

Applicant guidance notes

Completing form ISDE-FRM-WG-001

These notes explain the parts of the form that require interpretation or judgement. They should be read with the instructions already included in the application form.

Where information is not yet known, write **“to be confirmed”** and state what needs to be confirmed and, where possible, by when.

Questions that cannot be resolved using these notes should be directed to the ISDE Secretariat through the contact details given in the current Open Call.

Key concepts

Working Group

An ISDE Working Group is a continuing expert community established to steward a scientific, technical, policy, educational or institutional domain over several years.

A Working Group may:

- maintain strategic coherence in its domain;
- convene experts and regional contributors;
- monitor emerging developments;
- synthesise knowledge;
- advise Council, Bureau and ISDE programmes;
- support events and publications;
- identify priorities; and
- propose or sponsor Task Forces for defined delivery.

A Working Group is not permanent. It remains subject to reporting, review, renewal, reconstitution, merger or closure.

Stewardship

Stewardship means maintaining the relevance, coherence and continuity of a domain over time.

It may include reviewing developments, advising ISDE, connecting related programmes, curating accepted assets, identifying gaps and proposing Task Forces.

Stewardship is not the same as producing a single paper, toolkit, demonstrator or event outcome.

Task Force

A Task Force is a temporary delivery team established to produce one or more defined outputs within an agreed period. A Working Group may identify the need for a Task Force, help frame its scope and support its work. The Task Force must still be proposed, reviewed and approved through the relevant ISDE process.

Digital Earth Framework

The Twelve Digital Earth Frameworks describe the strategic and conceptual roles of Digital Earth. They help show where a Working Group contributes to the wider Digital Earth vision.

The Frameworks provide strategic direction. They are not committees, projects or technical standards.

The appendix to these guidance notes summarises the three tiers and Twelve Frameworks.

Digital Earth Enabler (DEE)

A Digital Earth Enabler, or DEE, is an operational capability, method or instrument that helps translate the Frameworks into practical use.

The six DEE clusters are:

1. Interoperability
2. Trust and Traceability
3. Foresight and Planning
4. Learning and Participation
5. Implementation
6. Meta-Governance

DEE asset

A DEE asset is a reusable output accepted through the relevant ISDE review and registration process.

Examples include a standard profile, curriculum, reference model, toolkit, registry, methodology, case-study collection or governance instrument.

Working Groups may steward or curate accepted DEE assets. Task Forces normally produce defined candidate assets.

Health check and anti-stagnation controls

A health check reviews whether a Working Group has:

- active leadership;
- appropriate participation;
- regular activity;
- useful advice or stewardship;
- alignment with ISDE priorities;
- credible plans; and
- continuing institutional value.

Anti-stagnation controls allow ISDE to reconstitute, merge or close groups that no longer have active leadership, participation or purpose.

Illustrative example

The examples below refer to a possible:

Digital Earth Education and Capability Building Working Group

Its continuing role would be to coordinate international expertise on Digital Earth education, advise ISDE on capability priorities, connect relevant events and publications, steward accepted learning assets, and propose Task Forces for defined outputs such as curriculum modules or educator guidance.

This example is illustrative only and does not represent approval or the current status of any ISDE Working Group.

1. Proposal type and gateway test

Working Group title and summary

Use a title that describes the continuing domain of stewardship.

Example:

Digital Earth Education and Capability Building Working Group

Avoid titles based on a single deliverable, project or event. A title such as “Digital Earth Curriculum Writing Working Group” probably describes a Task Force rather than a continuing Working Group.

The summary should briefly state:

- the stewardship domain;

- why continuing coordination is required;
- the recurring role of the group;
- its relationship to Task Forces; and
- its expected value to ISDE.

Example:

This proposal seeks to establish a continuing ISDE Working Group for Digital Earth education and capability building. The group will convene international expertise, advise ISDE on education priorities, connect related events, publications and regional activities, and steward accepted learning assets. Where defined outputs are required, it will propose time-bounded Task Forces, including possible work on a shared curriculum framework and educator resources.

Proposal type

Select the primary purpose of the submission:

- **New Working Group:** no current ISDE Working Group holds the proposed mandate.
- **Renewal:** an existing group seeks a further mandate term.
- **Reconstitution or merger:** an existing structure needs new leadership, membership or combination with another group.
- **Revision of scope or mandate:** the group continues, but its purpose or boundaries need material change.

