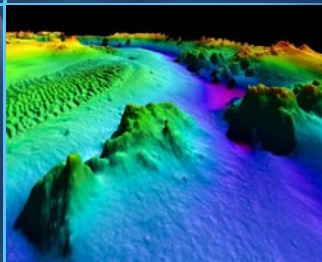


# Esri Nautical Solution

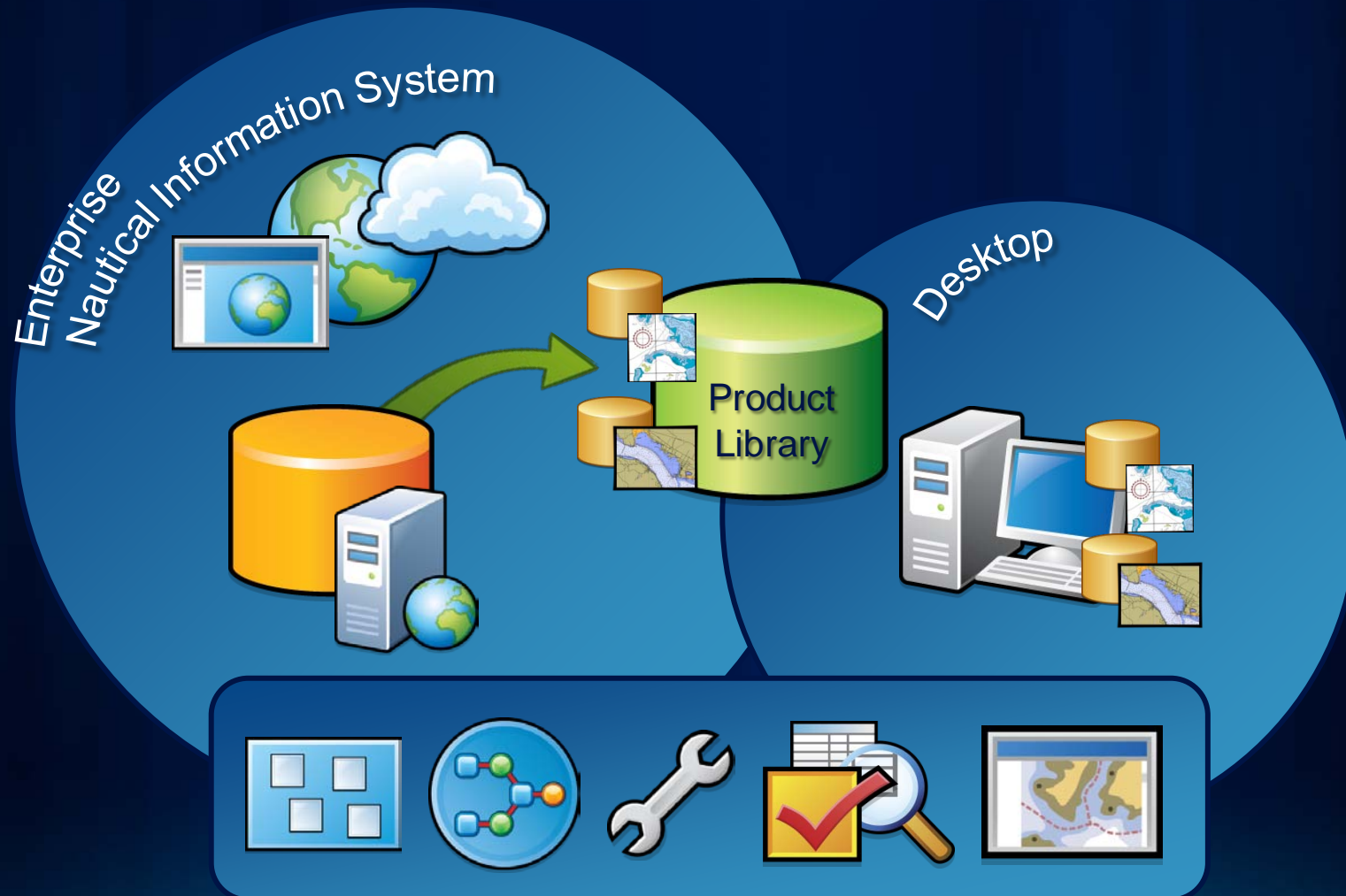
## Inland ENC and Paper Chart Production



