

Icebreaker One

Bridging the data gaps between
finance, assets, policy and science
to deliver a zero-carbon future

Mitigation

Adaptation

Resilience

Repair

Preparedness

Insurance

Investment

Infrastructure

Vulnerability

Asset management

Disaster response

Disaster risk reduction

Hazards

Exposure

Risk Modelling

Policy

Central planning

State planning

Municipal planning

Reconstruction

Transform the climate crisis into economic innovation that addresses the problem

We are limiting our creativity in finding new models, products and market solutions.

Our ability to join up and use existing and emerging data to address our environmental crises is stifled. The inhibitor to innovation is not technology—it is culture.

Asset owners, funders and insurers are complex value chains today: not working with data at-scale due to high transaction costs.

We have an ocean of available capital.

Lack of quality, timely, relevant data flow is leading to misallocation of resources, missed opportunities and catastrophic risks on global balance sheets.

Digital transformation is reaching maturity across industries—now is the time to build-in new uses for data. And, if we solve for climate change, we will unlock solutions for other areas.

Icebreaker One collaboration programmes

Mission

Bridge the gaps between science and policy, engineering and finance to deliver provable carbon net-zero outcomes.

We work with partners to unlock innovation to deliver robust open marketplaces and services.

Business & market innovation

Enable collaboration that accelerates use of existing tools and resolves blockers.

We are the collective voice for our partners, drawing on their strategic insight, practical experience & knowledge to provide knowledge exchange, leadership and engagement.

Product innovation

Unlock access to new, relevant & better quality data, enabling innovation that better quantifies risk and drives investment behaviours.

Our programmes illuminate gaps and opportunities that can be delivered through open market innovation.

Market efficiency

Improve discovery, trade and usage of data.

To reduce cost, friction and address blockers, we work with partners to create common principles and practices that enable action at scale.

Data infrastructure governance

Create a robust data infrastructure to support credible climate action.

To help drive demonstrable outcomes, we make it easier and safer for organisations to share information while addressing IP, liabilities and security issues.

Policy innovation & regulation

Join up environmental, economic and data policy and regulation to achieve our climate targets.

We identify relevant national, local and organisational interventions that drive change and support innovation.

Stories, Evidence, Research & Skills

Address a culture change towards systems thinking.

We work to identify stories, build the evidence base and business case for economic and policy interventions, and develop resources to support skills development.

"Our biggest stranded assets are not our coal plants, they are our cities" — Aromar Revi, IIHS

Financial markets

Insurance
Financing
Pensions

Public sector

Policy
Regulation
Green growth

Asset owners

Large portfolios
Impacted by climate change
Contributors to climate change

Science

Baseline data
Scenarios, insight & models
Predictive analysis

Icebreaker One aims to influence investment decisions of \$3.6T/year to deliver net-zero or net-negative outcomes, unlocking a marketplace for data sharing through common principles and practice, and \$300M in leveraged finance for innovation.

