

# Regional Ecosystem Data Management

*Presented to*

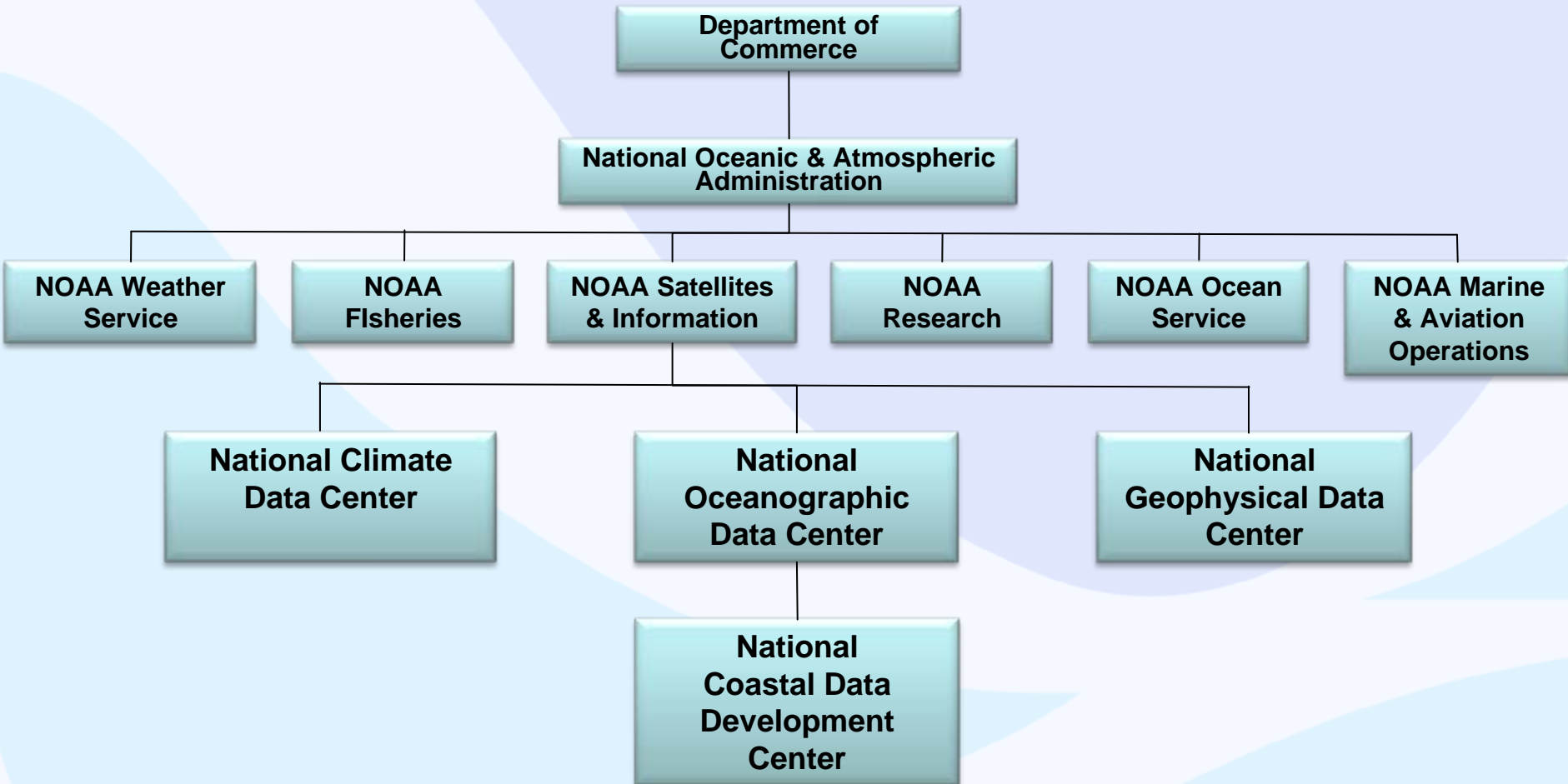
PaCOOS Data Management Workshop

Sharon Mesick

National Coastal Data Development Center

