ESIP Federation & NSF – Connecting Communities Across the IT & Geosciences

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Information Partners

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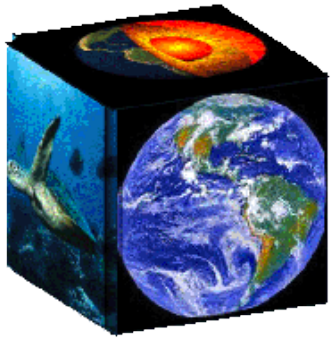
Aligning NSF CI and Geosciences Vision to ESIP

- Utilize community-based cyberinfrastructure
- Integrate data, information and tools for knowledge management across the Geosciences
- Establish inclusive governance mechanism that is adopted by the community



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NSF Needs Community-based Cyberinfrastructure

NSF

- Funds large-scale and small-scale data rich research projects
- Data systems developed on project-by-project basis
- Multiple directorates funding research with competing visions and priorities

ESIP

- Community tackles interoperability and integration challenges for disparate systems irrespective of
  - Domain
  - Agency
  - Architecture
- Focused on consensus building
  - Best Practices
  - Standards
  - Community Conventions
- Works through broad range of partners to represent best ideas of community

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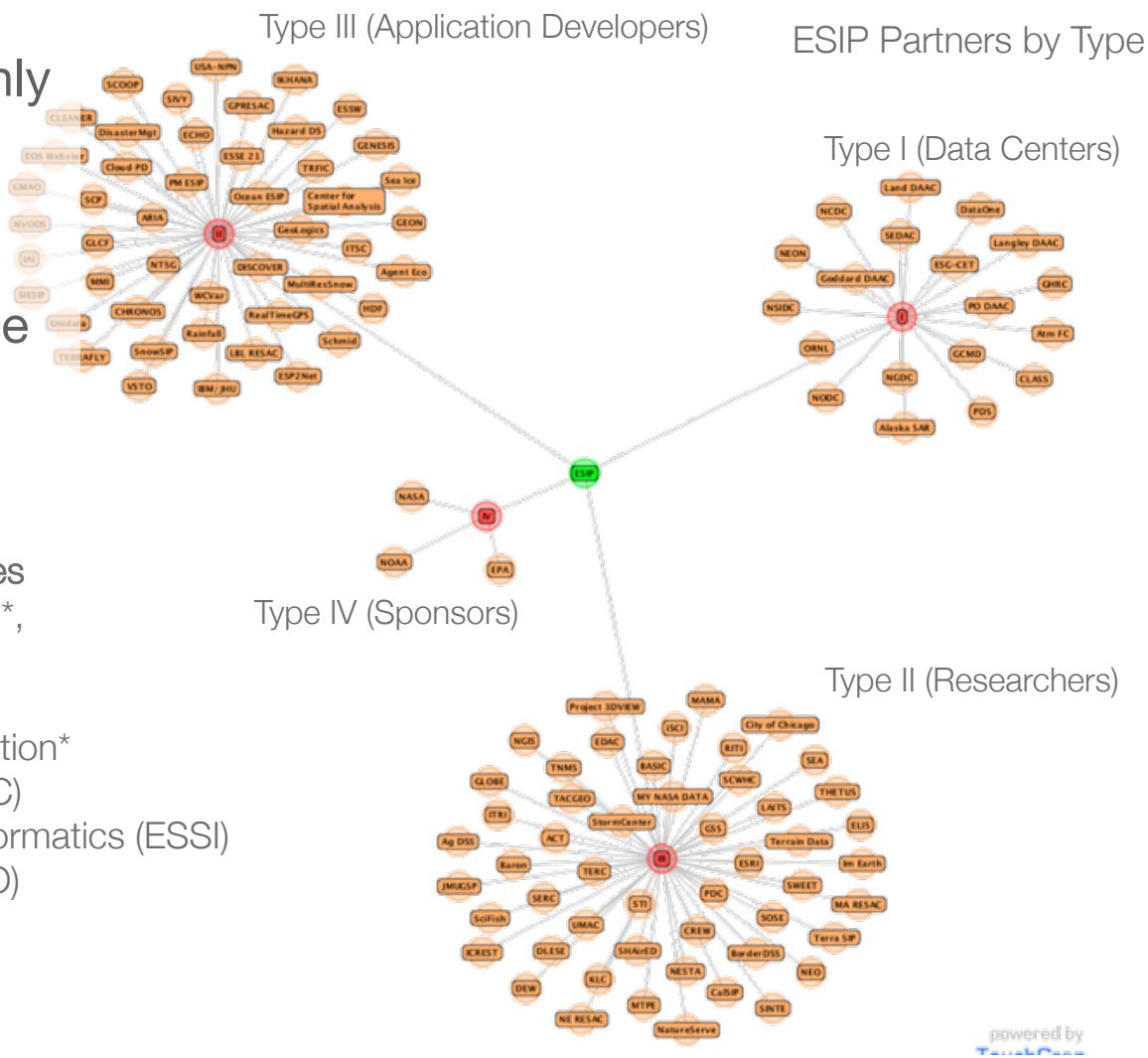
ESIP & Evolving Cyberinfrastructure

