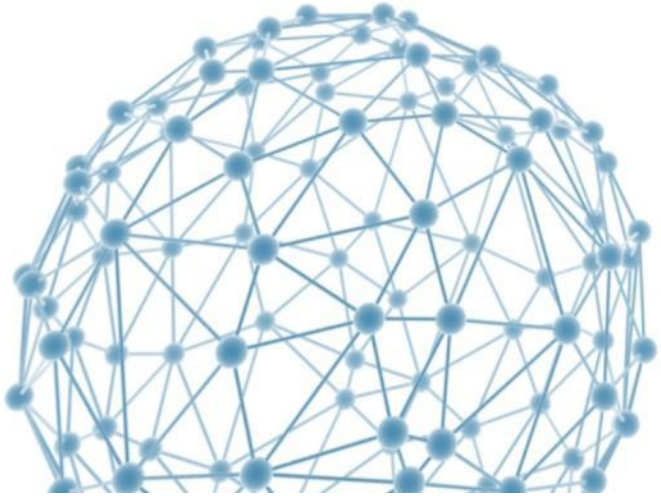
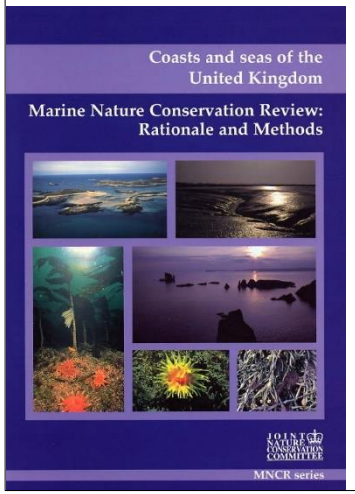
# Squaring the data-flow circle: One vision from disparate data



**Esther Hughes**
esthug@mba.ac.uk

Marine Data Flow History
Data Flow Today
Current Challenges
The Future

# 1987




# 1997

INSPIRE Infrastructure for Spatial Information in Europe

VIEWPOINT

**'Use Available Data'**

KEITH HISCOCK

*Joint Nature Conservation Committee, Monkstone House, Peterborough PE1 1JY, UK*

'Use available data' is a frequent requirement when asked to prepare an environmental statement. In this article, I suggest areas where we can improve our use of existing data or information to answer some current environmental protection and management questions but I also draw attention to areas where targeted research and acquisition of new field data is required. I counsel those who commission work not to expect too much of available information and to ensure that properly managed field investigations and experimental studies continue to be undertaken. © 1997 Elsevier Science Ltd. All rights reserved.

Using Available Data

Bringing together available literature or re-analysing raw data can provide the necessary information on which to decide such features as biological character, existing effects of activities and likely sensitivity of features to a particular activity—the stuff of an Environmental Statement. The most wide-ranging of these sorts of statements are the Quality Status Reports (QSR) required under the 1992 Convention for the Protection of the Marine Environment of the North East Atlantic. A characteristic of such a marine environmental assessment is that it is 'a compilation of current knowledge about a defined area' (OSPARCOM, 1994). On a world scale, proposals made to the Subsidiary Body on Scientific, Technical and Technological Advice to the Conference of Parties to the Convention on Biological Diversity have outlined the need for a global assessment of marine and coastal biodiversity 'using low-cost methods including extensive desk research to compile existing data' (UNEP, 1996).

Often, the request to 'use available data' is because there is no time to undertake field work and subsequent sample analysis; it may also be because low financial resources prevent desirable acquisition of field data. Whatever the reason, it is often assumed that there will be sufficient relevant data available. The assumption, or hope, that relevant and good quality data will exist for

always use available information where it is adequate, we must also take action to fill the gaps.

How 'Available' is Data?

Obviously, using available data only works where data relevant to the question being asked in the area under consideration has already been collected and, most importantly, is available. Broad summary descriptive or contextual information is readily obtained for the UK. It is published in documents such as the series of Assessment Reports contributing to the already completed North Sea QSR (North Sea Task Force, 1993) and, for nearshore areas of the UK, the Coastal Directories Series being published by the Joint Nature Conservation Committee (most recently, Bayne *et al.*, 1996). Sources for more detailed descriptions of the marine biology of particular locations and sources of raw data can be discovered using volumes of the United Kingdom Digital Marine Atlas Project (UKDMAP), based on information reviews undertaken by the Marine Nature Conservation Review (MNCR). Raw data is more difficult to obtain as it is often held comprehensively but with limited access (for instance the International Council for the Exploration of the Seas (ICES) benthos survey of the North Sea, MNCR and country nature conservation agency survey results for inshore areas of Great Britain). However, there are many gaps in information coverage—both geographical and of an appropriate quality to the sort of questions currently being asked.

