

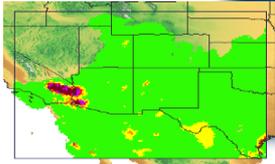
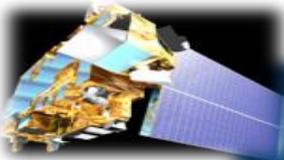
A view of Earth from space, showing the curvature of the planet and city lights at night. A bright star is visible in the upper left. The text is overlaid on the image.

Assessing community impact: a sample of ESIP's activities

Karl Benedict,
President
ESIP

Earth Science Information Partners Vision

*Leaders in promoting
the **collection, stewardship and (re)use**
Of Earth science data, information and knowledge
that is responsive to societal needs.*



Earth Science Information Partners (ESIP)

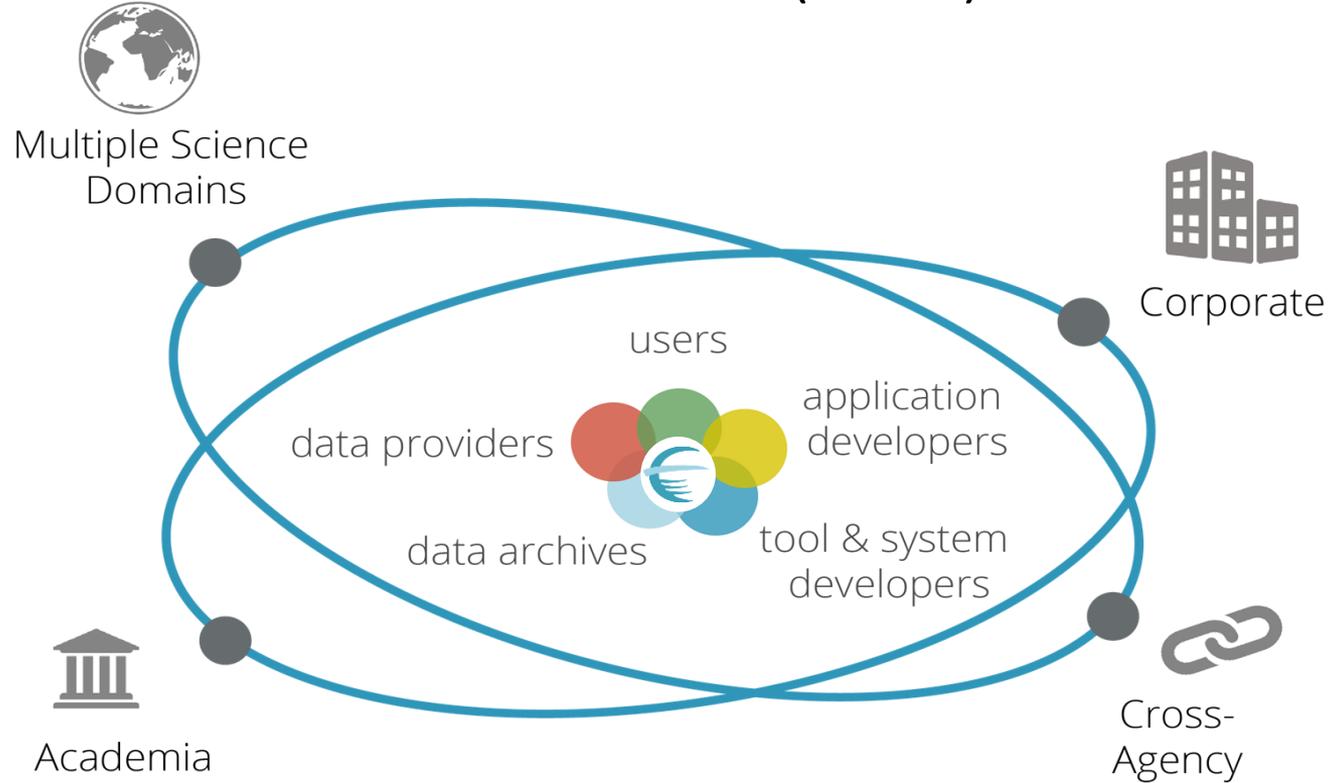
By the numbers:

120+ Member Orgs

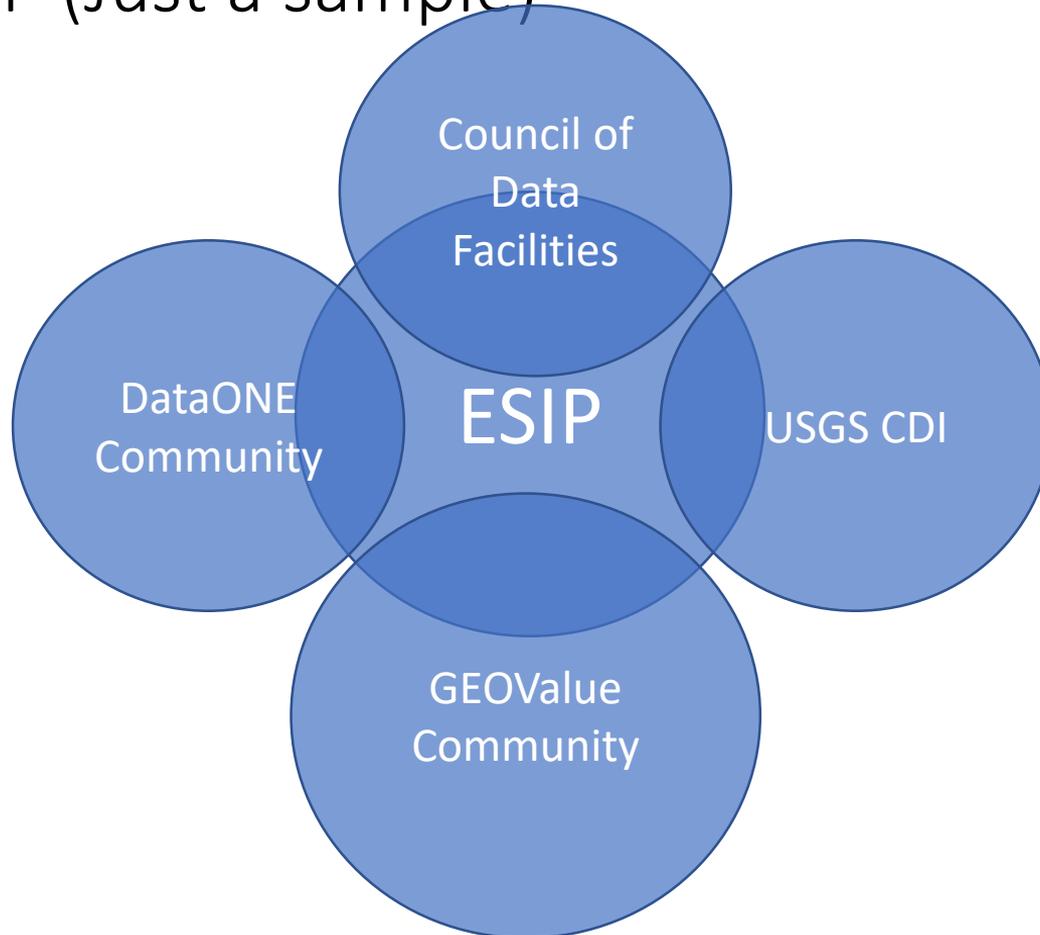
1000 Active Participants

30+ Working Groups

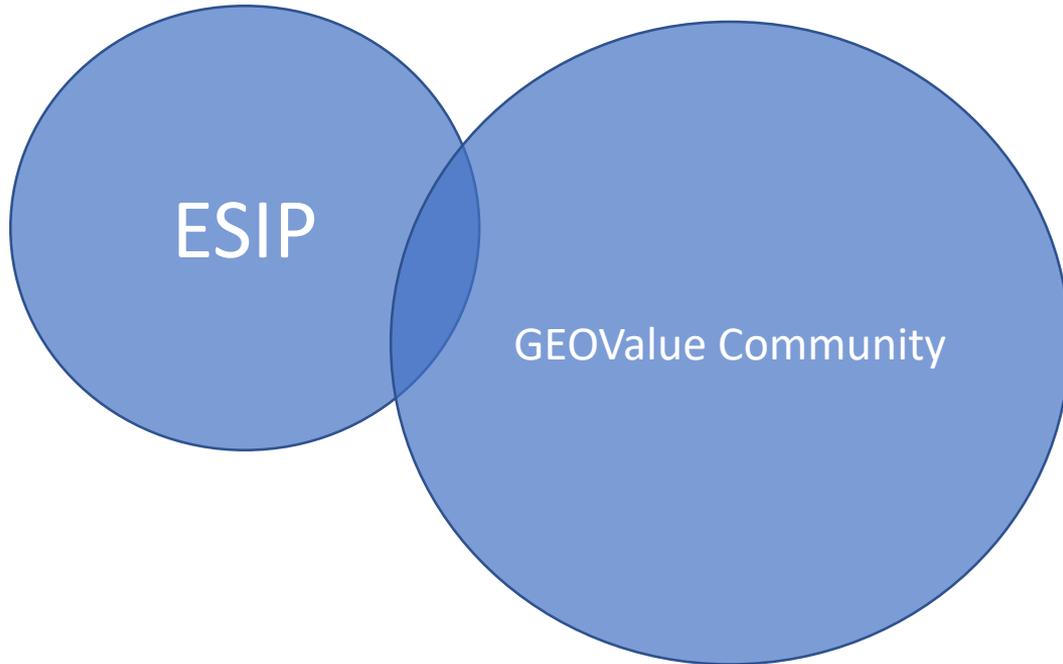
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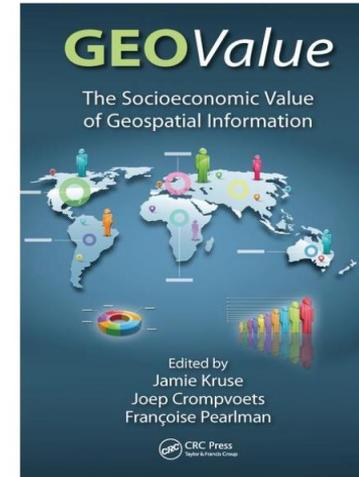
Beyond ESIP (Just a sample)



Beyond ESIP



- Workshops
- Webinars
- Presentations
- Publications



2017

<http://www.geovalue.org/workshops/>

FAIR Guiding Principles

FAIR is...

Findable

Accessible

Interoperable

Reusable

Article in Nature journal *Scientific Data*: Wilkinson, M. D. *et al.