Is community-driven, highly participatory and open to science data and technology practitioners from across the data value chain.



Some partners are networks themselves

- Unidata, DataOne, NEON, US-GIN*,
- Data Conservancy*, IRIS
- National Phenology Network,
- USGS Community for Data Integration*
- Open Geospatial Consortium (OGC)
- AGU Earth and Space Science Informatics (ESSI)
- Group on Earth Observations (GEO)
- NASA, NOAA, EPA

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NSF Needs to Integrate Data, Information & Tools

NSF

- Agency Model for Data, Information and Tool Development Still Evolving
- No NSF Community-based Mechanism to Facilitate Interactions Across Silos and Functions

ESIP

- Formal and Informal Groups within ESIP to Address Wide Range of Science, Technical and Governance Topics
- Air Quality
  - Interoperability of AQ Data Systems Using Standards (WCS, WMS)
  - ESIP Providing Community Space to Support Systems Integration Work
- Data Preservation and Stewardship
  - Commons approach creating best practices, technical papers

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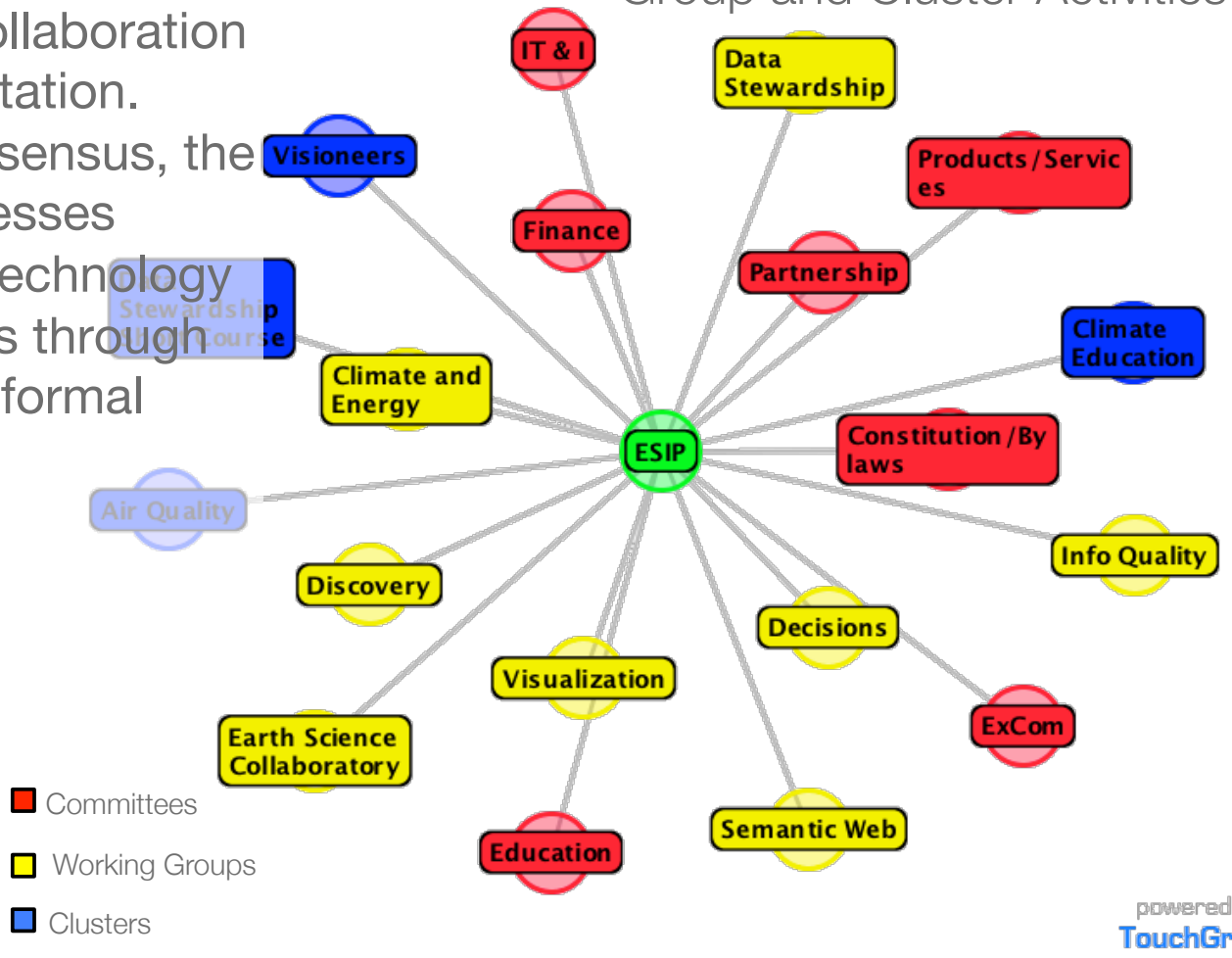
ESIP and Data, Information & Tool Integration