In the age of the World Wide Web and of freedom of information, of government 'openness' and so on, just how available is information? For instance, as the North Sea, oil companies have spent hundreds of thousands of pounds on benthic surveys in oil fields. The surveys are aimed at environmental protection and management and some companies will make data freely available. Others, understandably, may wish to recover some of the costs of survey and sell data. Others, perhaps where engineers are calling the shots, could adopt an approach which suggests possible competitive advantage in

# 1998

**MarLIN**

*The Marine Life Information Network for Britain & Ireland*

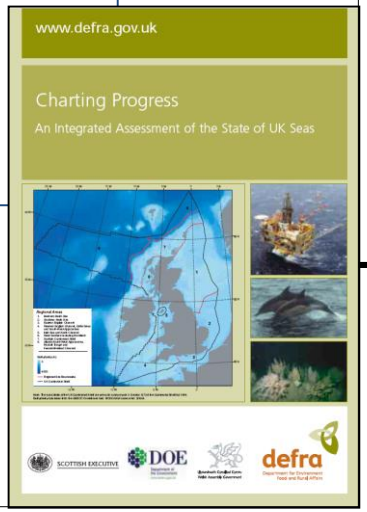
# 2005

**Marine Data and Information – Where to now?**

**Prof Mike Cowling**

Glasgow Marine Technology Centre
University of Glasgow

Independent Member, IACMST
Chair, MEDAG

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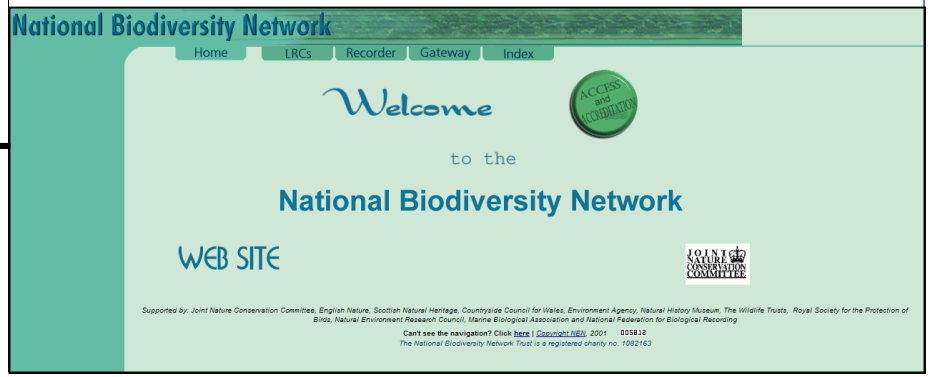

# 2008

MEDIN
marine environmental data & information network

## “Measure once use many times”

marinescotland
The Scottish Government
BGS 1835
HYDROGRAPHIC OFFICE UK
BODC
Cefas
HISTORIC ENVIRONMENT SCOTLAND
ÀRAINNEACHD EACHDRAIDHEIL ALBA
Met Office
ads ARCHAEOLOGY DATA SERVICE

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Marine Data Flow History
Data Flow Today
Current Challenges
The Future

# Standards and Guidelines

Instills good practice
Consistent format
Easy ingestion into DAC

Public sighting, complex cruise survey, historical time series!

Themed by method and split into levels

Can be bolted together if needed, i.e for complex surveys

# Linking **metadata** to data

MEDIN

marine environmental data & information network

Working together to improve access to and stewardship of marine data

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- finding data
  - data discovery portal
  - reference layers
- submitting data
- submitting metadata
- marine data standards
- useful links
- library

**You are searching for...**
**everything** in **56.98N 55.69N -2.02E -3.65W**

**1145** results returned in **0.72** seconds.

Return to your results or Edit this search.

**Download**

The metadata is available for downloading in the following formats:

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This metadata complies with INSPIRE and GEMINI 2 standards.

Add your own record here.

A light version of the portal is available for mobile and other limited browsers.

## Metadata: 2010 NERC Sea Mammal Research Unit. Berwickshire and North Northumberland Grey seal population status

Overview

**Abstract:** As part of a report to Natural England, the NERC Sea Mammal Research Unit conduct and investigation into the Grey Seal population status of Berwickshire and North Northumberland Coast European Marine Site. The report includes detailed counts of grey seals around various known populations along the site of interest. These totals are compared with previous studies estimate pup production rate and breeding potential for each population.

