

# The UK Marine Geospatial Community's

## Evidence Base & Recommendations

### Annexes:

Annex A - Evidence Cards

Annex B - Policy on a Page canvases



A group of people are seated around a dark table in a meeting room. The table is cluttered with various items including papers, sticky notes, a laptop, a water bottle, a coffee cup, and a plate of food. The people are dressed in business attire and appear to be engaged in a discussion or collaborative work. The background shows a whiteboard with some papers pinned to it. The overall scene suggests a professional meeting or workshop.

# Annex A: Evidence cards

# Collaboration

## COLLABORATION

Better understanding of the sea will come from global data, not just national data.

*Foresight: Future of the Sea* recommends:

[Improving] our understanding of the sea through **UK contributions to systematic, globally co-ordinated and sustained global ocean observations** and seabed mapping.

Source:  
Foresight: Future of the Sea, Recommendation 20

Evidence Card

## COLLABORATION

Tech and cultural changes are required to enable big data to drive innovation.

For big data to be a driver of innovation, **the UK must ensure that it has the necessary:**

- a) storage capacity**
- b) analytical skills, and**
- c) co-ordination** between sectors and within Government.

Source:  
Foresight: Future of the Sea, Recommendation 19

Evidence Card

## COLLABORATION

The G7 recognises the value of collecting and sharing ocean science, observation and seabed mapping data.

**The G7 2018 Charlevoix Blueprint seeks to:**

- a. Increase** the availability and sharing of science and data.
- b. Expand** global observation and tracking efforts.
- c. Significantly improve** the availability of data, by:
  - enhanced global monitoring of oceans
  - co-ordinating access to ocean science information

Source:  
G7 2018: Charlevoix Blueprint for Healthy Oceans, Seas and Resilient Coastal Communities

Evidence Card

# Collaboration

## COLLABORATION

The many government organisations working in this sector could be aligned more effectively.

Too many public organisations with marine relationships [are] **not joined up**.

We believe there is **scope to streamline** the number of individual government departments and agencies operating in the marine and coastal data domains.

How should [public sector organisations ] be **'herded'** with their many different and competing priorities?

### Source:

Evidence card from Marine Geospatial 'Diagnosis' Workshop  
Geospatial Commission - Call for Evidence - Submitted Responses (Oceanwise Ltd)  
Evidence card from Marine Geospatial 'Diagnosis' Workshop

Evidence Card

## COLLABORATION

Consideration of the needs of different data users could avoid unnecessary duplication and increase efficiency.

The data needs of all stakeholders should be **considered**, be it bathymetric, environmental, geological or biological.

[Such consideration could] **avoid unnecessary duplication of survey effort** between public sector and, where possible, private sector operators.

Recognise that bespoke seabed mapping surveys will always be needed, but even so **data should be collected to a common standard in order to maximise re-use**.

### Source:

Eunomia CEFAS UK National Seabed Mapping Programme Scoping Study; March 2016.  
Evidence card from Marine Geospatial 'Diagnosis' Workshop

Evidence Card

## COLLABORATION

There is a lack of alignment across the whole marine data sector.

[There are] So many **different groups** with many different and **competing priorities**"

"A **lack of visibility** of what everyone is already doing/ interested in doing"

[The lack of] collaboration leads to **siloed data and less value for all** "

The sector shows a **culture of competing incentives** and commercial interests.

[There needs to be a] **Balance of industry, government, academia and national security needs** for data access.

### Source:

Evidence cards from Marine Geospatial 'Diagnosis' Workshop

Evidence Card

# Standards

## STANDARDS

**Data should be collected to a common agreed standard in order to maximise re-use.**

[We] Recognise that bespoke seabed mapping surveys will always be needed but, even so, **data should be collected to a common standard** in order to maximise re-use.

**Source:**  
Eunomia CEFAS UK National Seabed Mapping Programme Scoping Study; 2016.

Evidence Card

## STANDARDS

**The UK is well positioned to take a lead in setting global standards.**

Looking forward, the UK is ... in a position to redevelop a large amount of its policy ... and **set leading global standards.**

[As an early adopter of standards], **the UK is able to forge its own path rather than play catch up!**

**Source:**  
Foresight: Future of the Sea - Political changes to UK's Marine interests, page 25  
Evidence card from Marine Geospatial 'Diagnosis' Workshop

Evidence Card

## STANDARDS

**Data cannot be compared or merged efficiently because different organisations are using different data platforms.**

**Metadata standards differ between DDSP and MDR, [so] the data and metadata quality can be variable.**

The Environment Agency use the DEFRA data services (DDSP) platform but CEFAS has its own master data registry (MDR) which feeds up to MEDIN.

**Source:**  
Evidence card from Marine Geospatial 'Diagnosis' Workshop

Evidence Card

# Standards

## STANDARDS

**Different actors in the sector have articulated the need for unified standards.**

There is a **lack of unified or common standards**, and a **lack of policy on standards**.

**Where are standards** and specs being published?

In the marine sector, **better national co-ordination and standards** are required.

**Source:**  
Evidence card from Marine Geospatial 'Diagnosis' Workshop & Geospatial Commission - Call for Evidence - Submitted Responses (Hydrographic Society UK)

Evidence Card

## STANDARDS

**There is a trade-off between standards, quality and the cost of collection.**

Higher standards makes collection too expensive

**Source:**  
Evidence card from Marine Geospatial 'Diagnosis' Workshop

Evidence Card

# Data accessibility

## DATA ACCESSIBILITY

**Unlocking data sets offers potential for more effective outcomes in both the private and public sector.**

**Unlocking marine data for all UK agencies and providing a foundation which can be built on** by private sector contribution through added-value is essential.

