

## **Thought Experiment: Building a Data Framework for Jersey Breeze Offshore Wind Farm**

### **Scenario:**

You are an advisor for Jersey Breeze, a fictional offshore wind farm investing in advanced underwater sensors for ecological and environmental monitoring within their lease area off the coast of New Jersey. You are tasked with designing a comprehensive framework for data quality and management standards that ensure the data are Findable, Accessible, Interoperable, and Reusable (FAIR).

### **Guiding Question:**

- What steps should Jersey Breeze take to ensure they are incorporating best practices for management of the project generated data?
    - Case 1: A data repository currently exists
    - Case 2: A data repository does not exist
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### **Jersey Breeze Data Framework: a Pathway for Data Sharing**

As part of the framework, you develop a “Pathway for Data Sharing”, which is a roadmap of the who, what, where, when, and how of data management; including, quality control, access, key players, roles, responsibilities, and decision points along the path. Below is a first draft of the Pathway you are developing.

### **Guiding Questions:**

- What aspects of data management are missing from the categories considered in the Pathway for Data Sharing?
- How would you **edit, expand, and improve** on the below draft?

### **Key Players:**

What entities are key players in this space?

- RWSC
- BOEM
- NCCOS
- IOOS
- ROSA
- **OTHER (Please Specify)**

### **Roles and Responsibilities:**

What are the roles and responsibilities of the different key players?

- Data transfer
- Data Management
- Funding
- Users
- QA/QC
- **OTHER (Please Specify)**

### **Guidance and Best Practices:**

What existing frameworks can be consulted?

- **NCCOS/BOEM Workshops** - identifying data needs and implementing best practices in data collection and processing.
- **RWSC** <https://rwsc.org/research-data/> - Recommendations for regional coordination, data management, standardization, and sharing by data type.
- **ROSA FishFORWRD** is a catalog of all East Coast research, monitoring efforts, and stated research needs for offshore wind, fish, and fisheries. <https://www.rosascience.org/fishforwrld/>
- **OTHER (Please Specify)**

### **Key Decision Points Along the Path:**

The who, what, where, when, and how of assuring data are Findable, Accessible, Interoperable, and Reusable (FAIR). This ensures that it is possible to find data, gain access to them, that data are comparable across wind energy facilities, and it is possible to reuse data for different analyses.

#### **1. Data Standards:**

- Clear standards for data sets and integration.
- Compatibility across platforms and organizations.

#### **2. Data Accessibility:**

- Key data sets and sharing opportunities.

#### **3. Data Transparency:**

- Transparency policies and mechanisms to ensure policy adherence.

#### **4. Data Sensitivity:**

- Approval process for sharing sensitive data.
- Balancing accessibility with privacy concerns.

#### **5. Data Repositories:**

- Repository depth and storage limitations.
- Long-term data preservation needs.

#### **6. Data Security:**

- Security measures necessary to protect data while ensuring accessibility.
- Guidelines to mitigate cyber risks.

#### **7. Funding:**

- Funding opportunities to support data consistency and interoperability.

#### **8. User Engagement:**

- Outreach strategies to ensure existing data is fully utilized.

#### **9. Other Resources and Partnerships**