**Data holder:** Natural England

**Online resource present:**

**Use constraints:**

- Accessible under NE and DASSH terms and conditions

Details

Details for the metadata are as follows:

**Geographic Extent**

The metadata covers the following areas (in the order West, South, East, North):

- -4.45°, 55.3291°, -0.412°, 57.874°

KML

| | |
|---|---|
| **Unique resource identifier** (info) | NATENG000221 |
| **Abstract** (info) | As part of a report to Natural England, the NERC Sea Mammal Research Unit conduct and investigation into the Grey Seal population status of Berwickshire and North Northumberland Coast European Marine Site. The report includes detailed counts of grey seals around various known populations along the site of interest. These totals are compared with previous studies estimate pup production rate and breeding potential for each population. |
| **Resource locator** (info) | http://www.dassh.ac.uk/MedUsrLog/Logger/?i=NATENG000221 |
| **Keywords** (info) | Marine Environmental Data and Information Network, Species distribution, Biodiversity, Seal abundance, Seal reproduction, Seal behaviour, Seal mortality |

# DASSH

View or download data as a png / gif; gml; data table

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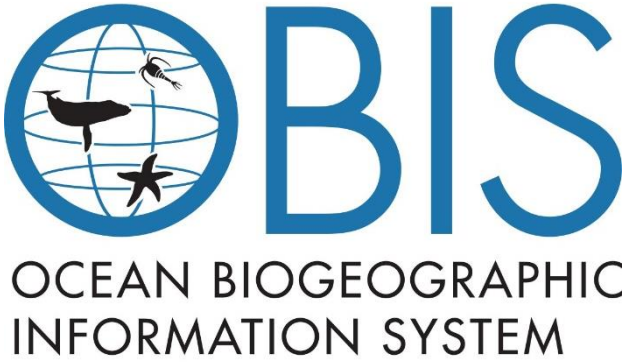
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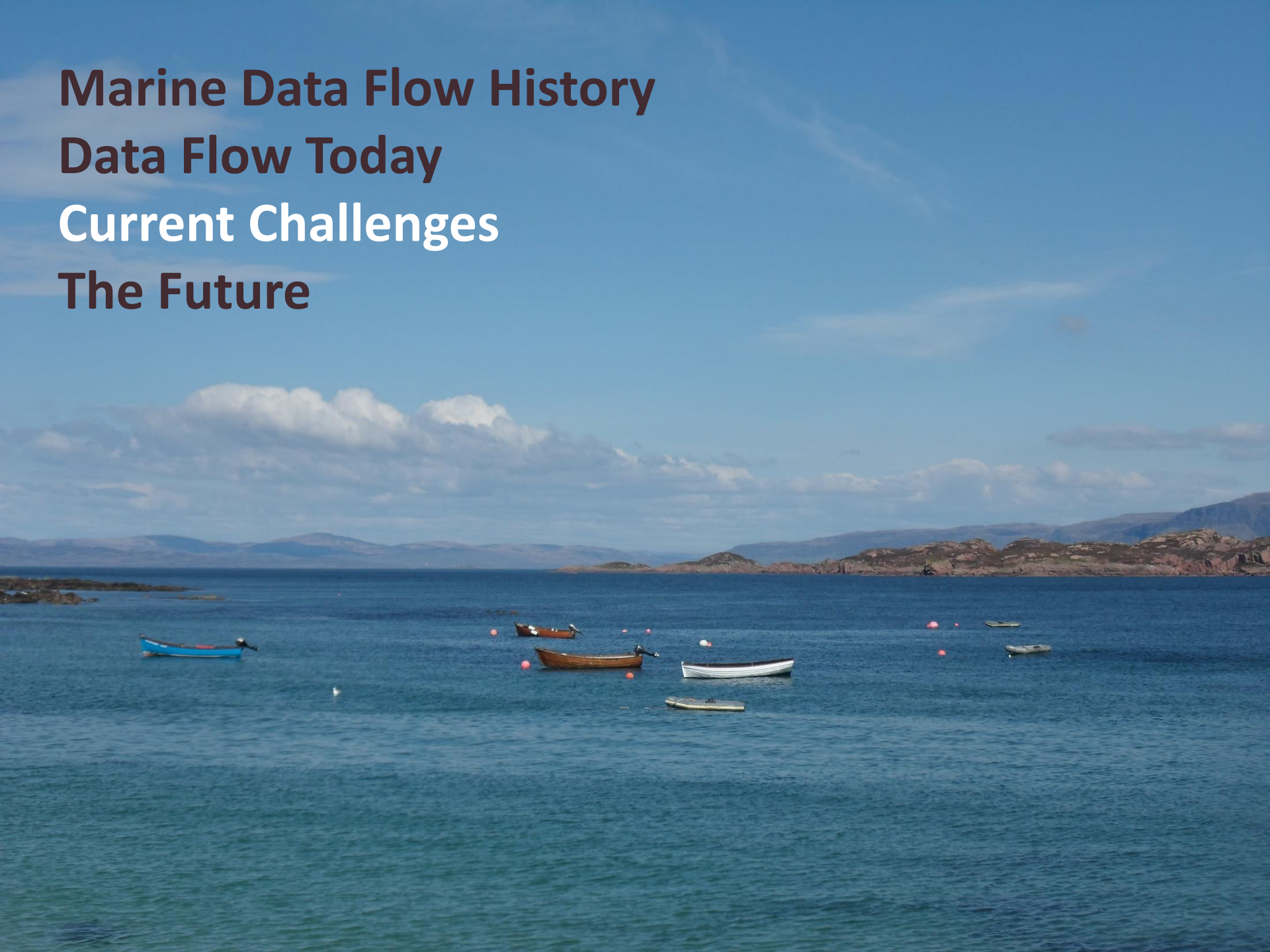
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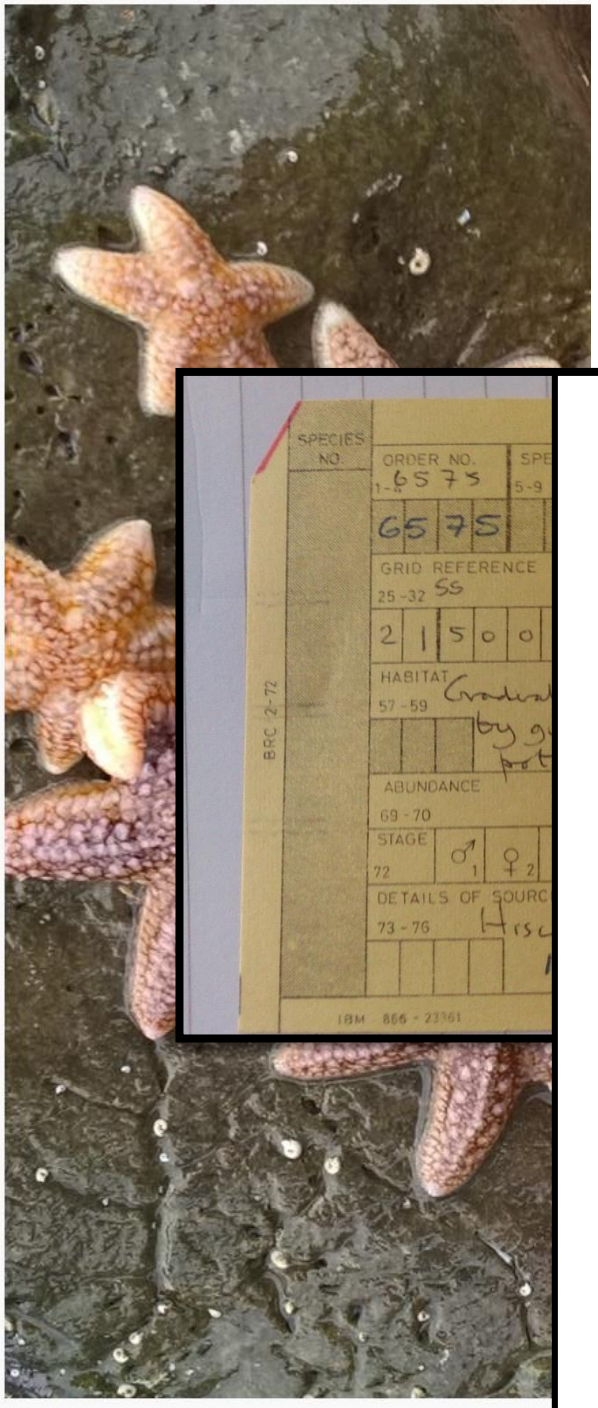
Data Flow Today
Current Challenges
The Future