**Source:**  
Geospatial Commission - Call for Evidence - Submitted Responses (IIC Technologies)

Evidence Card

## DATA ACCESSIBILITY

**Wider data access could enable wider data usage and application.**

[Making] Hydrographic data from UKHO/ MCA Civil Hydrographic Programme **[available publicly and for free]** would be valuable ... not only for non-navigational purposes.

... open access to the highest quality bathymetric products, and **open access to data** collected from seabed samples by BGS **[would help when]** **Assessing the UK's marine natural capital assets ...**

**Source:**  
Eunomia CEFAS UK National Seabed Mapping Programme Scoping Study; March 2016.

Geospatial Commission - Call for Evidence - Submitted Responses (BP / Fugro; JNCC; and The Crown Estate)

Evidence Card

## DATA ACCESSIBILITY

**Some organisations are reluctant to share data.**

Information is power - [organisations are] reluctant to share.

Data is regarded as a commodity ... [it is a] competitive advantage...

Industry has been historically very reluctant to share the data which complicates development in the ocean space.

**Source:**  
Evidence card from Marine Geospatial 'Diagnosis' Workshop

Evidence Card

# Data accessibility

## DATA ACCESSIBILITY

**The IT interfaces to access current data are not intuitive or easy.**

Marine data from the public sector is currently made available in a rather clunky and cumbersome way via a number of separate web-portals.

The marine data landscape in the UK is complex, and so ensuring that all existing marine data can be obtained and assimilated will be a key initial challenge for the Geospatial Commission

**Source:**  
Evidence card from Marine Geospatial 'Diagnosis' Workshop.

Geospatial Commission - Call for Evidence - Submitted Responses (Hydrographic Society UK; BP; and NOC)

Evidence Card

## DATA ACCESSIBILITY

**A major current barrier is not knowing what data exists.**

We **need to make better use of existing data** e.g. The Crown Estate Marine Data Exchange, UKHO Data Portal, MCA AIS

[One of **the current barriers is**] **Knowing it exists.**

**Source:**  
Evidence card from Marine Geospatial 'Diagnosis' Workshop and 'Growth and Innovation in Ocean Economy: North Sea Checkpoint'

Evidence Card

## DATA ACCESSIBILITY

**Legislation to mandate data sharing could widen accessibility to data.**

**Legislation is required** to enable all marine data collectors and holders **to share data centrally with government who then provide access to all.**

**Source:**  
Geospatial Commission - Call for Evidence - Submitted Responses (Hydrographic Society)

Evidence Card



# Data collection

## DATA COLLECTION

**Well co-ordinated data collection programmes would benefit all sectors.**

A UK national seabed mapping programme could **increase the current levels of investment** and **generate a range of benefits** for **both private and public sectors** as has been the case in other countries.

For example, INFOMAR in Ireland has forecasted substantial returns on investment to date.

**Source:**

Eunomia CEFAS UK National Seabed Mapping Programme Scoping Study; March 2016.  
Geospatial Commission - Call for Evidence - Submitted Responses (Oceanwise Ltd)

Evidence Card

## DATA COLLECTION

**There has been good initial progress but there's further to go.**

While the co-ordination of hydrographic survey work, for example, has improved in recent years, **there is the potential to go much further."**

**Source:**

Geospatial Commission - Call for Evidence - Submitted Responses (Oceanwise Ltd)

Evidence Card

## DATA COLLECTION

**Collecting more information will enable much greater understanding across a range of issues.**

Collecting more information will:

- **allow for greater investigation** of fundamental long-term and large-scale processes
- **provide baselines** upon which interventions and investments can be grounded
- [provide] **information for sustainable exploitation** of natural resources
- ... and improve our **understanding of climate change** and its impact.

**Source:**

Foresight: Future of the Sea, Recommendation 20

Evidence Card

# Data collection

## DATA COLLECTION

**Better ocean data will have significant impact on human wellbeing and the prosperity of livelihoods globally.**

The UN's Delivery Framework sets out its ambition for

"A predicted Ocean whereby society has the **capacity to understand current and future ocean conditions, forecast their change and impact on human wellbeing and livelihoods.**" [This is] supported by R&D Priority One: 'Comprehensive digital atlas of the ocean'.

**Source:**  
Delivery Framework UN Decade of Ocean Science for Sustainable Development

Evidence Card

## DATA COLLECTION

**The UK seeks to be global leaders in the marine data agenda - through tech, its workforce and the application of the data findings.**

Maritime 2050 commits the UK to commence charting its own seabed and EEZ seabed **using autonomous vessels to understand the potential economic benefits of the seafloor.**

And that **the UK will be at the forefront of international efforts to chart the international seabed area**, helping us to understand how to sustainably manage and benefit from the global ocean environment and creating exportable hard technology and soft skills

**Source:**  
Maritime 2050, Navigating the Future

Evidence Card

## DATA COLLECTION

**The size of the marine estate is a significant challenge.**

The UK & Overseas Territories Exclusive Economic Zone (EEZ) collectively **is the world's 5th largest marine estate.**

**Source:**  
Evidence card from Marine Geospatial 'Diagnosis' Workshop

Evidence Card

# Data collection

## DATA COLLECTION

The costs of data collection are high.

**Cost of data** (or its collection) acquisition is too high

**How do we get more bang for our buck?**

There needs to be a wider and more insightful debate and **how geospatial data is paid for, who pays for it**, and to consider risks associated with relying on a purely public funding model.

