

# UK-IMON International Workshop on New Monitoring Technologies

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# UK - Integrated Marine Observing Network

## MSCC Remit:

- To develop mechanisms to make best use of all data – for policy purposes
- To integrate all the existing marine observatories around the UK to form a single UK observatory.

## Workshop November 2011 – Towards a single UK marine observatory

### The Purpose:

*The UK Integrated Marine Observing Network serves societal needs by providing reliable marine data and information, for a better understanding of marine systems, improving safety, enhancing our economy and protecting the environment.*

# Aim and Objectives of the Workshop

## Aim

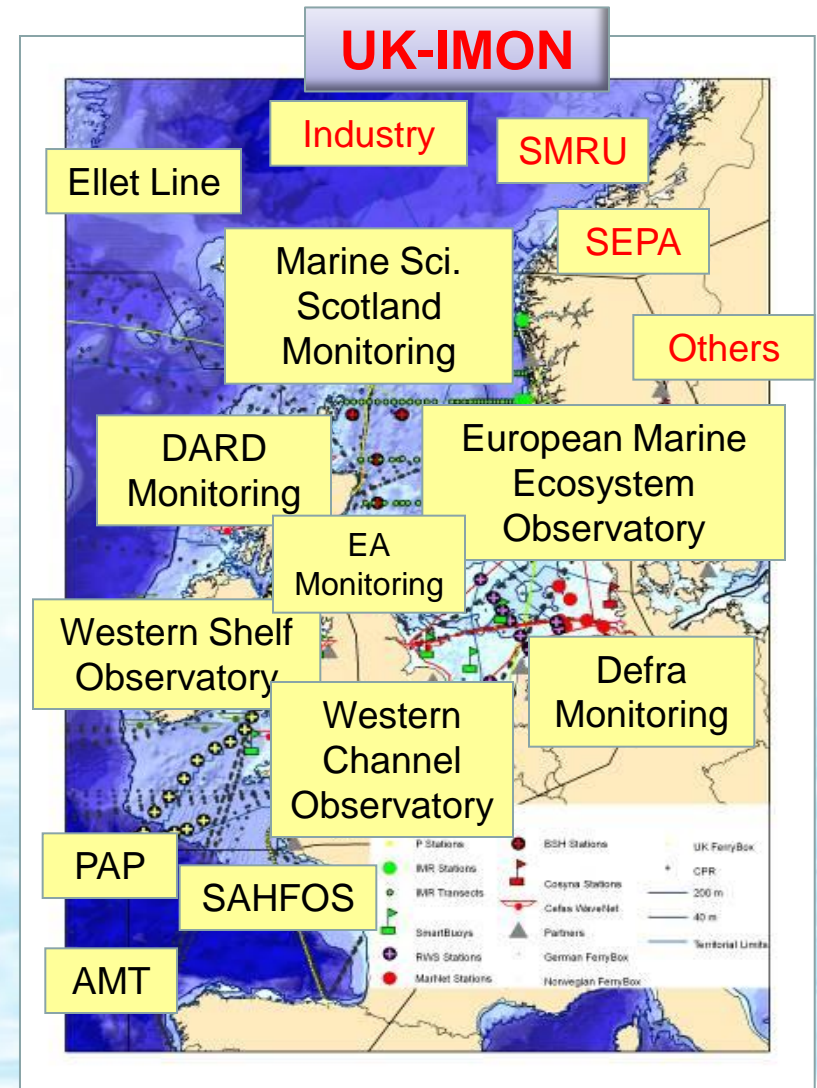
**Determine how best to reduce cost and increase efficiency, effectiveness of UK marine monitoring through the use of new monitoring technologies**

## Objectives

- To review and evaluate, against agreed criteria, new observing technologies
- To **prioritise up to 10** of the most promising observing technologies
- To develop a **detailed project plan to ‘roll out’ the three highest rated monitoring technologies**
- To develop a **longer term plan** for other promising technologies,

# The case for change !

- Data is expensive to collect  
- £80M UK, 1.4B EUR Europe pa
- Scale of demand increasing – photons to fowl !
- Increased pressure to exploit marine resources
- New observational technologies
- Optimised observing system
- Partnership & collaboration the way forward



**User Requirements**

**Shared Information System**

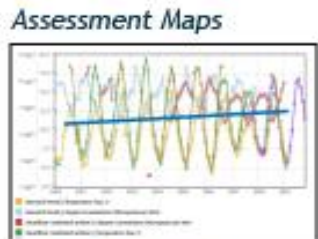
**Data Management**

**Data Comms.**

**Sensors & Platforms**

Data analysis, visualisation & assessment tools

**Design**



Indicator Assessment

Day	Speed	Lat	Lon	Sea %	W
20	145	1	14	1.0	Red
21	145	1	14	1.0	Green
22	129	1	12	1.0	Green
23	119	1	11	1.0	Red
24	128	1	12	1.0	Green



Data: XML, CSV

User Query



Models

Calibration  
Validation



Cache

Interface



National Data Centres



Local Databases



European Data Centres

Delayed mode transmission

Real-time transmission

Real-time transmission

Delayed mode transmission

Delayed mode transmission

Real-time transmission



**Delivery**

# Approach

- Review by theme – overviews and flash talks plus posters (10 – 11th)
- Ranking procedure (11-12th)
  - Against agreed criteria
  - By theme (sign up for theme session !)
  - Cross theme synthesis
  - Expert group report in plenary
  - Final Workshop ranking

Post workshop – progress to proposal

Time scales: 6-24 month, 2 – 5 y, 5 – 10 y

Longer term plan for promising area (low TRL?)

