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)
Network Interoperability
Timeliness of Data Delivery - Security
Accessibility to diverse user base
Encourage multi-disciplinary research...
Metadata Standards - Verification - Incl. models, workflows
Provenance
Exponential growth of data... scalability
Raw Data Center - Collection service
Single Logical Data Storage Location...
Observations exist in 4D space... geological and temporal
Authentication / Credentials / Security
Relevance of historical data / Disturbance history
Governance structure for shared resources and collaboration
Community Issues for buy-in / incentives for publishing data
Data Sharing and Incentives and Culture Change
Need demonstration of services for buy-in
Rules vs. Incentives
CI Design/Implementation Culture Change
Ethical concerns about shared data
Societal contributions (Community Science Contributions)
Standards Body / Knowledge Management Body
How to enable sustained communication between EONs

Sustainability / Maintenance / Keeping Expertise
Ontology for environmental/ecological variables
Mission planning and optimization