# Overview

- **System Architecture**
- **Enterprise Production**
- **ArcGIS in the Cloud**

# Esri Nautical Solution



# Esri Nautical Solution

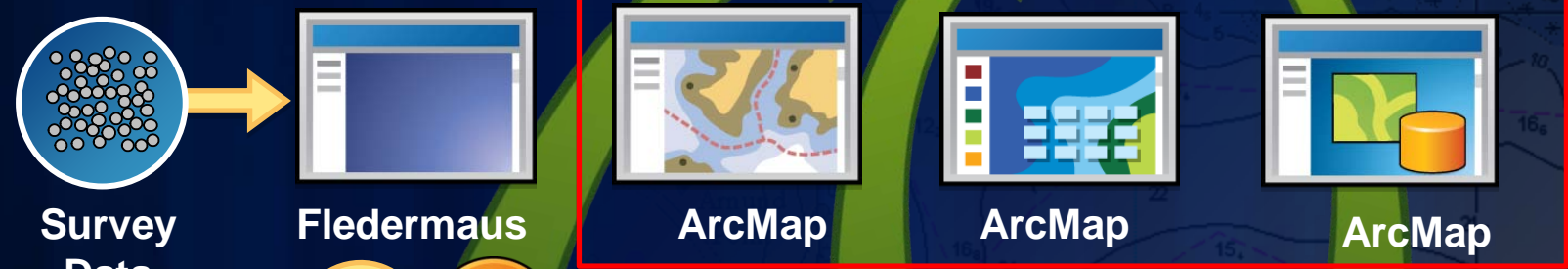
## Enterprise System Overview



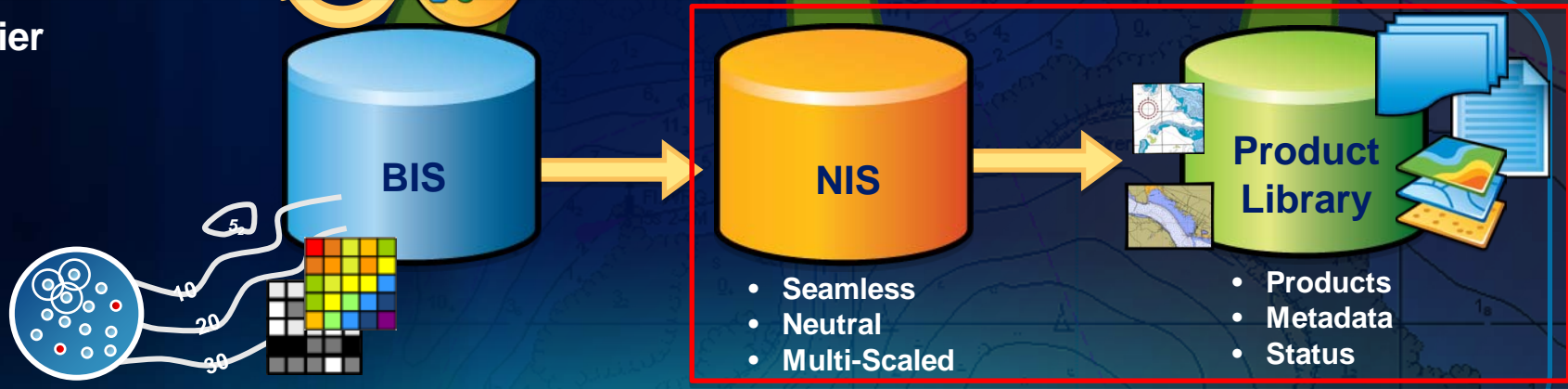
Thin Clients

Rich Clients

Application Tier



Server Tier





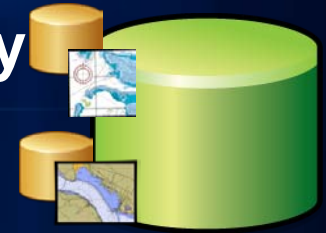
# Nautical Information System (NIS)