June, 2009

# NOAA Line Office Organization



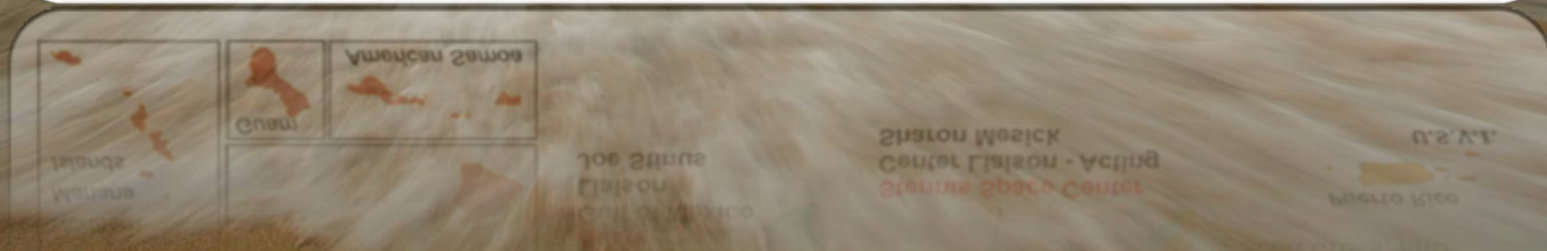
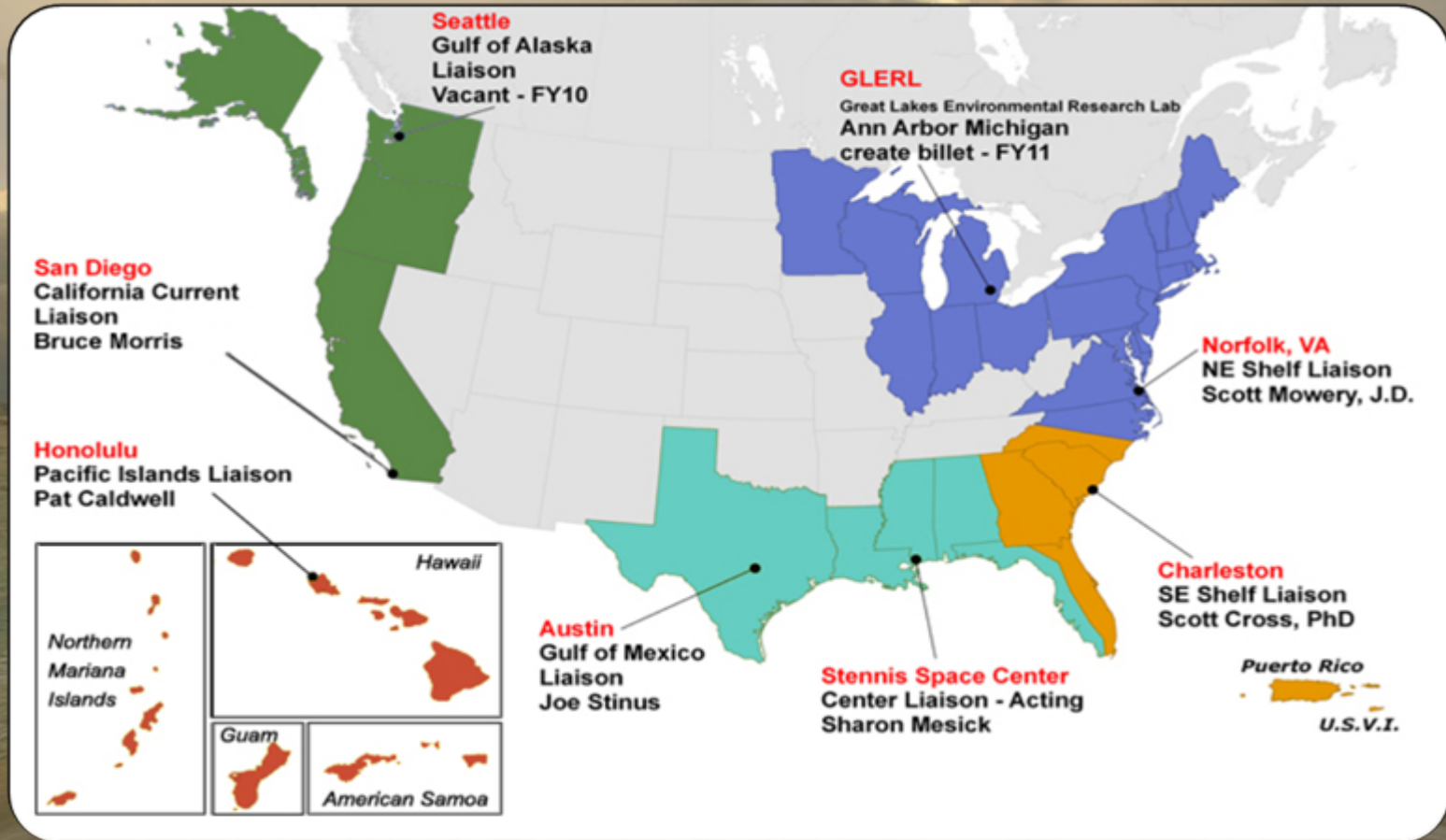
# Coastal Data Development ...