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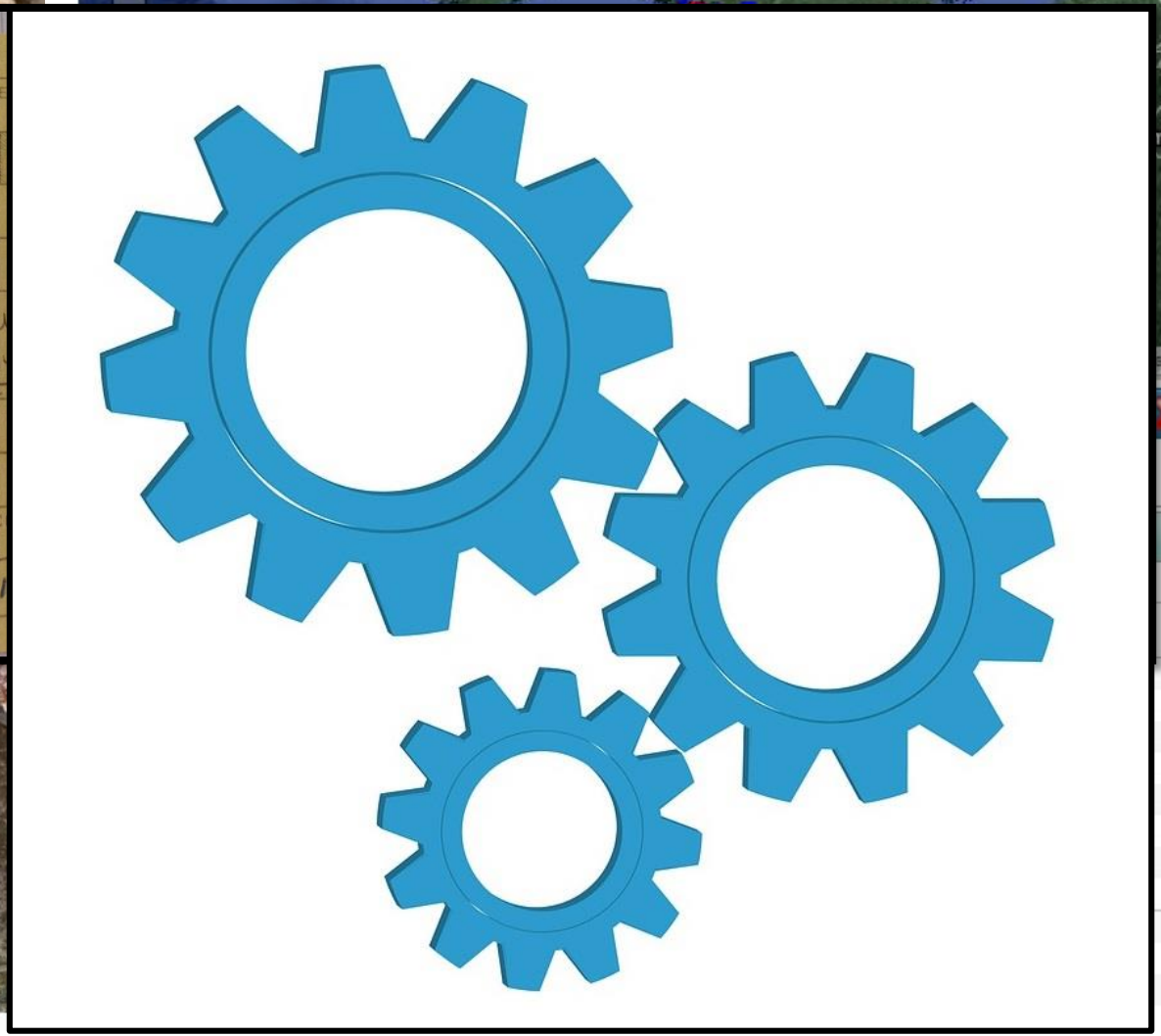