Supports science through discipline neutral IT collaboration and partner implementation. Using community consensus, the ESIP Federation addresses informatics, science, technology and governance topics through its many formal and informal groups.

ESIP Committee, Working Group and Cluster Activities



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NSF Needs Inclusive Community Governance Model

NSF

- Well-defined Research Communities Gather Together but Rarely With Each Other

ESIP

- 13-year History
- Multi-agency Participation
- Governed by Community
- Already Working on Data, Information and Tools Integration Across Communities
- OPEN Participation!

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The ESIP Federation Community Governance

People of ESIP and the ESIP Communities They Connect To

Is a knowledge network for science data and technology practitioners, connecting them and their organizations to develop interoperable data infrastructure.

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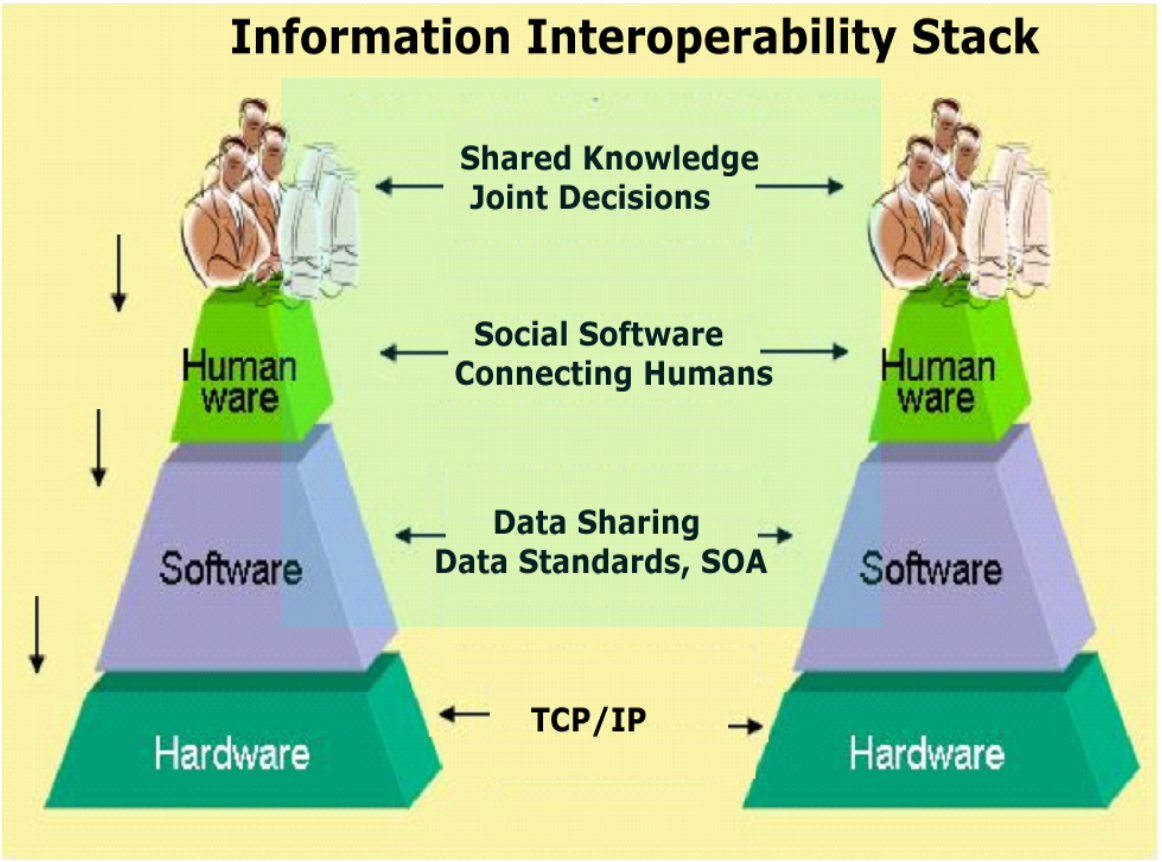
ESIP Transforms Earth Science

