

Access to most of the world's data is restricted. This makes it hard to direct **investment** and **action** towards net zero.

We are creating a **web of net-zero data**

Connecting **finance, industry** and **environmental data**.

Making **data work harder** to **deliver net zero**.

ICEBREAKER ONE

THE TIME

FOR

THEORY

IS OVER

IcebreakerOne.org

MMXIX



**Icebreaker  
One**

## The Icebreaker One Trust Framework

Lack of trusted data flow is leading to poor decisions that make it more risky and difficult to quantify and invest in the transition to net-zero.

We're generating huge quantities of data from our financial systems, our built world and our environment. But we're missing the opportunity to use it to get to net zero. We need to connect it to see the whole picture. This can generate material insights into lowering emissions, adapting to climate change, and direct financing to impact.

This isn't a problem that needs new technology. Many attempts to consolidate data—new databases and portals—struggle to scale, and we're letting the opportunity to modernise slip through our fingers. Our economic and infrastructure systems are being digitised in a decentralised and distributed way. There is no 'centre' in a system like this: we need to **connect not collect**.

It is vital that data flow more easily, requiring we clarify the rules of the road. We want to reduce the friction of finding, accessing, and using both commercial and non-commercial net zero data in a timely way.

### What is Icebreaker One doing?

We're creating a **web of net-zero data**; connecting **finance, industry** and **environmental** data to help inform net-zero decisions. Much of this data is restricted, so we're enabling a web by creating policies and guardrails that ensure data is comparable, machine-readable and trusted. To achieve this we are working across industries and governments.

The **Icebreaker One Trust Framework** creates and applies rules to make data flow more easily between organisations. These principles & rules are co-designed via the **Icebreaker Forum**. The forum is a multidisciplinary, multisector collaboration that enables sectors to create net-zero data strategies and open standards.

# Our growing Icebreaker Constellation connects governments, regulatory, academic and non-profit bodies



## What we offer

### Net-zero data innovation

- Participate in a growing professional network
- Co-develop Open Standards to unlock solutions
- Explore, learn, share, innovate

### Discover & access net-zero data

- Find data (commercial and open data) for free
- Register and control your data as a supplier
- Access, share and use data as a user

## Powered by

### Icebreaking

*Our process to unlock and connect data*

- Understand user needs
- Develop policies that unlock data flow
- Create net-zero standards & solutions

### IB1 Trust Framework

*Codified policies that govern data sharing*

- Authenticated data publishing and data usage
- Secure access control
- Trusted net-zero data flow

Join as a supporter

[icebreakerone.org/supporter](https://icebreakerone.org/supporter)

Join as a member

[Open Energy first to market](#)