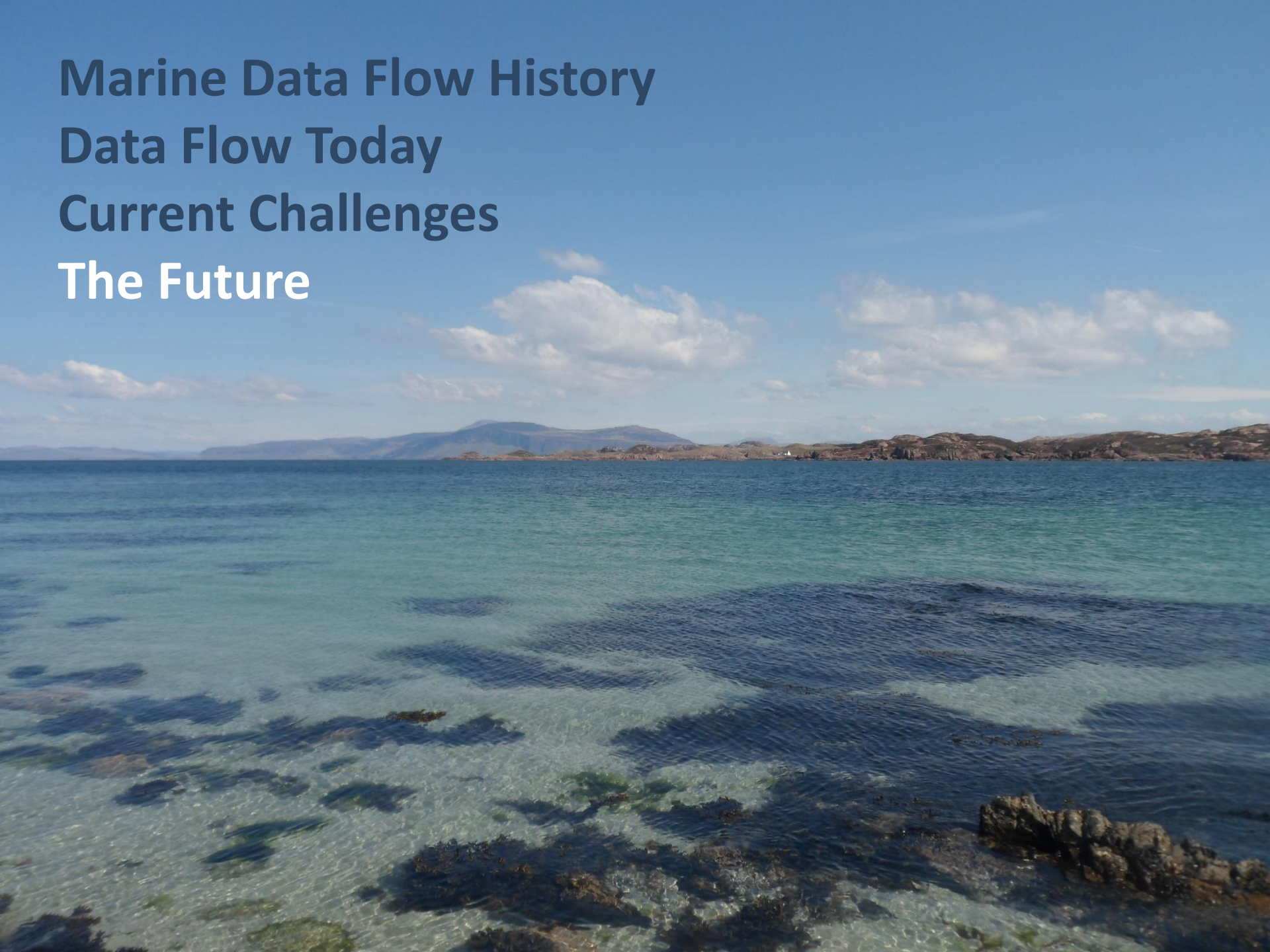
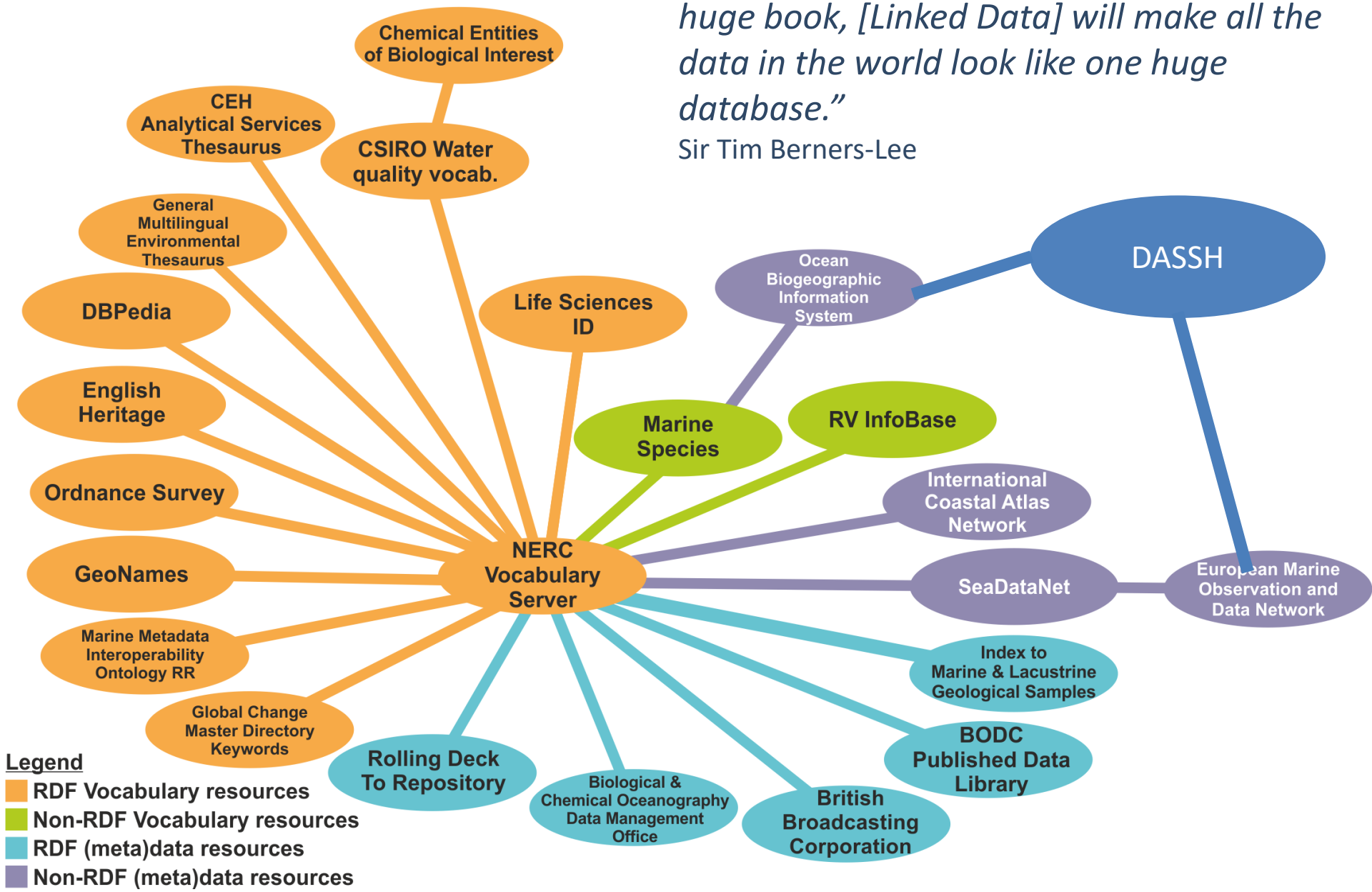