## *Providing access to the Nation's Coastal and Ocean Data Resources*

- ❖ The goal of the Coastal Data Development (CDD) program is to provide increased utilization of coastal and oceanographic data using web-based search and access and geographic information systems (GIS) techniques, which will improve understanding, management and use of coastal areas. *(from Congressional Budget Language)*
- ❖ FY09 Budget: Total Funding \$5.8M (includes \$1.4M sponsored)
- ❖ NCDDC is aligned with the Ecosystem Goal Team/  
Ecosystem Observing Program Capability 5: Data Management, Tech transfer, Education and Outreach

# Regional Approach ...

*NCDDC Liaison Officers*



# NCDDC Services

- **Consulting**
  - Web services, data standards, vocabulary standards
  - Metadata tools and training
- **Programmatic data integration**
  - Standard transport protocols
  - Data format translation
  - Encryption/authentication service
- **Data discovery and access**
  - Enhanced discovery via REDM Portal
  - Web mapping
- **Secure, long-term archival** (Through NODC and NGDC)

# NCDDC Metadata Program Resources



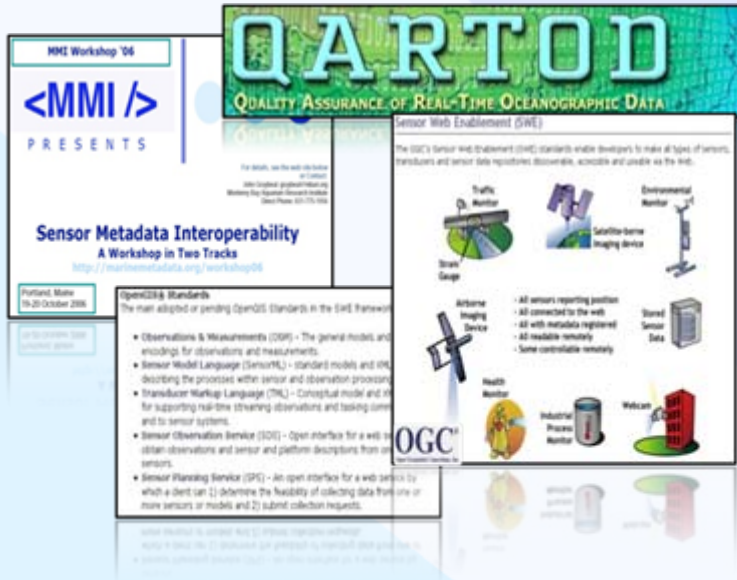
NESDIS/Northern Gulf Institute  
Minority Internship Program

*(class of 2007)*

- Community participation on expert Teams
  - DMAC, Quartod, MMI
- Supports data discovery, access and archive
  - Metadata training & mentorship
  - Metadata tools
  - Transformation between metadata standards
  - Automated metadata generation

# Q20

## *Implementing QA/QC Standards for In Situ Ocean Sensors Using OGC-Sensor Web Enablement (a.k.a. QARTOD to OGC)*



### **Partners:**

- Woods Hole Oceanographic Institution
- Martha's Vineyard Coastal Observatory
- University of Alabama, Huntsville
- University on North Carolina
- South East Coastal Ocean Observing System Regional Association
- Gulf of Maine Ocean Observing System
- Southern Universities Research Association
- University of South Florida
- Virginia Institute of Marine Science
- Louisiana Universities Marine Consortium

### **Capabilities:**

- Metadata & Data Discovery
- Data Access & Transport

### **Data:**

- Real-time physical oceanographic data (waves, currents, CTD, DO)
- Data quality
- Quality control tests and parameters

### **Impact:**

Providing data quality information with data, as well as access to the tests performed and the testing parameters.