Explain any overlapping circumstances in the summary.

Proposal origin

Select the source that most accurately describes how the proposal arose.

Do not select Council resolution or Bureau direction unless there is a recorded decision or instruction.

The origin reference should identify the relevant resolution, meeting, Task Force recommendation, Chapter proposal or other traceable source.

Example:

Renewal proposed following the ISDE review of existing Working Groups and consultation with education contributors. Formal review reference to be confirmed.

Gateway test

The gateway test determines whether a continuing Working Group is justified.

Answer **Yes** only where the domain:

- requires attention over several years;
- needs recurring synthesis, advice or strategic coordination; and
- spans several programmes, publications, events, regions or partnerships.

Example:

Digital Earth education requires continuing coordination because curricula, technologies, professional needs and regional capability gaps will evolve over time. The domain also connects ISDE publications, events, Chapters, youth activity and future learning assets.

A proposal centred on one defined output should normally be submitted as a Task Force.

2. Stewardship domain and purpose

Stewardship domain

Describe the continuing field for which the Working Group would take responsibility.

The domain should be broad enough to require sustained stewardship, but narrow enough to have a coherent mandate.

Example

Digital Earth education, professional capability development, spatial literacy, educator support and international exchange of learning practice.

Avoid describing a list of projects. Those should appear later as possible Task Force intentions.

Need for continuing stewardship and why ISDE is the appropriate home

Explain:

- why the domain will continue to require attention;
- why intermittent projects would be insufficient; and
- why an international ISDE body is needed.

Example:

Digital Earth education is changing as Earth observation, digital twins, artificial intelligence and immersive technologies enter research and professional practice. Capability needs differ between regions and institutions. ISDE is the appropriate home because it can connect international scientific expertise, publications, events, Chapters and education networks around a shared Digital Earth context.

Relationship to existing ISDE work

Identify relevant:

- Working Groups and Task Forces;
- Frameworks and DEE clusters;
- ISDE journals and the Manual of Digital Earth;
- Summits, Symposia and lectures;
- Chapters and Regional Hubs;
- youth and professional programmes; and
- external partnerships.

Explain whether the proposed group complements, replaces or consolidates existing activity.

Example:

The Working Group would connect education-related content in the Manual of Digital Earth, ISDE International Lectures, Regional Chapter activities, youth engagement and future curriculum Task Forces. It should coordinate with, rather than duplicate, scientific and technical Working Groups.

Intended beneficiaries and institutional value

Identify the principal users and the benefit to ISDE.

Example

Beneficiaries include educators, students, researchers, professionals, Chapters, universities and organisations building Digital Earth capability. ISDE would gain a clearer international education strategy, stronger regional participation and continuity between publications, events and practical learning resources.

Evidence or source basis

List only the evidence that materially supports the need for continuing stewardship.

Relevant evidence may include:

- existing Working Group records;
- participation data;
- regional capability needs;
- Council or Bureau papers;
- ISDE publications;
- event outcomes;
- partner requests; and
- recognised gaps in education or practice.

3. Scope and mandate

In scope

State the continuing responsibilities of the Working Group.

Example:

- *Monitor developments in Digital Earth education and professional capability.*
- *Advise ISDE on education priorities and regional needs.*
- *Convene educators, researchers, practitioners and Chapter representatives.*
- *Connect education activity across ISDE events and publications.*
- *Steward accepted curriculum and learning assets.*
- *Identify gaps and propose Task Forces for defined outputs.*
- *Provide periodic advice and recommendations to ISDE governance.*

Out of scope

Define what the Working Group will not do.

This prevents it from becoming an unrestricted committee or an unapproved delivery body.

Example

- *Directly deliver large curriculum-development projects without an approved Task Force.*
- *Accredit courses or institutions.*
- *Issue qualifications or professional certifications.*
- *Commit ISDE funding or external partnerships.*
- *Endorse commercial learning platforms.*
- *Speak publicly for ISDE without authority.*

Initial mandate term and review cycle

A Working Group is continuing but not indefinite.

State:

- the requested initial mandate term;
- the frequency of routine reporting;
- the proposed annual health check; and
- the formal renewal point.

Example:

Initial three-year mandate, subject to annual activity and health review, regular Secretariat reporting and formal renewal consideration before the end of the term.

