



# **NOAA Rolling Deck to Repository (R2R)**

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**27 June 2012**



# Background

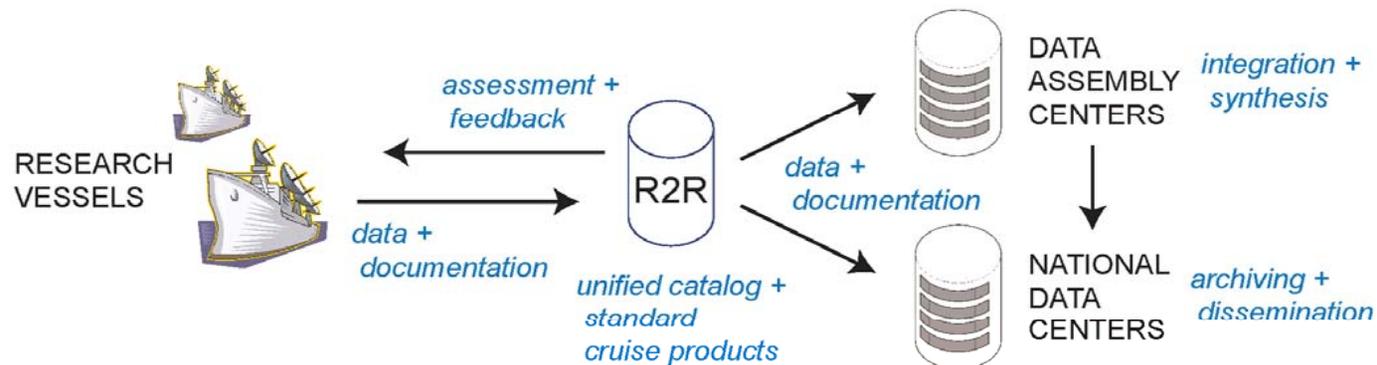
- Project Initiated in 2010:
  - Modeled after the UNOLS R2R project.
  - Project Lead: NOAA's Integrated Ocean and Coastal Mapping program.
- Goals:
  - Providing a “direct pipeline” for routine underway cruise data and documentation to a central repository.
  - Ensure that data collected about NOAA ships is documented, preserved, and available for access for the long-term.



# UNOLS R2R



- System Model



- Migrate all routine “underway” data to long-term repositories
- Create catalog of cruises and standard products
- Assess data quality and provide timely feedback to operators



# Key Benefits

- 5 Standard Products
  - Cruise Metadata Record
  - Scientific Sampling Event Log
  - Quality-controlled Ship Track
  - Real-time quality-controlled MET and TSG data
  - Operations Report (Formatted document containing standard products & appendices)
- Data Documentation and Delivery
  - Data Catalog (dataset, and file level metadata)
  - Routine and consistent data delivery to NDCs
  - Accessibility for public reuse