# Regional Ecosystem Data Management



## Technologies:

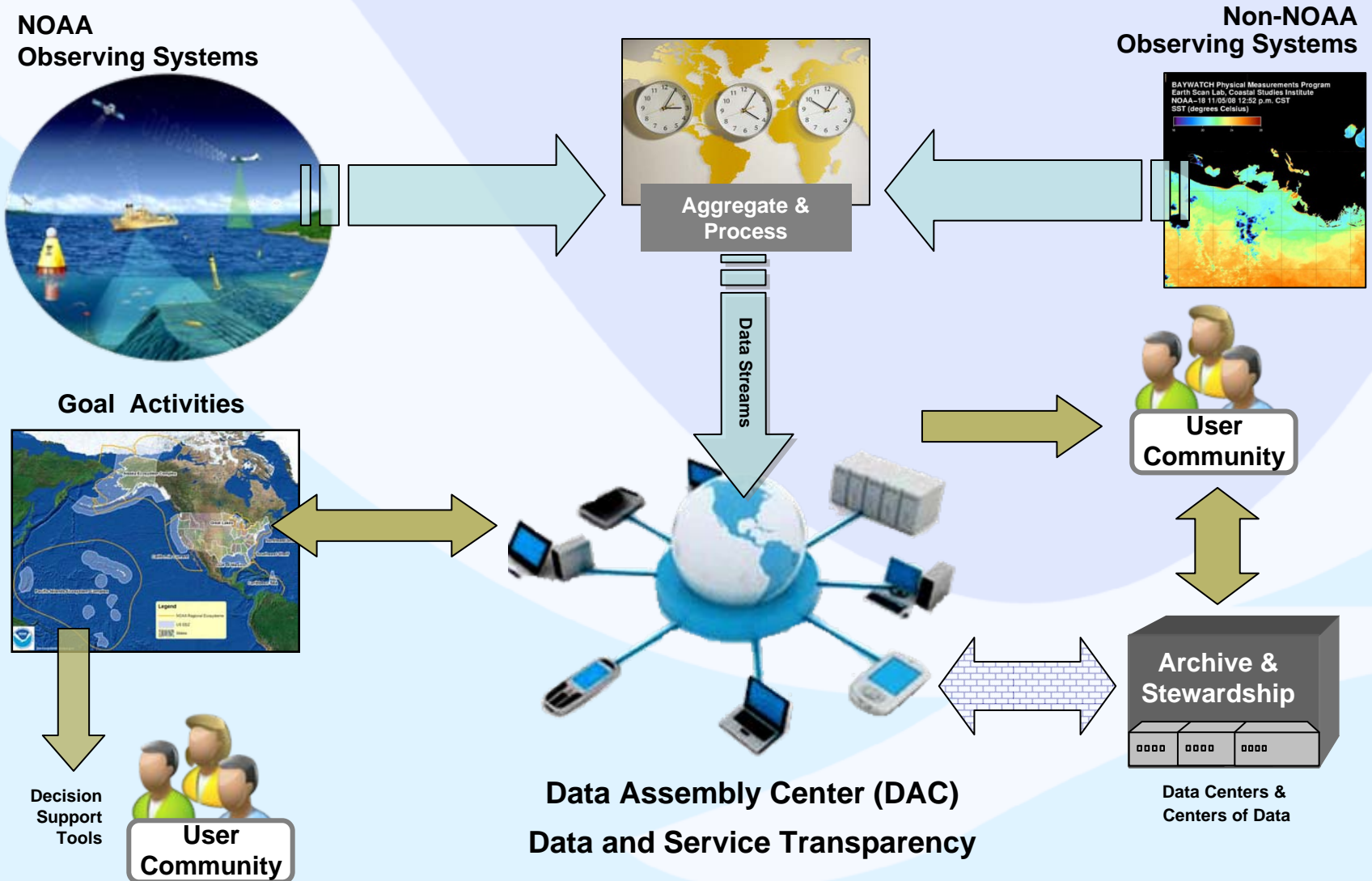
- Semantic catalog and web search
- Syndication services
- Google Map API
- Common Data Model
- OPeNDAP support