ARUP

Willis
Towers
Watson

UN
environment

eit Climate-KIC

Bird & Bird

AON

Santam

blue ventures
beyond conservation

SUFINDA

OASIS

cenfri

resilience
brokers

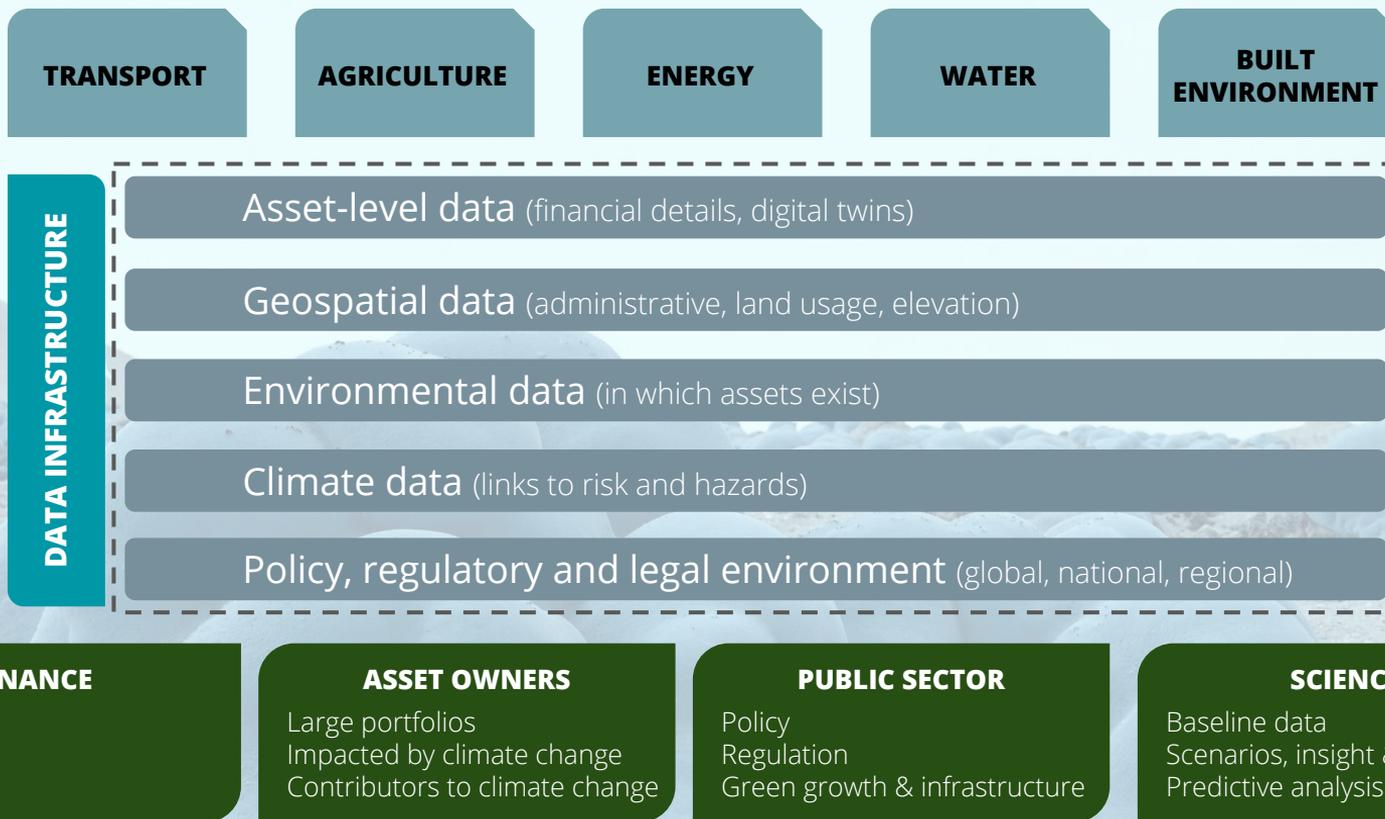
UNIVERSITY OF
CAMBRIDGE

Global
Partnership
for Sustainable
Development Data

UNIVERSITY OF
OXFORD

solvère

We are helping to develop the data infrastructure for climate-ready investment



We are helping to define standards, principles & practice that will unlock data flow

ICEE
SERI FRAMEWORK

RESEARCH LEARNING INNOVATION COMMUNICATION

Business cases
Policy cases
Acceleration
User needs
Evidence
Stories

GOVERNANCE

Market rules
Policy & regulation
Certification

DATA INFRASTRUCTURE

Principles & practice
Values & commitments

ENVIRONMENTAL RISK REDUCTION

Preparedness; planning; disaster risk reduction; disaster response; resilience; reconstruction; mitigation; sustainability; scientific evidence

