

US EPA ARCHIVE DOCUMENT

Great Lakes Observing System



GEO User Interface Committee Meeting

August 1, 2007
Washington D.C.

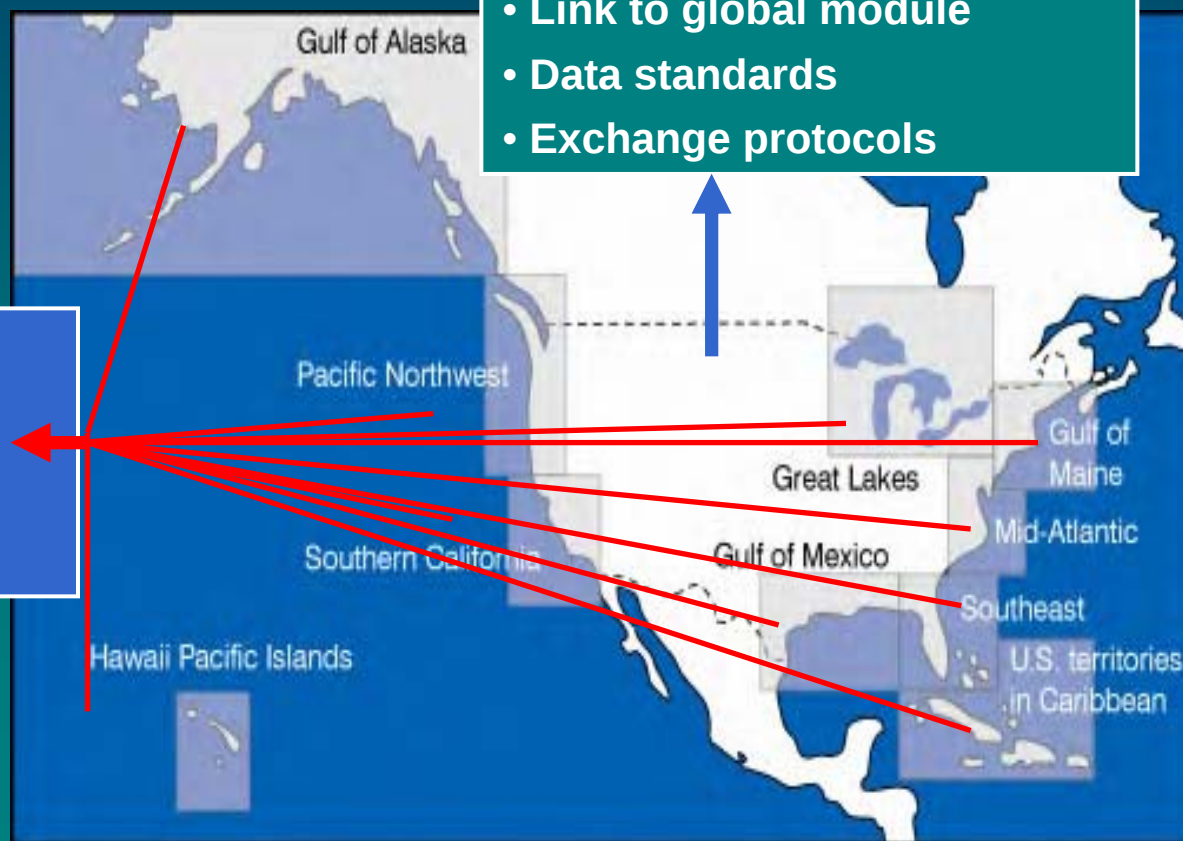
Integrated Oceans Observing Systems

