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# Using accreditations to navigate the waves of marine data management

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MARIS



National  
Oceanography  
Centre



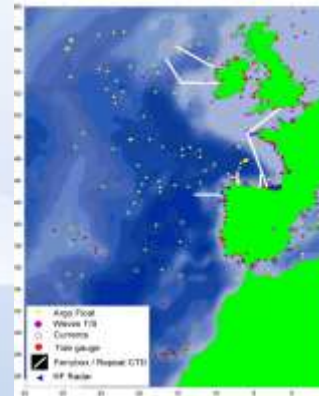
# Contents

- The Marine Institute
- Data Management Requirements
- Supporting Certifications/Accreditations
- Current status: DM-Quality Management Framework
- Next steps: Pursuing CoreTrustSeal (CTS)
- The Marine Institute's Journey

# The Marine Institute, Ireland



- State agency: marine research, technology development & innovation
- Provide scientific and technical advice to Government
- Help inform policy -> sustainable development of Ireland's marine resources
- Many data acquisition platforms and programmes, service areas
- A marine research funder in Ireland
- National Oceanographic Data Centre for Ireland



# Objective: Support Good Data Management Practises

## Requirements

- Show compliance with **standards** and best practises
- Monitor and assess the **quality** of data processes and services
- Sharing data => store them in a **trustworthy** data repository
- Data must be **managed**, curated, and archived
- Remain **useful** and meaningful into the future
- Continued **access** to data



To demonstrate the institute's **capabilities** to provide data and services in **compliance** with established **standards** and responsibilities, there has been a focus over the past five years on relevant supporting **accreditations/certifications**

# Why accreditations/certifications?

Ensuring high quality, transparent data processes & be a trustworthy data repository



Good data management

Roadmap/guidance

Evidence & support

Supporting  
Accreditations/  
Certifications



# Data Management - Quality Management Framework



Foras na Mara  
Marine Institute

- 2019: The Marine Institute's NODC received International accreditation of its **Data Management Quality Management Framework (QMF)** by the IOC-IODE programme (*Leadbetter et al., 2020*)
- Identified and fully documented all the data handling **Processes & Procedures** in the Marine Institute
- The QMF guides data management activities from collection, storage, quality control, and analysis to data outputs from minting DOIs to legislative reporting
- The real-world experience of the Marine Institute in developing a DM-QMF - **IMDIS 2021** (*Reed and Thomas, 2021*)

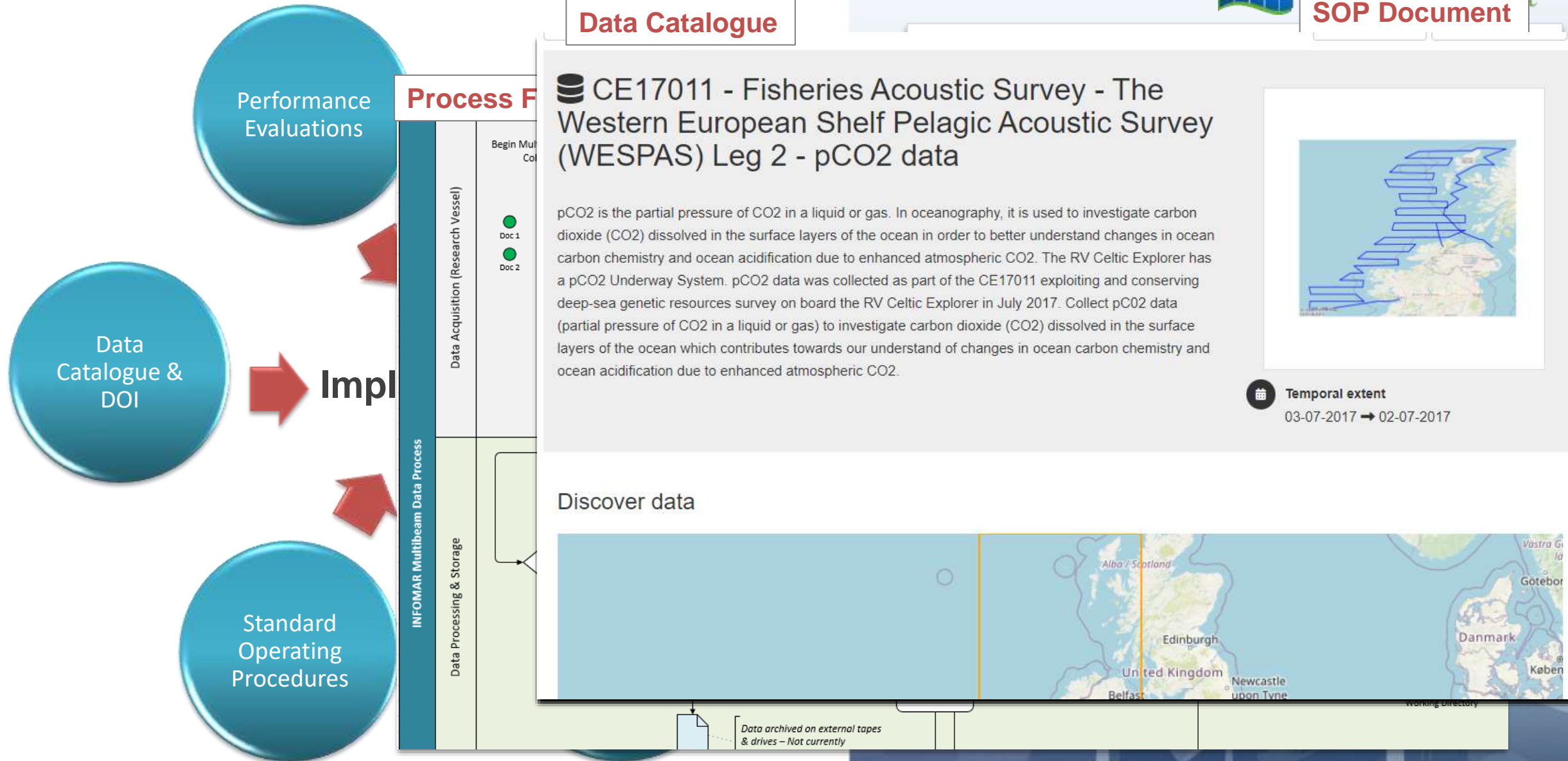
[https://imdis.seadatanet.org/files/IMDIS2021\\_oral\\_66.pdf](https://imdis.seadatanet.org/files/IMDIS2021_oral_66.pdf)