FINANCIAL INSTRUMENT DESIGN

Multimodal investment; insurance; funds; bonds; design and delivery

RISK MODELLING

Risk identification; forecasting; vulnerability; hazards; exposure

DISCOVERY AND ACCESS INTERFACES

Search and access available to both humans & machines

PUBLISHING & ACCESS RULES

Licensing that enables granular search, access & use

PUBLISHING & ACCESS PROCESSES

Web-based solutions to data publishing

METADATA

DATA MODELS

TAXONOMIES

ONTOLOGIES

CODIFIED DATA & ALGORITHMS

originators; providers; aggregators; sensors; registries

CODIFIED SCIENCE

IMPACT

USE

APPLICATION

DISCOVERY & ACCESS

PUBLISHING RULES

DATA &
ALGORITHMS

 in scope

<http://bit.ly/ib1-seri>

Our leadership & advisory board include domain experts across innovation, data and policy



Founder of Icebreaker One, Gavin Starks has created, funded and run over a dozen organisations including as CEO of the Open Data Institute, Co-Chair of the Open Banking Standard and CEO of global environmental intelligence company, AMEE.



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.



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.



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 our industries.



Julie Calkins is Head of Risk Information for Climate Adaptation at Climate-KIC. She holds a PhD in Environmental Science, and has worked with the British Antarctic Survey.

Our Icebreakers — a constellation of experts



Dozens of domain experts in disaster risk modelling, insurance, financial instruments, ecosystems, risk analysis, communications, design innovation, urban infrastructure and systems design.



Claire Souch has 20 years' experience of catastrophe risk modelling in the global re-/insurance industry across both property and agriculture.



Stuart Fraser is a disaster and climate risk specialist working in the insurance and development sectors, and striving to improve risk insights through more effective sharing of risk information.



Kathryn Corrick is a business strategist and educator who enjoys helping people cut through complexity. She is founding partner of Corrick, Wales & Partners LLP who work with companies to innovate responsibly.



Adrian Philpott is an award winning brand creative director who works across public and private sectors in cultural and corporate organisations, strategically using art, design and story to trigger behavioural change in-line with the sustainable development goals.



Dickie Whitaker has 30 years' experience in the (Re)Insurance business and for the last 20 years has specialised in risk and innovation, linking academia, government and finance. He is chief executive of Oasis Loss Modelling Framework Ltd.



Cynthia Rudge has 30 years of corporate, venture, M&A and entrepreneurial experience across organisations including Richardson Securities, Merrill Lynch, Wood Gundy and Oliver Wyman. She is Director of Open Banking at Dgen.



Tim Davies is an interdisciplinary social researcher, consultant and facilitator working on projects that harness data, technology and collaboration for social change.



Jeremy Hindle has 35 years of reinsurance industry experience in property catastrophe underwriting, catastrophe model use and validation, with enterprise risk management combining all non-life risk aggregation insights with data analytics.



Emma Thwaites is a former Cabinet Office head of strategic communications and a storyteller. She founded her own agency in 2012 and works with clients in science, technology and engineering.



Srin Sundaram is Founder and CEO of Agvesto, an agricultural parametric insurance company spanning UK, USA and India. He co-founded Aire, a financial technology startup with a new credit score to help people to qualify for essential financial products.



Gea Mikic is a multilingual programme lead with experience in disaster risk reduction, climate risk and urban resilience projects.



Fiddian Warman is a creative technologist and founder of the BAFTA-winning agency, Soda. Crossing arts, culture and communications his work focuses on learning, social change and the public understanding of science.



Ben Cotton is a partner in Dais Partnership LLP. He has advised governments, supranationals, NGOs, funds, banks, corporates and others on the creation and use of instruments for funds, derivatives, equity, M&A, environmental and other finance.



Jack Kelly is a machine learning researcher who's terrified by climate change. Jack left Google DeepMind to co-found Open Climate Fix, a non-profit entirely focused on harnessing the power of 100s of developers and open science to mitigate climate change at scale.