**Source:**  
Evidence card from Marine Geospatial 'Diagnosis' Workshop & Geospatial Commission - Call for Evidence - Submitted Responses (Oceanwise Ltd)

Geospatial Commission - Call for Evidence - Submitted Responses (Hydrographic Society UK)

Evidence Card

## DATA COLLECTION

Every stage of the data collection process matters.

There is scope to consider how marine geospatial data within Government is:

- **Created**
- **Collected**
- **Collated**
- **Aggregated.**

**Source:**  
Geospatial Commission - Call for Evidence - Submitted Responses (The Crown Estate)

Evidence Card

A group of people in a meeting room are gathered around a table, working on laptops and documents. The room is dimly lit, and the scene is overlaid with a blue tint. The text "Annex B: Policy canvases" is prominently displayed in white across the center of the image. In the background, a sign on a wall reads "WOMEN OF ONE".

# Annex B: Policy canvases

# Collaboration

**Opportunity / Challenge title:** MARINE GEOSPATIAL COMMUNITY

**Brief description of the idea:** LET'S KEEP THIS FORUM GOING!

**Who will be responsible for delivering and / or operating it?** UKHO HAVE MADE A GREAT START - THANK YOU! SO... UKHO? +/- MAO? (+ DAS) +/- MEA?

**What are the main risks or challenges with the idea?** THERE AREN'T ANY! ... EXCEPT IT FIZZLES OUT 😞

**What support might be needed to make it happen?** A SPONSOR. SEE

**Three suggestions for further initiatives that will be needed to make the idea work:**

- DON'T MEET TOO OFTEN (ANNUALLY?)
- DEVELOP THEMES TO HELP PEOPLE UNDERSTAND ISSUES THAT WE ALL FACE
- TIE IN WITH WIDER THINGS MSFO? / POST BREXIT DRIVEN ETC

**How will we know if the idea or initiative is a success?** WE KEEP MEETING!

**Who will be responsible for delivering and / or operating it?** UKHO HAVE MADE A GREAT START - THANK YOU! SO... UKHO? +/- MAO? (+ DAS) +/- MEA?

**What are the main risks or challenges with the idea?** THERE AREN'T ANY! ... EXCEPT IT FIZZLES OUT 😞

**What support might be needed to make it happen?** A SPONSOR. SEE

**What are the timescales / urgency?** NOW - LET'S KEEP BALL ROLLING

**Draw how it works:** GOVT ... ACADEMIA ... CARE ... INDUSTRY

**Handwritten notes:** THIS FORUM! Keep going... WHAT ANALYS DO WE NEED TO DO DIFFERENTLY?

**Logo:** POLICY LAB

**Opportunity / Challenge title:** Collaboration

**Brief description of the idea:** (Different data formats) How to facilitate the sharing of different formatted data which will absorb data of different formats and harmonize them into a single internationally recognised format.

**Who will be responsible for delivering and / or operating it?** UK Gov, operating as a range of not-for-profit marine geospatial data central repository

**What are the main risks or challenges with the idea?** i) Technically difficult ii) Some expensive iii) May not increase sharing iv) Stakeholders still need to work to share

**What support might be needed to make it happen?** i) Creation of UK central geospatial data repository, independent and publically funded. ii) Consideration of legislation relating to data sharing in marine sphere iii) Incentivisation of data sharing for private entities, tax etc

**Three suggestions for further initiatives that will be needed to make the idea work:**

- 1) How to in the funding
- 2) Liaison with appropriate businesses provided incentives to share and
- 3) Incentivisation of data sharing for private entities, tax etc

**What are the timescales / urgency?** - Next 5 years.

**Draw how it works:** Cable layers, Drilling, OREI, CHP Gov, Other Gov Dept → Format (conversion, standards) → UK national Geospatial Data repository (Marine) → IANs → UK national Geospatial Data repository (Marine)

**Handwritten notes:** Data exchange tools to merge data sets (tech solution)

**Logo:** POLICY LAB

**Opportunity / Challenge title:** Building a real-time marine data portal

**Brief description of the idea:** Integrating traditional and new marine data sets (wind, electricity generated, AIS/shipping activity, hydrodynamics...) into an open source data portal.

**Who will be responsible for delivering and / or operating it?** UK Hydrographic Agency will release of maritime data

**What are the main risks or challenges with the idea?** - Who will own the data? - conflicting of hydrographic

**What support might be needed to make it happen?** - Stronger awareness about costs of not sharing and linking up data

**Three suggestions for further initiatives that will be needed to make the idea work:**

- Stronger awareness about costs of not sharing and linking up data

**How will we know if the idea or initiative is a success?** - better informed & stable maritime goals - less marine safety incidents

**What are the timescales / urgency?** - decadal time scale, linking up this project as integral/enabling element of Climate Change Act / 2050 target

**Logo:** POLICY LAB

**Opportunity / Challenge title:** SHARING OF INFORMATION

**Brief description of the idea:** CENTRALISED CATALOGUING + DISSEMINATION PORTAL/SERVICE OF CURRENT DATA HOLDINGS WHICH ALLOWS EXPLOITATION BY NON-EXPERT USERS

**Who will be responsible for delivering and / or operating it?** PUBLIC SECTOR FUNDED DELIVERED BY COMMERCIAL ORGANISATIONS

**What are the main risks or challenges with the idea?** CULTURAL - GETTING PEOPLE TO NOT INVENTED HERE MENTALITY BECOMES ANOTHER EXPENSIVE SOFTWARE SOLUTION