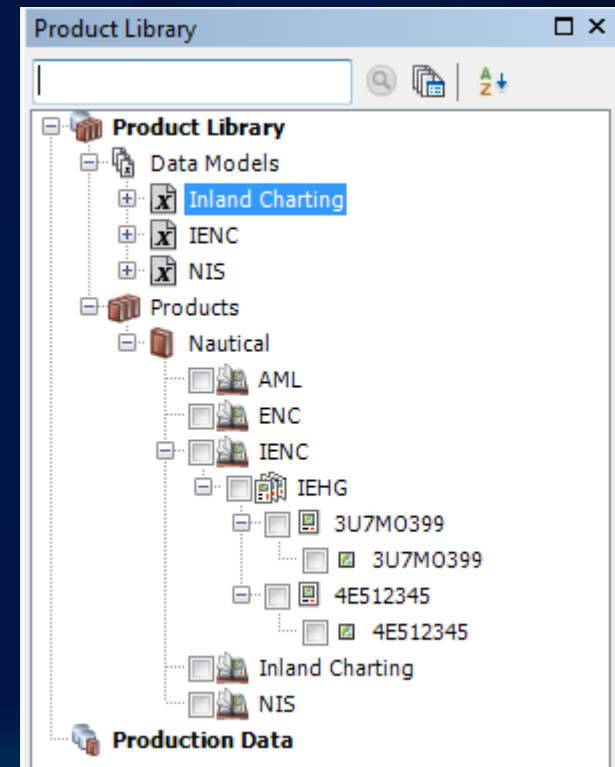
- **Product Neutral Geodatabase**
  - Centralized data
- **RDBMS Neutral**
- **Updates multiple products with one edit**
- **One feature one time**
- **Multiple cartographic displays**
- **Scale banded (configurable)**
- **Extendable data model**
- **Multi-user access**
- **ArcGIS Server**



# Product Management using Product Library



- Framework within ArcGIS for effective management of products and associated metadata
- Products managed through “Check-in/out” process
- Contains Business Rules
  - Symbology, Validation, Surround Elements, Data model



# Data Loading

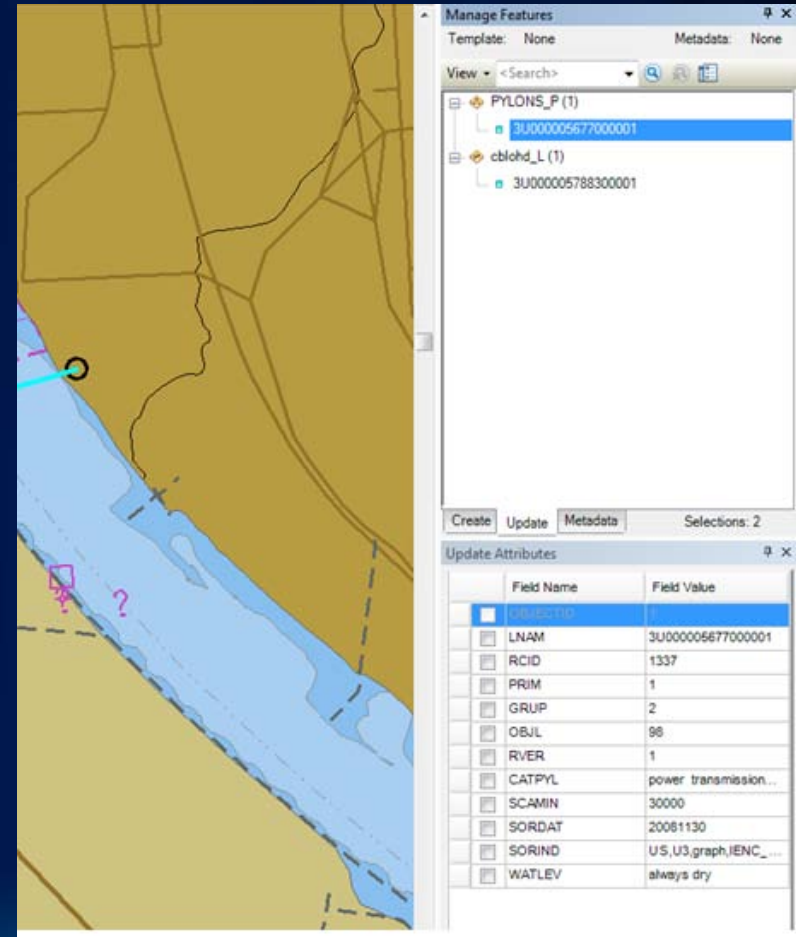


- **Import existing S-57 data**
- **Copy/Paste supported ArcGIS formats**
- **Heads up digitizing**
- **Customize using Safe Software FME**
  - **Data Interoperability Extension**

