Business Plan Overview
SECOORA Planning Framework

GEOSS Framework

IEOS or GOOS Framework

IOOS Framework

Governance and Funding WG
- RA Goals and Objectives
- Governance Plan
- By-Laws, Articles of Incorporation
- Budget Requirements

Product Development and Marketing WG
- Outreach Plan
- Marketing Plan

Operational and Systems Performance WG

Research and Development WG
- Regional Research Priorities
- Pilot Projects
- Workforce Sustainment/Training Plan

Observations And Data Transmission SG
- RCOOS Design Document
- Asset Inventory/Future needs
- System Performance Milestones/Metrics

Data Management and Communications SG
- Ocean Data Partnership
- Standards/Protocols
- System Performance Milestones/Metrics

Data Analysis and Data Products SG
- Modeling/Forecasting Strategic Plan
- User Interfaces
- Private Section Coordination
- System Performance Milestones/Metrics

C. Hood
Business Plan – structure

- Executive summary
- Business concept/mission
- Operations Plan
  - Observations and Data Transmission
  - Data management and communication
  - Data analysis and modeling
- Marketing Plan
- Research and Product/Service Development
- Appendices (governance, conceptual design, details of operations and marketing plans)
Business Plan – Concept and Mission

Concept and Mission

- Not-for-profit entity to provide information in a common manner based on sound scientific practice.
- Purpose: A partnership of and fiscal agent for interested parties to develop and operate an RCOOS that provides relevant coastal information to address user needs.
- Defines location of RA – head-of-tide to EEZ boundary in NC, SC, GA and FL; recognizes overlap with adjoining RAs.
- Defines initial objectives: safe and efficient marine operations (e.g., search and rescue), preserving and restoring healthy ecosystems (e.g., fisheries), predicting and mitigating against coastal hazards (e.g., coastal inundation).
Business Plan -> Operations Plan

structure

- For each subsystem
  - Current state
  - Desired future state and how to achieve transition
  - Gap analysis
  - Controls
  - Performance measures
  - Issues
Observations and Data Transmission Subsystem

Observations and Data Transmission ('05 sticky dots)

<table>
<thead>
<tr>
<th>Current State</th>
<th>Transition Actions</th>
<th>Desired Future State (1 yr)</th>
<th>Transition Actions</th>
<th>Desired Future State (3-5 yrs)</th>
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<tbody>
<tr>
<td><strong>Operations</strong></td>
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|   - Autonomous systems running quasi-independently  
   - Most systems research oriented and marginally "operational" | - Initiate observation asset inventory  
   - Characterize existing observation procedures/protocols  
   - Define/instantiate obs-related testbed activities  
   - Generate Operations Plan for confederated obs. system | - Existing obs resources/assets inventoried  
   - Focused testbeds addressing key obs-related applications/constraints  
   - Preliminary Obs operations plan in place | - Generate Operations plan for integrated observation system  
   - Generate Observation Metrics Plan  
   - Develop SLAs commensurate with support and expected use  
   - Complete engineering trades | - Optimized Obs operation strategy in place  
   - Cost/benefit metrics routinely collected  
   - Each assets works within a reasonable Service Level Agreement |
| **Infrastructure** |                    |                             |                    |                                |
|   - Large number of assets in place, but not effectively managed from an enterprise perspective  
   - Low bandwidth connections to instrumentation | - Generate Preliminary Development Plan for coordinating/evolving federated obs assets  
   - Set up effective cross-system linkages | - All obs assets inventoried and managed  
   - Coordinated regional approach for obs procurement/maintenance  
   - Clear link between required obs infrastructure and desired end use | - Develop Enterprise Obs Plan that response to desired architecture and leverages economies of scale | - Optimized observations infrastructure in place |
| **Relationships and Procedures** |                    |                             |                    |                                |
|   - Governance process still in development  
   - Roles and responsibilities between stakeholders not well defined  
   - Obs protocols not standardized | - Ratify TOR  
   - Use TOR to set up long-term governance structure  
   - Articulate obs roles and resp  
   - Generate 5-year Strategic Plan  
   - Generate work plan for this year  
   - Set up committee to oversee certification process  
   - Collect lesson learned from other RAs | - Effective governance mechanism in place  
   - Certification effort underway  
   - 5 year Strategic Plan in development with section on Obs/Data Trans.  
   - Viable annual work plan in place  
   - Effective liaisons in place with other RAs and relevant groups | - Generate an RA obs development plan consistent with top-down and bottom-up drivers  
   - Generate SECOOR obs protocol | - Fully certified RA  
   - SECOORA recognized as intellectual leader in RA development in obs coordination |
| **Resources** |                    |                             |                    |                                |
|   - High dependency on earmarks  
   - Limited coordination between projects  
   - Sustainment activities in infancy | - Generate viable Business Plan for obs sustainment  
   - Generate plan to diversify funding sources for obs sustainment | - Generate viable Value proposition  
   - Generate and execute tactical plans for ob sustainment consistent with the overall business strategy | - SECOORA can effective compete for grants, RFP, other opportunities related to obs sustainment  
   - There is significant local and private sector investment in obs sustainment |
Observations and Data Transmission