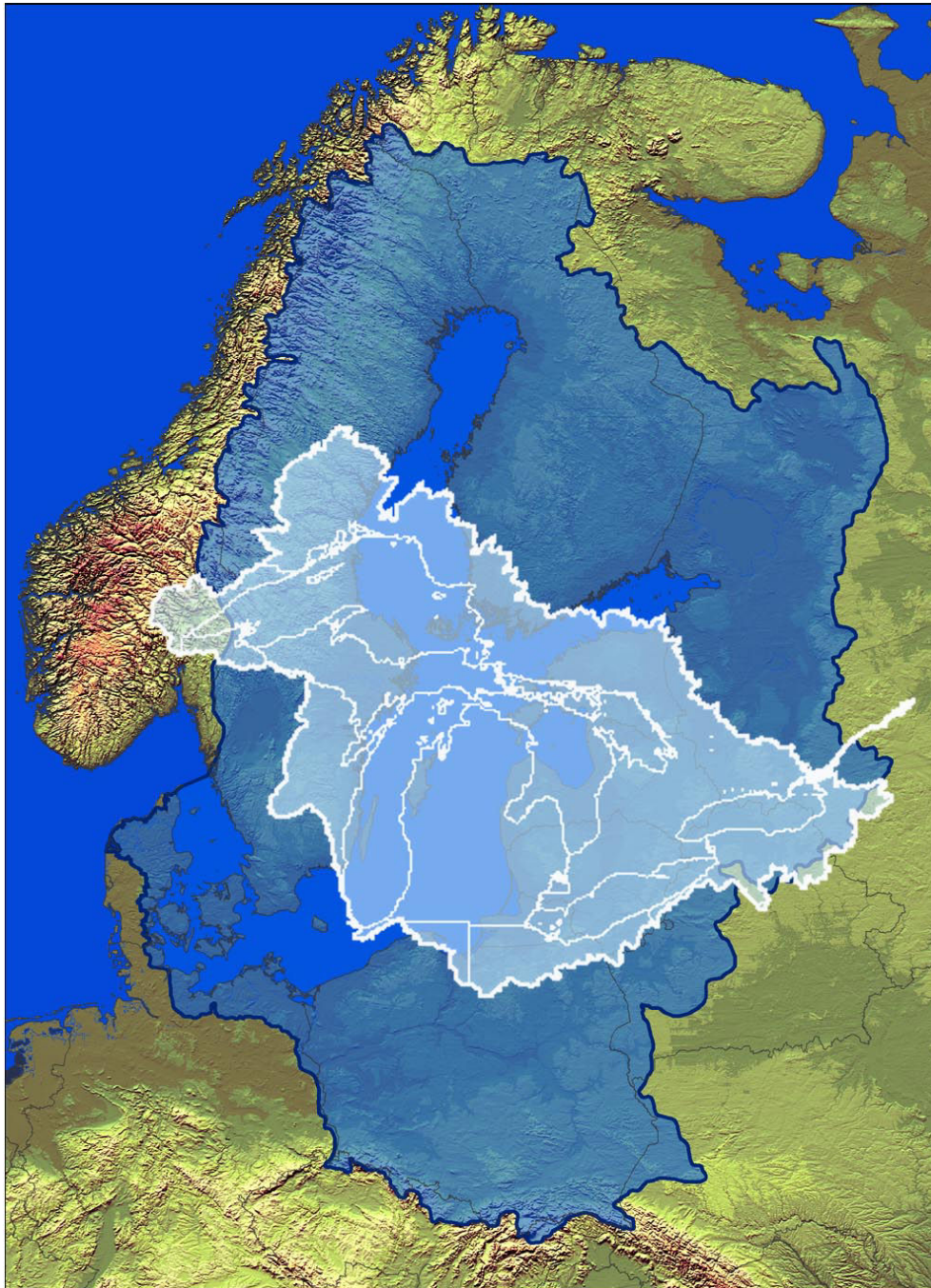
National System:

- Satellite remote sensing
- Reference, Sentinel Stations
- Link to global module
- Data standards
- Exchange protocols

Regional Systems:

- Land-based inputs
- Regional Priorities
- Greater resolution
- More variables

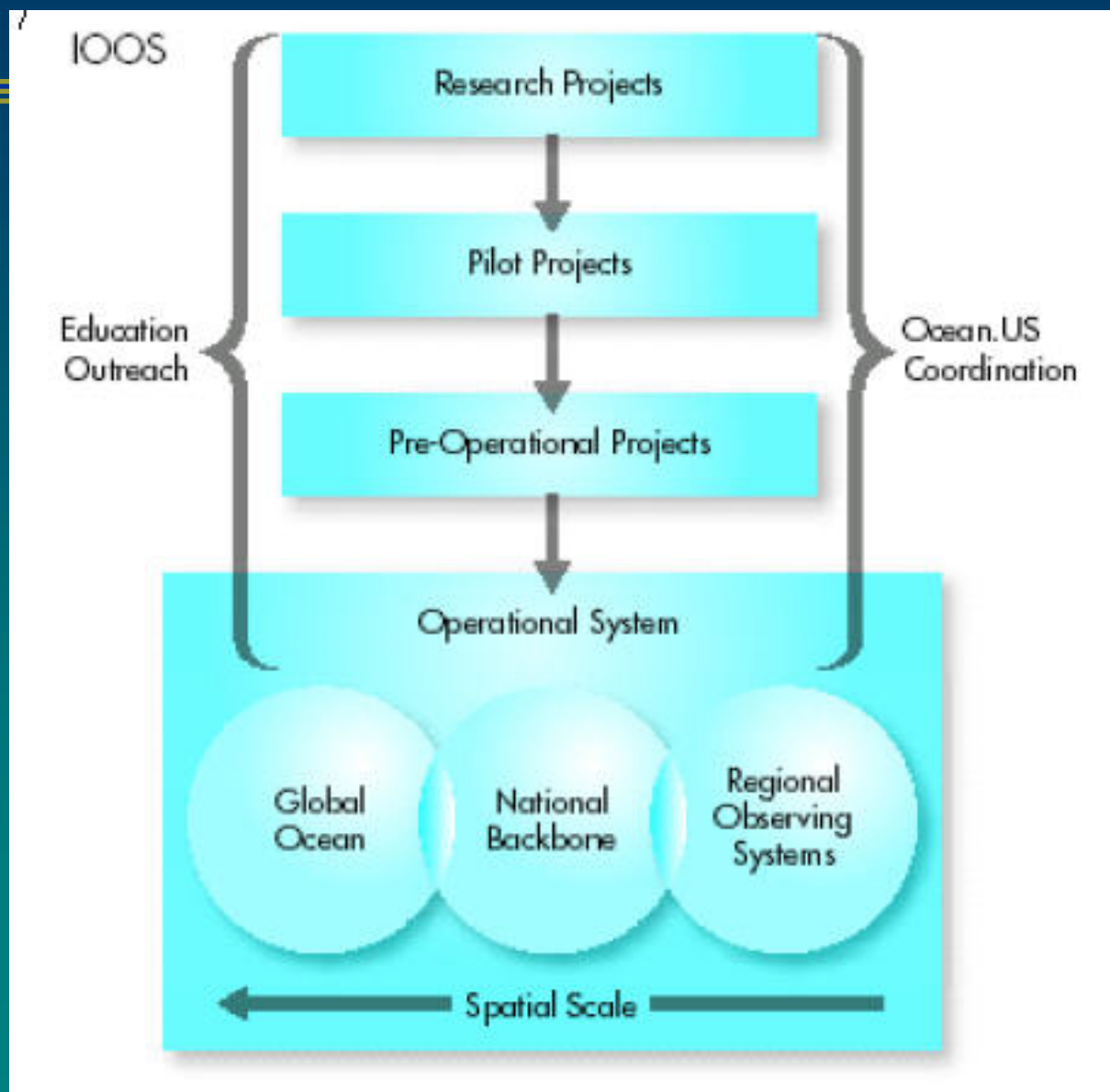




Critical Current **Great Lakes Issues**

- Protect drinking water supplies
- Restore biologic integrity
- Reduce loadings of nutrients, sediments and nutrients
- Clean up toxic hot spots
- Enhance resiliency to climatic variability / change
- Limit adverse affects from aquatic invasive species
- Improve navigation safety and efficiency
- Support sustainable coastal communities

Integrated Ocean Observing System



IOOS Core Variables

Physical

Ocean height
Bathymetry
Bottom character
Temperature
Surface waves
Surface currents
Ice distribution
Optical properties
Heat flux