**What support might be needed to make it happen?** POLICY FRAMEWORK PRACTICALITY ON PROCEDURES USER ON BOARDING INITIATIVE MENSUREMENT OF VALUE / SUCCESS TRAINING

**Three suggestions for further initiatives that will be needed to make the idea work:**

- 1) POLICY FRAMEWORK PRACTICALITY ON PROCEDURES
- 2) USER ON BOARDING INITIATIVE
- 3) MENSUREMENT OF VALUE / SUCCESS

**What are the timescales / urgency?**

**Draw how it works:**

**Handwritten notes:** PUBLISH REGISTER OF FINANCE PROJECTS + OUTLINE... CENTRAL REGISTER OF CURRENT DATA HOLDINGS... PUBLISH LIST OF DATA HOLDINGS AND OWNERSHIP... Single index portal with hotlinks to data repositories with IPK disclosure

**Logo:** POLICY LAB

# Collaboration

Opportunity / Challenge title: <b>Encouraging pods / sharing of data</b>			
Brief description of the idea: <b>Explore levers &amp; incentives to encourage pods &amp; sharing of data</b>			
Which stakeholders will benefit from it? What will they say about it? <b>All</b>	How will we know if the idea or initiative is a success? <b>More economic opportunities created Subsidiary</b>	Who will be responsible for delivering and / or operating it? <b>Gov backed org</b>	What are the main risks or challenges with the idea? <b>Protective, non-open of data</b>
What support might be needed to make it happen? <b>Funded org + platform</b>	Three suggestions for further initiatives that will be needed to make the idea work: <b>- Tax incentives - Funds to explore new business creation from use of data (UKFS/Ado) - State sponsored commissioning of data</b>		
What are the timescales / urgency? <b>1/2 years/3</b>	Draw how it works: <pre>graph TD     A[BP Shell ORE Agriculture] --&gt; B[Repository]     B --&gt; C[New Business]     D[License income back to owner] --&gt; C</pre>		

Opportunity / Challenge title: <b>ENABLING CROWDSOURCING OF DATA (CITIZEN'S SCIENCE)</b>			
Brief description of the idea: <b>Overseeing the value chain of data collection from general public - collection, quality control, storage, distribution. Open Street Map for the ocean data</b>			
Which stakeholders will benefit from it? What will they say about it? <b>Providers of data need to be able to access - Open</b>	How will we know if the idea or initiative is a success? <b>- Amount of data - Use of data</b>	Who will be responsible for delivering and / or operating it? <b>- UKHO</b>	What are the main risks or challenges with the idea? <b>- Quality - Consistency</b>
What support might be needed to make it happen? <b>- Funding for the technology e.g. incubators. - Campaigns for public awareness</b>	Three suggestions for further initiatives that will be needed to make the idea work: <b>- Data collection from leisure drone operators - Value exchange to encourage participation e.g. fishing sector could have reduced costs for providing data.</b>		
What are the timescales / urgency? <b>- Simple to start and value builds over time with participation grow public/voluntary sector. - Filling in gaps of parallel activities</b>	Draw how it works: <pre>graph TD     A[Pyramid of Data] --&gt; B[Data Flow]     B --&gt; C[Storage]     C --&gt; D[Distribution]</pre>		

Opportunity / Challenge title: <b>COLLAB + DATA COLLECTION</b>			
Brief description of the idea: <b>NATIONAL MAPPING PROGRAMME, COORDINATING ACTIVITY ACROSS GOV, AGENCIES, <sup>ACROSS</sup> INDUSTRY</b>			
Which stakeholders will benefit from it? What will they say about it? <b>SOCIETY - IF CLEAR BERT GOV - DATA COLLECTED PLUGS IN GAPS TO BENEFIT USERS ACROSS GOV, INDUSTRY</b>	How will we know if the idea or initiative is a success? <b>GAPS IN COVERAGE FILLED. RESULTS TO ASSESS THE BERT ENVIRONMENTAL STATUS (POWER GAPS IN ASSESSMENT) POWER/NO HAZARD INCIDENTS DUE TO INCREASED FUNDING. (SIGNALS) (SIGNALS)</b>	Who will be responsible for delivering and / or operating it? <b>ONE LEAD BODY FOR ALL OF UK eg. UKHO WITH A GOV-INDUSTRY STREAMING GROUP</b>	What are the main risks or challenges with the idea? <b>- OVERLAP ADMINISTRATIONS - CONFLICTING PRIORITIES - FUNDING - CHANGES IN POLITICAL PARTIES SUPPORT NETWORK OF POLICY MAKERS</b>
What support might be needed to make it happen? <b>Facilitation of 'PIEH- BACKING' TO ENABLE SEAMLESS COLLECTION eg. CO FUND EXPANSION OF DATA SERVICES</b>	Three suggestions for further initiatives that will be needed to make the idea work: <b>- INVENTORY OF ASSETS - RECOGNITION FROM GOV OF THE AMBITION + REQUIREMENT - TECHNOLOGICAL - BUY IN FROM STAKEHOLDERS</b>		
What are the timescales / urgency? <b>SOON - LET'S MAKE IT URGENT! AGENCIES OPEN WORK IN ONE YEAR PLANS - LET'S DO LONGER TERM PLANNING eg. 5 YEARS</b>	Draw how it works: 		