ESIP **provides community coordination** to support interoperability at the data, systems, human and organization level.



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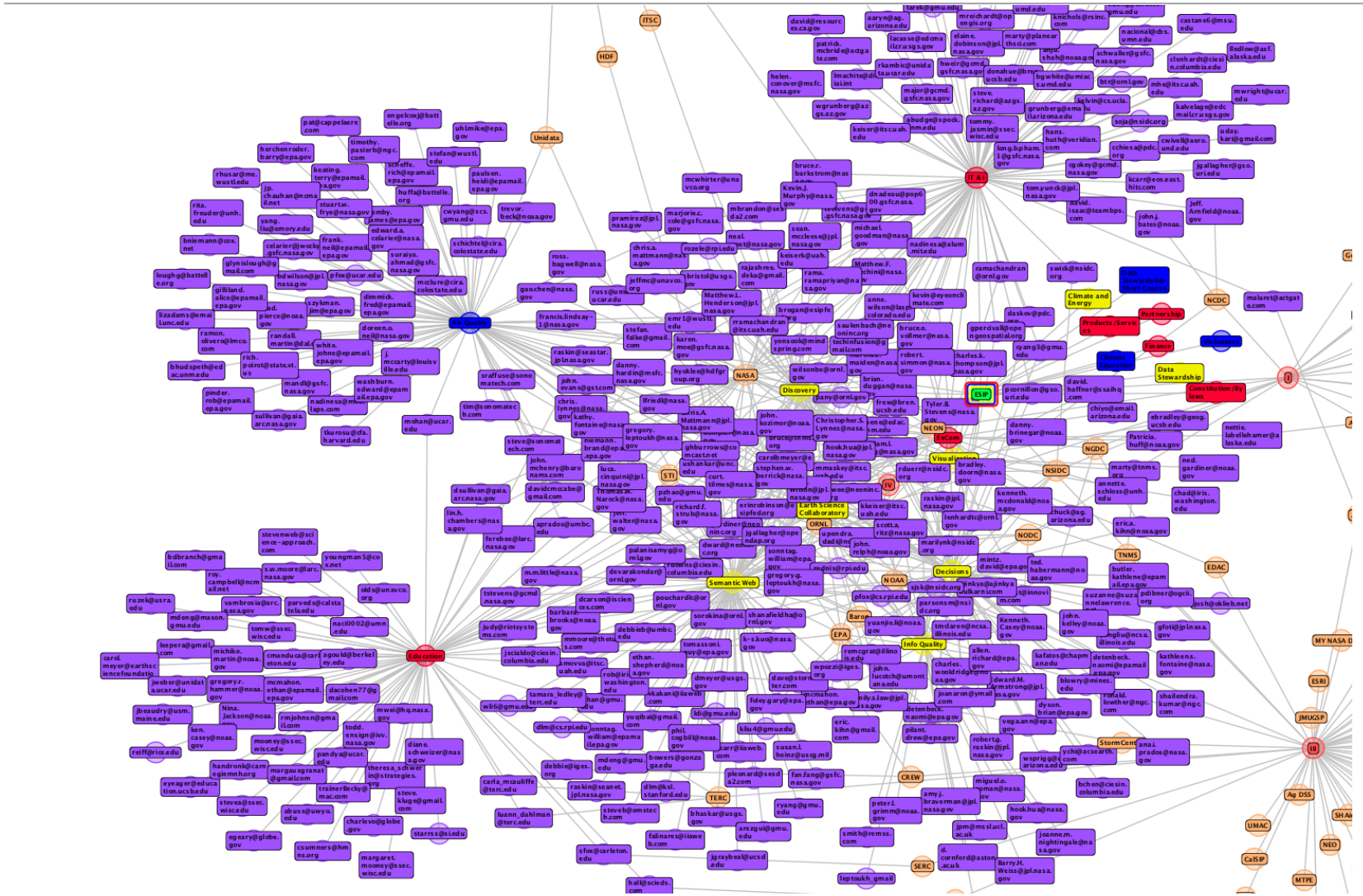
Network Effect: ESIPx^n