# Data Management – QMF Implementation Pack



Foras na Mara  
SOP Document



# Data Management - Quality Management Framework

## Current status:



**126** datasets/processes are managed through the DM-QMF



Regularly reviewed and improved



Extending the QMF to research project data



In March 2023, the Marine Institute has been **successful in achieving re-accreditation.**



*Foras na Mara*  
*Marine Institute*

## Outcome

Provide access and usability of the data as well as the reliability of the underlying services.

The quality assurance of these data processes provides a solid foundation for the evidence-based national marine decision making.



# Next Steps:


Support to National Marine Programmes e.g. National Marine Planning Framework, the Ocean Renewable Energy Development Plan and for marine licensing services

- Further extending remit in managing **third party data**, research data (potentially mandated)
- Discrete data from an **external** organisation => need appropriate **documentation** to ensure data are available for reuse
- Build stakeholder **confidence**

**Action:** Explored **complimentary accreditations** to:

- Further **support** data management activities – data preservation
- Review and **improve** the quality and transparency of our processes
- Recognised **trustworthy** data repository

## Why



To demonstrate our commitment to effectively managing and preserving data over time, ensuring its integrity and accessibility for both current and future use



# CoreTrustSeal Certification

- “CoreTrustSeal is an international, comm non-governmental, and non-profit organ promoting sustainable and trustworthy c infrastructures”
- Long-term preservation
- An enabler of FAIR data
- Complimentary to the existing DM-QMF and preserve data over time
- Valid for 3 years
- MI is working towards obtaining this cert
- Evaluates repositories against a number requirements
- Two step certification process



<https://www.coretrustseal.org/>



1. Self-assessment



2. Peer Review

# The Marine Institute's Journey



**2019**  
IOC-IODE  
accreditation as  
the NODC

**2023**  
QMF  
IOC-IODE  
Re-accreditation

**2022**  
CoreTrustSeal  
Application  
Submitted

**2024**  
CoreTrustSeal  
Re-submitted



- Over 5 years
- Applied for CTS – pending certification
- Many other ‘hidden’ milestones along the way
- Improved the quality and transparency of internal data processes
- And how we manage 3<sup>rd</sup> party/external data (NODC)
- Improved policies and documentation
- Increased awareness of and compliance with established standards
- Benchmark for comparisons to help identify opportunities for improvement

# Conclusion



Embracing these two Data Management Accreditations/Certifications has many benefits

- Continuously reflect on all levels of Data Management at the Marine Institute and our remit as Ireland's NODC
- Demonstrate that the Marine Institute are following internally recognised best practices
- Build stakeholders confidence – trustworthy data repository

These accreditations and certifications have helped ensure the Marine Institute is prepared for the challenges ahead in *'navigating the waves of marine data management'*





**Go raibh maith agaibh!**