# Icebreaker One Clusters

Connecting data infrastructure across sectors

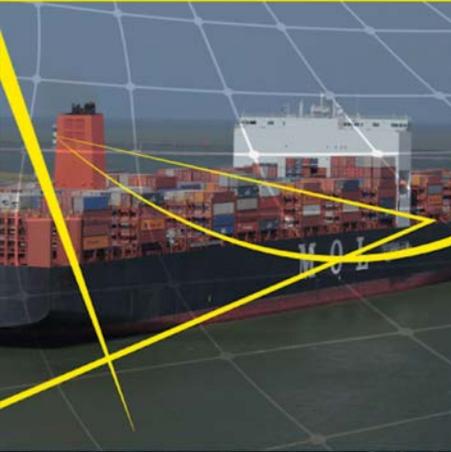
## AGRICULTURE



## BUILT WORLD



## TRANSPORT



## ENERGY



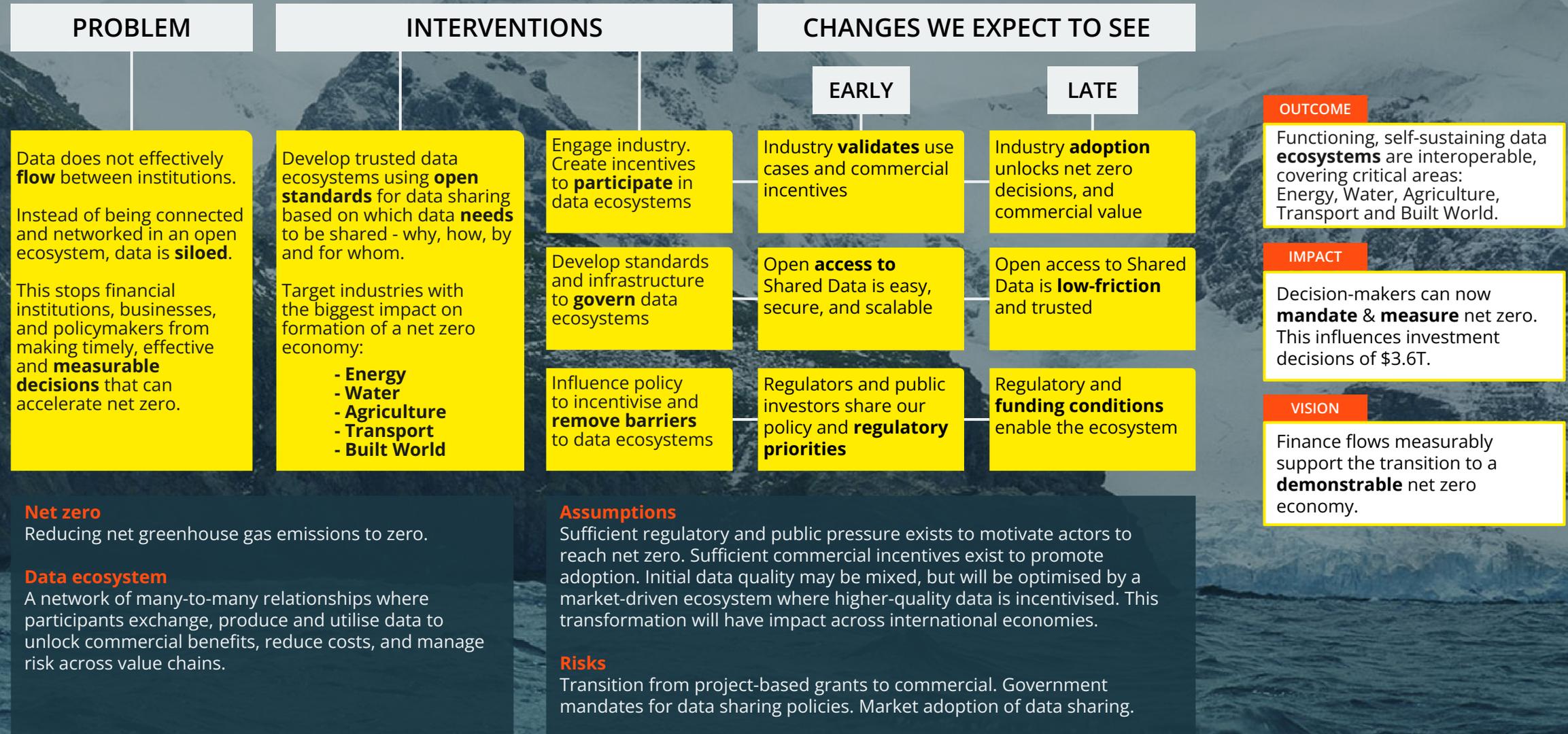
## WATER



We work across industry clusters that have the greatest impact on our climate and environment. Each have **ESG** and **climate finance** tracks to join up **finance, industry** and **environmental** impact data to Net Zero targets.

Backed by both UK and EU grant funding, Built World & Insurance was our first programme (SERI, £1.5M), producing industry-led Climate-Ready Financial Products for the built world and the global insurance sector. Energy has built on the learnings of SERI and Open Banking to develop Open Energy (£1.2M) to lay the foundations for sector-wide and cross-sector sharing of energy data (uses range from local authority planners to accelerating EV deployment).

# Our Theory of Change



# Understanding the Data Value Chain

DATA INFRASTRUCTURE

## Asset-level data

*Financial details, digital twins*

## Geospatial data

*Administrative, land usage, elevation*

## Environmental data

*In which assets exist - including physical infrastructure*

## Climate data

*Links to risk and hazards*

## Policy, regulatory and legal environment

*Global, national, regional*

DATA VALUE ADD

DATA IMPACT / USE

DATA CREATION

**Needs**  
*User, community, business, market, social*

DATA TRANSFORMATION

Analyse

Transform

User +  
Decisions  
⇒ Impact

Create

Acquire

Combine

AGRICULTURE

WATER

TRANSPORT

ENERGY

BUILT WORLD

IB1

IcebreakerOne.org  
Net-Zero Future

Icebreaker One unlocks access to data across domains and across sectors



# What is in a Net Zero Data Ecosystem and how can it help connect policy, investment and industry?

## Public and private sector investment & policy landscape

Regulation - Investment policy statements - Procurement rules - Policy positioning

### Data Suppliers

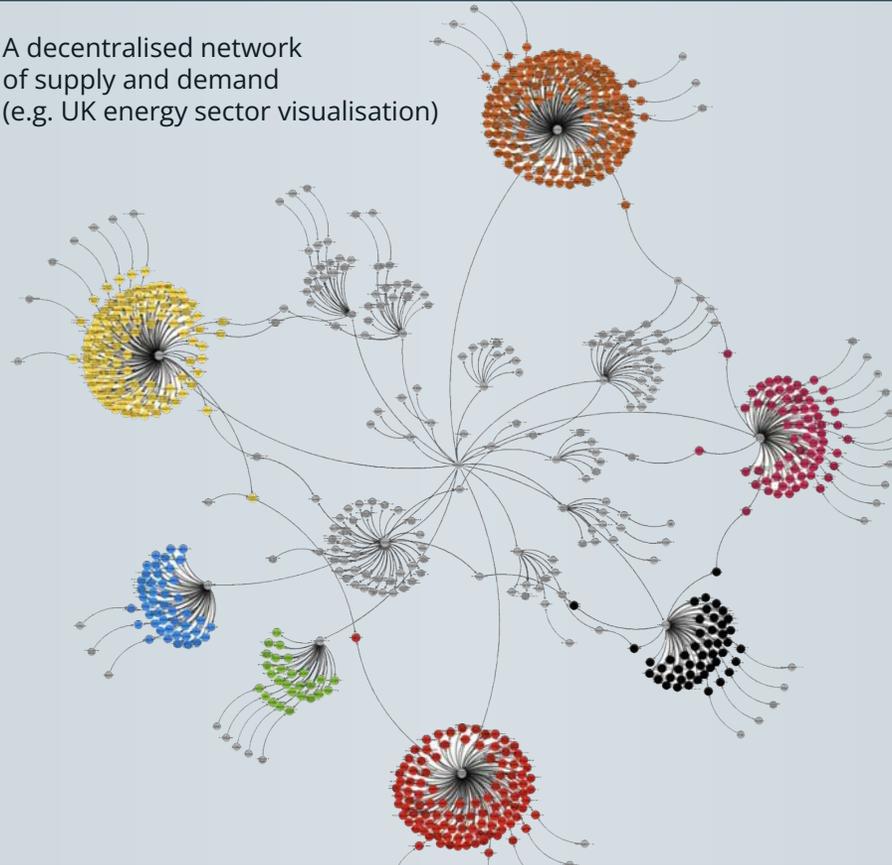
Millions of systems  
(e.g. assets, finance)

Thousands of providers  
(e.g. utilities, sensors, satellites)

Aggregators  
(e.g. market intelligence)

Market analysis  
(e.g. competition, ratings)

A decentralised network  
of supply and demand  
(e.g. UK energy sector visualisation)



### Data Users

Business applications  
(e.g. forward planning, efficiency)

Finance & compliance  
(e.g. TCFD, TNFD, Audit)

Engineering and industrial  
(e.g. efficiency, solutions)

Millions of systems  
(e.g. assets, finance)

## Investment community

Public funding - Private equity - Venture capital - Development banks - Asset managers - Pension funds



# The Icebreaker One Trust Framework

The **Icebreaker One Trust Framework** is a set of **policies** and **services** that **codify** and **automate** rules to unlock data discovery and access: making data flow efficiently and easily between organisations.

