



EGIDA Project

National Use Cases Workshop

UK Environmental Observation Framework

Rome, Italy – April, 18-19, 2011

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Environmental Monitoring – the picture in 2007



- **FRAGMENTED**
- **UNCOORDINATED**
- **LACKS STRATEGIC DIRECTION**
- **NO OVERALL OWNER**

Risk of

- Missed opportunities
- Poor data sharing
- Funding stopped for key time series
- Duplication of effort

Refs (ADAS, 2006), UKMMAS (Defra, 2005), GECC (2006)



UK Environmental Observation Framework

Aims to provide:

... holistic picture of the overall observational needs of the UK and the role of such observations ...*

*Includes all monitoring/surveillance, all technologies from satellite data to butterfly counts, made on behalf of or by the UK



Valuing observations for all needs

Living With Environmental Change

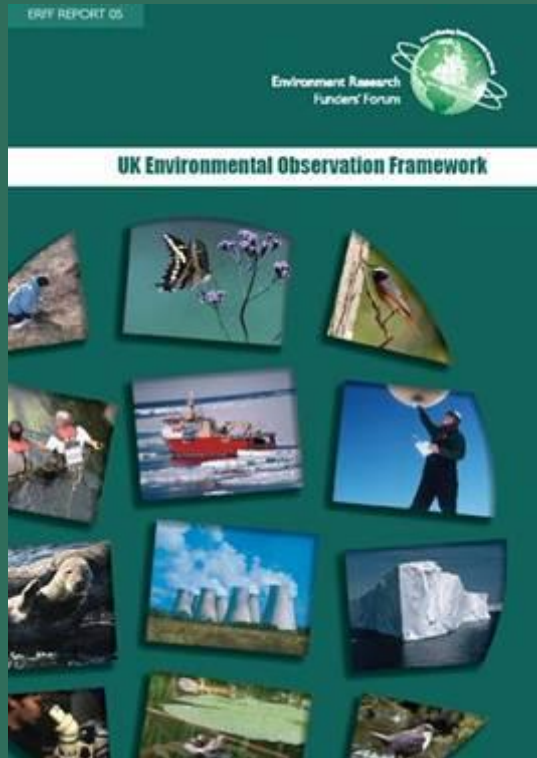
Environmental observations



Vital source of information from global to local scale for:

- **understanding and managing our changing environment**
- **guiding current and future policy, science and innovation**
- **economic benefit and quality of life**

UK EOF Launched, July 2008 to:



- **Develop holistic picture of the observational needs of the UK and the role of such observations**
- **Share Knowledge & Information**
- **Understand use of observation data & tools for knowledge transfer**
- **Enable funding mechanisms for long-term observations**
- **Build strong community to share data & expertise**