# Ranking 'criteria'

1. Technology readiness level (TRL)
2. Relevance to requirements of policy, operational and research end-users:
  - UK-IMON Core Variables
3. Multi-purpose – adding value
4. Cost – will the new technologies save money?
  - Cost of transitioning to operational status
  - Operation costs both human (increased autonomy) and hardware

## Other factors

- What is their current and future capacity, quality (better or worse), international standing, how adaptable to future need

# Workshop challenges & opportunities

- Partnership the way forward
  - Can we forge new partnerships ?
- Prioritised list of technologies (platforms & sensors) for investment
- Short term – trials and pilot studies
- Medium term – near market capabilities
- ‘The longer term – bold ideas for the future
- Excite, enthuse – lets make a difference



# Thanks for your attention

Sensors & Platforms

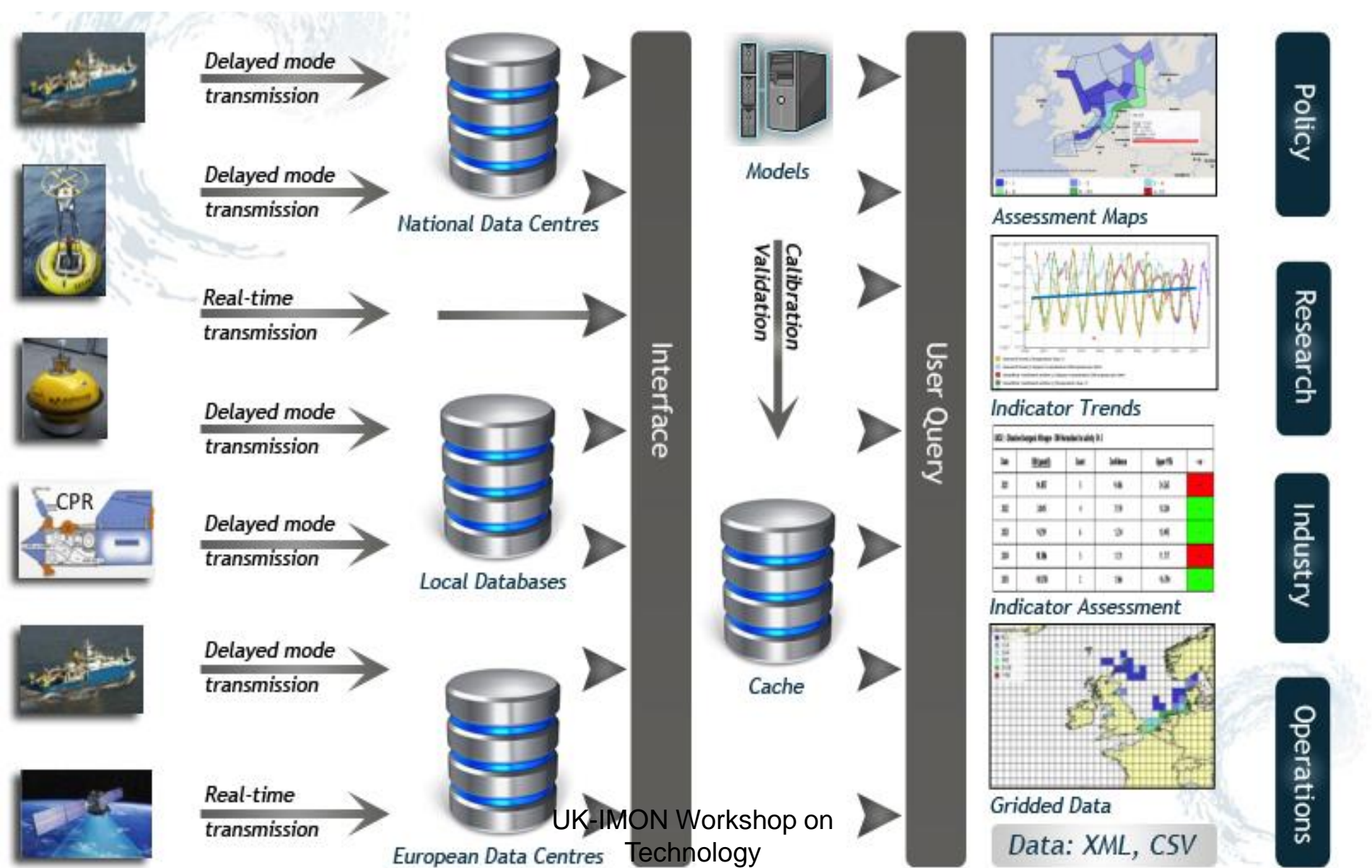
Data Comms.

Data Management

Shared Information System

Evidence & Knowledge

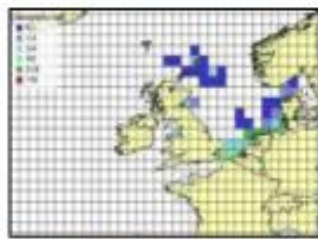
Data analysis, visualisation & assessment tools



UK-IMON Workshop on Technology

Indicator Trends

Year	Spain	UK	France	Italy	Other
2001	1.87	1	1.46	1.22	Red
2002	2.05	1	1.73	1.29	Green
2003	1.79	1	1.21	1.46	Green
2004	1.88	1	1.11	1.11	Red
2005	1.53	1	1.16	1.16	Green



Gridded Data  
Data: XML, CSV