Necessity for highly adaptable CI to respond to evolving science
Tailored product which provides information I trust and understand
Enable PIs to submit well described data (and incentives to submit)
Standardize descriptions for models, data, workflows, etc.
Give credit, providence for submissions
Governance structure for shared resources and collaboration
Mission planning and optimization

Encourage multi-disciplinary research…
Metadata Standards
Provenance
Data Sharing and Incentives and Culture Change

Single Logical Data Storage Location…
Observations exist in 4D space… geological and temporal
Sustainability Business Model
Authentication / Credentials

Relevance of historical data / Disturbance history
CI Design/Implementation Culture Change
Security / Single Sign on / Access Levels / One-time Access
Governance - Access to resources / Who has editorial power?
Community buy-in to shared infrastructure
Long term stability / maintenance - including expertise
Ethical concerns about shared data
Metadata Standards
Provenance - Authorship
Raw Data Center - Collection service
Timeliness of Data Delivery - Security
Accessibility to diverse user base
Societal contributions

Verified/clear metadata
Standards Body / Knowledge Management Body
Need demonstration of services for buy-in
Rules vs. Incentives
Ontology for environmental/ecological variables
Exponential growth of data… scalability
Adaptation to new technologies
Network Interoperability