| Meeting Frequency | At least twice a year, more as need arises. | | | | |
| Member Responsibilities | 1. Make recommendations that support the interests of the broader community; 2. Develop, review, and approve performance metrics for assessment of activities within the committee purview; 3. Attend and prepare for meetings (virtual / in-person; no more than twice per year in person); 4. Participate in committee discussions; 5. Actively solicit input from the broad stakeholder community and faithfully represent community needs and perspectives; 6. Review minutes; and 7. Willingness to serve on sub-committees or focus groups as needed; and Interface with membership and community. | | | | |
| Authority | Advisory | | | | |
| Support Required | Support for the committee must include: 1. Administrative support; 2. Travel to some in-person meetings; 3. Family support for governance participation; 4. Access to online resources for communication and record-keeping; 5. Training in committee purpose, governance leading practices, and past committee actions; 6. Onboarding education describing responsibilities of governance members to represent broad interests; and 7. Bias and ethics training. | | | | |
| Common Goals and Practices | Recruitment of broad representation in committee membership; active communication with stakeholder community such that committees serve as conduits for community input, including new scientific directions and opportunities; annual assessment of goals and purpose of committees; committees should seek to meet the highest standards of transparency | | | | |
| Board Liaisons | 1. Summarize Board discussion on recommendations back to committee 2. Convey Board expectations/needs to committee 3. Participate in all committee meetings | | | | |
| Other Liaisons | Liaisons representing federal agencies or other constituencies can be committee members or non-voting observers, as appropriate. | | | | |

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| Committee Chair (shared roles possible) | <ol style="list-style-type: none"> 1. Presides at all committee meetings; 2. Sets the agenda with senior management; 3. Conducts formal communications between committee and Board (incl. CEO); 4. Assists with annual reporting of potential committee member COIs, managing such conflicts; 5. Reports recommendations to the Board at Board meetings; 6. Participates in Board meetings as a non-voting observer; and 7. Provides outward facing minutes to the community with help of EarthScope Consortium staff |
| COI | Annual disclosure of all members necessary, or as new COI arises. |