



Icebreaker One

Delivering robust,
decentralised data
infrastructure to
accelerate net zero

Trusted data, urgently needed

For the earth to remain a livable planet, greenhouse gas emissions must be reduced [by 45% by 2030](#) and reach net zero by 2050.

Data has a vital role to play in delivering [net zero impact](#). Good data is vital for: verifying that organisations are meeting their commitments; enabling investors to shift their investments towards sustainable finance; and driving green energy innovation and production.

But despite generating huge quantities of data every day, we're not making the most of it. Even when data is shared, it's seen as an exercise in after-the-fact reporting, rather than continuous flows of well-structured, reliable data.

We're letting opportunity slip through our fingers. Poor data leads to poor decisions that make it more difficult to quantify, verify, invest and take action to transition to net zero.

There is an urgent need for a new approach: one that enables organisations to connect and share high-quality data for net zero at web scale. The time for theory is over.

About Icebreaker One

Icebreaker One (IB1) makes data work harder to deliver net zero.

We reduce the friction of finding, accessing, using and sharing data for net zero by:

1. [Icebreaking](#): based on user needs, Icebreaking is our structured process for co-creating new data-sharing principles, rules and standards to address a net zero challenge. We convene industry, regulators, trade associations and government to define how data sharing *should* work. Successful Icebreaking requires collaboration across commercial, legal, technical, policy and communications disciplines.

2. [Delivering Schemes](#): Schemes operationalise the principles, rules and standards defined through Icebreaking. Schemes define what data can be shared, why, by whom and how, to address the given challenge or cause. Schemes provide the tooling to enable the creation of new impact-based products and services, within a sector or that span many sectors.

3. [Delivering Trust Frameworks](#): Trust Frameworks provide the underpinning governance, legal and technical services needed to enable data exchange between many organisations, and ensure this data is usable, comparable, machine-readable and trusted. Trust Frameworks enable Schemes to function. We've started building them for energy, water, transport, agriculture and the built world.

We undertake applied R&D projects and maintain an active community of members who contribute to our work. We also engage policymakers, as government policies on both climate and data are increasing demand for our work, and as regulatory intervention is often necessary to drive industry to engage.

Our progress

We're making great progress across several sectors, including:

[Perseus](#): a Scheme that will help businesses to access over \$100B of green finance by automating assurable sustainability reporting for every SME in the UK. Perseus was featured at COP28.

Participants include:



[Open Energy](#): a Trust Framework for the energy sector to open up access to data. It includes a registry of verified organisations, common definitions and data assurance services.

[Open Net Zero](#): a global catalogue of over 50,000 net zero datasets. It makes data discoverable, assurable and usable, including both open data and restricted data from commercial sources. It demonstrates what is possible when trusted approaches are in place.

Our work has been funded through a combination of project-based income and philanthropic grants. We have generated over £6M (\$8M) in combined revenue so far.

Connect > collect

We've seen many attempts to 'bring all the climate data into one place'.

But centralised databases and portals come and go. These approaches tend to create expensive, fragile systems that don't meet a diverse range of user needs and they struggle to scale.

IB1 is not a technology vendor and we don't ever host data or provide analysis services. Instead, we drive the discovery, design and development of the *minimal infrastructure needed to unlock data flow*.

Rather than bring data into a central place, IB1's Trust Frameworks consist of six services:

- **Identity verification & management.**
- **Data protection & privacy foundations.**
- **Security standards.**
- **Systems interoperability.**
- **Legal & regulatory compliance.**
- **Governance mechanisms.**

Schemes do not pool data either. They are *rulebooks* that encompass very specific processes, practices and tools needed to enable data sharing for a particular challenge or cause.

Importantly, this approach provides [assurable data](#). It gives confidence to people inside companies that they are allowed to share data externally, as well as clarity to others that they have permission to build new products and services with it.

Robust data governance

Making data work harder for net zero isn't a technology problem; it's a collective action problem.

As with data spaces¹, it is "crucial to have a neutral orchestrator facilitating the exchanges between participants before the operations and governance of a data ecosystem solidifies". IB1 is the neutral orchestrator for net-zero data.

We approach our work with five core principles:

1. Trusted data is essential to delivering net zero.
2. Access to net-zero data must be as open as possible.

3. Rules for data sharing must address the needs of public, private, academic, and third-sector entities.
4. Net-zero data infrastructure must be governed openly and independently.
5. Net-zero data infrastructure requires mandates for engagement.