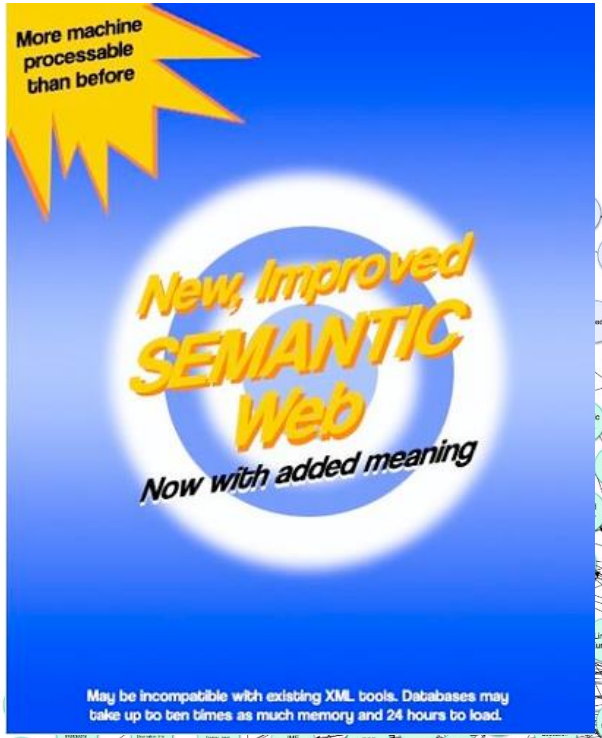

Marine Data Flow History
Data Flow Today
Current Challenges
The Future

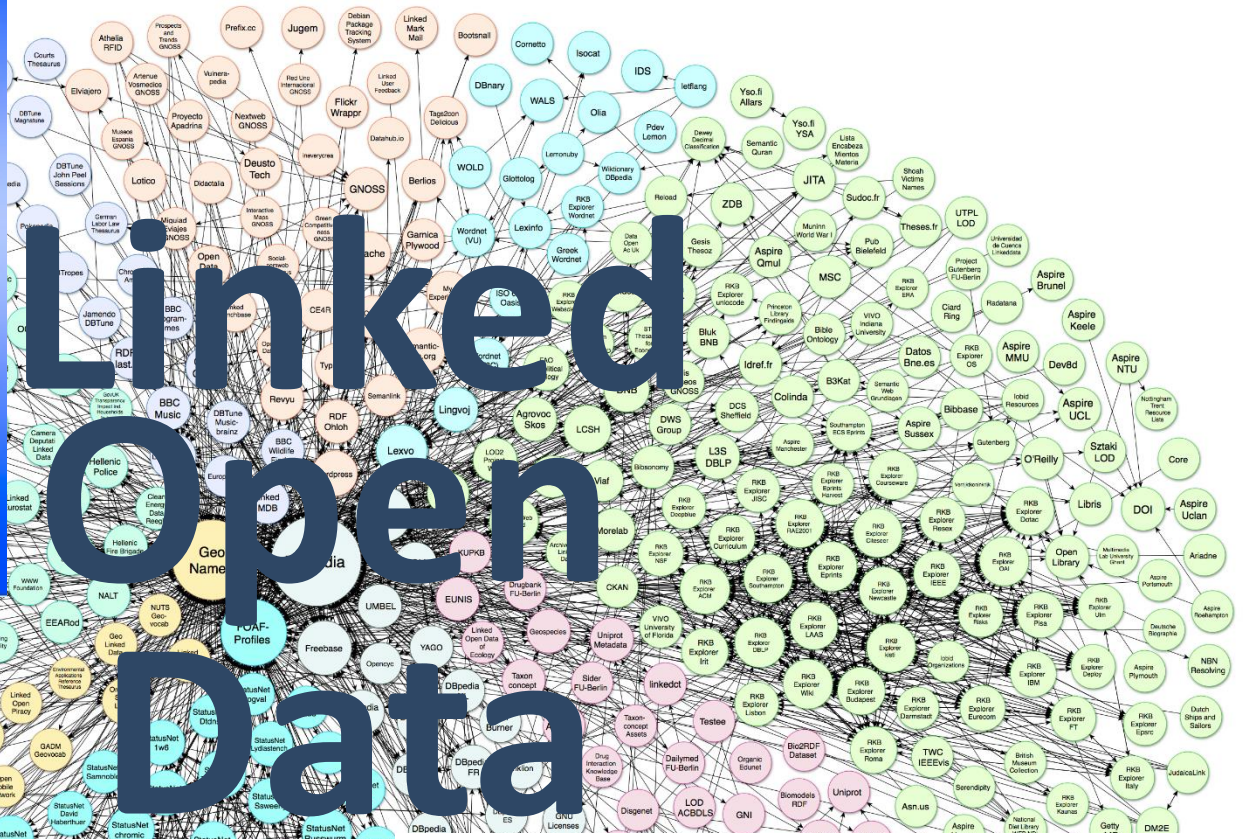
*"If HTML and the World Wide Web made all the online documents look like one huge book, [Linked