UK-EOF Governance

Owned by LWECC members

Living With Environmental Change

Guided by the UK-EOF Management Group

UK-EOF Management Group

Programme progressed by the Secretariat and partners

UK-EOF Secretariat

Advised by data experts

Data Advisory Group

The UK-EOF is a Programme under LWEC partnership



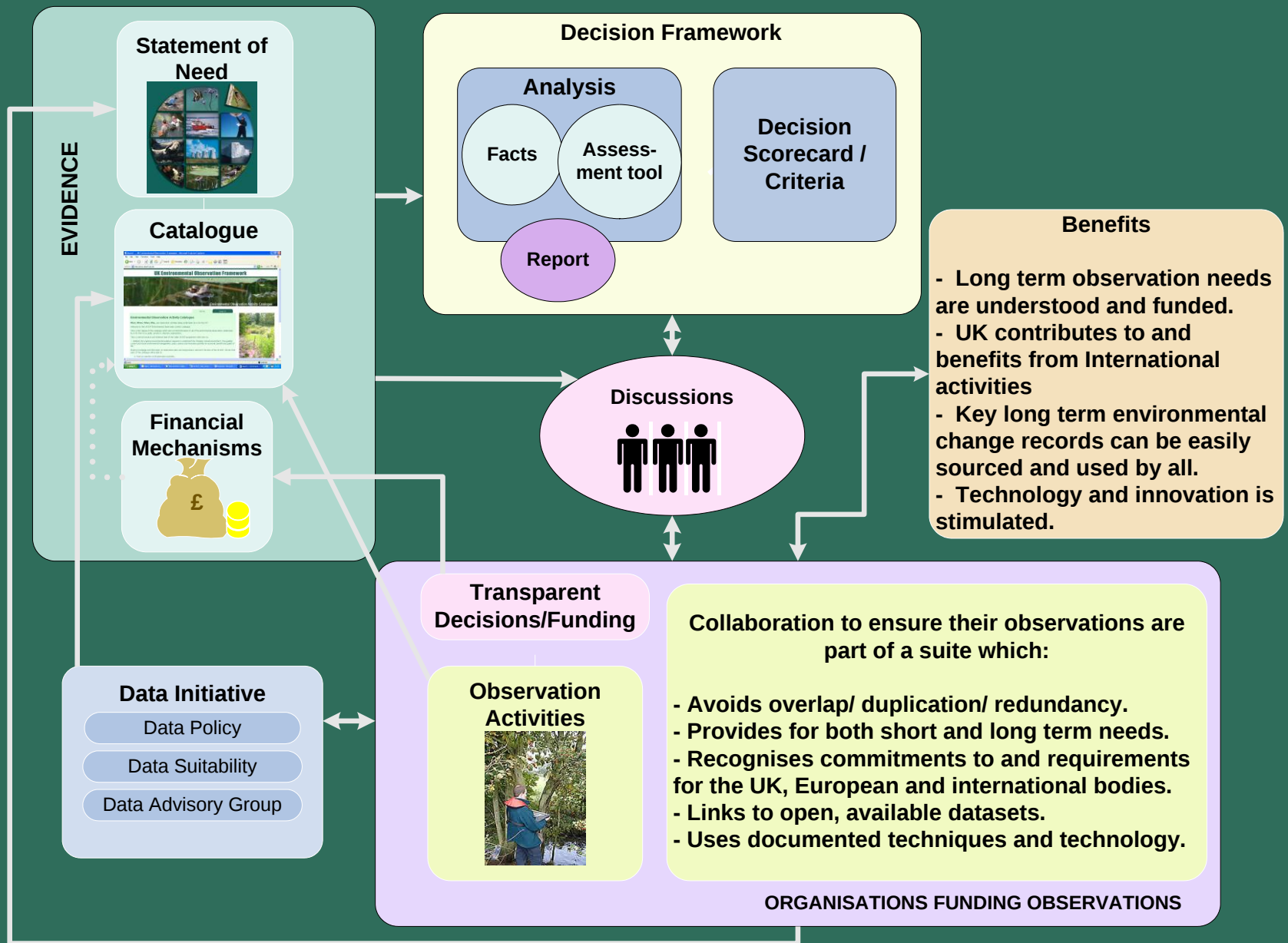
“Optimise the coherence and effectiveness of UK environmental research funding.

Ensure government, business and society have the foresight, knowledge and tools to mitigate and adapt to environmental change.”



Main Aims of UK-EOF in 2010/ 11

- To help organisations use the UKEOF tools to resolve:
 - What should the UK invest in?
 - How can the UK ensure it collects the right data?
 - How can we share the information in a timely manner?
- Improve use of environmental socio-economic information
- Encourage cultural change in collection and sharing of data



So what is available now? UK-EOF Tools

- **‘Towards a Statement of Need’ document and requirements tables**
- **Cost guidance.**
- **The Observation Activity Catalogue**
- **Decision Support Framework and criteria**

Tool 1: Statement of Need

Current and Future Observation Requirements are looked at from the following perspectives:

Environmental Domains

Atmosphere

Biosphere

Cryosphere

Freshwater and Groundwater

Lithosphere & Pedosphere

Marine

Headline Environmental Issues

- Population Growth & Pollution
- Economic Growth & Sustainable Use of Resources
- Future States of the Earth (Carbon & other cycles)
- Fisheries, Agriculture, Food Security & Water Supply
- Human Health, Wealth & Well-being
- Extreme Events and Disasters
- Biological Diversity, Ecosystems & Services
- Climate Variability
- Technology & Innovation