We enable groups of organisations to collectively decide and govern how Icebreaking, Trust Frameworks and Schemes work.

We facilitate the *design and implementation* of Schemes to determine:

- **User needs & impact:** commercial priorities, business cases, and prospective new products and services.
- **Technical:** ontologies, APIs and schemas.
- **Licensing & legal:** data licences, modes of redress and liability frameworks.
- **Engagement & communications:** common language, stakeholder engagement and recruitment.
- **Policy:** necessary changes to corporate policy and regulatory interventions.

IB1 ensures that no individual or entity can take disproportionate or unaccountable control of net zero data. With a laser focus on end user needs over individual priorities, we also ensure participants are held accountable for progress.

A world-class team

IB1 is an independent non-profit organisation headquartered in London.

Our [multidisciplinary team](#) has experience across research, technology, product, governance, law, public policy and engagement, as well as deep expertise in various climate issues.

Our founder, [Gavin Starks](#), has founded and run over a dozen organisations. As Co-Chair of the [Open Banking Standard](#), Gavin played a key role in enabling data to flow across financial systems—now with 10M UK users, application in 80+ countries and projected to be a \$12B market.

The team is supported by an experienced [Advisory Board](#), spanning climate and the environment, energy, finance, and sustainable capitalism.

¹ <https://www.sitra.fi/en/articles/eight-lessons-from-building-data-spaces>

Sustainable data infrastructure

Not all of the data infrastructure we need to deliver net zero will be built if it's left to the market alone.

Philanthropy has an urgent role to play in unlocking data flow and de-risking commercial funding further down the line.

Philanthropic capital is also necessary to ensure that foundational data infrastructure is stewarded by strong, independent actors not motivated by profit². Otherwise, there's a risk of mistrust, causing data to remain locked up in project, institution or topic-oriented silos, or that the net zero issues addressed by data will be dictated by commercial actors.

Organisations like IB1 have been described as *Gazelles*³—a new breed of organisation for the 21st Century.

We are not trying to be a *Unicorn* pumped with venture capital and optimised only for shareholder return, nor a *Show Pony* sustained only with grant funding and with limited real-world value. We agree that “it's time to blaze a middle path in which philanthropic capital funds a variety of data service providers that are accountable to paying customers”.

Perseus, for example, requires around £5M (\$6.25M) investment over three years to set up. This Scheme is being funded by over 60 organisations, including startups and banks, paying fees of [up to £150K per year](#). After this, participating organisations will pay an annual fee to IB1 to maintain and further develop the Scheme, as well as use the underlying Trust Framework that enables it to work.

Our ask: help us scale up

At IB1, we've made a strong start to making data work harder to deliver net zero.

We've done this through a blend of projects funded by industry and the public sector, as well as small-scale grants. However, this type of funding isn't conducive to building infrastructure for the long-term⁴, nor is it at the scale needed to drive the systemic change we're targeting.

²<https://blog.opensupplyhub.org/2024/06/17/why-open-supply-hub-is-a-non-profit/>

³<https://radiant.earth/blog/2024/01/unicorns-show-ponies-and-gazelles>

⁴<https://www.eatingpolicy.com/p/project-vs-product-funding>

We're seeking contributions to \$20M in catalytic funding, over five years, to build the IB1 team.

A scaled-up team will enable us to:

1. Deliver a core set of Trust Frameworks for the energy, water, transport and built environment sectors. This will provide the underlying infrastructure needed to enable data to flow effectively within—and across—the sectors that are vital to the transition to net zero.

2. Deliver new Schemes to tackle critical net zero challenges that are not being addressed by private or government funding. The challenges we will focus on will be defined through a process of co-creation with industry, regulators, trade associations, governments, startups and civil society.

3. Undertake foundational R&D in areas that are holding back net zero data. This will include work on machine-readable data licensing, improving metadata standards to make data more discoverable, and improving the interoperability of data infrastructure developed by IB1 and other groups.

We're committed to working in the open. Philanthropic investment in IB1 also produces new, re-usable knowledge and tooling for the wider climate data ecosystem, such as new, open standards for data and modular data licensing terms for multilateral collaboration.

We have proven our model. Funding at this scale will help lay solid, non-partisan foundations to deliver public benefit at scale, and enable long-term, sustainable revenue from the private sector.

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