The term should remain subject to ISDE's approved governance arrangements.

Assumptions, dependencies and constraints

Identify matters that may affect the Working Group's viability.

Example:

The group depends on active regional contributors, access to relevant ISDE publication and event plans, and sufficient Secretariat coordination. Participation will be voluntary unless separate resources are approved.

Sensitive exclusions or separate approvals

Identify matters that require a decision outside the Working Group mandate.

Example:

Accreditation, public certification, formal education partnerships, funded programmes, use of personal learner data and public-facing AI learning systems would require separate review and approval.

4. Framework and DEE alignment

Selecting Frameworks

Select only the Frameworks the group will directly support.

For the example, suitable Frameworks may include:

- *Framework 8, Knowledge Federation, because the group connects knowledge across disciplines and regions.*
- *Framework 10, Learning and Empowerment Platform, because education and capability development are its primary domain.*
- *Framework 11, Cultural Memory and Storytelling Hub, where learning incorporates cultural and place-based knowledge.*

Do not select every Framework that has an indirect educational connection.

Selecting DEE clusters

Select the operational clusters the Working Group would steward.

For the example:

- *Learning and Participation, as the principal cluster;*
- *Interoperability, where curricula need shared terminology or structures;*
- *Meta-Governance, where the group provides stewardship and maturity guidance.*

Explaining alignment

Explain what the Working Group will do in relation to the selected Frameworks and clusters.

Example:

The Working Group will support Knowledge Federation by connecting education practice across disciplines and regions. It will advance Learning and Empowerment by advising on curricula, capability priorities and participation. Its principal DEE role will be to steward learning assets, identify gaps and propose Task Forces for reusable education resources.

DEE assets to steward or curate

List existing or anticipated assets that may require continuing stewardship.

Example:

Open curriculum modules, educator guidance, Digital Earth competency frameworks, lecture resources, case-study collections and a future education resource registry.

For a new Working Group, it is acceptable to state:

No accepted DEE assets at commencement. Candidate assets may be proposed through future Task Forces and accepted through the relevant ISDE process.

Dependencies on other DEE assets

Identify related assets or standards.

Example:

Digital Earth glossary, Framework descriptions, publication resources, use-case registry, learning platform requirements and relevant governance guidance.

5. Operating model and delivery mobilisation

Convening rhythm

Select a meeting frequency appropriate to the role and availability of an international volunteer group.

Quarterly meetings are likely to be proportionate for many Working Groups. More frequent meetings should have a clear reason.

Example:

Quarterly formal meetings, supported by short thematic sessions or consultations when required.

Initial delivery intentions: Task Forces the group expects to commission

Identify likely delivery needs, without presenting them as approved.

Example

Possible future Task Forces may develop:

- *a baseline Digital Earth curriculum framework;*
- *a collection of regionally diverse teaching case studies;*
- *guidance for educators using Earth observation and digital twins; or*
- *an open learning module linked to the Manual of Digital Earth.*

Each Task Force would require a separate proposal, mandate, review pathway and closure condition.

Success measures

Success measures should assess stewardship, not only the number of meetings held.

Useful measures include:

- active and regionally appropriate membership;
- regular advice to ISDE;
- evidence of coordination across programmes;
- Task Force proposals generated from identified needs;
- accepted DEE assets stewarded;
- participation in events and publications;
- contribution to Chapters and Hubs;
- evidence of partner or community engagement; and
- completion of reporting and health checks.

Example:

The group will be considered effective where it maintains active leadership and international participation, provides at least one substantive annual advice note, supports relevant ISDE events or publications, identifies credible Task Force priorities and maintains a current record of learning assets and capability needs.

Collaboratory, partner or community engagement

Describe how the Working Group will engage beyond its core membership.

A **collaboratory** is a structured environment in which distributed contributors work together on a shared field, resource or problem. Gore envisaged Digital Earth as a “collaboratory”, meaning a distributed laboratory without walls through which researchers could work together to understand interactions between humanity and the environment.

Reference: Al Gore, *The Digital Earth: Understanding Our Planet in the 21st Century*, speech delivered at the California Science Center, Los Angeles, 31 January 1998.

Example:

The Working Group will engage Regional Chapters, universities, educators, youth representatives and relevant professional bodies through thematic forums, consultations and shared learning activities. Formal partnerships will require separate approval.