* The FAIR Guiding Principles for scientific data management and stewardship. *Sci. Data* 3:160018 doi: 10.1038/sdata.2016.18 (2016).



There is an urgent need to
improve the **[Global
Collaborative]** infrastructure
supporting the **(re)**use of
scholarly data.

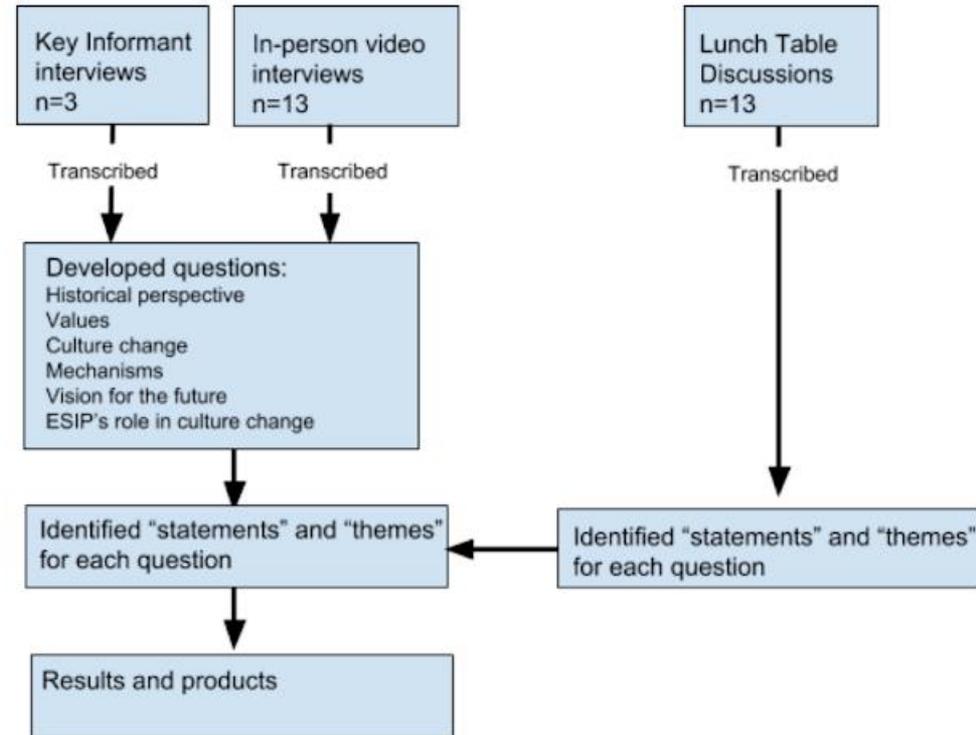
- (Modified, Erin Robinson) From *The FAIR Guiding Principles for scientific data management and stewardship*

Community Impact Assessment

ESIP Strategic Goal - "Promote techniques to articulate and measure the socioeconomic value and benefit of Earth science data, information and applications."