- **Operations**
  - Intra-regional coordination of data collection, formatting and QA/QC

- **Infrastructure**
  - Inventory of assets, personnel, and redundancy
  - Prioritization of infrastructure replacement
  - Expansion plans

- **Relationships**
  - Greater coordination among all partners and activities

- **Resources**
  - Transfer of certain products to operation[s? al agencies]
  - Define requirements and funding levels
Observations and Data Transmission

Will coordinate observing and to the extent possible support data collection related to SECOORA priorities in the SE

Current state:
- variety of ongoing observing activities
- inventory of regional observing assets – static at present
Observations and Data Transmission

Station and Variable Inventory

This map is a static overview of known observation stations monitoring the coastal ocean of the Southeast US.

The dataset for this map is also available as an Excel Spreadsheet • ESRI Shapefile.

This map and dataset were created as an improvement to the SECOORA Asset map completed in Fall 2005. The data were further refined to create a single dataset containing ~543 stations. Questions? Contact Jesse Cleary (jcleary at email dot unc dot edu).
Observations and Data Transmission

Year 1 goals:
- should move to dynamic inventory (that includes sensor metadata) to monitor system-wide performance
- define desired initial sampling scheme consistent with priorities
- compile operating requirements from existing programs
- develop operating agreements (SLAs?)
- establish pilot programs (on system accuracy, new observing technologies…)
- coordinate planning with National Backbone
Observations and Data Transmission
Observations and Data Transmission

Year 5 vision:

- A robust, effective observing system has evolved through testing, gap analysis.
- Performance and maintenance requirements are well established.
- Established logistic and infrastructure support coordinated with Backbone resources.
- Automated monitoring of system components and measures of system performance (virtual operations center).
- Ecological and biogeochemical sensing systems increasingly operational.
- Regional technical and engineering expertise established and coordinated.
Observations and Data Transmission

Gap Analysis:
- initial – comparison of desired outcome of physical state estimation system with existing inventory
- test utility of the observing system to specific applications in pilot studies
- re-evaluate based out testing outcomes
- repeat procedure for non-physical observing system
Observations and Data Transmission

Controls:
- timely response to repairs, maintenance, tactical/adaptive sampling -> distributed network of support teams along coastline
- balance redundancy/timeliness against cost-effectiveness of centralized operations
- should consider vessel support, onshore infrastructure, personnel, existing capabilities
- should require adherence to reporting (e.g. metadata) and QA/QC standards
Observations and Data Transmission

Performance measures:

- use virtual operations center to monitor system components
- VOC to provide feedback on performance to data providers
- flag data gaps, track failure point, use to target evaluation and upgrade efforts
- short list of metrics: # of reporting stations/sensors, # of obs/month, transmission delay, accuracy, # of streams including QA/QC
Observations and Data Transmission

Issues:
- coordination with National Backbone and among regional partners on:
  - location of assets
  - regional priorities
  - logistic support – ships, comms, calibrations
  - robust regional satellite remote sensing
  - developing and testing new observing technologies
  - test-bed support
  - sufficient pool of trained personnel