These policies & rules are co-developed via the **Icebreaker Forum**: a multi-disciplinary, multi-sector set of Advisory, Steering and Working Groups that enable experts to convene around open standards and develop their net-zero data strategies.

We deploy **services** that support delivery and accelerate action by making it faster to find, access, connect and use data across systems. This enables efficient data sharing for both **commercial** and **open** data at market-wide scale.

We are working with governments and regulators to catalyse the development of regulations that mandate interoperability, based on the success of the Open Banking Standard (which unlocked a \$20B market).

- **Cohesive** common rules
- **Interoperable** common processes
- **Legal** framework data rights, liability, redress
- **Controlled** rights-based consent management
- **Universal** open to the whole market

## Our advisory board has deep experience across finance, industry, climate, policy, and data



Founder of Icebreaker One, Gavin Starks has created, funded and run over a dozen organisations including:

CEO, Open Data Institute  
co-Chair, Open Banking Standard  
CEO, AMEE (global environmental intelligence)



Celeste Connors has 20 years experience in economic, environment, energy, and international development policy. She was Director for Environment and Climate Change at the National Security Council and National Economic Council in the White House.



Volker Buscher is Arup's Data Leader (Chief Data Officer). He is a member of Arup's Group Board Digital Executive, with responsibility for developing Arup's creativity with data at scale, and digital innovation across relevant industries.



Irene Graham is the CEO of the ScaleUp Institute. She is a former senior banker at Standard Chartered Bank and was the Managing Director at the BBA responsible for Commercial Banking.



Baroness Bryony Worthington is the Executive Director for Environmental Defense Fund, Europe. She is a leading expert on climate change and energy policy, and was instrumental to the adoption of the UK Climate Change Act.

We are actively seeking to expand our governance board

## Icecore (aka 'The Icebreakers' are our core operational team)

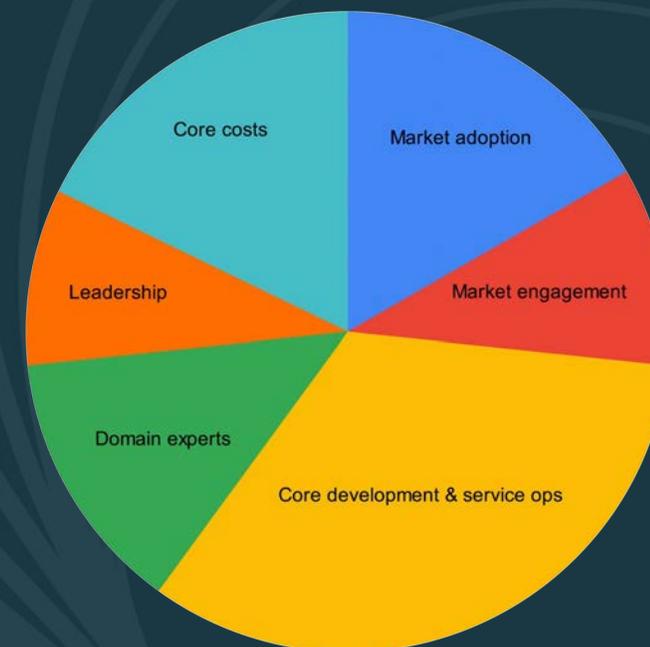
A wealth of experience across industry, government, policy, data, technology, financial markets, environmental impact, operations and communications.



Our core team combines leadership, programme management, research, development, community engagement and communications to bring together hundreds of participants from across the public and private sectors in the development of common solutions.

# The Icebreaker One (Limited by Guarantee) organisation: financial plan, design, roles and focus

P&L		2021	2022	2023	2024	2025	Total
<b>Income (£'000)</b>		<b>1,023</b>	<b>2,755</b>	<b>4,501</b>	<b>6,655</b>	<b>9,339</b>	<b>24,272</b>
Membership income	Market-led funding	273	1,255	2,501	3,655	6,339	14,022
Core funding	Public & philanthropic funding	750	1,500	2,000	3,000	3,000	10,250
Commercial members	Members and users	15	76	245	462	997	
<b>Direct Costs</b>		<b>450</b>	<b>1,818</b>	<b>2,971</b>	<b>4,392</b>	<b>6,164</b>	<b>15,795</b>
Market adoption	Direct business development	82	413	675	998	1,401	3,569
Market engagement	Advisory groups; evidence; comms	72	248	405	599	841	2,164
Core development & service ops	Development of operational services	225	826	1,350	1,997	2,802	7,200
Domain experts	Legal, technical and market consulting	72	331	540	799	1,121	2,862
<b>Gross margin</b>		<b>573</b>	<b>937</b>	<b>1,530</b>	<b>2,263</b>	<b>3,175</b>	<b>8,477</b>
<b>Indirect costs</b>		<b>521</b>	<b>744</b>	<b>1,215</b>	<b>1,797</b>	<b>2,522</b>	<b>6,799</b>
Leadership	Leadership, mgmt, team leads	256	220	360	532	747	2,116
Core costs	GFA, support, office, facilities	215	441	720	1,065	1,494	3,935
Contingency	% on income	51	83	135	200	280	749
<b>Total costs (D+I)</b>		<b>971</b>	<b>2,562</b>	<b>4,186</b>	<b>6,189</b>	<b>8,685</b>	<b>22,593</b>
<b>EBITDA</b>		<b>51</b>	<b>193</b>	<b>315</b>	<b>466</b>	<b>654</b>	
Reserve allocation target	Long term stability capital	51	138	225	333	467	1,214
Headcount		20	56	92	136	191	



We wish to secure philanthropic contributions of £3M/y (£21M/\$25M to 2030). Our business model is **membership based**, building on the existing successful membership models of Open Banking and the Open Data Institute (both of which were co-founded by Icebreaker One's founder). IB1 has forged strong relationship between the public & private sectors and we aim to maintain this through commercial (tiered membership) and non-commercial income (grant and philanthropic).

