Advancing the culture of data sharing at the U.S. Geological Survey through community engagement
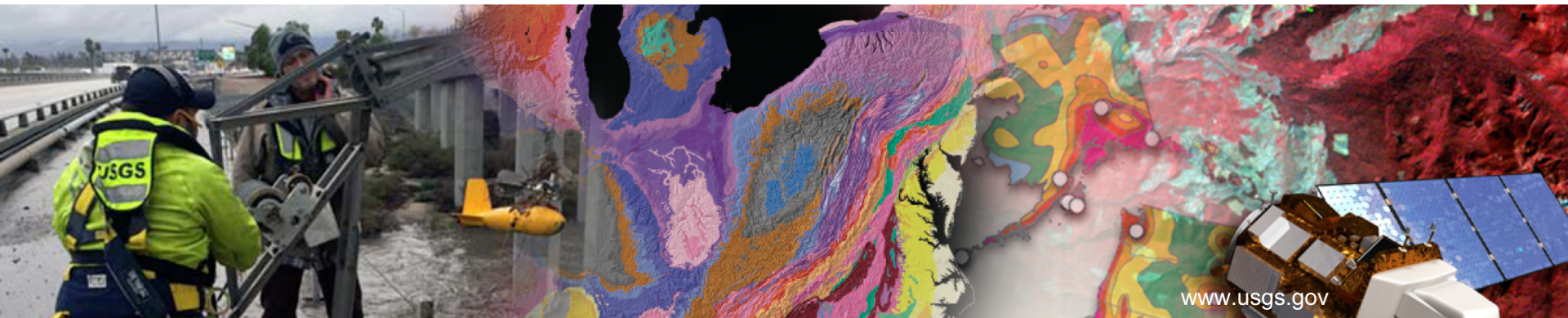
Leslie Hsu, U.S. Geological Survey

9 August 2018

Geoscience Digital Data Resource and Repository Service (GeoDaRRS) Workshop

Boulder, CO

USGS – Science for a Changing World

We provide science about the natural hazards that threaten lives and livelihoods, the water, energy, minerals, and other natural resources we rely on, the health of our ecosystems and environment, and the impacts of climate and land-use change. (https://www.usgs.gov/about/about-us)

www.usgs.gov

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Government Drivers for USGS Science Data Management
Open Data Initiatives 2013

Executive Order
- Increasing Public Access to the Results of Federally Funded Scientific Research Feb. 22, 2013

Executive Order
- Making Open and Machine Readable: the New Default for Government Information May 9, 2013

M-13-13 Open Data Policy
- Managing Information as an Asset

USGS
science for a changing world

Public Access to Results of Federally Funded Research at the U.S. Geological Survey: Scholarly Publications and Digital Data

January 8, 2016

U.S. Department of the Interior
U.S. Geological Survey

http://www.usgs.gov/quality_integrity/open_access/

Goals of the USGS Public Access Plan

OVERARCHING GOAL: *electronic copy of final accepted manuscript or final publication of record AND supporting data is available free of charge for public access not more than 12 months after publication date.*

Data Management Plans	Review and Approval	Metadata	Digital Object Identifiers	Repository	Science Data Catalog
Formal **Data Management Plans** must accompany all new research proposals	Science data undergoes QA/QC, formal description, **review and approval before release**	All science data is documented with **metadata** using FGDC or ISO standards	**Digital Object Identifiers** are assigned for data and publications	Data are submitted to a **USGS trusted digital repository** All intramural data and publications are stored on **trusted digital repositories**	USGS data and metadata are indexed in **USGS Science Data Catalog**

USGS Science Data Management Branch

provides tools, best practices, and education for data management

ScienceBase
sciencebase.gov

Metadata Wizard
sciencebase.gov/metadatawizard

Science Data Catalog
data.usgs.gov

myUSGS
my.usgs.gov/resources

USGS Data Management Website
usgs.gov/datamanagement

Community for
Data Integration
usgs.gov/cdi

selected tools

best practices and education

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Why is community engagement one of our strategies in USGS Science Data Management?
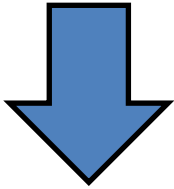
USGS Science Data Management Branch

9

members

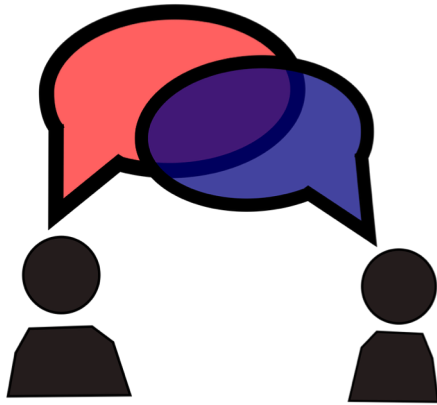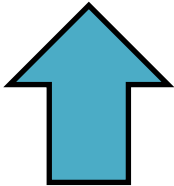Community for Data Integration

900

members

Top down:
USGS Policies, Open Data Initiatives, Public Access Plan

The Community for Data Integration: conversation between the top and the bottom

Bottom up:
Best Practices, Processes, and Tools

The Community for Data Integration

Increase communication across boundaries and grow the USGS knowledge base in data integration and management

Monthly Meetings	Collaboration Areas	Funded Projects	Workshops and Trainings
Encouraging discussion through presentations	*Member-driven working groups* *Data Management Metadata Reviewers*	*Over 80 projects funded since 2010*	*In-person and virtual events*

Community engagement helps USGS address the questions:

What are we supposed to do?

