



Passive Acoustic Monitoring Access Network

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IOOS DMAC 2022



Project Team



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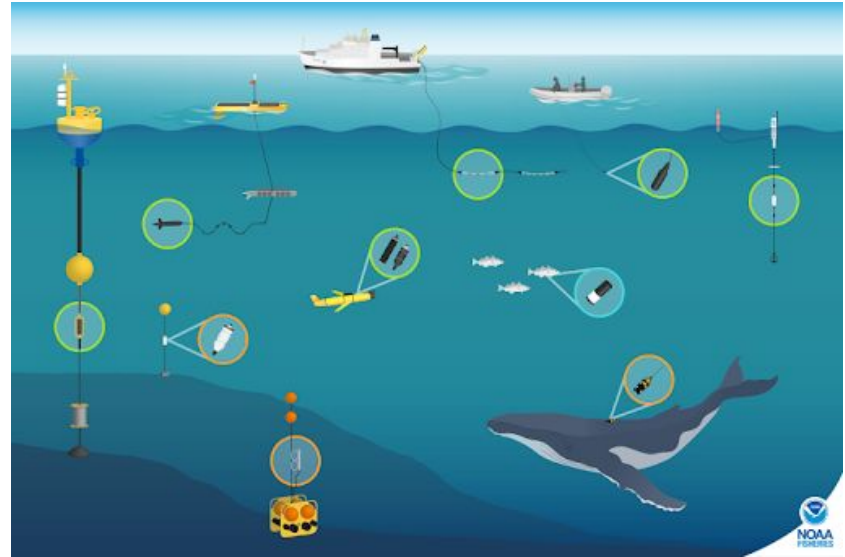
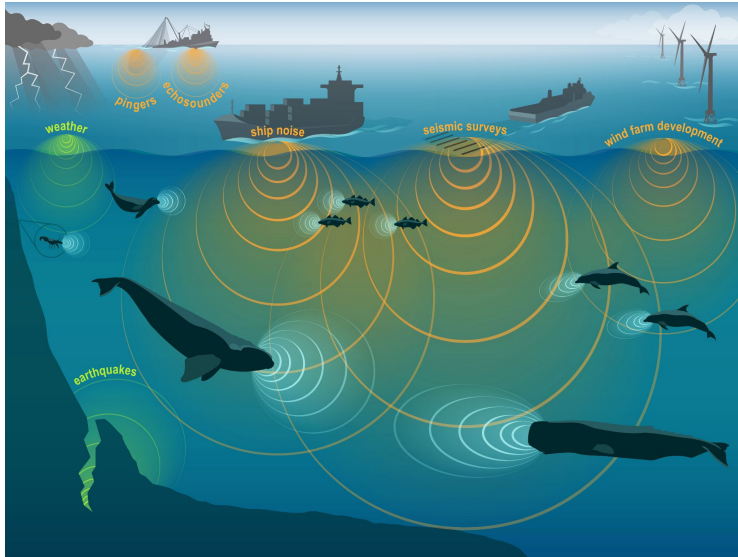
Rob Bochenek

