

Global Research Infrastructure & Group of Senior Officials (GSO)

Jim Ulvestad & Matt Hawkins

Large Facility Workshop

April 30 – May 2, 2018



Outline

- History and Background
- GSO Framework
- Benefits for U.S. Facilities & Researchers
- Case studies around NSF-funded facilities



History and Background

- June 2008 G8 Science Ministers meeting
- Foster international cooperation on Global Research Infrastructures (GRI)
 - Too expensive to “go it alone”
 - Maximize scientific & societal benefits
 - Minimize overlap and duplication
- Most active since 2011



History and Background

- 15 GSO Member States
- “Working Level” Representatives from:
 - **G7:** Canada, France, Germany, Italy, Japan, United Kingdom, United States
 - **Plus:** Australia, Brazil, China, European Union (Commission), India, Mexico, Russia, South Africa



U.S. GSO Representatives

- NSF
 - Dr. Jim Ulvestad, OD (Senior Official)
 - Matt Hawkins, LFO
 - Mangala Sharma, OISE
- DOE
 - Dr. Benjamin Brown, Office of Science



History and Background

- GSO Goals:
 - Identify National RI of global interest & possible new areas of cooperation
 - Investigate how countries evaluate and prioritize implementation of large-scale RI
 - Promote transnational access to GRI
 - Foster “distributed infrastructures”
 - Identify measures to promote appropriate handling, storage and accessibility of scientific data
 - Develop a common understanding for lifecycle management of GRI



History and Background

- GSO “good practice” Framework
 - Drafted in 2008
 - Principles to be considered when presenting RI as a candidate for greater international cooperation/integration
 - Voluntary
 - Living document
 - Affirmed by G7 Science Ministers in 2013



GSO Framework

14 areas for GRI to address:

- Core purpose of the Infrastructure
- Partnership
- Scope/Schedule/Cost
- Project Management
- Funding
- Reviews
- Termination
- Global-Excellence-Driven-Access
- E-infrastructure
- Data exchange.
- Clustering of Research Infrastructures
- International Mobility
- Technology Transfer & IP
- Monitoring Socio-economic Impact

See poster for details of the Framework



GSO Framework

Promotes:

- Access to GRIs should be on the basis of merit through a peer review process
- Better sharing and managing scientific data, especially by reinforcing engagement with community-based activities such as the Research Data Alliance
- Opening of existing RI's to international partners
- International mobility of scientific and management expertise
- Development of innovation clusters around the GRI
- Monitoring of socio-economic impacts



GRI Impacts

- Boost generation of scientific knowledge
- Accelerate technology development & innovation
- Broader socio-economic impacts & response to grand challenges
- Provide advanced scientific training for new generations of scientists and science managers
- Provide enabling environments for established researchers to improve their performance and output



GRI Challenges

- Extremely Complex
- High development, construction and operation costs
- Global nature of the scientific questions and societal challenges



Benefits to U.S. Facilities & Researchers

- Facilitate implementation of national facilities on the basis of internationally recognized good practices
- Augment community-based international collaboration in identifying potential partners
- Reciprocal treatment from the partner nations:
 - Access to data
 - Access to other RI
- International recognition
- Enhanced U.S. Leadership position



GSO Case Studies

Purpose:

- Illustrate alignment with Framework
- Identify potential international collaboration opportunities & partnerships
- Identify good practices to inform Framework language



11th GSO Meeting - 2018

- Hosted by United States (NSF & DOE)
- NSF's National High Magnetics Field Lab (Maglab)
Florida State University, May 21-25
- NSF Case Studies:
 - MagLab: Single-sited, established international collaboration
 - NEON: Distributed, international potential
- Site Visit & Framework Analysis



GSO Case Studies

Case Studies follow-up:

- Underground Laboratories (UG-GRI)
- International Mouse Phenotyping Consortium (IMPC-GRI)
- RI's develop their own road map for implementation of the Framework
- “Light monitoring” by GSO
- Report according to the self-identified milestones



GSO Website

<https://ec.europa.eu/research/infrastructures/?pg=gso>



Thank You

Questions?