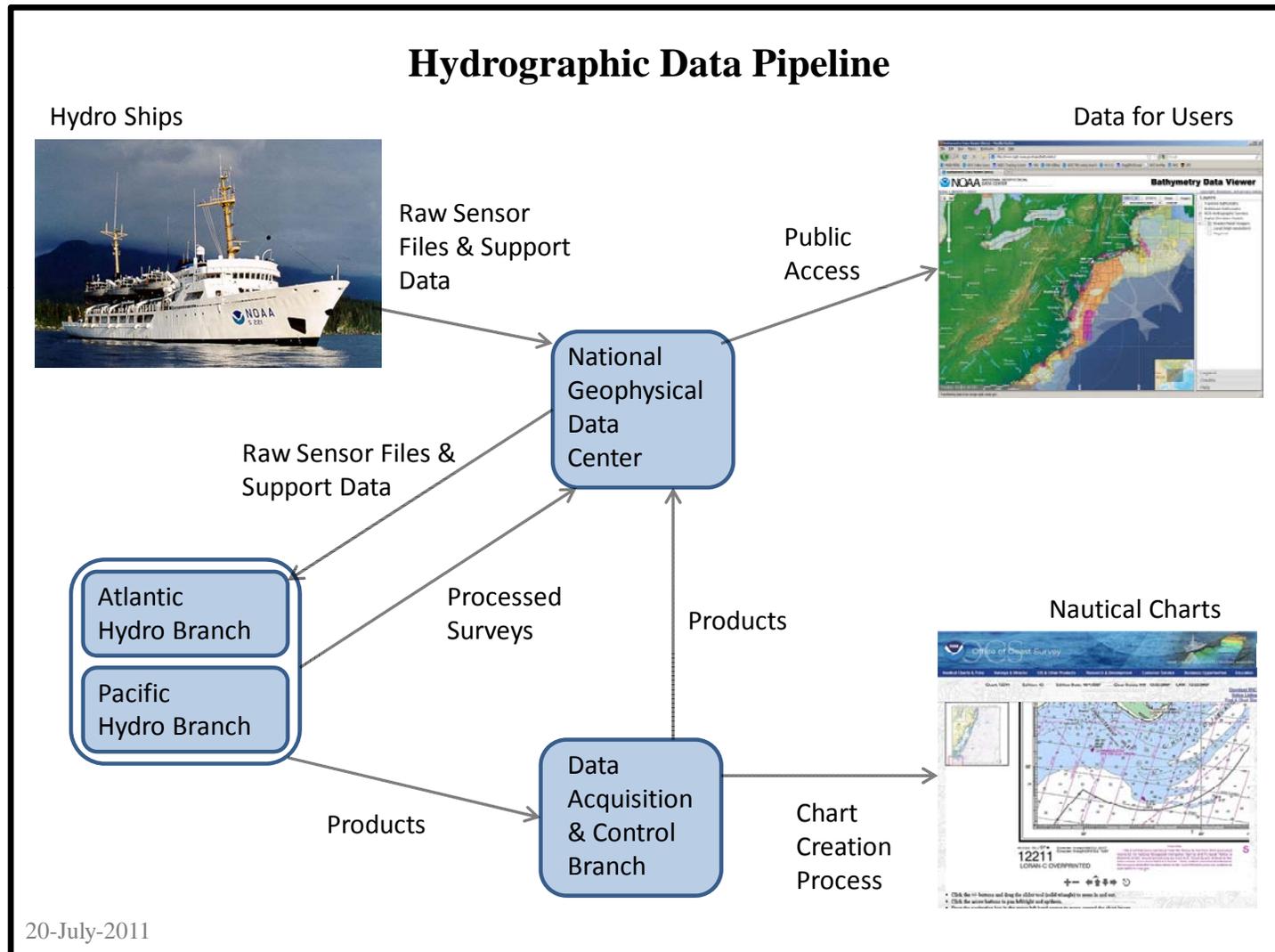


# Current Status

- Existing pipelines (components):
  - NOS hydro survey
  - Ocean Exploration
  - SAMOS: Scientific Computer System (SCS) Dataset
- Identified Gaps
  - Complete Project SCS Dataset
  - NMFS data (biologics, acoustic, video)
  - Metadata, data integrity
  - Standardization & tracking