Axiom Data Science

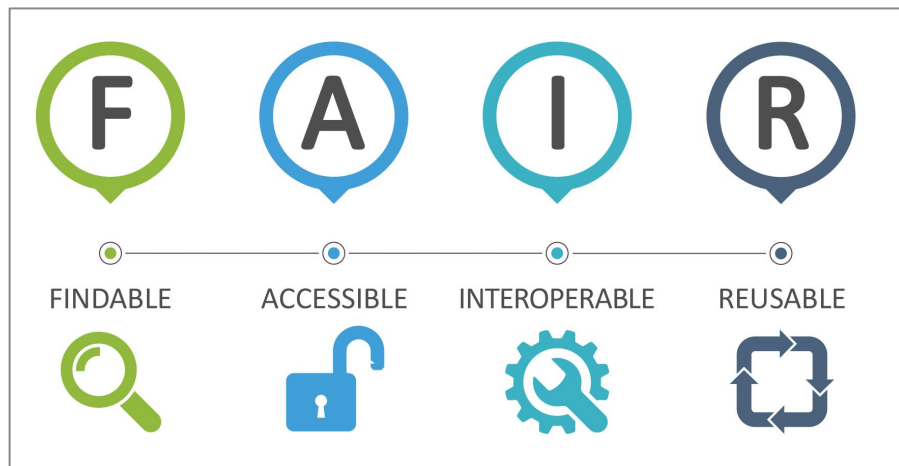
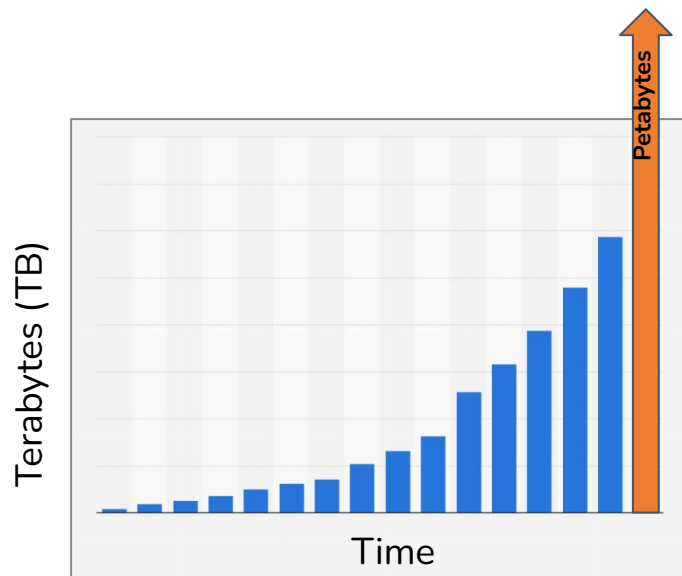
Passive Acoustic Monitoring National Cyberinfrastructure Center



Background



Background





Background

Goal

Pilot a community-focused, national cyberinfrastructure capability for passive acoustic monitoring data, technology, and best practices to promote improved, scalable and sustainable accessibility and applications for management and science.



Background

Vision

An effective technological ecosystem that supports single point access and standardized processing of disparate bioacoustic data collections, driven by community collaboration



Background

Project Components

- 1) **Stand up advisory committee and convene scoping workshops in Years 1, 2, and 3**
Focus on community discussions to inventory existing PAM data collections, identify gaps in access and infrastructure, and further institutionalize existing standards and best practices for processing acoustic data
- 2) **Provide cyberinfrastructure capabilities for Passive Acoustic Monitoring National Cyberinfrastructure Center (PAMNaCC)**
Advance capabilities and capacity by bringing together researchers across geographically distributed laboratories, universities, and agencies guided by an advisory team
- 3) **Plan for, ingest, and curate PAM datasets and integrate with environmental data**
Integration of environmental data, especially the animal telemetry network (ATN), aims to serve as a holistic PAM visualization platform
- 4) **Develop a transition plan to support technology transfer**
Support future PAM projects so that they may be interoperable with existing datasets available through the PAMNaCC and thereby contribute a lasting impact