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ESIP and Earth Cube

- ESIP is THE community venue for supporting data and systems integration.
  - Decade+ History
  - Open Invitation to Participate/Contribute
  - Inter-agency
  - Multi-sector
  - Flexible
  - Community-based Governance Model (formal and informal mechanisms)
  - Efficient Mechanisms for Information Transfer
  - Peer-to-peer Network of Practitioners

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ESIP and Earth Cube (continued)

- NSF lowers risk by using ESIP community governance model
  - Leverages investments made by other federal sponsors
  - Broad, growing, established and trusted community already operational
  - Independent forum driven by community members
  - Open invitation for practitioners to participate

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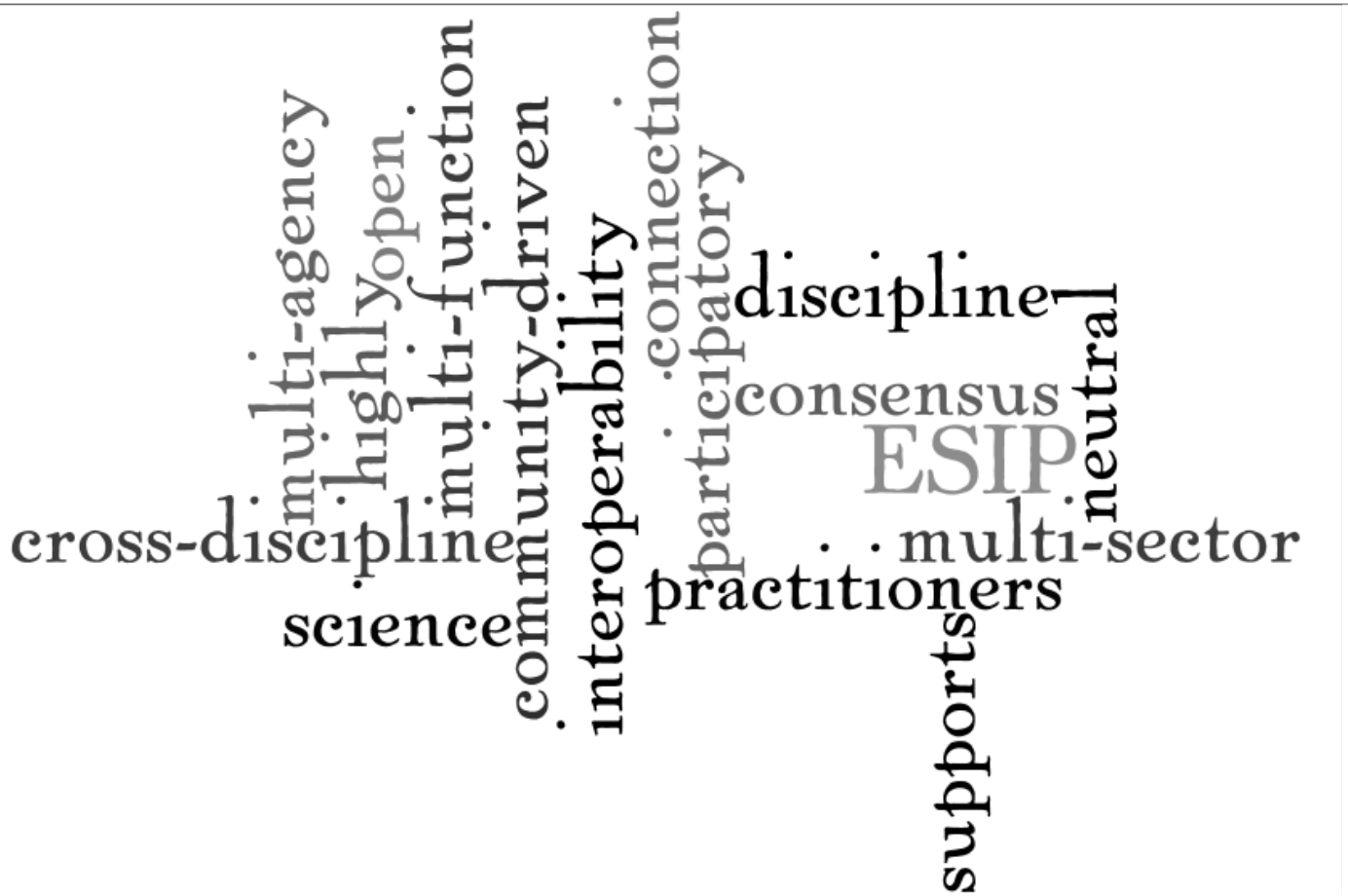
Questions?