Reporting and annual review pathway

State who will report, to whom and how often.

Example:

The Chair will provide a short activity update to the Secretariat every six months and an annual stewardship report covering participation, advice, Task Force proposals, assets, risks and priorities. Material governance or reputational issues will be escalated when identified.

6. Leadership and membership

Chair and Deputy Chair

The proposed leadership should have:

- relevant expertise;
- capacity to convene an international group;
- familiarity with ISDE;
- willingness to report and maintain records; and
- no unmanaged conflict that would impair neutrality.

The Deputy Chair may provide regional, disciplinary or succession balance.

Initial members and contributors

List people who have agreed, or are reasonably expected, to participate. Include their affiliation, country and relevant contribution.

Do not create a long nominal membership list without defined roles or evidence of interest.

For the education example, the initial membership may include:

- *Digital Earth and geospatial educators;*
- *Earth observation specialists;*
- *professional capability practitioners;*
- *curriculum or instructional-design specialists;*
- *youth representatives;*
- *Regional Chapter contributors; and*
- *representatives from different educational and cultural contexts.*

Regional and disciplinary coverage

Explain whether the proposed group has the perspectives required for its domain.

Example:

Initial membership includes contributors from Africa, Asia, Europe, the Americas and Oceania, with experience in higher education, professional development, Earth observation, geospatial science and community learning.

Regional diversity should support meaningful contribution, not only geographic appearance.

Expertise gaps

Identify missing capability honestly.

Example:

Further participation is required from Indigenous education specialists, vocational training providers, youth networks and institutions operating in lower-resource contexts.

Conflicts of interest and affiliation notes

Declare interests that could influence, or appear to influence, the group's advice.

Example:

Several members are affiliated with universities offering commercial education programmes. The Working Group will not accredit or endorse individual courses, institutions or commercial platforms.

7. Governance, resources and risk

Secretariat support

Request only the support required for stewardship.

Example:

Secretariat support is requested for meeting records, maintenance of the Working Group register, liaison with Council and coordination of the annual review.

Funding or in-kind support

State:

- whether ISDE funding is requested;
- what members or institutions will contribute;
- what future resource needs may arise.

Example

No ISDE funding is requested at establishment. Members will contribute time in kind. Any funded curriculum, platform, translation or event activity will require a separate proposal and approval.

Main risks and mitigations

Identify credible stewardship risks and pair each with a response.

Risk	Mitigation
Leadership becomes inactive	Deputy leadership, succession planning and annual health review
Membership is nominal rather than active	Confirm roles and participation expectations
Scope overlaps another Working Group	Maintain a clear mandate and coordinate shared matters
Meetings occur without useful advice or action	Use an annual work plan and measurable success criteria
The group becomes a delivery team	Route defined outputs through Task Forces
Regional participation is uneven	Use Chapters and Hubs to broaden engagement
Commercial or institutional interests affect advice	Declare interests and avoid endorsements
Secretariat workload becomes disproportionate	Use a proportionate meeting and reporting rhythm

Sensitive matters

Tick matters that are reasonably likely to arise within the stewardship domain.

A tick:

- identifies a likely governance consideration;
- does not approve the activity;
- does not authorise expenditure or partnership; and
- does not replace a Task Force proposal or business case.

Example:

An education Working Group may tick “AI-enabled system”, “Sensitive data” and “Public-facing platform or tool” if it expects future Task Forces to consider AI learning resources or learner platforms. The notes should explain that no such system is currently approved.

8. Renewal record and declaration

Delivery and stewardship record

New proposals should leave this section blank.

Renewal, reconstitution, merger and scope-revision proposals should provide a concise evidence-based record covering:

- mandate period;
- leadership continuity;
- meetings and participation;
- advice provided to Council, Bureau or ISDE programmes;
- Task Forces proposed or supported;
- publications, events or partnerships supported;
- DEE assets stewarded;
- regional and disciplinary engagement;
- reporting completed;
- problems encountered;
- lessons learned; and
- reasons for renewal or change.

Avoid listing activity without explaining its value.

Example:

During the previous mandate, the group supported two ISDE education sessions, contributed to a Manual-related learning initiative and maintained engagement with three Regional Chapters. Activity declined during the final year following a leadership vacancy. Renewal is proposed with revised leadership, clearer scope, annual reporting and a priority to develop a Task Force proposal for reusable curriculum resources.