Data] will make all the data in the world look like one huge database."*

Sir Tim Berners-Lee

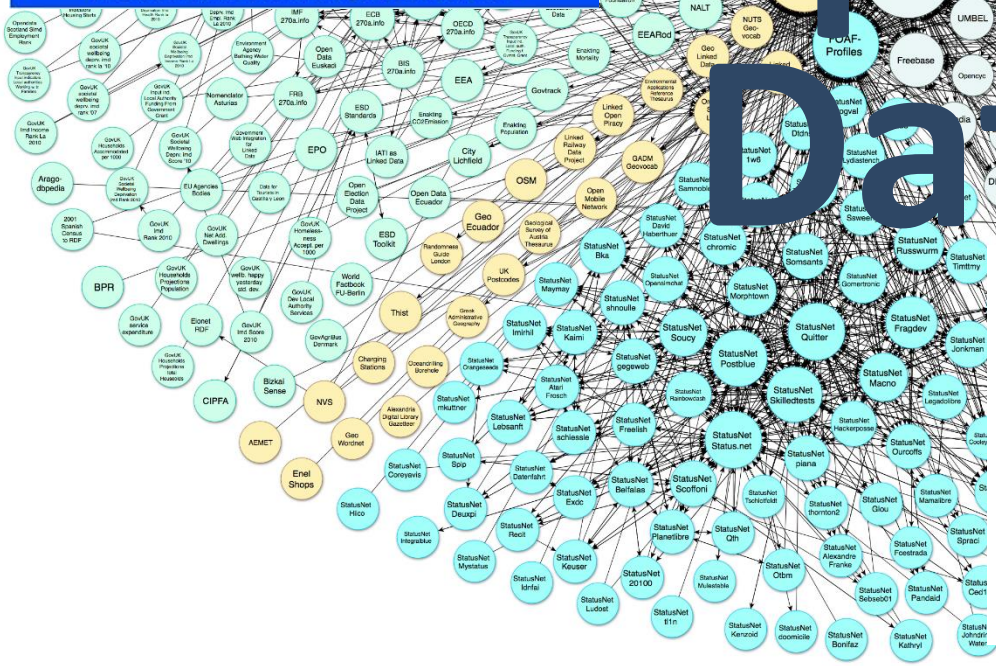


# What next?



# Linked Open Data



Semantic Web

# THANK YOU

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