## Functions:

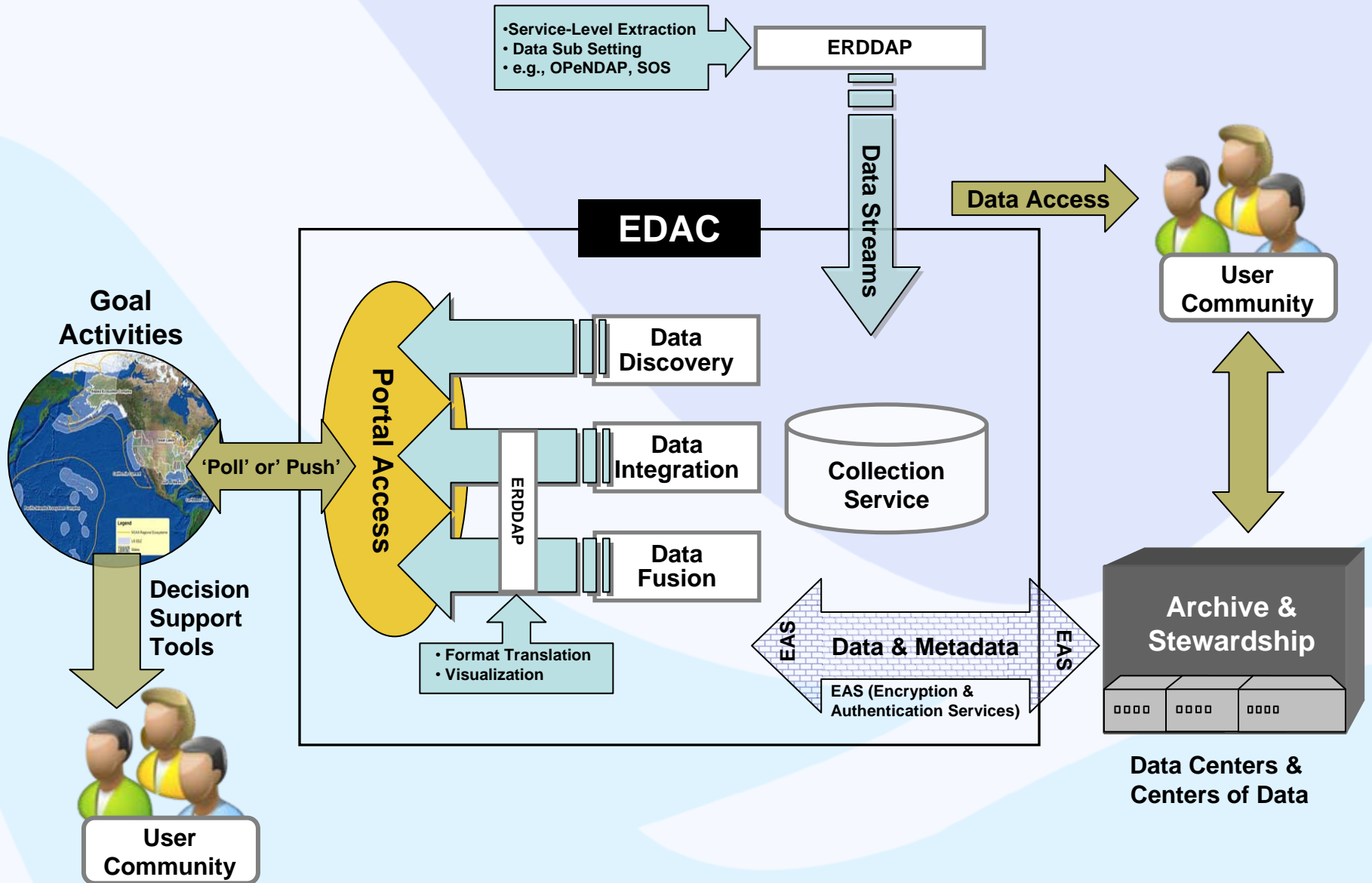
- Metadata catalog(s)
- IEA-flavored knowledge map
- Thematic data search
  - Data Coverage Map
  - Data Theme Search
  - Full Text Search
- Data access, translation



# EDAC Architecture Supporting Data Management Requirements



# Data & Service Transparency



Demos:

[www.ncddc.noaa.gov](http://www.ncddc.noaa.gov)

[ecowatch.ncddc.noaa.gov](http://ecowatch.ncddc.noaa.gov)

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