# Editing



- **Feature Manager**
  - Efficiently manage features while editing
  - Symbolized favorites
  - Use of construction tools
  - Integrated with Product Library
    - Field display
    - Validation rules
    - Metadata configuration
  - Specialized tools
  - ArcGIS functionality
    - Geoprocessing
    - Python scripts
    - models

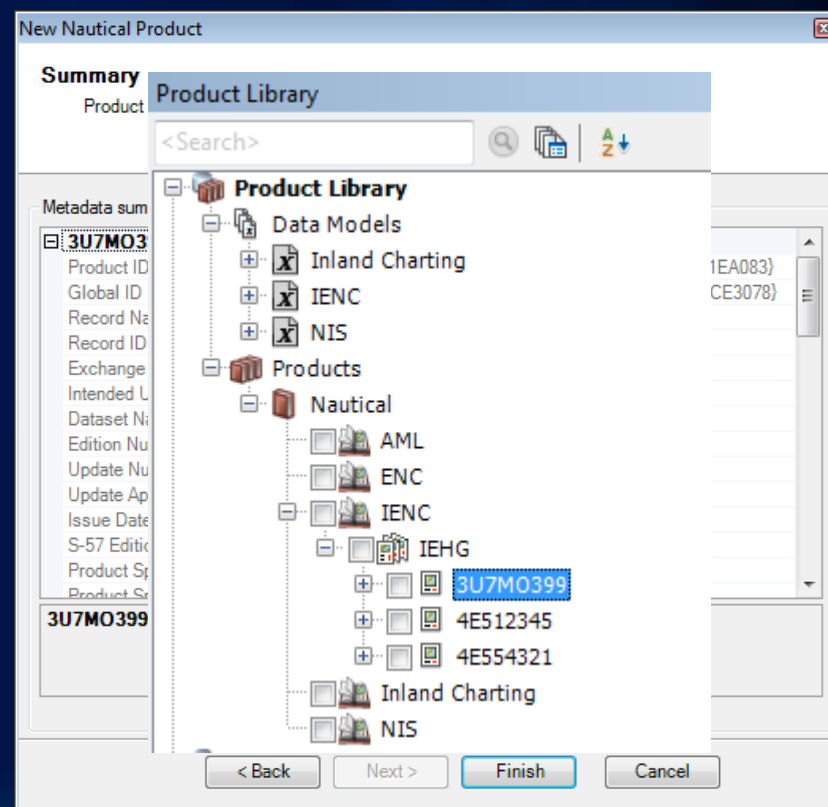




# Product Creation: Nautical Product Wizard

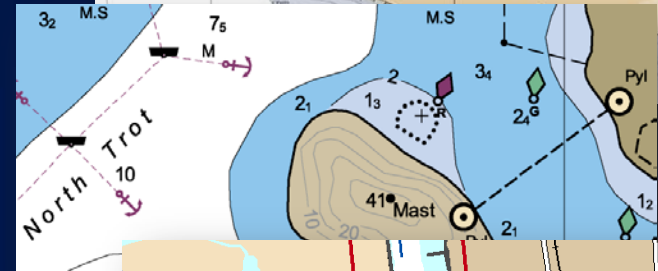


- Leverages Business Rules in Product Library (PL)
- Use existing data (S-57)
- Define new product boundaries
- Extend beyond traditional metadata
- Stores everything in PL