Membership fees will be decreased with scale to ensure the barrier to commercial participation is as affordable as possible. **Public and philanthropic funding** is used both to seed long-term industry-funded engagement, and to provide essential balance in protecting the public interest. In IB1's founding year it closed over £4M/\$5M in grant, philanthropic and commercial funding and has measured yet ambitious scaling plans.

IB1's organisational design allocates the resources needed to proactively engage with and convene stakeholders, understand their needs, iterate development to meet them, and deliver operational, supported services.

Substantial focus is on **market engagement** and **adoption**. Over time adoption, engagement, research and support will eclipse service development costs by proportion.

# The Icebreaker One organisation: use of funds, operational structure, and scale

Funds will be used to invest across:

<b>Market adoption</b>	Direct business development
<b>Market engagement</b>	Running stakeholder advisory and working groups, direct market research, evidence gathering, and outbound communications
<b>Platform development and user support</b>	Development of core service offerings and tools (Search, Access Control, ESG Toolkits)
<b>Domain experts</b>	Building multi-disciplinary teams, evincing our mission, organisational strength and USP
<b>Leadership &amp; GFA</b>	Management, finance, administration, facilities (online and in-person)

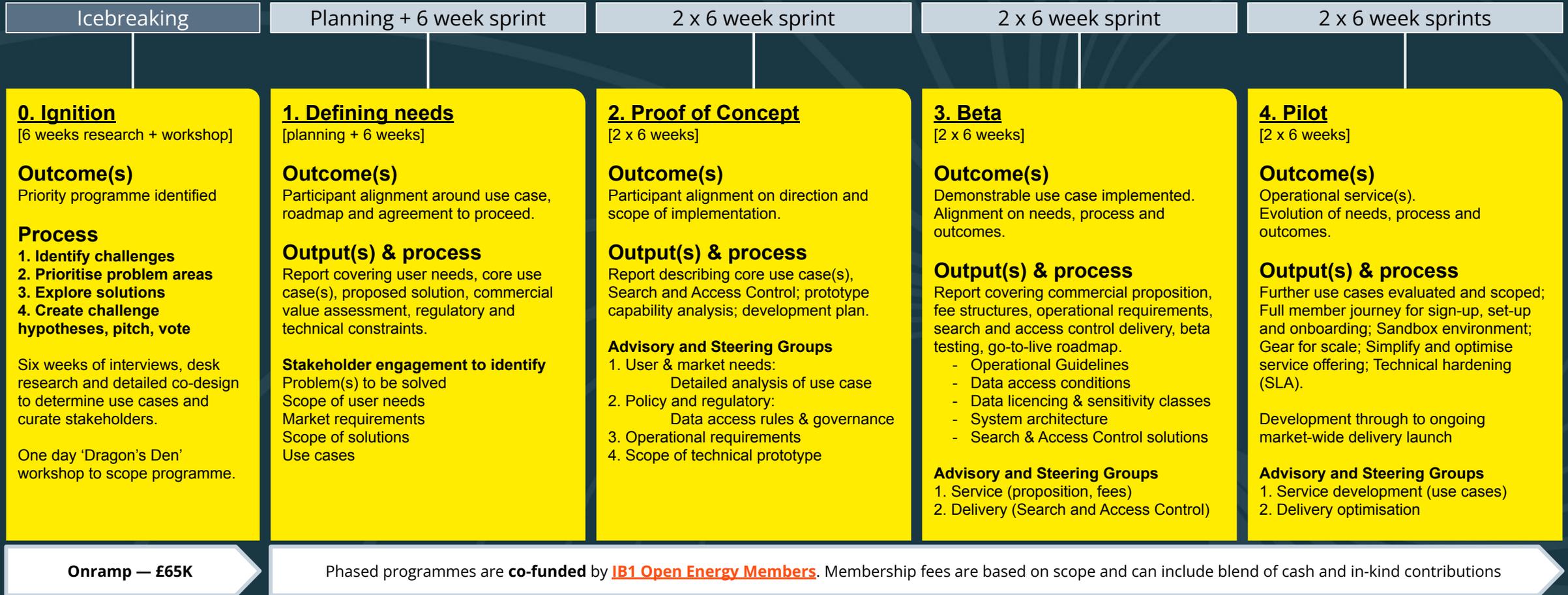
**The costs of scaling are highly non-linear:** service solutions can scale (like a Software-as-a-Service business) to thousands of organisations and millions of transactions. Domain-specific headcount is required to unlock sector-based scaling (Icebreaking). Core costs grow marginally with scale. Based on our non-profit approach we aim to aggressively **drive down the cost of paid membership** with scale to ensure low barriers to entry and adoption. This approach embeds revenue-sustainability derived from the 'stickiness' of SaaS business models (similar to ICANN that assigns top-level domain names).

During our first 18 months we have convened hundreds of leading organisations, working closely with industry, government and regulators. We scaled the team from 2 to over 50 while maintaining internal and external business controls, addressing risk management and continuity. We are now building on this foundational work, and expanding across sectors including **Energy, Transport, Water, Agriculture, Built World** covering **ESG** and **climate finance** to connect finance, industry and environmental data with Net Zero targets.