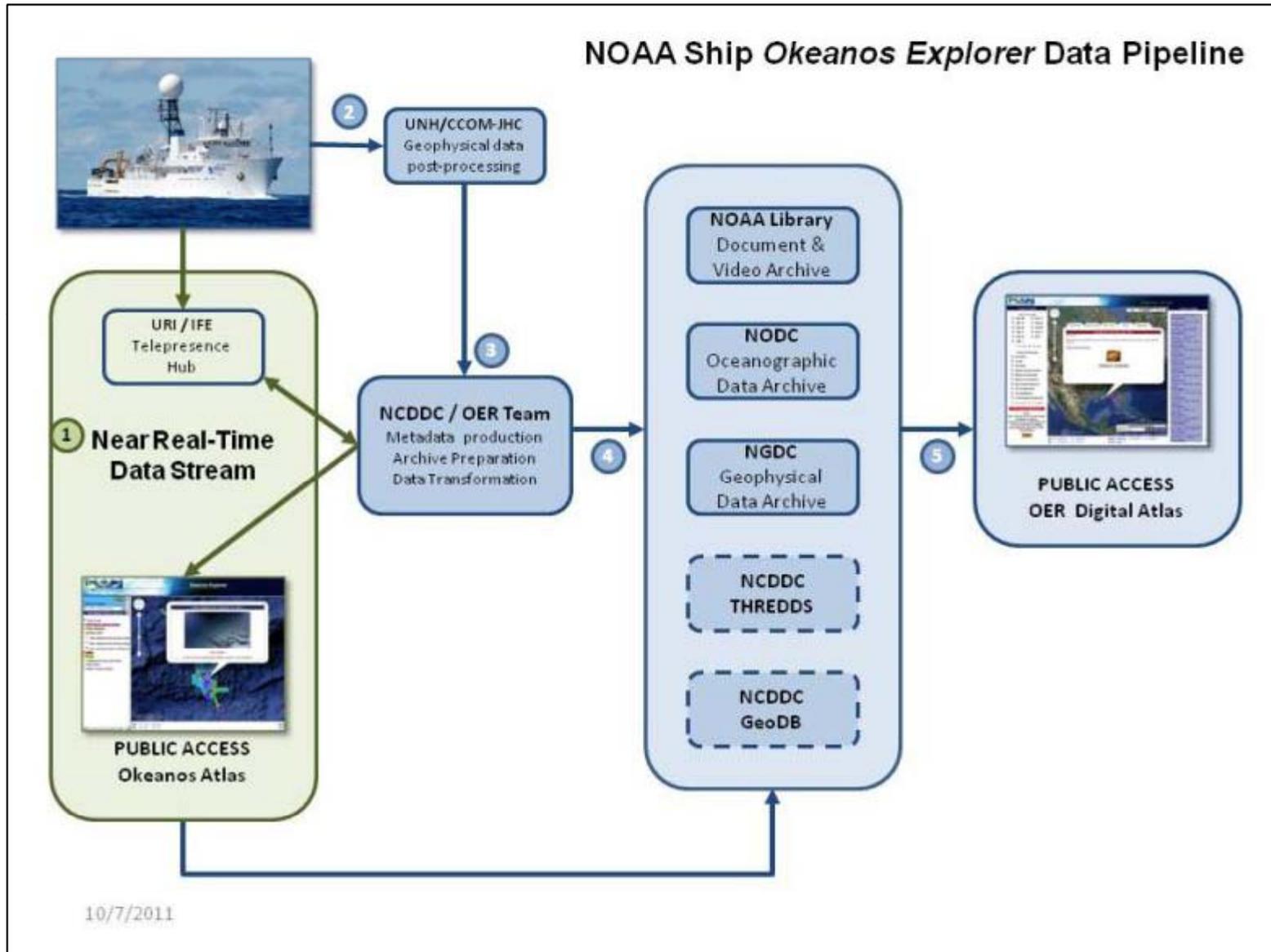


# NOS Hydro Survey Pipeline





# Ocean Exploration Pipeline





# Next Steps 1

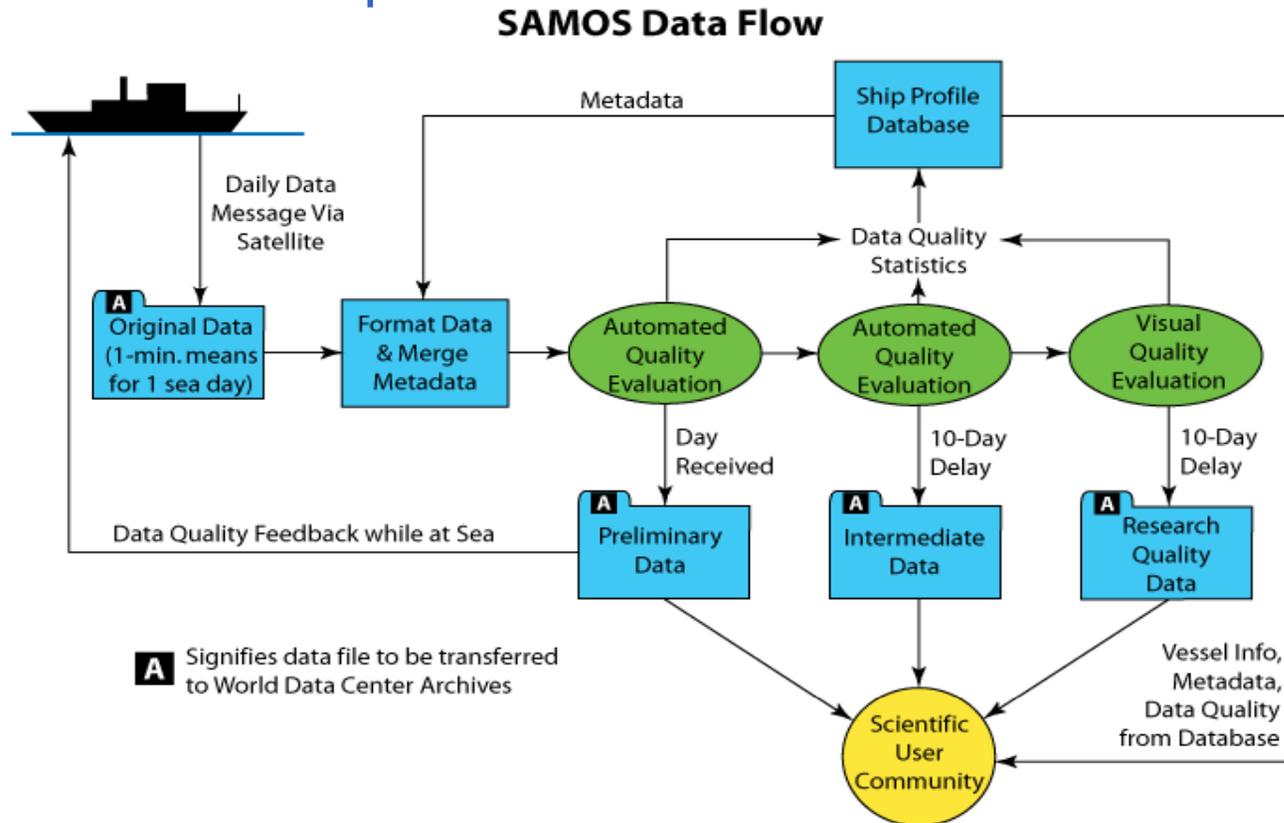
- Create an OMAO Data Management Policy
  - Formalizing responsibly as it pertains to lifecycle data management and data quality
    - Place responsibility for ship sensor data with vessel operators, not science party
- Formalization of SCS data pipeline
  - Provide for Full SCS dataset
  - Metadata, acquisition, packaging, submission, archive, access
- Work with NODC & SAMOS to develop a cruise catalog
- Automate Data tracking and formalize Data submissions for Geospatial data on non hydrographic ships.
  - Inclusion of data stewardship policies in cruise instructions and communicate and formalize Data Management SOPS per vessel



# Next Steps 2



- Enhance partnership with the SAMOS Data Assembly Center (DAC) to automate the transfer of a subset of meteorological data and surface oceanographic data from NOAA ships to Shore





# Next Steps 3

- Improve/formalize and automate ship schedule submissions to SAMOS DAC. \*For CY2011 schedule information was not obtainable for any enrolled NOAA vessel .

MARCH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
KAOU		P	P	S	S	S	S	S	S	S	S	S	S	S	S	P	P	P	P	P	P	P	P	S	S	S	S	S	S	S	S	
KAQP													A	A	A	A	A	A	A	A	A	A	A									
KCEJ	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
KNBD >D2																																
NEPP																																
NRUO																																
VLHJ		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	S	S	P	P	
VNAA																															S	
WBP3210	A	S	A	A	A	A	A	S	A	A	S	A	S	S	S	A	S	A	S	A	A	A	A	S	A	A	A	A	A	A	A	
WCX7445	A	A	A	A	A		A	A	A	A	A	A	S	A	A	A	A	A	A	A	A		A	A	A	S	A	A	A	A	A	
WDA7827											P																					
WDC9417							S	P		S	P			P						S	S	P		P		S	S	S	S	S	P	
WECB	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	P	P	S	S	S	S	S	S	S	S	S	
WTDH >HB	A	A	A	A	A	A	A	A	A																							
WTDH >OE																	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
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WIDO >O2	A									A	A	A	A	A	A	A	A	A	A	A	A											
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WTEP >OD																																
WTER >NF								A															A	A	A	A	A		A	A	A	
WTEU >HI	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A								
WTEY										A	A	A	A	A	A	A	A	A	A	A	A	A	A	A							A	
WXAQ	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	S	A	A	A	A	A	A	A	A	A	A	A	A	
ZMFR																																