Opportunity / Challenge title: <b>DATA ACCESS / COLLABORATION</b>			
Brief description of the idea: <b>CENTRALISED MARINE DATA MANAGEMENT ENTITY An entity E take control/ownership of a holistic view of UK marine data (geospatial)</b>			
Which stakeholders will benefit from it? What will they say about it? <b>- Marine data users - Industry/Academic/Gov</b>	How will we know if the idea or initiative is a success? <b>- Let's duplication of effort - Quicker results - More comprehensive - Better view of the world</b>	Who will be responsible for delivering and / or operating it? <b>- UKHO? - MMO? - Depend on the view - Decision Making?</b>	What are the main risks or challenges with the idea? <b>- All year effort is in budget - Research data owners - Res-use - Infrastructure - Governance</b>
What support might be needed to make it happen? <b>- Support from data owners - Policy - Industry Appetite</b>	Three suggestions for further initiatives that will be needed to make the idea work: <b>- Standards of metadata/collection - Create the entity - Exercise to identify data users - Across Whitehall</b>		
What are the timescales / urgency? <b>- Demand of the ocean starts now - Delivery of Marine 2050 - Renewable targets - 2030</b>	Draw how it works: <pre>graph TD     A[Diseminate] --&gt; B[Direct]     B --&gt; C[Collect]     C --&gt; D[Collate]     D --&gt; A</pre>		

# Standards

<p>Opportunity / Challenge title: Adoption of a globally standardised model and standards for marine geospatial (large scale) data. S100-S100 + OSG? - Implementation and engagement regionally + globally.</p>			
<p>Brief description of the idea: Implementation of IHO/IMO global standards within a national framework. Implementation of a national set of persistent unique identifiers for all features as a matter of policy.</p>			
<p>Which stakeholders will benefit from it? What will they say about it?</p> <p>Agencies, partners, collaborators, safety (S&amp;S)</p>	<p>How will we know if the idea or initiative is a success?</p>	<p>Who will be responsible for delivering and/or operating it?</p> <p>Lead + Marine Agencies</p>	<p>What are the main risks or challenges with the idea?</p> <p>Quantity of work involved Legacy data</p>
<p>What support might be needed to make it happen?</p> <p>Funding, Planning, Resources + classification.</p>	<p>Three suggestions for further initiatives that will be needed to make the idea work:</p>		
<p>What are the timescales / urgency?</p> <p>rather flexible.</p>	<p>Draw how it works:</p>		

Publish standards which are being used.

S-100 is only a framework

Government to adopt position on S100

Persistent, w integrated identifiers for marine

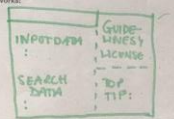
Intelligent adoption and development of S100

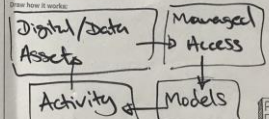
Implementation of S100

S-100 or multiple products.

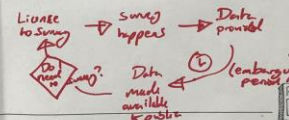
Standards for UK.

# Data accessibility

Opportunity / Challenge title: <b>MAKE SHARING DATA AN OBLIGATION OF ANY OPERATING LICENSE</b>			
Brief description of the idea: <b>CHANGE TO MAKE ALL DATA MORE 'OPEN SOURCE', (*LITMUS REMAIN) ACCESSIBLE &amp; FIT FOR USE &amp; INTEROPERABLE</b>			
Which stakeholders will benefit from it? What will they say about it? <b>LOCAL ADMIN, ACADEMIA, ALL BUSINESSES.</b>	How will we know if the idea or initiative is a success? <b>LESS QUALIFICATION OF DATA MORE POLICED OPEN RESOLUTION</b>	Who will be responsible for delivering and/or operating it? <b>REGULATOR TO SET ONE STANDARD, * DELIVER DATA LINES TO BUSINESS TO STANDARD</b>	What are the main risks or challenges with the idea? <b>MAINTAIN THE RESPONSIBILITY &amp; PLATFORM LEVEL OF TRUST</b>
What support might be needed to make it happen? <b>CIVILIANITY &amp; S/HOLDER ENGAGEMENT TO GET STDS.</b>	Three suggestions for further initiatives that will be needed to make the idea work: <b>PLATFORM TO HOST DATA &amp; REGULATION SEARCH PARAMETER TO EFFECTIVE USE KEEP IT SIMPLE &amp; SELL IT TO STAKEHOLDER</b>		
What are the timescales / urgency? <b>6 MONTHS → 10 YEARS.</b>	Draw how it works: 		

Opportunity / Challenge title: <b>Data as a public asset PROVIDER</b> <del>Recognise data as an asset</del> - how to recognise + deliver			
Brief description of the idea: <b>If data = money, how can governments coordinate and deliver this asset effectively for public good. Should it be recognised as an asset register?</b>			
Which stakeholders will benefit from it? What will they say about it? <b>Should benefit Public + industry</b>	How will we know if the idea or initiative is a success? <b>Increase utility of data</b>	Who will be responsible for delivering and/or operating it? <b>Central Gov Dept.</b>	What are the main risks or challenges with the idea? <b>How open to make data?</b>
What support might be needed to make it happen? <b>Resource allocation</b>	Three suggestions for further initiatives that will be needed to make the idea work: <b>* Collection of standardized data. * Coordination of delivery. * Mechanism for access.</b>		
What are the timescales / urgency? <b>If data is valued, then should happen quickly. Access should be considered, so danger of rushing through?</b>	Draw how it works: 		