Organisation viewpoint

Statutory Requirements

Organisational Requirements

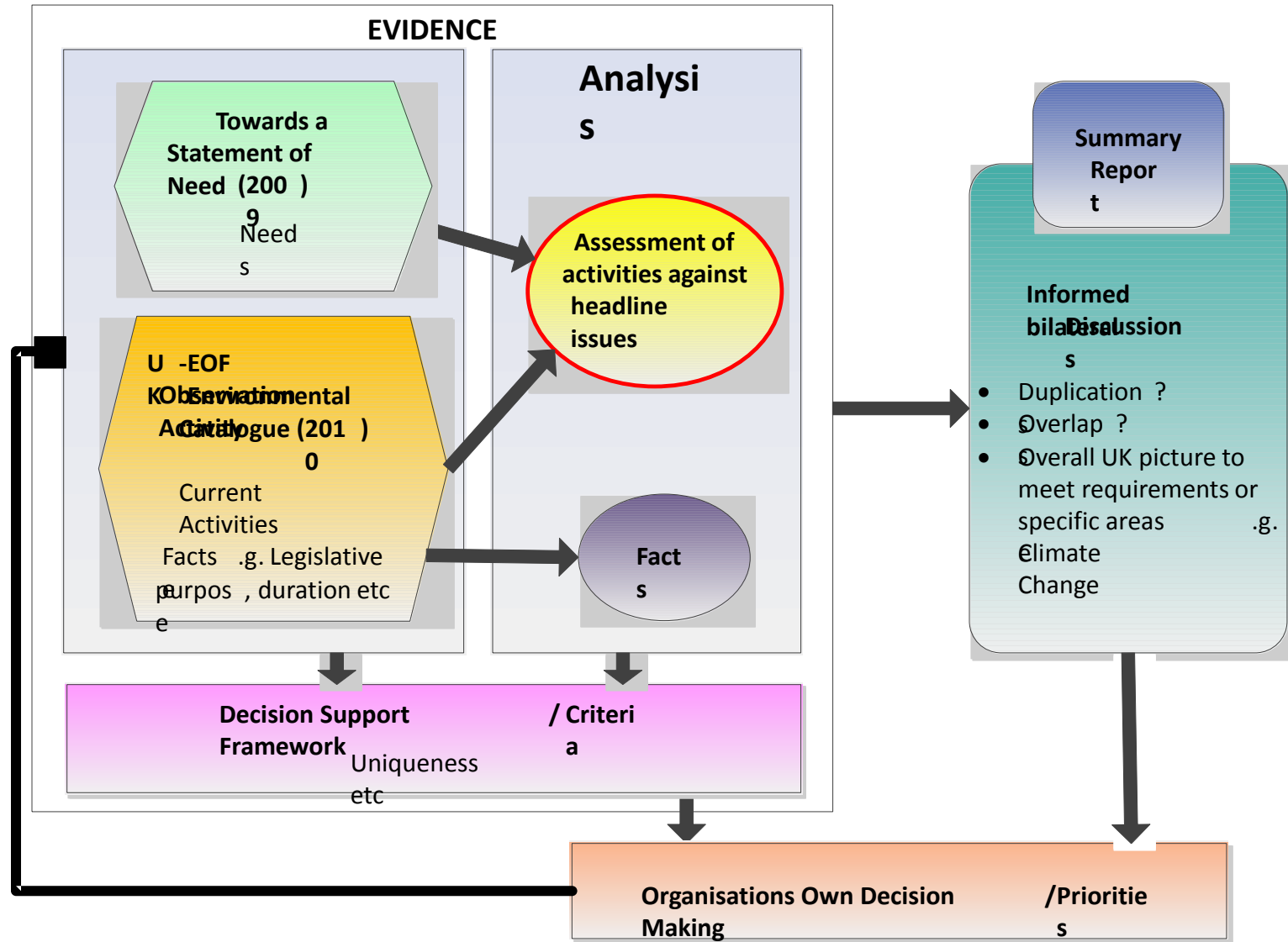
Individual Requirements

Statement of Need – Summary Statement

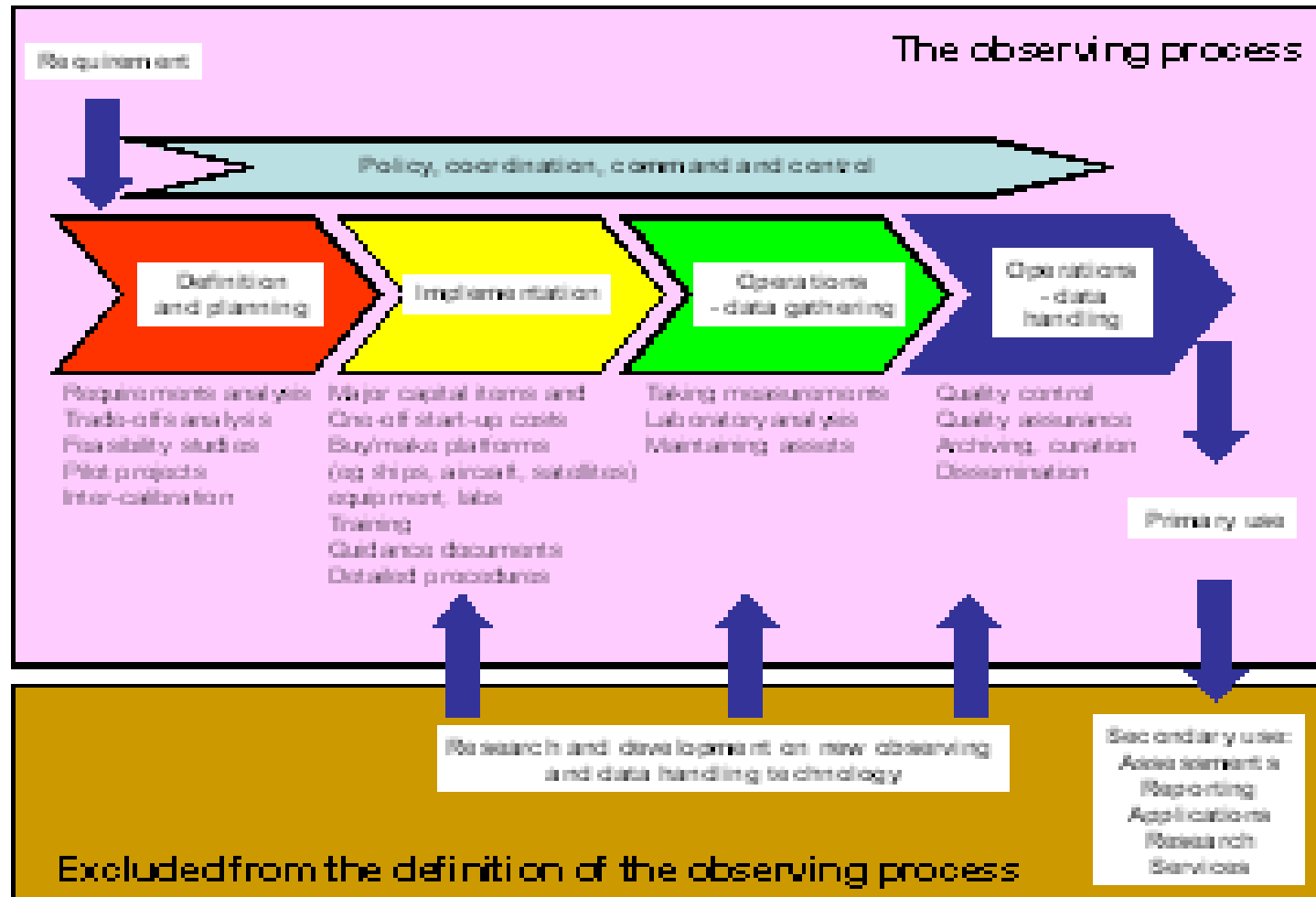
The UK needs a suite of environmental observations to tackle the challenges associated with our changing natural environment.

The suite must span all environmental media, accommodate temporal and spatial variability and allow changes to be assessed in the short, medium and long terms in local, national and international contexts.