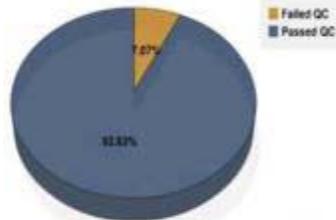
2011 calendar for March showing (green) ship days received by DAC and \*(grey) additional days reported afloat by vessels; "A" denotes data has been archived at NODC, "S" denotes vessel reportedly at sea, "P" denotes vessel reportedly at port. Vessels are listed by call sign.



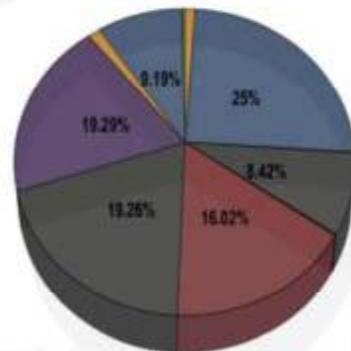
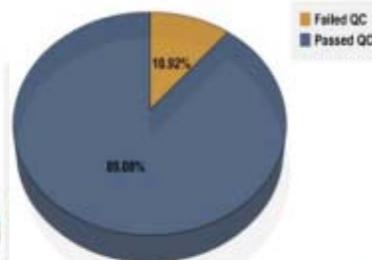
# Next Steps 4

- Partner with SAMOS to receive automated quality control data to populate dashboards and produce reports routinely visible to NOAA

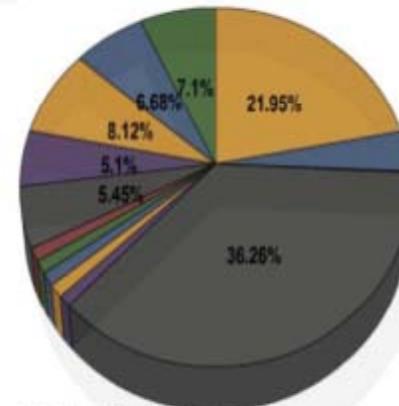
*Henry B. Bigelow*



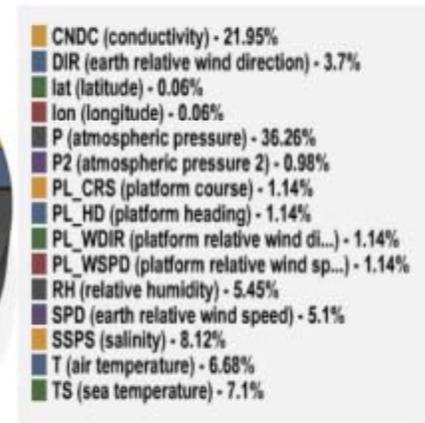
*Hi'ialakai*



7.07% of the data is flagged  
(224658 flagged of 3178908 data values)



10.92% of the data is flagged  
(259678 flagged of 2377169 data values)





# Next Steps 5



- Train Survey Techs and ET's to populate and maintain the SCS sensor configuration editor with metadata attributes such as calibration history, photos, and other identification/location attributes.

**Physical Device**

Warning – calibration date is more than one year old or is not set.

1 Image. [Images](#)

Name: Rel Humidity sensor

Manufacturer: RM Young

Model No.: Hygro Flex

Serial No.:

CD No.:

Type:  [Clear](#)

Comment: old Location: deck of flying bridge.was replaced by 41382v combo temp/hum sensor located on port yardam

Gen. Location:  [Clear](#)

Survey Location

Measurement Reference: Gyro Room Survey Mark [Select/View](#)

X:  Y:  Z:

Latest Calibration

Cannot be calibrated [Upload](#) [View](#)

File:

Select Date: 6/20/2012 12:01:35. [>](#) Date:  [History](#)

[Delete](#)

Latest Test

Select Date: 6/20/2012 12:01:35. [>](#) Date:  [History](#)

[Add New](#)

Tested By:  [Delete](#)

Results:

Not installed.