Opportunity / Challenge title: <b>Ensuring we have clear governance over all marine geospatial data</b>			
Brief description of the idea: <b>Regulation to ensure that it is clear who owns it who can use/access it</b>			
Which stakeholders will benefit from it? What will they say about it? <b>Public &amp; private sector users Easy? Incentivizing to buy it from others</b>	How will we know if the idea or initiative is a success? <b>Adoption / Buy in from all sectors Feedback through special interest groups.</b>	Who will be responsible for delivering and/or operating it? <b>MEDIN to deliver</b>	What are the main risks or challenges with the idea? <b>Risk awareness of conservation, commercial &amp; security issues.</b>
What support might be needed to make it happen? <b>Overarching policy marine specific</b>	Three suggestions for further initiatives that will be needed to make the idea work: <b>1. Adoption of MEDIN standards across all marine interested government departments &amp; marine funders 2. a marine community forum 3. Investment to make the process easy &amp; implementation.</b>		
What are the timescales / urgency? <b>ASAP! to build on momentum already gained.</b>	Draw how it works:		

Opportunity / Challenge title: <b>Change guidance on data sharing</b>			
Brief description of the idea: <b>Any govt. funded or licensed data made public</b>			
Which stakeholders will benefit from it? What will they say about it? <b>Any stakeholders who need access to data.</b>	How will we know if the idea or initiative is a success? <b>NO of data users goes up a lot</b>	Who will be responsible for delivering and/or operating it? <b>MAAO Crown Estate UKHO</b>	What are the main risks or challenges with the idea? <b>I.P.R. Has to be uniform</b>
What support might be needed to make it happen?	Three suggestions for further initiatives that will be needed to make the idea work:		
What are the timescales / urgency?	Draw how it works: 		



# Data accessibility

**Opportunity / Challenge title:** DATA PORTALS - "DATA ACCESSIBILITY"

**Brief description of the idea:** Government makes basic data often + historical data, Free Portal to citizens Access to data

<b>Which stakeholders will benefit from it? What will they say about it?</b> Diverse usage of data Public use of data Machine use of data.	<b>How will we know if the idea or initiative is a success?</b> Usage + Analytics	<b>Who will be responsible for authoring and / or operating it?</b> One central organisation	<b>What are the main risks or challenges with the idea?</b> Long term funding Access to data Technology change
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**What support might be needed to make it happen?**  
Career Saver  
Secure program bring money

**Three suggestions for further initiatives that will be needed to make the idea work:**  
- Collaboration across organisations need buy in one nation  
- Commercial vs. use of data.

**What are the timescale / urgency?**  
AsAP - large things go on  
- Real data always  
- Unable to share data

**Show how it works:**  
Collection BY IN + INVESTMENT → [DATA] ← Gov + Gov + Gov + Gov + Gov + Gov  
↓ ↑  
Data Owners  
↓ ↑  
Usage / Analytics

**POLICY LAB**

**Opportunity / Challenge title:** Accessing Existing Data

**Brief description of the idea:** Large amount of existing data that needs to be shared for the benefit of all stakeholders

<b>Which stakeholders will benefit from it? What will they say about it?</b> UKto collect & distribute Public Statistics Defence	<b>How will we know if the idea or initiative is a success?</b> Stakeholder able to access all available data % of data acquired shared to the wider domain/ audience.	<b>Who will be responsible for authoring and / or operating it?</b> UKto collect & distribute data from stakeholders	<b>What are the main risks or challenges with the idea?</b> National Security, Security Resistance cost for data over release, IPR, cuts for cloud services
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**What support might be needed to make it happen?**  
- Incentivise, education  
- Financial, financial  
- Financial laws for vessels to acquire data.

**Three suggestions for further initiatives that will be needed to make the idea work:**  
- Financial - tax breaks  
- National Security Legislation  
- Common standards for data release +

**What are the timescale / urgency?**  
5 Year target

**Show how it works:**  
UKto create UKto  
↓ ↑  
UKto Distribute  
↓ ↑  
UKto

**POLICY LAB**

**Opportunity / Challenge title:** Managing IPR in a digital world.

**Brief description of the idea:** Usage of block chain to mark (ownership + authenticity) throughout the life cycle.

<b>Which stakeholders will benefit from it? What will they say about it?</b> • Owners • Users - convenient in authenticating • Third Parties • Regulatory / Legal system	<b>How will we know if the idea or initiative is a success?</b> • Facilitating things needed • Level of adoption will highlight success	<b>Who will be responsible for authoring and / or operating it?</b> • Existing body would be responsible for initial branding • Block chain responsible for self regulation / management	<b>What are the main risks or challenges with the idea?</b> • Technology not mature enough • Strategic / additional list • Cost
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**What support might be needed to make it happen?**  
• R&D national level  
• Industry buy in  
• Education

**Three suggestions for further initiatives that will be needed to make the idea work:**  
• Demo of block chain usage (compatibility, functionality)  
• Educational initiative reference the technology  
• Legislative framework specifically supporting blockchain IPR.

**What are the timescale / urgency?**  
• Up to 2 years  
• Urgency is dependent on delivery of a reliable system.

**Show how it works:**  
Blockchain  
↓ ↑  
Blockchain

**POLICY LAB**

**Opportunity / Challenge title:** Single Point of Access For Marine Data.

**Brief description of the idea:** Single authoritative point access (website + GIS portal powered by linked data encoding / des)

<b>Which stakeholders will benefit from it? What will they say about it?</b> RIP, Ripley, reef, OGE diversity, fishing, offshore, construction, public, Civil + education, shipping	<b>How will we know if the idea or initiative is a success?</b> Efficiency volume (with/without) Traffic Feedback	<b>Who will be responsible for authoring and / or operating it?</b> All data owners for data provision	<b>What are the main risks or challenges with the idea?</b> False conclusions / data Lack of data prov / maintenance Data - use coordinate commercial or government Justification / lack of funding
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**What support might be needed to make it happen?**  
• R&D national level  
• Industry buy in  
• Education

**Three suggestions for further initiatives that will be needed to make the idea work:**  
• Central & involved gov endorsed legislation on private & public data access / publishing  
• Combined approach to data linking / sharing  
• Contributor / Payment mechanism, CTHE BLOCKCHAIN IDEA!!