# Cartography

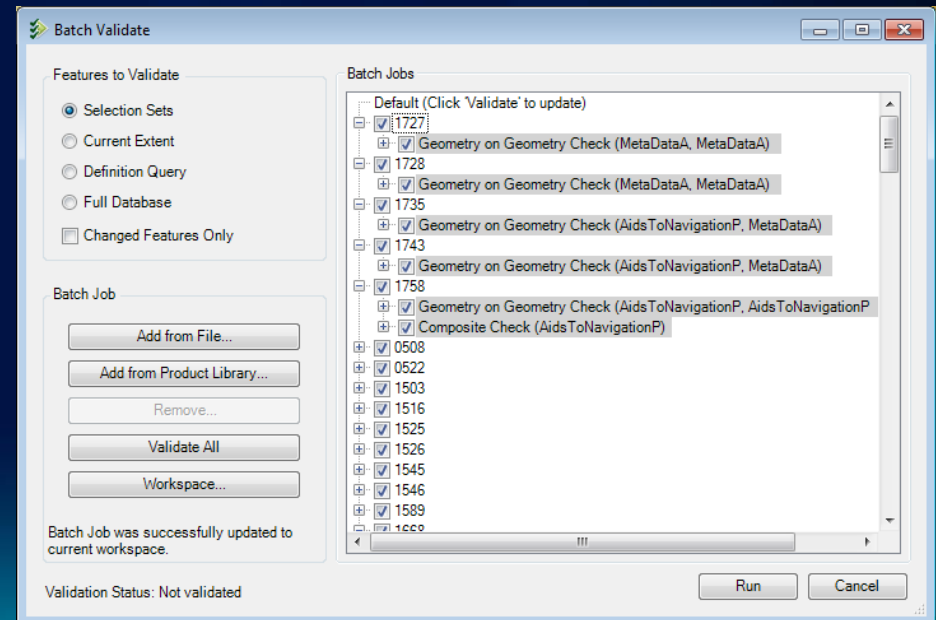
- Database driven cartography
  - Persisted through editions
- Edit with Overrides
  - Does not alter data
  - Representations
- Surround Elements stored centrally
  - Linked through Product Library
- Automated masking
- Traditional Charts
- Inland Charts (Books)



# Validation



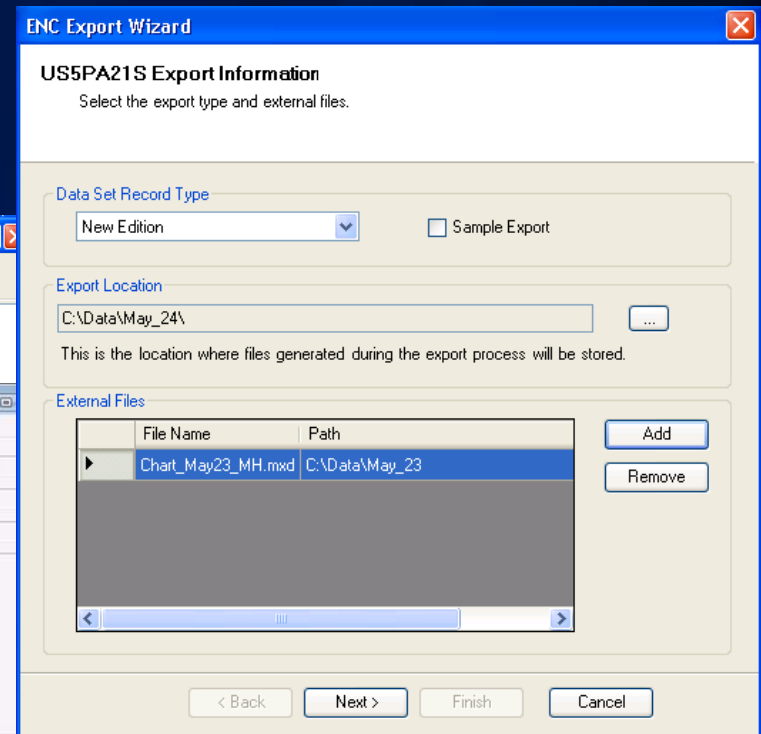
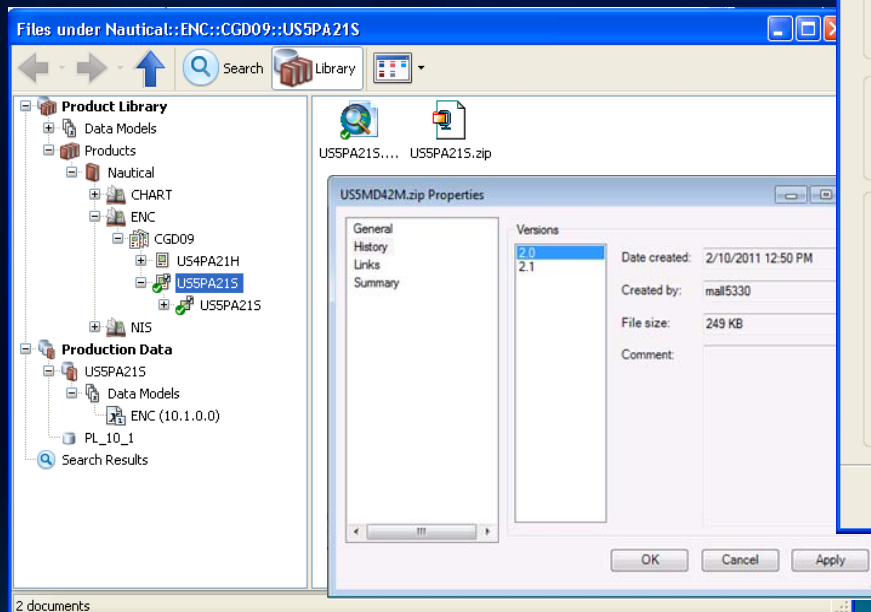
- **Batch Jobs are integrated with Product Library**
  - Validation rules stored once
- **Reporting**
  - Report by check and error description
  - Dashboard
- **Run-time validation**
- **Extensible**