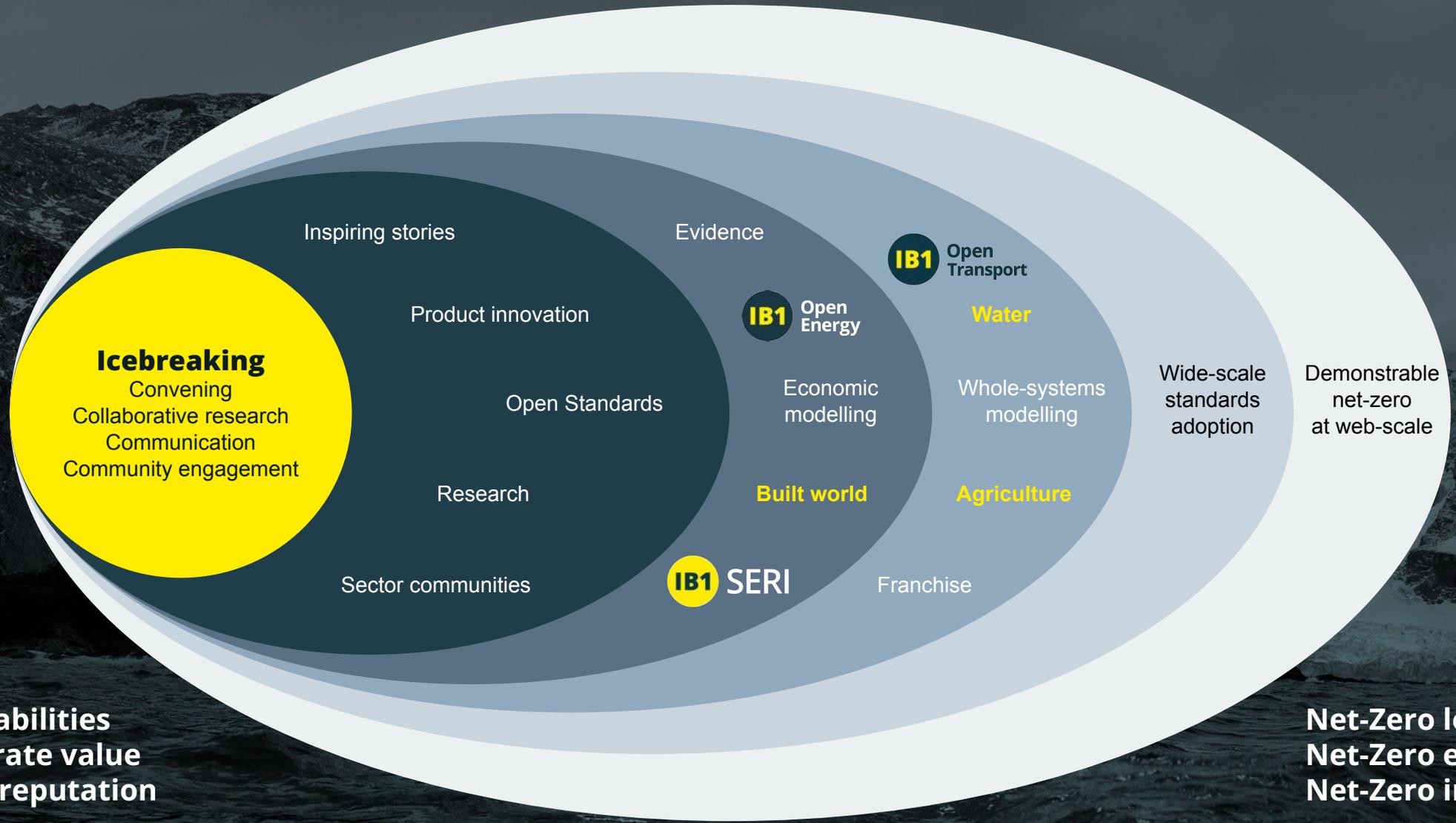
	Team
Market adoption	<b>Commercial Director</b> Account manager Business development manager Business development team
Market engagement	<b>Engagement Director</b> Membership Manager Membership Administrator Engagement manager Community Manager Support team manager Support teams
Core development	<b>Technical Director</b> API development lead Data science lead Deployment lead UX lead Tools development lead Web development lead Testing lead User research lead Technical delivery manager
Domain experts	<b>Product Marketing Director</b> Service design lead Innovation manager Innovation administrator Legal strategy lead Policy strategy lead Technology strategy lead Product manager Domain teams
Leadership	<b>CEO</b> Commercial Director Product Marketing Director Engagement Director Technical Director Communications Director Operations Director
Core	<b>Operations Director</b> Financial manager Programme manager Operations manager Executive assistant Leadership assistant Bid writer Internal systems manager Project manager(s) Legal

# IB1 Icebreaker sector programmes — from idea to delivery

A one year, stage-gated programme for engagement, innovation and impact, leading to sustainable change



# Our roadmap to a demonstrable Net Zero future by 2030 — a systemic catalyst to demonstrable Net Zero impact





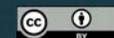
# Icebreaker One

## APPENDIX

### Context and programme examples



[IcebreakerOne.org](https://IcebreakerOne.org)



Unless otherwise stated, these slides are licensed under Creative Commons attribution licence.