**What are the timescale / urgency?**  
2-5 years dev & deliver

**Show how it works:**  
Single PDA index & consolidated / combined portals for marine data

**POLICY LAB**

# Data collection

<b>Opportunity / Challenge title:</b> <b>A Register of planned Survey Activity</b>			
<b>Brief description of the idea:</b> All planned surveys are visible in a single place			
Which stakeholders will benefit from it? What will they say about it? Anyone planning or commissioning surveys. Anyone interested in where surveys are.	How will we know if the idea or initiative is a success? NB of access. Reduced money spent on surveys.	Who will be responsible for delivering and / or operating it? MMO? UKHO?	What are the main risks or challenges with the idea? Might need cost. Access to the information. Funding.
What support might be needed to make it happen? Something to make it mandatory - inst. Reg?	Three suggestions for further initiatives that will be needed to make the idea work: All data gathered made available. Guidance on information to be provided.		
What are the timescales / urgency? Fair to deliver (Simple) QUICK WIN Urgency - sooner you do it the sooner people save money.	Draw how it works: 		

<b>Opportunity / Challenge title:</b> UK's Characteristic marine estate, incl. overseas territories			
<b>Brief description of the idea:</b> Long-term plan to survey estate & estimate its economic potential. Establish a Register of marine estate to encourage economic data sharing.			
Which stakeholders will benefit from it? What will they say about it? Economic able to exploit. UKHO and local govt. bodies.	How will we know if the idea or initiative is a success? If exploitation rights are granted under licenses, the number & value of these licenses would distribute level of success.	Who will be responsible for delivering and / or operating it? UKHO could need to fund such surveys. Alternatively, could be grant sponsored. Non-licensed activities.	What are the main risks or challenges with the idea? The size of the estate v. the accuracy to which surveys need to be done. Also, the each area of economic potential may require different plans to be measured.
What support might be needed to make it happen? Legislative/regulatory framework. Common standards for data acquisition. A central catalogue.	Three suggestions for further initiatives that will be needed to make the idea work: Identify parameters required in order to estimate economic potential (presumably different for each area of potential). Identify cost-effective methods of measuring each parameter. Pilot studies addressing several areas of economic potential.		
What are the timescales / urgency? The three steps listed here should be capable of being implemented in ~5 years.	Draw how it works:		

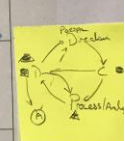
Data Collection - Yellow

<b>Opportunity / Challenge title:</b> How do we collect the data we need and 'live' collect once we have it?			
<b>Brief description of the idea:</b> Co-design data getting campaigns as a community -> Acoustic of and use of Boundary Survey.			
Which stakeholders will benefit from it? What will they say about it? Gov. Academics - Also. Who should lead?	How will we know if the idea or initiative is a success? - More data - More funding - More downstream impact	Who will be responsible for delivering and / or operating it? - Silos	What are the main risks or challenges with the idea? - Silos
Three suggestions for further initiatives that will be needed to make the idea work:			

Data Collection

<b>Opportunity / Challenge title:</b> UK seabed mapping programme to characterise un-surveyed areas.			
<b>Brief description of the idea:</b> UK's main operational data collected, it made publicly available, communication of data is limited to marketing / data products, comprehensive communication of UK seabed.			
Which stakeholders will benefit from it? What will they say about it? All UK marine industries, academics, NGO	How will we know if the idea or initiative is a success? Widely accepted & used as trusted data source across marine industries.	Who will be responsible for delivering and / or operating it? UK government	What are the main risks or challenges with the idea? - Expense - Data collected benefits one industry over others - Data not collected in enough detail effort
What support might be needed to make it happen? Funding. Communication of survey effort.	Three suggestions for further initiatives that will be needed to make the idea work: Use data standards agreed across industry & academia.		
What are the timescales / urgency? ASAP to allow for well-informed decisions on best use of seabed / conservation of environment -> identify key resource areas for industries of fisheries, agriculture, offshore wind...	Draw how it works:		

<b>Opportunity / Challenge title:</b> OPENNESS ACROSS GOV. AHEAD PROJECTS (E.G. WORKING GROUPS)			
<b>Brief description of the idea:</b> TO IMPROVE COHESION & MANAGEMENT ACROSS GOV. DEPTS, AGENCIES			
Which stakeholders will benefit from it? What will they say about it? - DATA COLLECTORS - DATA EXPLOITERS	How will we know if the idea or initiative is a success? THE NUMBER OF COLLECTED DATA SETS WILL INCREASE (TEND TO INCREASE)	Who will be responsible for delivering and / or operating it? SINGLE COORDINATOR AT UKHO	What are the main risks or challenges with the idea? - STAKEHOLDER BUY-IN - PUBLICISING IT - ENFORCEMENT - RESOURCES CREEP - ATTENTION CREEP
What support might be needed to make it happen? POTENTIAL LEGISLATION / REGULATION INTERNATIONAL STANDARDS	Three suggestions for further initiatives that will be needed to make the idea work: 1) RECOGNISED CENTRAL AUTHORITY FOR MARGINALISED 2) PORTAL / PLATFORM TO COLLABORATE & COMMUNICATE 3) PILOT PROGRAMME & FEEDBACK (E.G. MOD)		
What are the timescales / urgency? SET-UP: 2 YRS + ? + PILOT & ITERATION: 2-4 YRS? RUN TIME: ONGOING	Draw how it works: 		