Steering Committee



**NOAA
FISHERIES**



IOOS
Integrated Ocean
Observing System

BOEM
BUREAU OF OCEAN ENERGY MANAGEMENT



RWSC

Regional Wildlife Science Collaborative
for Offshore Wind



Interreg
North Sea Region
Jomopans
European Regional Development Fund



International Quiet Ocean Experiment



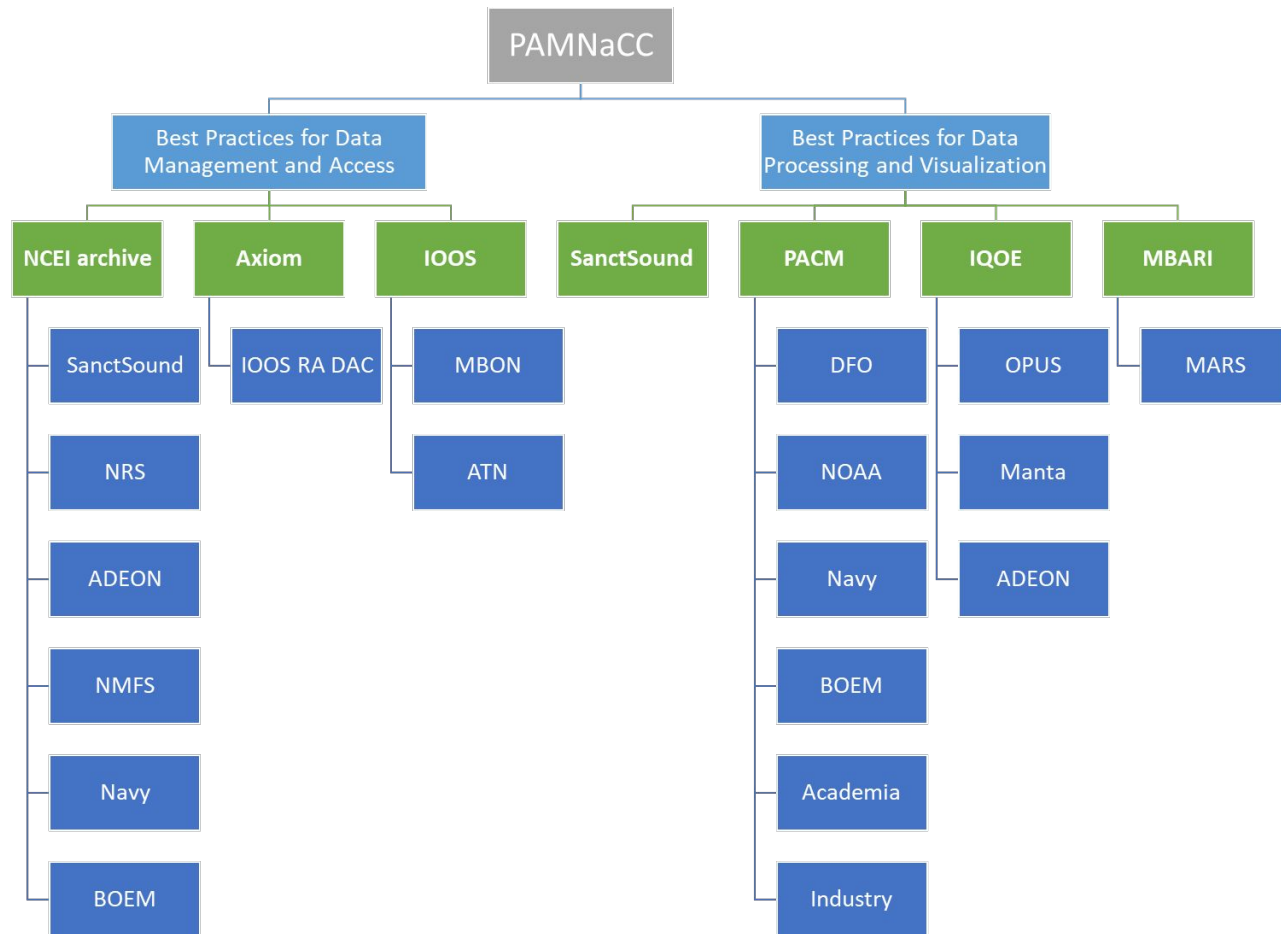
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Background