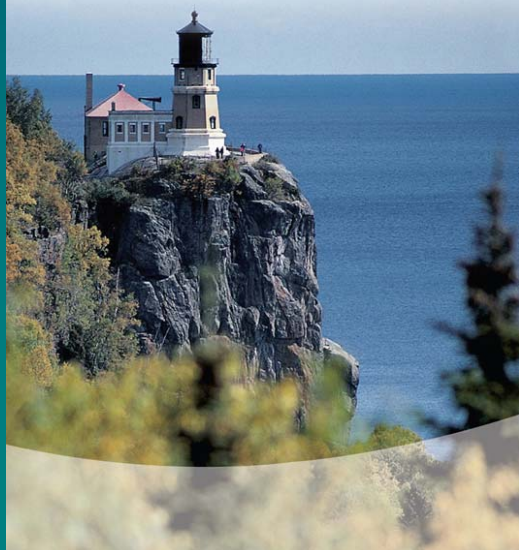
Chemical

Salinity
Contaminants
Dissolved nutrients
Dissolved Oxygen

Biological

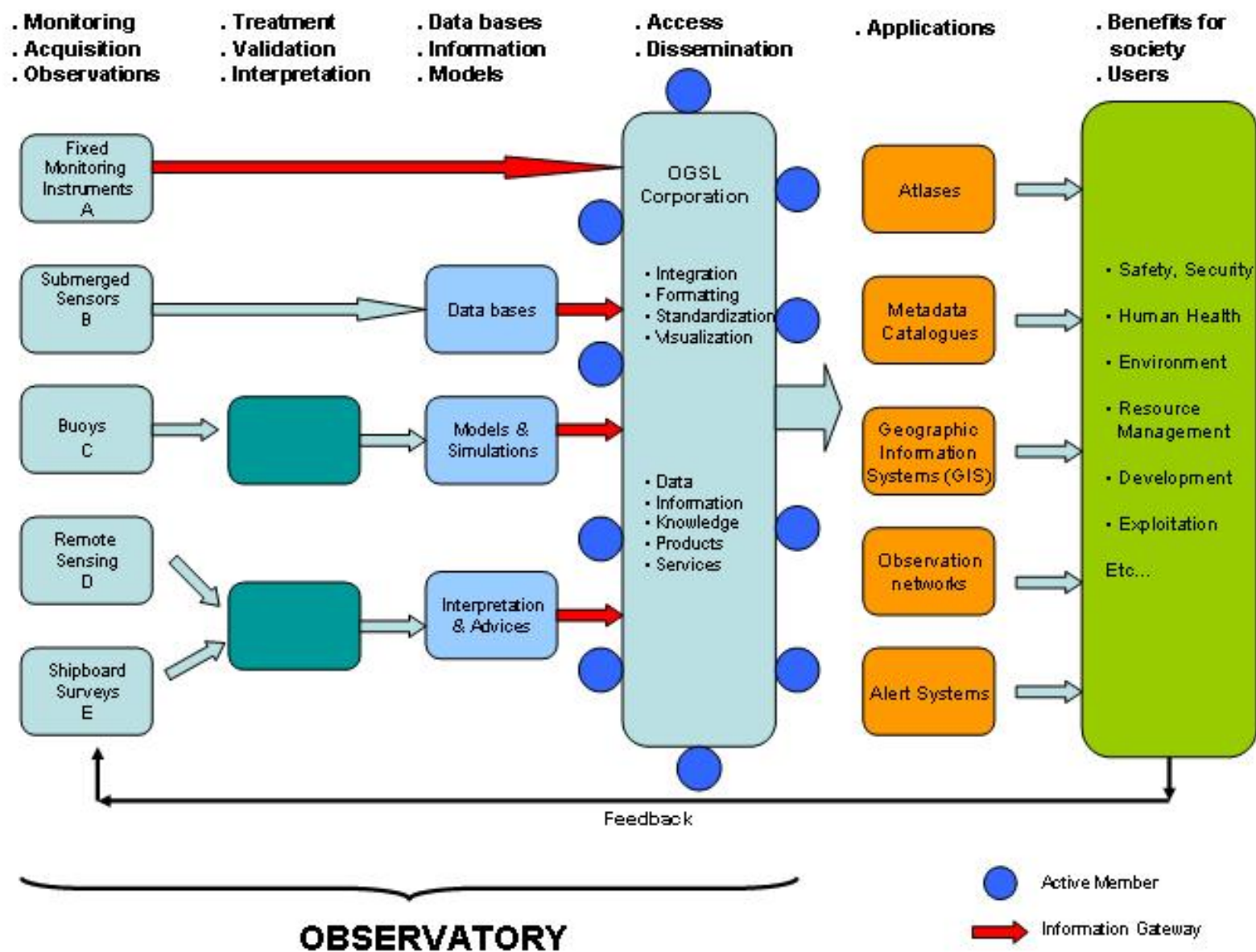
Fish species
Fish abundance
Phytoplankton
Zooplankton
Pathogens

GLOS Basics



- A U.S. non-profit Corporation
- Membership to include federal, state, provincial agencies, academic institutions, commercial concerns and other non-profit corporations
- Principal focus areas:
 - define needs for more physical, chemical and biological observations;
 - coordinate data collection efforts and;
 - integrate information to provide for enhanced discovery and access

Observatory Concept

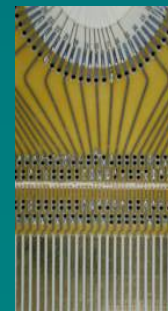
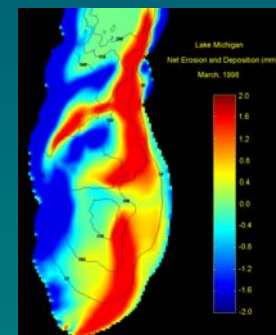