# Data collection

**COLLECTION / ACCESSIBILITY / COLLABORATION / STANDARDS!**

**Opportunity / Challenge title:** Improve coordination to avoid duplication

**Brief description of the idea:** To designate Responsible Authority for feature types so particular organisations can manage their area of expertise  
 es. botany, cables, AON, fisheries

**Which stakeholders will benefit from it? What will they say about it?**  
 Everyone in marine industries + research Gov (Whole sector)

**How will we know if the idea or initiative is a success?**  
 Able to find data easily  
 P/B cost reduced

**Who will be responsible for delivering and / or operating it?**  
 Geospatial Commission with ind. Gov. agencies at the next level

**What are the main risks or challenges with the idea?**  
 Accounting creating it (financial)  
 Industry may not share. Funding is not available  
 Where does the data live now?

**What support might be needed to make it happen?**  
 High-level government to clear + mandate  
 All orgs to be involved  
 Industry to get on board with sharing

**Three suggestions for further initiatives that will be needed to make the idea work:**  
 Geospatial Commission to take on overall leadership  
 marine community lobbying government to do this  
 MoU between gov agencies with sharing

**What are the timescales / urgency?**  
 PSAP - money is currently wasted (NOW!)

**Draw how it works:**

**Opportunity / Challenge title:** How do we use (public bodies) coordinate collection + collection + standards

**Brief description of the idea:** To establish a single co-ordination centre for collecting data and standards to ensure strategic continuity

**Which stakeholders will benefit from it? What will they say about it?**  
 Public bodies (AIBs)  
 Public departments  
 Industries (insurance)  
 Academics (research)

**How will we know if the idea or initiative is a success?**  
 Reduced overlap  
 more data collected  
 more data accessible  
 public standards created

**Who will be responsible for delivering and / or operating it?**  
 UKHO - prime  
 Major stakeholders  
 - DfT, H&S, MOD, BES  
 - Data, GC, Marine (industrial)

**What are the main risks or challenges with the idea?**  
 - LO support to them  
 - understand what already exist  
 - Data security (inf + IP)

**What support might be needed to make it happen?**  
 All partners need willing to invest  
 Investment in data info  
 - UK scale promotion that is cost effective + standards

**Three suggestions for further initiatives that will be needed to make the idea work:**  
 - UKHO create portal to show when data has been collected, is being collected + is going to be collected; all to what standard  
 - A method to share + deliver data  
 - A governance forum to provide awareness + knowledge sharing + function

**What are the timescales / urgency?**  
 Less than 12 months - immediate impact  
 Broad involvement  
 The hardest / biggest effort will be getting partners involved

**Draw how it works:**

**Opportunity / Challenge title:** <sup>marine</sup> What data can I use?

**Brief description of the idea:** Central Catalogue of marine data, including authority + license T&Cs.

**Which stakeholders will benefit from it? What will they say about it?**  
 Area user of marine spatial data  
 Thank god!

**How will we know if the idea or initiative is a success?**  
 Increased innovation  
 greater traffic to websites, greater quality and analysis

**Who will be responsible for delivering and / or operating it?**  
 Gov. UK.

**What are the main risks or challenges with the idea?**  
 Silo, metadata quality, governance, harmonising T&Cs.

**What support might be needed to make it happen?**  
 Central govt coordination

**Three suggestions for further initiatives that will be needed to make the idea work:**  
 ✓ Communication campaign to get buy in.  
 3/ Agree metadata standards and governance require.  
 3/ harmonising T&Cs.

**What are the timescales / urgency?**  
 Two stage approach.  
 1/ buy in - urgent include simple website.  
 2/ build catalogue next 2 years

**Draw how it works:**

**Opportunity / Challenge title:** <sup>Entrepreneur promotion</sup> DRIVING INNOVATION THROUGH FUNDING.

**Brief description of the idea:** TO ENSURE SHORT - MEDIUM, and LONG-TERM INNOVATION FOR MARINE GEOSPATIAL DATA.

**Which stakeholders will benefit from it? What will they say about it?**  
 GOVT - INITIAL + INVESTMENT FOR LONG TERM SPANDED CONSULTANCIES, ANALYSIS PUBLIC OPERATORS.

**How will we know if the idea or initiative is a success?**  
 30% increase in funding for innovation from 2020 to 2040.  
 40% sea floor in next 10 years surveyed using innovative funding.

**Who will be responsible for delivering and / or operating it?**  
 BEIS

**What are the main risks or challenges with the idea?**  
 KPIs not well defined.  
 TOO LIMITED - VISION NOT AMBITIOUS ENOUGH.

**What support might be needed to make it happen?**  
 PRIVATE CAPITAL INVESTMENT.

**Three suggestions for further initiatives that will be needed to make the idea work:**  
 - STEMM education - early school years.  
 - enhance private philanthropic private industry & insurance through Tax credits.  
 - UN / IHO / GEBCO BUY IN.

**What are the timescales / urgency?**  
 2020 - 2040. 10% INCREASE YEAR ON YEAR + INNOVATION FUNDING.

**Draw how it works:**



**Stakeholder Workshop - 12th Nov 2019  
held at the Churchill War Rooms, London**