Photos © Rachel Sussman - Antarctic Moss (5,500 years old, Elephant Island, Antarctica)

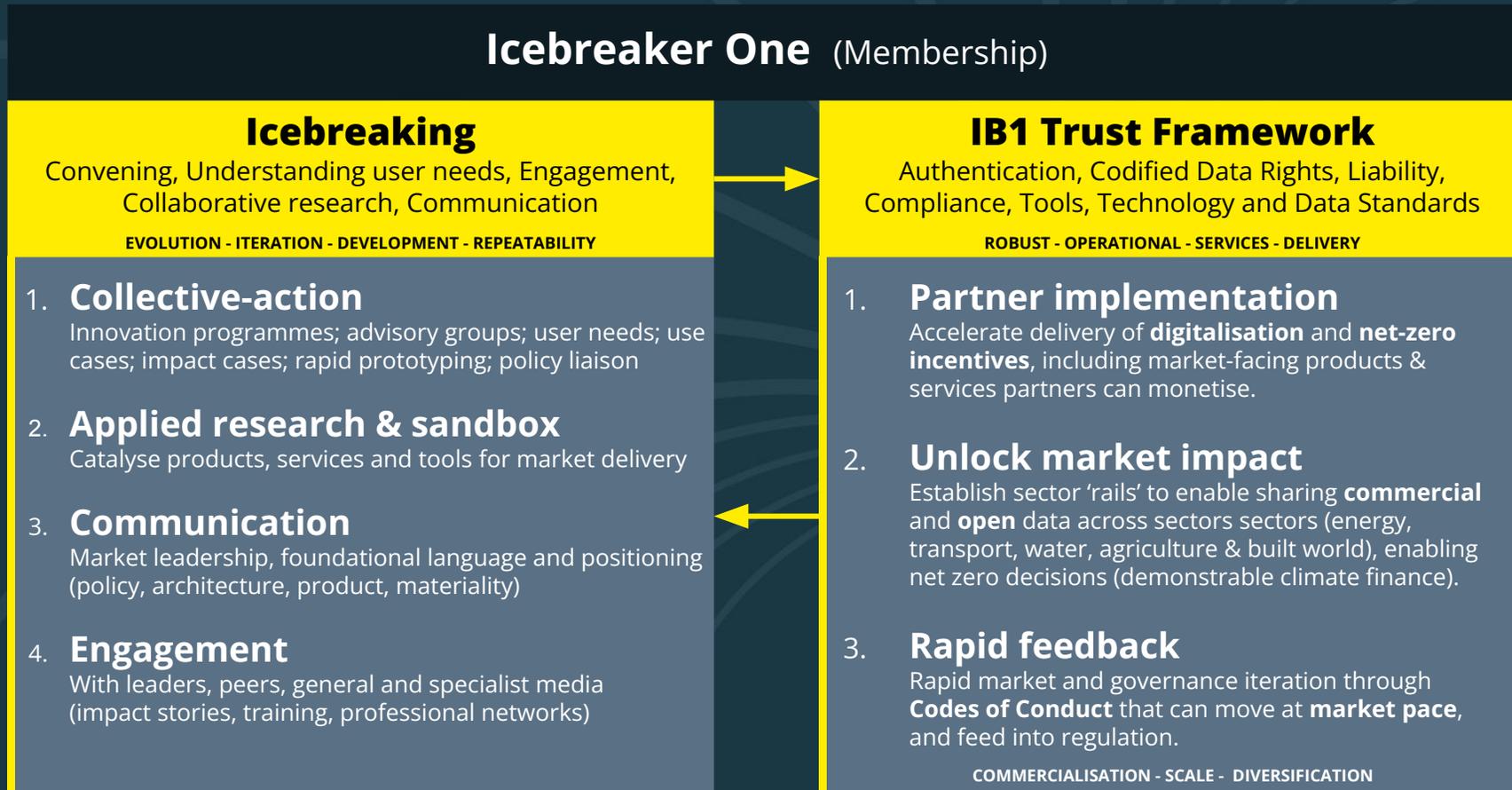
**"A tremendously successful initiative that has gone above and beyond what was expected."**

**"We are delighted to have IB1 as a partner, they've set the standard for what is possible"**

**"The most ambitious initiative we have funded."**

**"Excellent delivery and technical implementation. "**

[COMMENTS FROM FUNDER REVIEWS]



## What is in-scope to unlock trusted data flow?

A blend of characteristics including, but not limited to:

- **compulsion for firms to participate**

- liability models
- aligned terms and conditions
- dispute resolution processes
- consent and consent management
- data rights and access management
- authentication and identity management
- user experience design patterns

- **conformance and certification with standards**

- codification of legal frameworks
- implementation of regulatory permissions
- identification and accreditation of entities
- standardised security protocols
- logistic processes
- technology architecture (e.g. open APIs)
- operating principles, processes and practice
- performance (e.g. service level agreements)

Policy instruments

IB1 operational implementation

IB1 helps to identify, codify, and operationalise these areas in a manner that can be considered either 'best practice' through **industry adoption**, and/or **regulated** to ensure the whole market engages.

Our approach ensures that **openly licensed standards**, shared and common processes, principles and practice, are made compulsory to deliver cohesion and interoperability across the whole market.

## IB1 is an enabling structure for national and international policy priorities

IB1 is **aligned**, **additive**, and **enabling** to existing initiatives and can enable organisations to address **regulatory** requirements.

- 10-point plan for Green Industrial Revolution
- Industrial Strategy
- BEIS Smart Data strategy
- National Data Strategy
- National Digital Twin strategy
- Digitalisation Strategy and Action Plan
- COP26 Green Grids initiative
- Mission Innovation intergovernmental platform  
(China, Italy, UK, Germany, India, Japan, Brazil, Canada, EC, etc)

IB1 can enable regulators to **codify** policy, **monitor** implementation, and **adapt** to changing circumstances.

- Net Zero Innovation Portfolio
- FCA/PRA Climate Financial Risk Forum
- FCA Open Finance programme
- Office for Zero Emission Vehicles
- Energy Digitalisation Taskforce
- Green Growth agenda
- Cross-border data sharing for Net Zero
- Task Force on Climate-Related Financial Disclosures (TCFD)

Summary of partners and initiatives — <https://icebreakerone.org/constellation/>





#CLIMATE\_FINANCE

#BUILT\_WORLD

#NET\_ZERO\_DATA

# SERI

**Standard for Environment, Risk and Insurance**

“Create & market-test a **Climate-Ready Financial Product**”

Aon, Brit Insurance, ClimateWise, Arup, Lloyds Register

[IcebreakerOne.org](https://www.IcebreakerOne.org)



Unless otherwise stated, these slides are licensed under Creative Commons attribution licence.