# Exporting



- **Controlled through Product Library (PL)**
  - Uses existing business rules
- **Updates system metadata**
- **Stores export within PL**



# Workflow Management

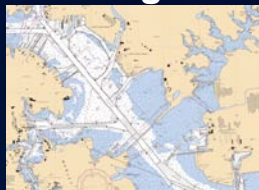


- **Workflow Manager Extension**
  - Bundled with Esri Nautical Solution
  - Equipped for the enterprise (Server enabled)
  - Build standardized workflows
  - Assign, share and monitor jobs
- **Task Assistant Manager**
  - Bundled with Esri Nautical Solution
  - Deployable through centralized location or locally
  - Build detailed workflow steps (akin to SOPs)
  - Start/stop, pass to other users and chart progress

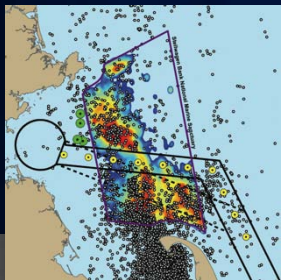


# ArcGIS in the Cloud

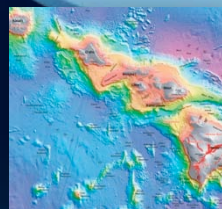
Charting



Marine SDI



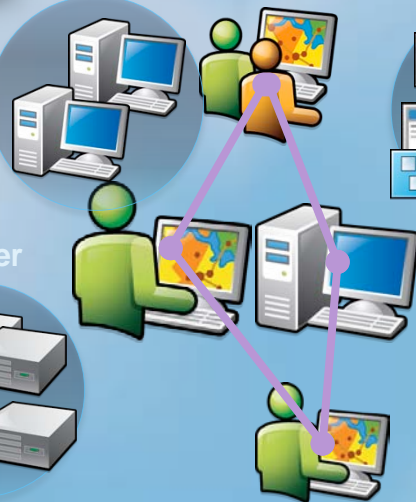
Species Density



Bathymetry



Desktop



Lightweight



Mobile

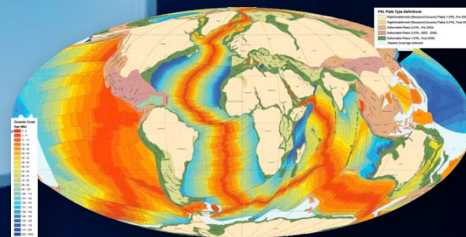
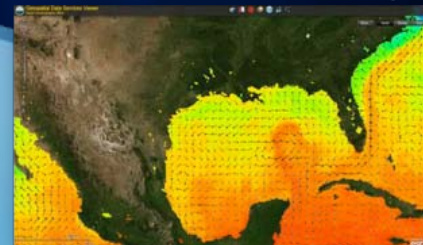


Server



Ocean Basemap

Climate Change



Ocean Health Index

*Beyond Traditional Charting*

# Questions?

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esri