What *could* we do?

What *should* we do?

Topic: Data Release

The path for formally releasing scientific data at the USGS.

What are we supposed to do?

What *could* we do?

What *should* we do?

USGS

Topic: Metadata Review

The process to ensure the accuracy, completeness, and usefulness of the metadata for USGS data products.

What are we supposed to do?

What *could* we do?

What *should* we do?
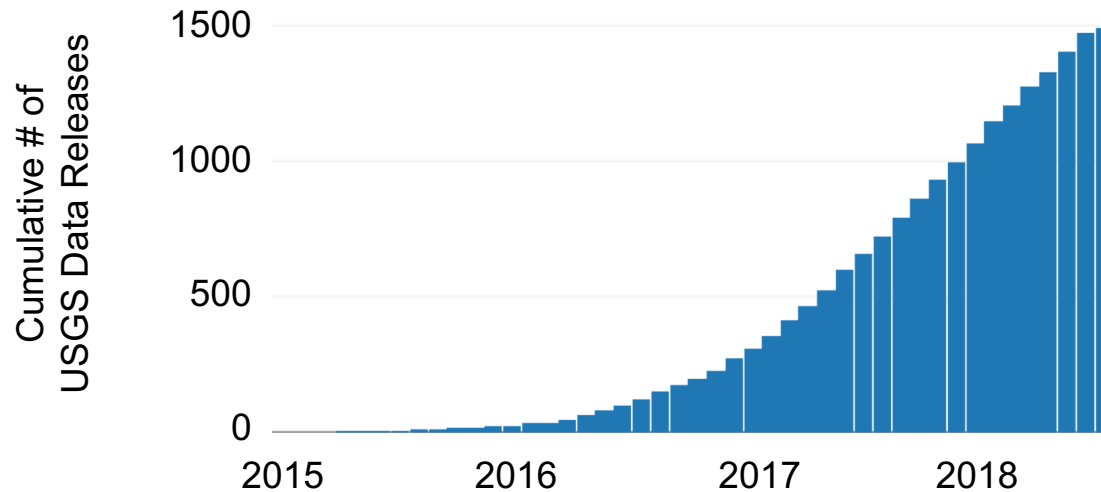
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Topic: Software Release

The path for formally releasing scientific software at the USGS.
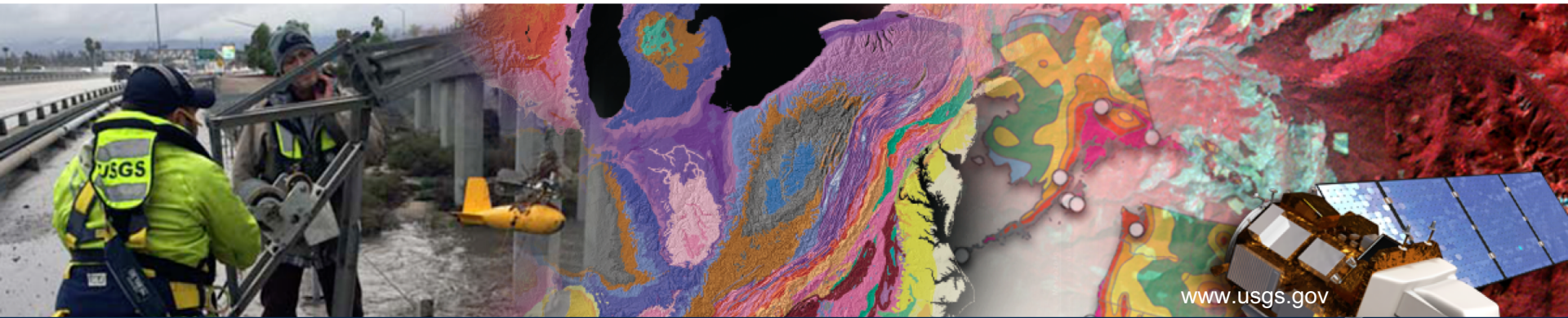
What are we supposed to do?

What *could* we do?

What *should* we do?

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Community engagement advancing the culture of data sharing: **Data sharing as the new normal**

Challenges

- Data management for specific disciplines

- Making USGS data truly integrated

- Reaching everyone who could benefit

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Take homes:
Community engagement strategies we like

- *Consider an approach that includes both a bottom-up and top-down method*

- *Provide transparency and documentation of past solutions*

- *Grow networks and trust*

Leslie Hsu – lhsu@usgs.gov

USGS

Extra slides

Data Management Lessons from the USGS

- Consider approach that includes both a bottom-up and top-down method
- Build a mechanism to create buy-in
- Consider the culture of your organization – what's worked in the past, etc.
- Policies need resources to be implemented (via staffing, tools, guidance, infrastructure)
- It is possible to build this up incrementally
- Don't reinvent the wheel – seek out models, tools, guidance – already in place
- Find a champion to support your work

V. Hutchison

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COMMUNITY FOR DATA INTEGRATION