Needs: history, context and evolution

An 18-month consultation (2018-2019) with public & private sector financial organisations to understand their needs revealed

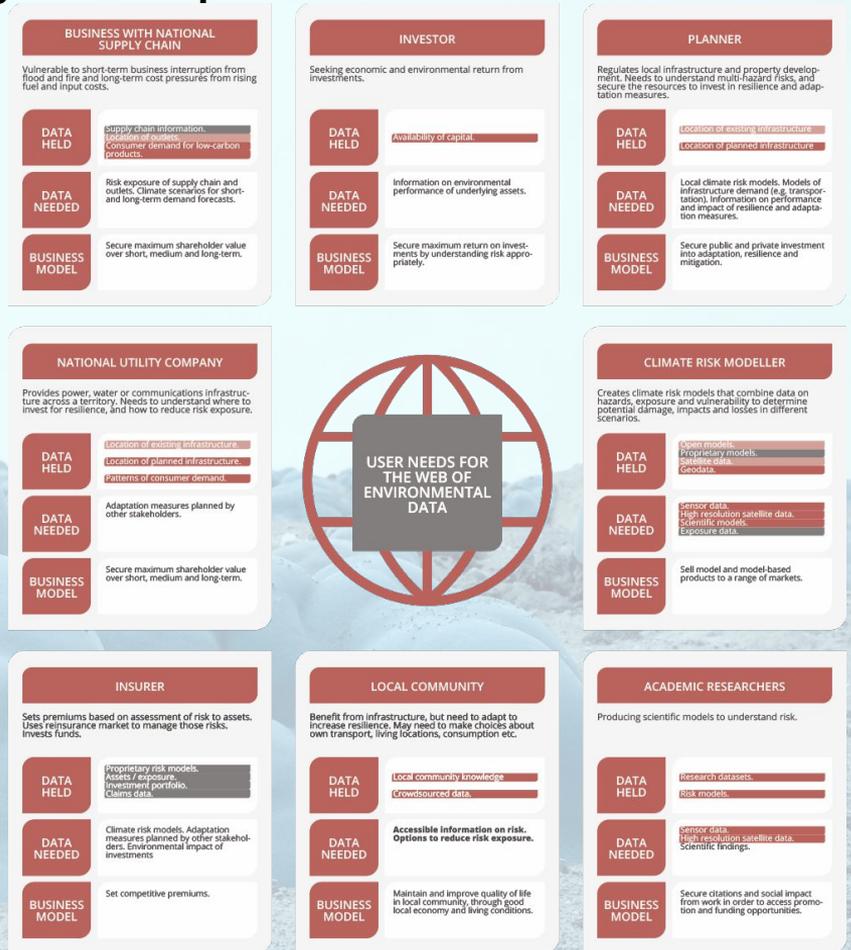
1. A need to convene public & private sector actors to help share insights, opportunities and threats
2. A need to better map investment to impact both in pre-funding analysis and post-execution reporting
3. A need to demonstrate material, long-term impact that reduces risk and increases returns
4. A need to stimulate innovation that brings together public & private sector expertise to maximise public good and private returns
5. A need to reduce friction in data sharing, addressing IP and related legal and security issues

User needs: address today's challenges and catalyse scale-up solutions

Icebreaker One is driven by user needs, seeking to bridge the data gaps between policy and finance. User needs are derived directly from cross-industry working groups that articulate what works, what doesn't and where opportunities exist.

Icebreaker One will unlock capital and transform behaviours by creating a proactive culture of risk-informed decisions. For example, for:

- Investors**, both public and private, who need to understand the risks and outcomes from their investments, to maximise investment in carbon net-zero or carbon net-negative outcomes, and hold investees to account with facts while minimising reporting costs.
- Asset and infrastructure owners**, who require oversight of the systemic, nonlinear risks they are facing, to better prepare for disasters, to continuously optimise the efficiency of, and minimise impacts from, their asset base.
- Insurers**, who need to set premiums based on the assessment of risks to their assets, to provide a new class of insurance combined with market standard risk transparency and openness, and to create new risk-informed investment opportunities that are demonstrably carbon net-zero.
- Urban planners**, who need access to multi-risk models that can allow them to plan infrastructure investment, to inform strategic planning and share the results in forms that can feed into insurance and investment models.
- Engineers**, who need access to real-world performance data to enable impact and resilience to be correctly addressed at the design phase.
- Policy makers**, who need to create and apply interventions that lead to increased resilience, enabling businesses and citizens to make choices about their infrastructure, transport, living locations and consumption.