A Qualitative Approach to Assessment

- 2018 “Making Data Matter” Project – Dr. Arika Virapongse
 - Phone and Video interviews
 - Lunch table discussions
 - Results inform the 2019 ESIP **Organizational Assessment** approach and strategy feeding into ESIP’s next 5-year Strategic Planning project



Questions & Answers

- *Why did you choose the case study? - Impact assessment for community development is difficult, but must be pursued. This case study illustrates a qualitative approach to community development assessment.*
- *How can we effectively measure the impacts? “Measure” in the context of this qualitative approach is more aligned with identification of themes and trends to aid in characterization of impact. Less aligned with “measure” in the context of numeric metrics which we often think of when measuring.*
- *What core indicators/models seem more appropriate to be used? Positive and negative terms around areas of intended impact. Appearance of intended impact areas in responses from interviewees.*
- *What are the main challenges? Many Earth science researchers/technologists/data scientists do not have familiarity with qualitative analysis methods and tools and therefore don’t employ them as frequently as quantitative tools/methods.*
- *What works and what does not work? Qualitative data do not lend themselves towards quantitative depictions (graphs, trendlines, tables) in the way that many of us are most familiar with. Qualitative data can yield impactful statements from users that illustrate outcomes and impacts.*
- *What are your recommended best practices? Seek out expertise in qualitative data collection and analysis to perform effective community impact assessment.*
- *What is missing and how can this be improved? Some additional quantitative elements that can be used to assess longitudinal trends in attitudes and perceptions from community members.*

Data Management Training Clearinghouse Assessment

ESIP Strategic Goal – “To increase the use and value of Earth science data”

DMTC Enhancement Project

- Focus on
 - Metadata Enhancement
 - Content diversification & growth
 - **Assessment**



Welcome to the DMT Clearinghouse

The Data Management Training (DMT) Clearinghouse is a registry for online learning resources focusing on research data management.

It was created in a collaboration between the [U.S. Geological Survey's Community for Data Integration](#), the [Earth Sciences Information Partnership \(ESIP\)](#), and [DataONE](#).

For questions or feedback, please contact clearinghouseEd@esipfed.org

[Read More](#)



FGDC Lifecycle - <https://www.fgdc.gov/policyandplanning/a-16/stages-of-geospatial-data-lifecycle-a16.pdf>

Search

Find learning resources by keyword, name, date, license and cost

[Search](#)

Browse

See a list of learning resources by educational framework

[Browse](#)

Submit

Submit your learning resources to the Clearinghouse

[Submit](#)

<http://dmtclearinghouse.esipfed.org>

DMTC Assessment Directions

- Focus on both the DMTC and provided content
- Integration of content feedback into metadata/search informed by Kirkpatrick's Four Levels assessment framework:
 - Reaction
 - Learning
 - Behavior
 - Results
- Mixed methods
 - Quantitative log analytics and learning material users and learners
 - Qualitative feedback from users of clearinghouse and content
- Guided by DMTC Assessment Working Group and Project Advisory Committee

Questions & Answers

- *Why did you choose the case study? **Development and delivery of quality data management training is critical for building the capacity of the Earth science community to perform high-quality work efficiently. The assessment activities around the DMTC can help close the loop on the effective discovery and use of existing training materials AND provide useful information to training material users – instructors and learners.***
- *How can we effectively measure the impacts? **Using mixed quantitative and qualitative methods.***
- *What core indicators/models seem more appropriate to be used? **Indirect (i.e. analytics) and direct (i.e. user feedback) methods of assessment information collection***
- *What are the main challenges? **Narrowing the field to the most critical areas of assessment (prioritization) and development of data collection capacity that allows for streamlined use in the system.***
- *What works and what does not work? **TBD***
- *What are your recommended best practices? **Be open to both quantitative and qualitative approaches.***
- *What is missing and how can this be improved? **TBD***

Thank you!

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