Declaration

The declarations confirm that the applicant understands:

- submission is not approval;
- a Working Group stewards rather than directly delivers defined projects;
- Task Forces require separate approval;
- the group will be subject to reporting and health checks;
- inactive groups may be reconstituted, merged or closed;
- proposed DEE assets are not approved until accepted; and
- Bureau and Council retain the relevant decision rights.

All declarations should be completed before submission.

Final check

Before submitting, confirm that:

- continuing stewardship is genuinely required;
- the proposal is not primarily for one defined deliverable;
- the domain and ISDE role are clear;
- scope and exclusions are defined;
- the mandate term and review cycle are realistic;
- Framework and DEE alignment is explained;
- likely DEE assets are identified without implying approval;
- Task Force intentions are described as proposals, not authorised projects;
- success measures assess stewardship rather than meeting volume;
- leadership and active membership are credible;
- regional and disciplinary gaps are disclosed;
- risks and mitigations are paired;
- sensitive matters are identified;
- renewal evidence is included where applicable; and
- all required declarations are completed.

Appendix A: The Twelve Digital Earth Thematic Frameworks

The Twelve Digital Earth Thematic Frameworks provide a shared strategic architecture for describing the roles and capabilities of Digital Earth. They are conceptual lenses, not individual projects, technologies or technical standards.

Tier 1: Foundational Systems

Purpose: Defines the systemic architecture, technical foundations and knowledge conditions required for Digital Earth.

No.	Thematic Framework	Summary description
1	Digital Earth as a Dynamic Complex Adaptive System	Understands Digital Earth as an evolving planetary-scale system shaped by interactions among environmental, social, economic and technological systems. Feedback, learning and adaptation allow it to respond to changing conditions.
2	Digital Earth as a Cyber-Physical Continuum	Connects the physical and digital worlds through sensors, Earth observation, data cubes, digital twins, models and simulations. It supports continuous exchange between observed conditions, digital representations and real-world action.
3	Digital Earth as a Supersense and Perception	Extends human perception by combining observation, data fusion, artificial intelligence and visualisation. It helps reveal environmental and social patterns that may otherwise be difficult to detect or understand.
4	Digital Earth as a Sustainable Computational Substrate	Provides the computing, storage and communications foundations needed for Digital Earth while promoting energy efficiency, resilient infrastructure, responsible resource use and equitable access.
5	Digital Earth as a Trust and Compliance Infrastructure	Establishes confidence in data, models and digital processes through provenance, identity, consent, security, compliance controls and auditability.

Tier 2: Enabling Infrastructures

Purpose: Converts observations, data and models into governable knowledge, value, foresight and coordinated action.

No.	Thematic Framework	Summary description
6	Digital Earth as a Value Exchange Infrastructure	Connects verified information and measurable performance to economic, environmental and social value. It supports transparent accounting, incentives and value-exchange mechanisms that encourage responsible stewardship.
7	Digital Earth as an Ethical Governance System	Embeds rights, responsibilities, fairness, transparency and plural representation into Digital Earth. It addresses data consent, responsible artificial intelligence, cultural sensitivity and accountable decision-making.
8	Digital Earth as a Knowledge Federation	Connects distributed scientific, technical, policy, Indigenous, local and community knowledge without requiring it to be held in one system. It preserves provenance, context and custodianship.
9	Digital Earth as a Meta-Design Space for Planetary Futures	Provides an environment for exploring, designing and testing possible futures through scenarios, simulations, digital engineering and participatory foresight.

Tier 3: Human-Centric Applications

Purpose: Translates Digital Earth capability into learning, participation, cultural meaning, foresight and practical decision support.

No.	Thematic Framework	Summary description
10	Digital Earth as a Learning and Empowerment Platform	Strengthens spatial literacy, education, professional capability and community participation. It helps people understand complex issues and contribute to decisions affecting their places and futures.
11	Digital Earth as a Cultural Memory and Storytelling Hub	Preserves and connects cultural heritage, memory, identity, local knowledge and place-based narratives while respecting cultural rights, attribution and custodianship.

12	Digital Earth as a Strategic Intelligence and Decision Theatre	Integrates data, models, scenarios, narratives, uncertainty and ethical considerations into an environment for assessing risk, comparing options, understanding trade-offs and coordinating action.
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12 Thematic Frameworks