Scoring Assessment of Needs



Tool 2: Calculating the costs of our investments: the observations lifecycle



Guidelines: Developed for reporting full FEC costings / per year / for all elements of the observing process

UK public sector Investments in Observations 2009

- Using the Guidelines is it estimated that at least £300m per year is invested by 18 public sector funders in the UK
- With over 200 organisations involved including industry, Local Authorities and voluntary sector – the overall investment could be £1billion / year

Tool 3: Observation Activity Catalogue

www.ukeof.org.uk

UK Environmental Observation Framework

[Home](#)[About us](#)[Catalogue](#)[Decision Support Framework](#)[Statement of Need](#)[Data Resources](#)[Contact us](#)

Tools

[Catalogue - Search](#)[Decision Support Framework](#)[Statement of Need](#)[Data Resources](#)

Activities

[Data initiative](#)

- Work Packages
- Catalogue - Background
- Focal Point

[Community](#)[Socio-economic observations](#)[Financing observations](#)

Structure & Governance

[Background](#)[Management Group](#)[Delivery plan](#)[LWEC](#)

[Introduction](#)[Search](#)[Results](#)[Update](#)

I want to find out...

Who is observing the environment?

Search by organisation:

What is being observed?

Search by title or description of the activity:

Search by environmental domain:

Atmosphere

Biosphere

Cryosphere

Freshwater

Search by variable/parameter/keyword:

Where is the work occurring?

Search by location:

United Kingdom

Great Britain

England

Wales

Why are the observations being collected?

Search activities collecting information for:

Basic science

Characterising environmental issues/solutions

Characterising environmental issues/solutions

Collaboration

☒ Send summary results to screen ☐ Send full results to spreadsheet

[Search](#)

Environmental Observations in the Catalogue

- At least 1100 activities (projects and programmes and data sources) are recorded in the catalogue – each have a unique ID for linking to outputs and data.
- Over 100 organisations involved and coverage is across environmental domains
- Contents need updating continually- owner of the entry is the lead agency. Updates promoted by UKEOF annually. The 2010 update means 70% of the activities were updated or checked.

Social & Economic information

Strong drive and support to:

- Improve understanding of requirements for Social & economic information to inform environmental issues
- Improve discovery of information/datasets

Benefits:

- Increased opportunities for multi/cross disciplinary working
- Better knowledge transfer
- Ability to discover and use relevant datasets

Workshop was held in September 2010.

Tool 4: Decision Support Framework

A step towards transparent, evidence based decision making in the UK public sector. UK-EOF aims to:

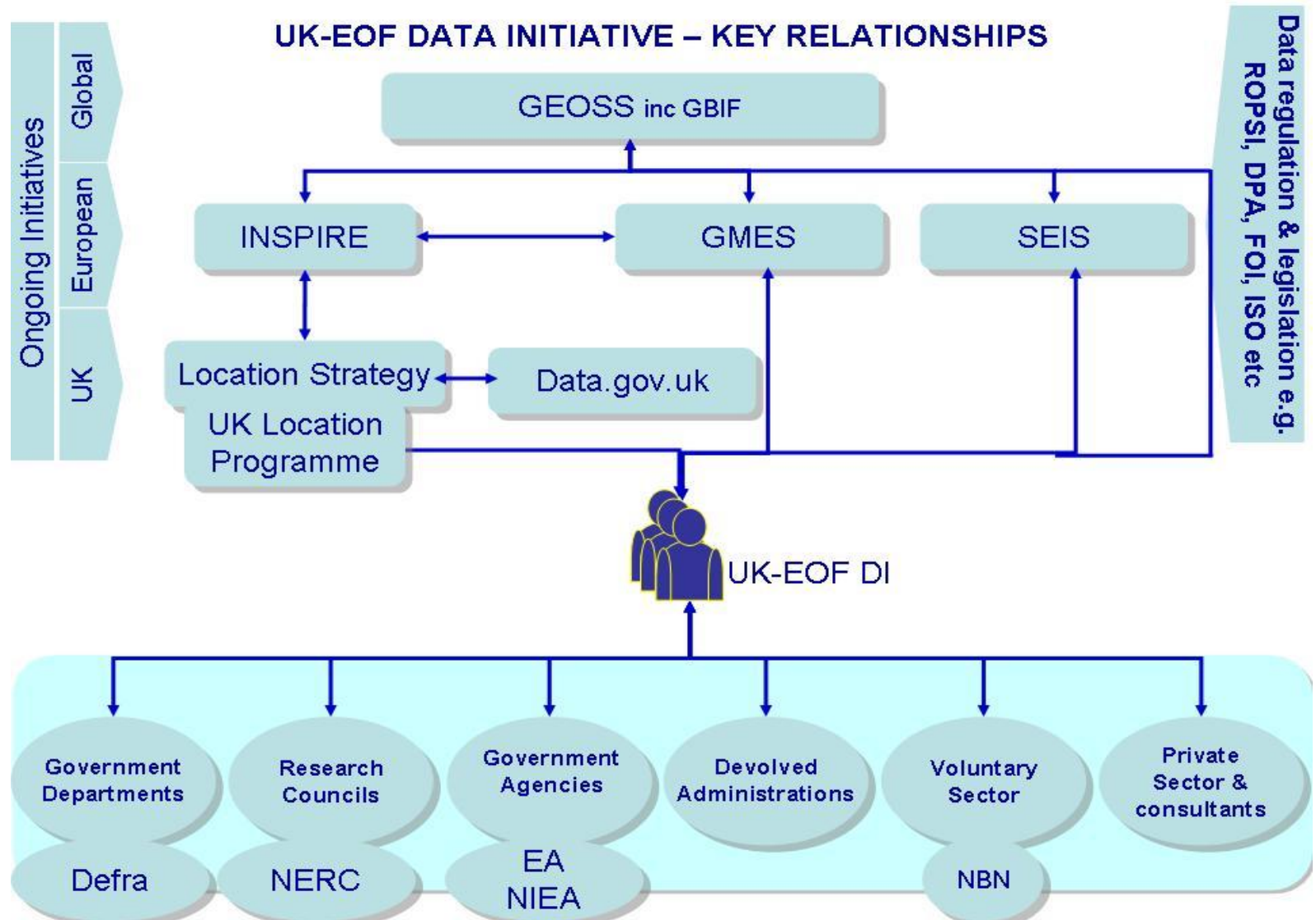
‘enable and empower the UK, and each agency to optimise its investments, recognise dependencies and work in partnership’

Decision Support Framework

The decision support framework will:

- Encourage transparent, informed decisions.
- Enable organisations to make informed decisions in a UK and global context
- Provide a neutral space for discussions