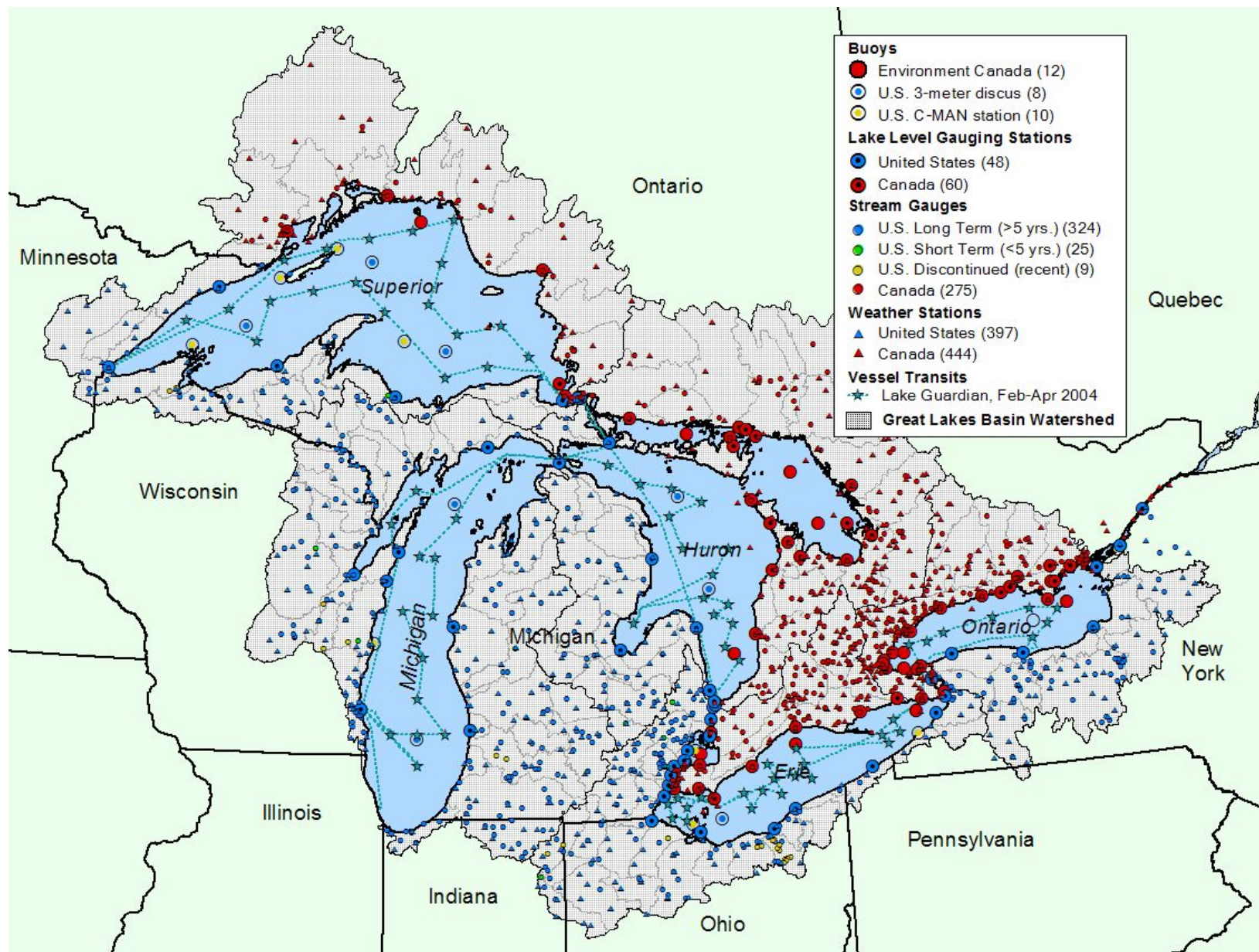
St. Lawrence Global Observatory - SLGO

Great Lakes Observing System

Subsystems:

- Deep Water Observations
- Science Vessels
- Interconnecting Waterways
- Nearshore Observations
- Atmospheric Monitoring
- Remote Sensing
- Modeling and Ecological Forecasting
- Information Integration
- Education and Outreach