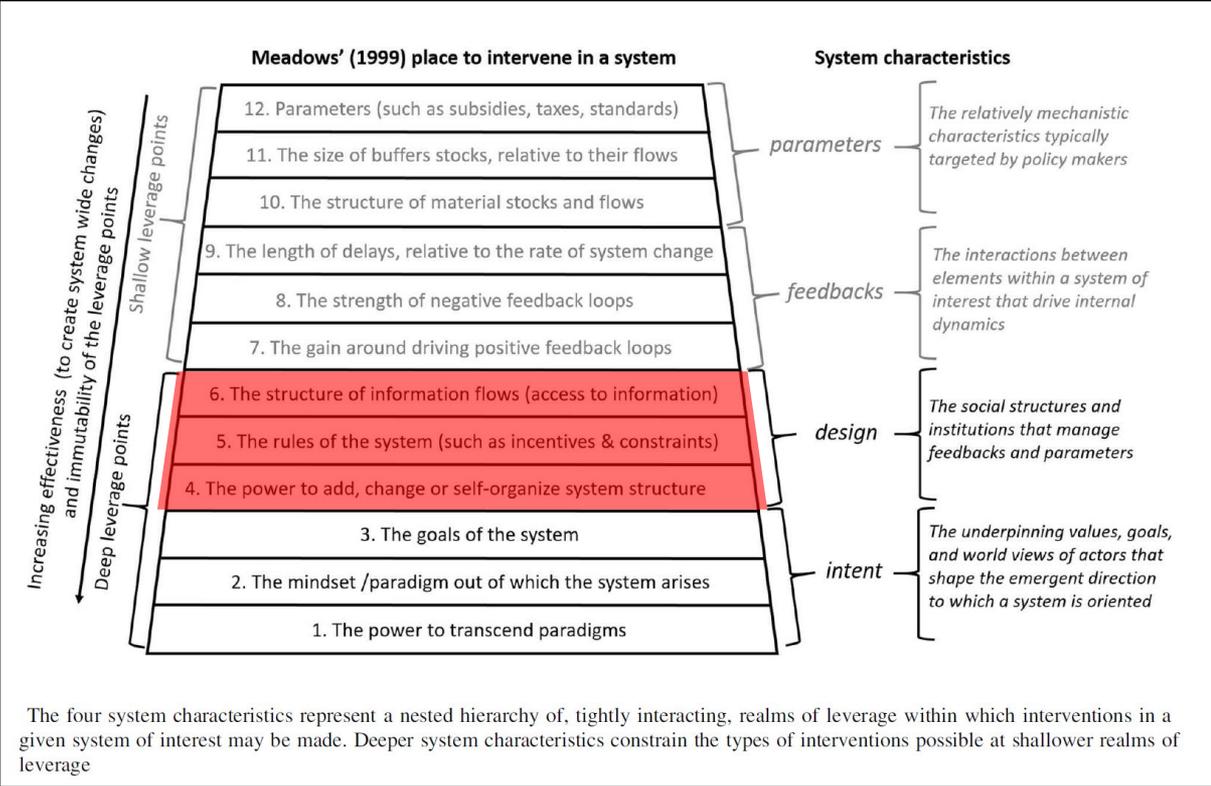


Where in the ecosystem can Icebreaker One standards help unlock value?

"climate change is no longer primarily an issue of technology development but one of technology diffusion"
[Hofstetter](#)

Icebreaker One standards help unlock access to information by defining rules, incentives and constraints that reduce transactional friction.

We address the question "How can we make it easy to find, access and share information that will help us make and instrument our decisions"?



The adaptation of Donella Meadows' "Leverage Points" concept to sustainability transitions (Abson et al. 2016). System intent refers to the values, goals, and world views of actors who shape the direction of the system's evolution.