Data Initiative



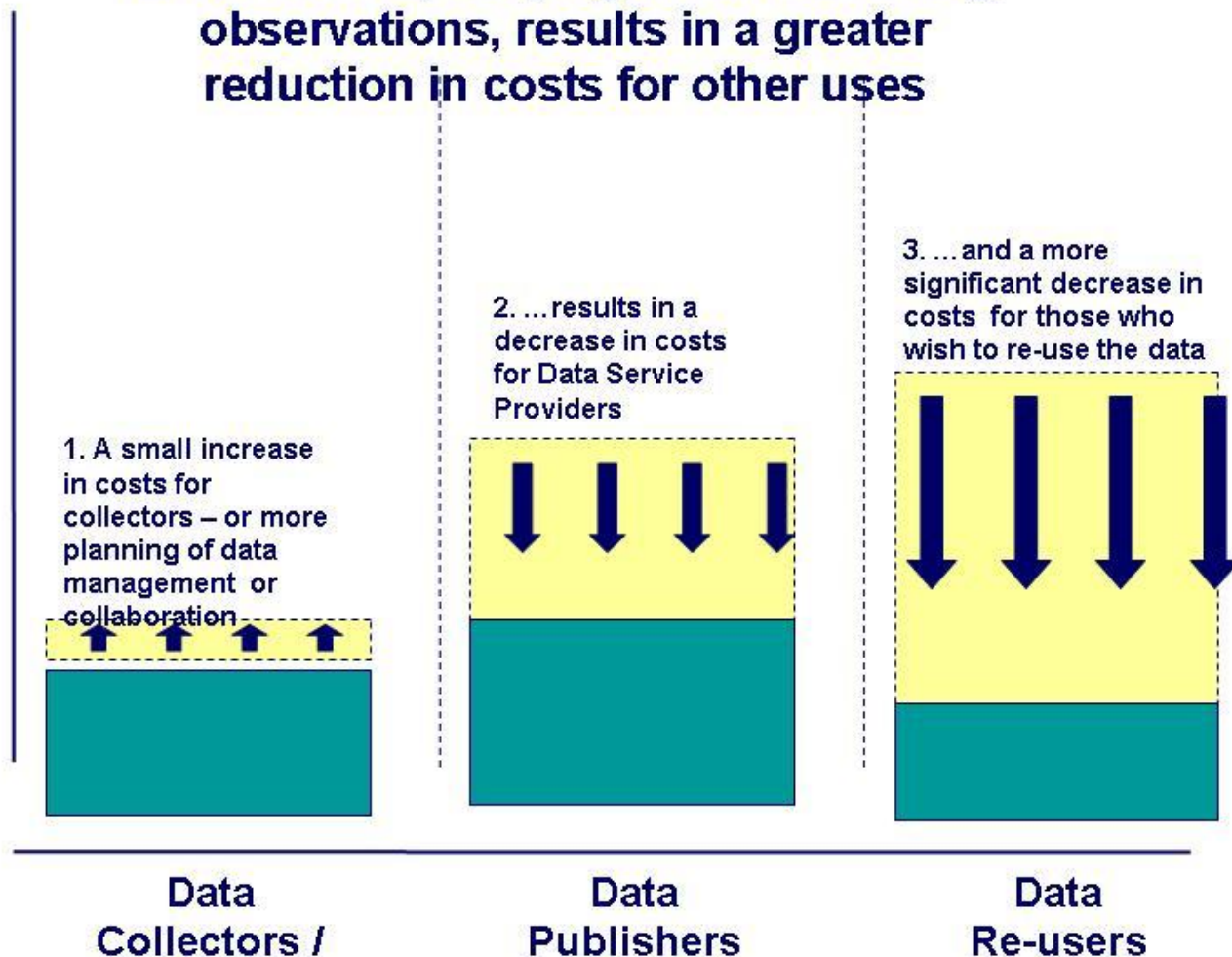
UK Environmental Observation Framework

UK-EOF Data Initiative

- Government Think Tank held in 2008
 - development of Data Initiative to enhance:
 - Discovery of the observations (the catalogue)
 - Communication and understanding of:
 - a) data management issues
 - b) data initiatives at the UK, EU and global levels
 - c) changes in policy, practice or technology

The culture change: a small increase in effort when specifying and undertaking observations, results in a greater reduction in costs for other uses

Effort/costs required for data to be reused



UK Environmental Observation Framework

Summary of UK-EOF

UK-EOF is an ambitious strategic programme aiming to change the culture around environmental observations

It's a partnership with : broad science and policy remit, neutral space / UK overview/ strategic / providing evidence

Some key tools available, now we are :

- **Embedding concepts and decision tools**
- **Managing catalogue of activities**
- **Widening to include socioeconomic issues**
- **Identifying what the 'suite' should look like**
- **Focal point for global picture – e.g. GCOS IP , DSTF**
- **Changing culture on data sharing**

The Management Group and community are key.





Further information and Observation Catalogue: www.ukeof.org.uk

Contact us: office@ukeof.org.uk



Definitions and Scope

Observations: the taking, on a reasonably regular basis, of any form of observations relative to the status of the environment, regardless of frequency of, or purpose for which the observations are made, or however they are made (from satellites, ships, etc). Such observations are designed to meet a wide range of societal needs by providing a variety of products and services. Surveys are in scope for some workstreams.

Environmental: the broadest sense of observations from the natural environment concerning physical (including geological), chemical and biological properties of the environment. This includes observations collected on land, in air, in ice, in freshwater and in the coastal and marine environment, compliance or statutory information, earth observations from space and the effects of humans on the environment. This now includes social and economic information of relevance.