Core GLOS-DMAC Functionalities

Components

Data Discovery

Data Visualization

Data Evaluation

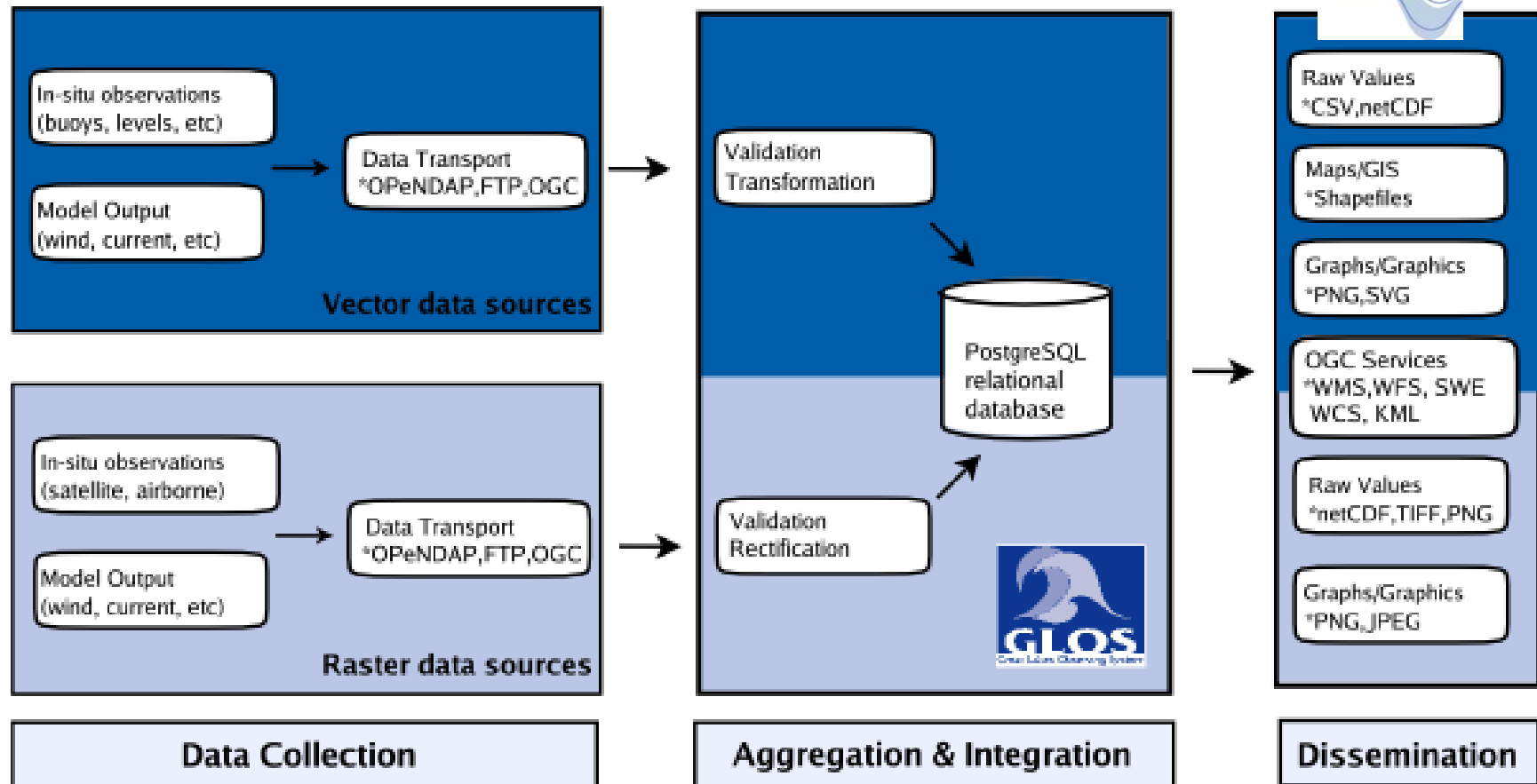
Data Access

Data Publishing

Tenants

- Empower user/organizations
- Make data accessible to ALL
- Be extensible/expandable
- Minimize duplication
- Metadata driven
- Standards based
- Leverage open source software
- Service Oriented Architecture

GLOS Conceptual Data Flow



What's Next

Refine user needs assessments focused on system engineering concepts

Address parameter, station and product shortfalls

Develop customized products meeting user needs

Integrate data with other IOOS and Canadian nodes

Expand products to include historic information