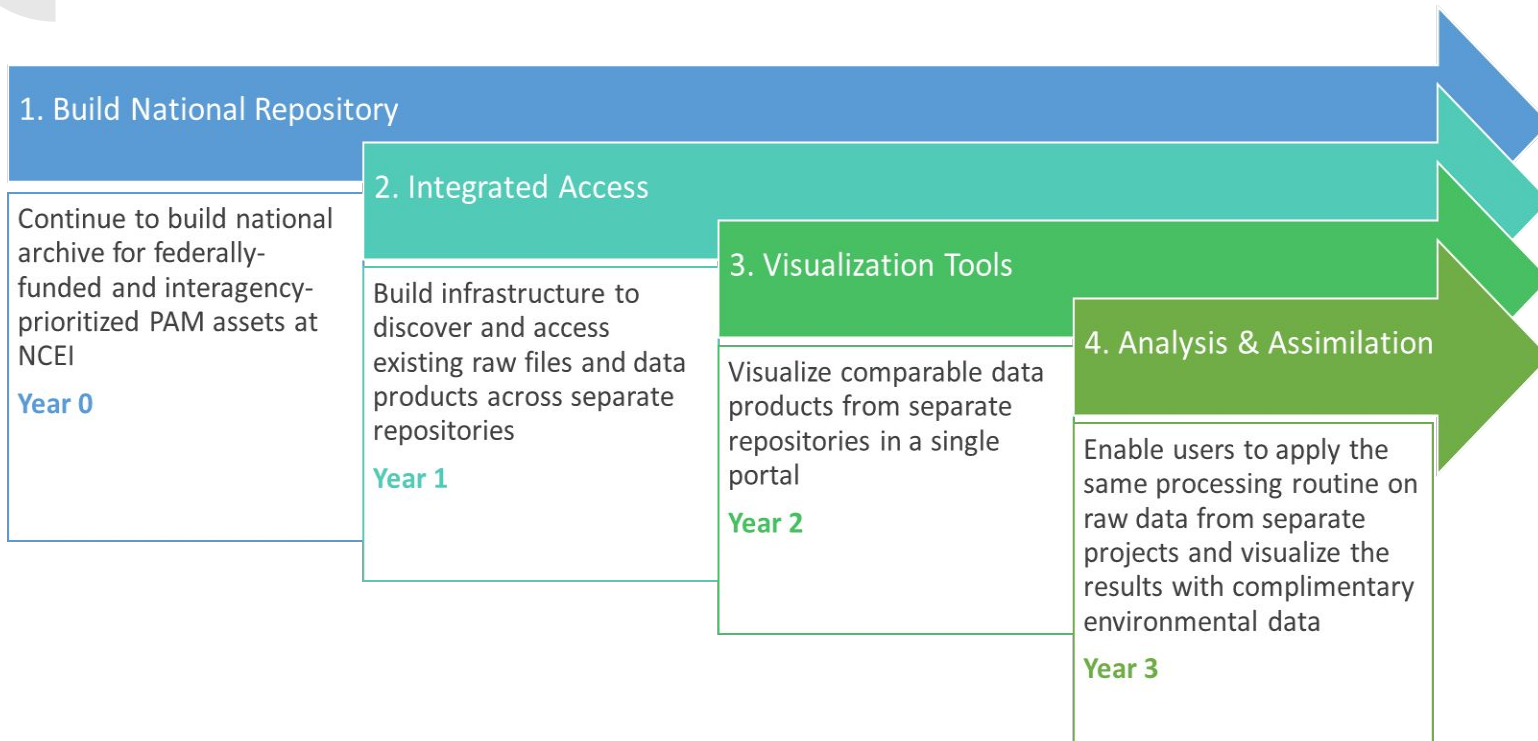
Building Blocks

Leveraging the existing work and expertise of the community to guide the development of PAMNaCC





Planning



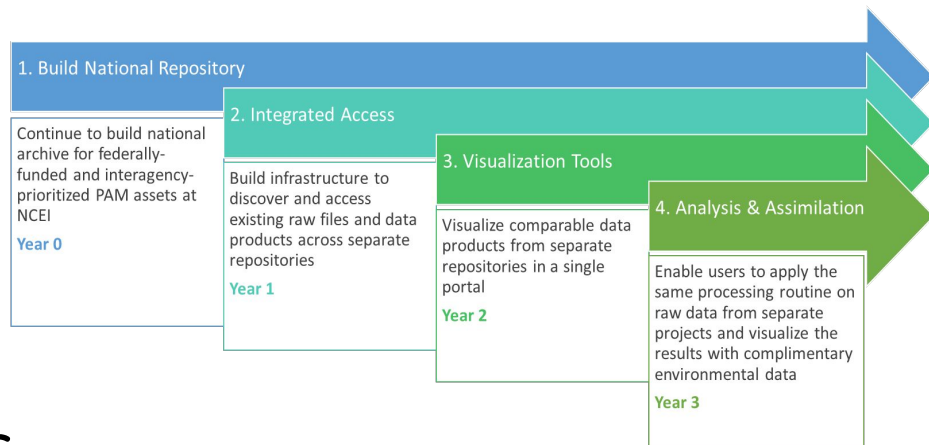


Planning

Case Study 1

Priority federal datasets

- NOAA, BOEM and U.S. Navy-funded, large, prioritized datasets will be archived to support long term access to federally-funded raw PAM data
- Visualize and compare time series of standardized sound levels recorded in the Pacific and Arctic Oceans