Photos © Rachel Sussman - Antarctic Moss (5,500 years old, Elephant Island, Antarctica)

# SERI in data: reach, engagement and impact over a £1M, 15-month programme

51

Partner events

38

Advisory Group members

22

New climate finance products explored

32

'Climate-Ready Building Passport' use cases

470+

Attendees to public events

642k

Comms reach

31

Blog posts

5

Output reports

ARUP



AON  
Empower Results®

BRIT

DAIS

Bird & Bird

Willis  
Towers  
Watson



HINDLEWORLD  
RISK SOLUTIONS

OASIS  
LOSS MODELLING  
FRAMEWORK



<<<<  
Open Climate Fix



passivSYSTEMS

UN  
environment  
programme

solvère

AGVESTO

# SERI defined a market architecture, product examples and pathway to Climate-Ready financial products



- [The Principles and Practices of a Trusted Data Ecosystem](#)
- [SERI: The Potential Transformation in the Insurance Market](#)
- [An ecosystem concept map for the Standard for Environment, Risk, and Insurance use case which displays how data sharing can occur in the insurance sector](#)
- [Climate-Ready Building Passport Use Case Data Sharing to Enable Net Zero Insurance](#)
- [A Pathway Towards SERI: Operational and Technical Considerations](#)
- [Envisioning SERI's Regulatory and Data Sharing Framework](#)



#ENERGY

#NET\_ZERO\_DATA

#CLIMATE\_FINANCE

# Open Energy

**Net Zero Data discovery, access and control**

Vision — “Create an **open marketplace for energy data**”

UK-wide collaboration including government, industry and academia including energy, transport and finance actors.

[IcebreakerOne.org](https://IcebreakerOne.org)



Unless otherwise stated, these slides are licensed under Creative Commons attribution licence.

Photos © Rachel Sussman - Antarctic Moss (500 years old Elephant Island, Antarctica)

# Open Energy reach, engagement and impact in one year—laying the foundations of net-zero data infrastructure

16

Formal advisory & steering group meetings

134

Individual collaborators (Steering, Advisory, Review)

75

Organisations represented

10

Formal consultations

1,530

Attendees to over 30 public events

3.2M

Comms reach

40

Blog posts

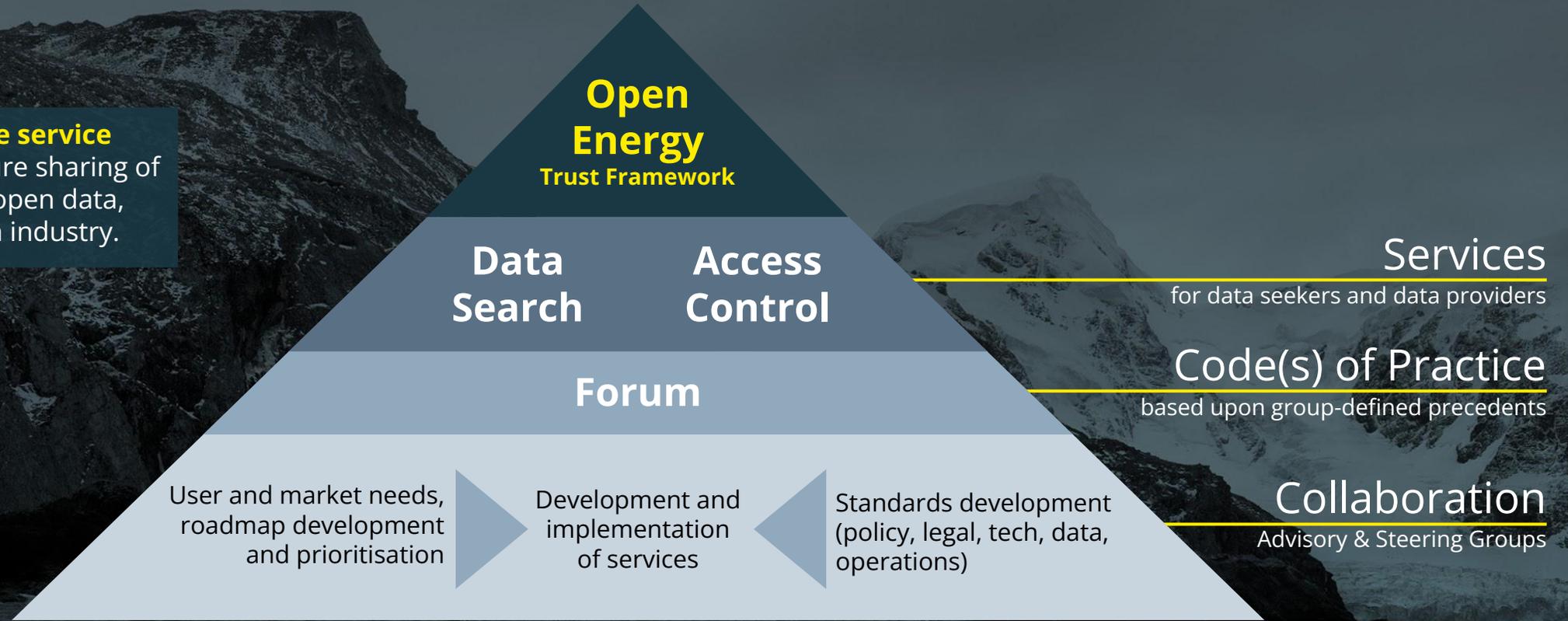
5

Output reports





An **public-private service** that enables secure sharing of commercial and open data, **co-designed** with industry.