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Extra Slides

- History
- Governance
- ESIP Ethos
- ESIP 2010
- Get Involved
- Key Contacts
- ESIP Online

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History

- Formed in 1998 by NASA
  - National Academy report recommended the creation of a federation
  - 24 original “Working Prototypes-ESIPs”
    - 12 research
    - 12 applications
  - Later expanded to include NASA DAACs
- “Constitutional Convention” (1999-2000)
  - Constitution and Bylaws
- Foundation for Earth Science (2001)
  - Nonprofit 501(c)(3) corporation
  - The Federation’s secretariat

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Governance

- Assembly
  - 1 partner, 1 vote
  - Annual meeting in Jan.
  - Leadership elected from Assembly representatives
- Committee
  - Chair elected by Assembly
  - Chair serves on Executive Committee
- Working group
  - Created by Assembly or Committee
  - Task-oriented
- Cluster
  - Self-forming
  - For any reason
  - Ends when the last person hangs up

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Governance: Partner Types

- Type I: data centers
  - NASA DAACs
  - NOAA (NGDC, NODC, NCDC)
- Type II: researchers and tool developers
  - Academia
  - Government labs
- Type III: application developers
  - Commercial
  - Nonprofit
  - Educational
- Type IV: strategic partners
  - NASA
  - NOAA
  - EPA

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Governance: Activities

- Standing Committees
  - Education
  - Information Technology and Interoperability
  - Products and Services
- Administrative Committees
  - Constitution and Bylaws
  - Finance and Appropriations
  - Partnership
- Working Groups
  - Air Quality
  - Climate Education
  - Climate Forecasting (CF)
  - Visioneers
- Clusters
  - Cloud Computing
  - Data & Info Quality
  - Discovery
  - Drupal
  - Energy
  - Decisions
  - Federated Search
  - Preservation & Stewardship
  - Semantic Web
  - Visualization

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ESIP Ethos

- ***We are***...
  - Community Driven
    - Members are the authority
    - Voluntary
      - No requirements
      - No remuneration
      - "For the good of the order"
  - Distributed
    - Geographically
    - Topically
    - Functionally
  - Open
    - Collegial
    - Neutral forum
- ***We value***...
  - Participation
    - Share your expertise
    - Leverage others' expertise
    - Encourage free flow of ideas
    - Exposure → opportunities
  - Collaboration
    - "Communities of practice"
  - Innovation
    - No institutional barriers
    - Results for $5K!
- ***Hybrid virtual and 'real' organization***

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ESIP 2020: Vision Pillars

1. ESIP is the trusted community authority that supports the integration of science and data into mainstream use.
2. ESIP provides the intellection commons to Earth science informatics innovation.
3. ESIP leads the development of the Earth science data and information field to:
    - recognize data management as a profession;
    - provide opportunities for continued professional development;
    - train the research community on data management; and
    - engage the next generation of science data information professionals.

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Get ESIP'ed

- Ongoing activities
  - Clusters
    - start a new one!
  - Working groups
  - Committees
- Twice-yearly meetings
  - Attend
    - Next: January 4 – 6, 2012 Washington, DC
    - Present a talk or poster
  - Chair a session
- Partnership
  - Join
  - Invite your colleagues
  - Host a summer meeting
- Consider running for office

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Key Contacts

- ESIP Elected Officials (annual)
  - President – Chris Lenhardt (2011)
  - Vice-President – Karl Benedict (2011)
  - ESIP type representatives
  - Committee chairs
- Foundation for Earth Science
  - Executive Director – Carol Meyer
  - Information and Virtual Community Director – Erin Robinson

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ESIP Online

- Home page
  - http://esipfed.org
- Wiki (primary collaborative space)
  - http://wiki.esipfed.org
- Facebook
  - http://tinyurl.com/esip-facebook
- Twitter
  - #esipfed
- Global Change Master Directory
  - ESIP data portal
  - ESIP services portal