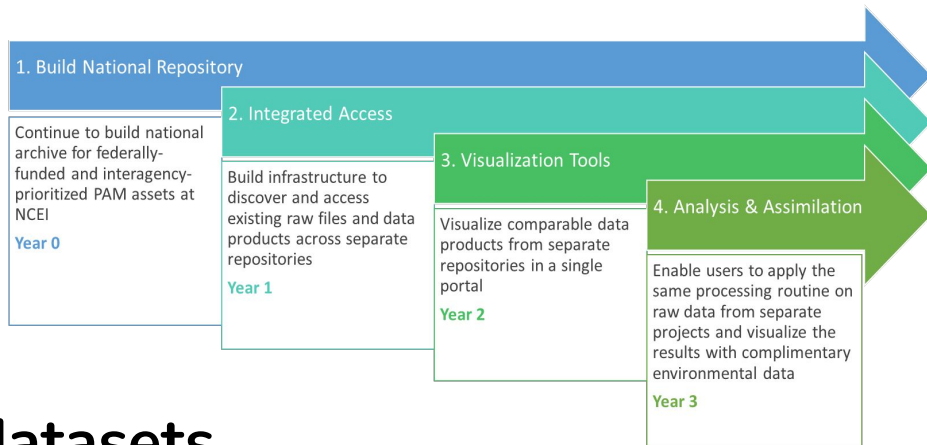


Planning

Case Study 2

IOOS regional partner datasets

- Establish a public page to increase visibility and community understanding of existing code repositories
- Visualize and compare the processing results across the repositories using IOOS datasets as the training dataset



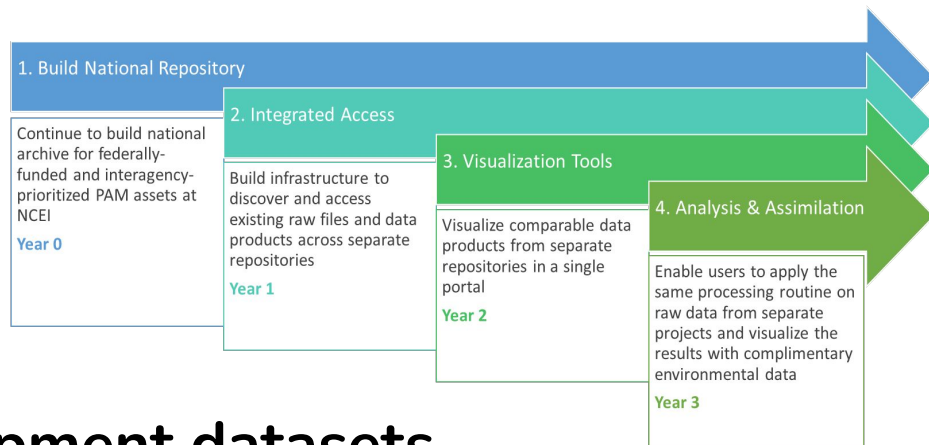


Planning

Case Study 3

Offshore energy development datasets

- Extract sound levels from a historic, high volume Arctic dataset
- Visualize and compare standardized sound levels and detections from more recent federal and state funded relevant monitoring efforts on the east coast



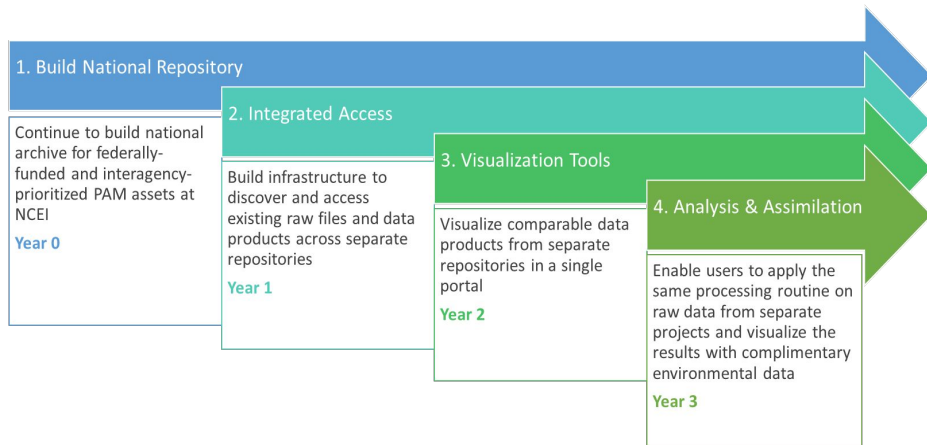


Planning

Case Study 4

International datasets

- Visualize and compare standardized sound levels from the SanctSound and JOMOPANS project in the IQOE Open Portal to Underwater Sound (OPUS)
- Visualize and compare standardized sound levels from JOMOPANS and those in OPUS





On Deck

- Finalize case study objectives and datasets
- Continue archiving and enabling access to federal datasets
- Host workshop for broader passive acoustic community
- Execute the case studies



Thank you!

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www.ncei.noaa.gov/products/passive-acoustic-data