NB: Data remains with the data supplier until consent is provided, upon which it is transferred directly from the supplier to the data user. The **Trust Framework** helps define and operationalise this process.

# Connected programmes across public & private sectors: Climate Finance, Data Gaps and Risk

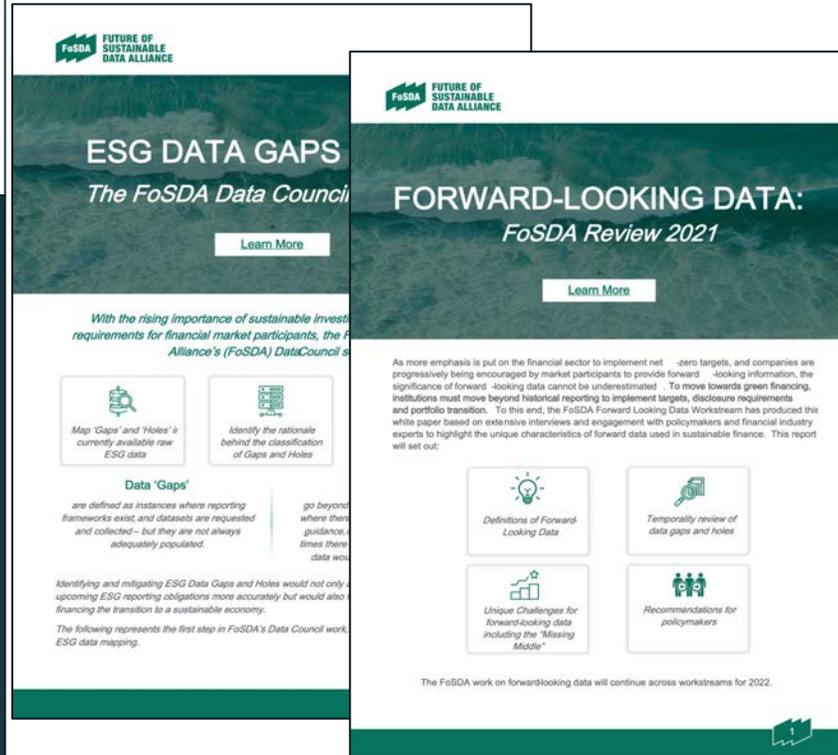


IB1 strategic programme

The Future of Sustainable Data Alliance (FoSDA) exists to “identify and accelerate the reliable, actionable ESG data and related technology that is needed for improved investor decision making on the global journey to sustainable development”.

Spearheaded by Refinitiv and the World Economic Forum, FoSDA was formed in Davos in January 2020.

Icebreaker One is now running its ongoing global development with corporate members including the **London Stock Exchange, Moodys, Bloomberg, City of London Corporation** and the **Green Bonds Initiative**.



## CFRF Guide Innovation

Including a case study on Icebreaker One

The Climate Financial Risk Forum (CFRF) is an industry forum jointly convened by the PRA and FCA to build capacity and share best practice—to advance the sector’s responses to the financial risks from climate change.

The CFRF set up four technical working groups on disclosure, scenario analysis, risk management and innovation. Icebreaker One has been participating in its Innovation track

<https://icebreakerone.org/constellation/future-of-sustainable-data-alliance/>

<https://icebreakerone.org/constellation/climate-financial-risk-forum/>

# Comparing Open Banking and Open Energy

Today:  
High-friction  
data sharing

Future:  
Low-friction  
data sharing



	Prototyping (3 months)	MVP (1 year)	Implementation (2-3 years)	Growth
Open Banking	Treasury Industry Open Data Institute	Regulator Industry Dedicated Open Banking NGO (£20M cost)	Regulator Industry Open Banking NGO Major banks \$7B market	Regulator Industry Open Banking NGO Major banks \$40B (global market)
Open Energy	IUK, BIES, Ofgem Industry Icebreaker One	IUK, BIES, Ofgem Industry Icebreaker One (£2M cost)	tbc	tbc

Icebreaker One is taking the blueprint of Open Banking across sectors, with a Net Zero imperative.

## Videos

Our work with the Climate Financial Risk Forum (including FCA, PRA and BoE)

<https://icebreakerone.org/constellation/climate-financial-risk-forum/>

Our international panel session in the Green Zone at COP26

<https://icebreakerone.org/2021/10/13/icebreaker-one-at-cop26/>

Our comprehensive project presentation to UK Government on their investment in Open Energy

<https://energy.icebreakerone.org/2021/09/14/webinar-open-energy-launches-pilot-phase/>



International development of Open Energy

<https://icebreakerone.org/constellation/mission-innovation-green-powered-future/>

**PRODUCERS**

Gavin Starks  
Kathryn Corrick  
Michelle Prescott  
Gea Mikic

**TECH / DATA WRANGLERS**

Frank Wales  
Tom Hukins  
Kasia Kulma  
Tom Oinn  
Ed Dowding

**DOMAIN EXPERTS**

Miles Cheetham  
Jeremy Hindle  
Vichi Chandra  
Ross Crear  
Emily Judson  
Nick Tyrone  
Lily Zhang  
Jannah Patchay  
Aneysha Minocha  
Sara Vaughan  
Cristobal Pollman  
Faith Reynolds

**OPERATIONS & SUPPORT**

Zoe Swiderski  
Siobhan McVeigh  
Caroline Fraser  
Sam Haines

**ECOSYSTEM DEVELOPMENT**

Michelle Brook  
Tom de Grunwald  
Tim Werkhoven  
Alpesh Doshi  
Chris Adams

**COMMUNICATIONS**

Laura Townshend  
Rachel Fernandez-Vidal  
Emma Thwaites  
Adrian Philpott  
Anne Edimo  
Zoe Philpott

2021 CREDITS