## Next Steps 6

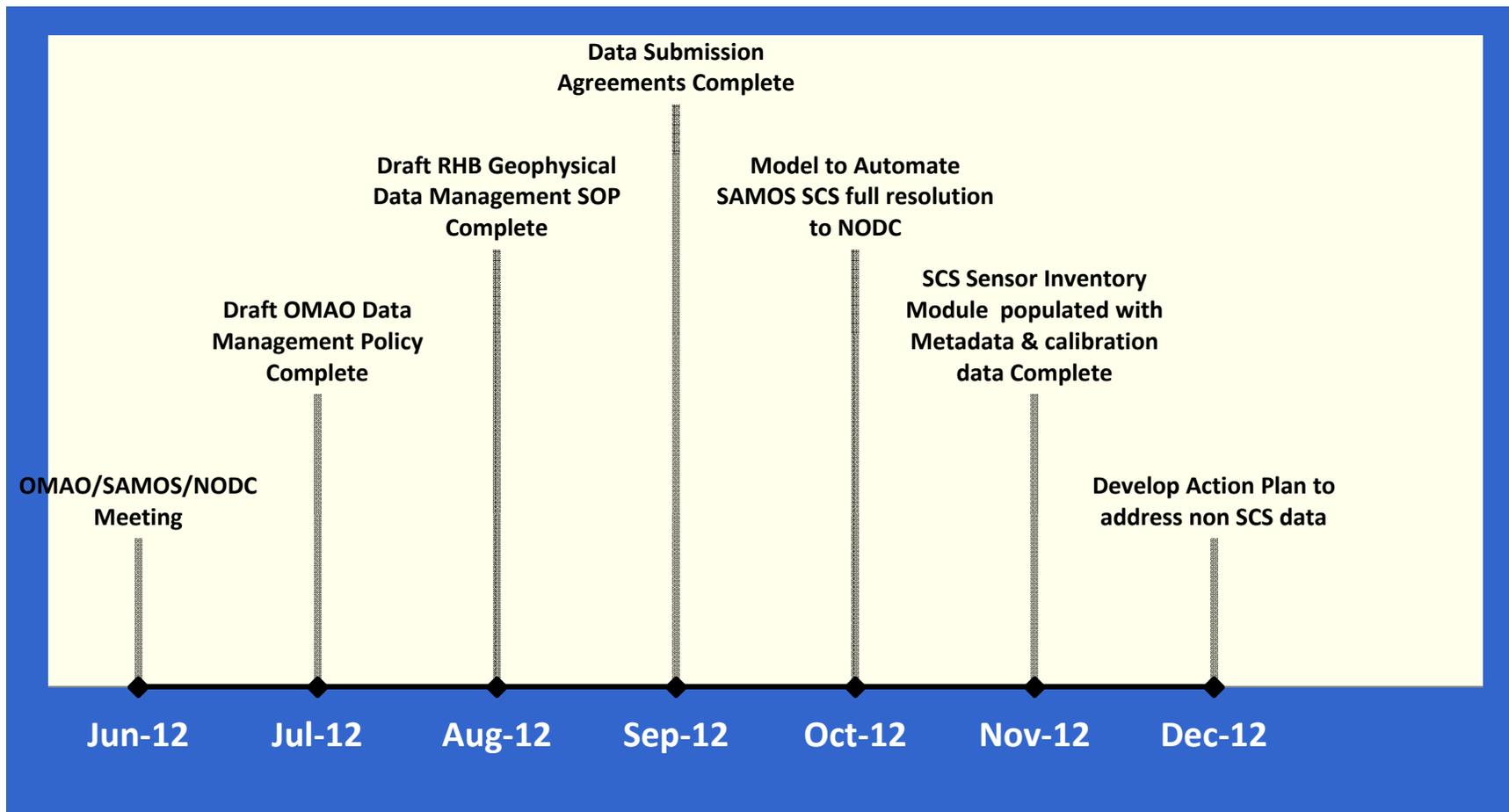
- Address Lifecycle Data Management of Non-Ship Sensors
  - Require data management plans indicating repository of Science party equipment
- Data Centers
  - Issue ingesting MB (ME-70) data
- Develop data submission agreements
  - Identify funding needs for participating programs



# Next Steps 7



## Notional timeline for action items





Questions?