

Global Biodata Coalition Strategy and Targets 2023-2026

Towards sustainability of the global biodata infrastructure

Overview

Understanding of life lies at the heart of our ability to rise to the challenges that face our world; from climate change and biodiversity loss, through emerging infectious disease to threats to global nutrition, the life and biomedical sciences underpin the responses and interventions that we make. The COVID-19 pandemic demonstrated that at the heart of the life sciences lies data, and the global sharing of these data is essential for scientific advance. However, the very systems at our disposal for the sharing of life science data — the many open biodata resources that operate around the world — are themselves at risk. The Global Biodata Coalition (GBC) works to address this challenge, seeking to bring long-term sustainability and security to biodata resources in order to sustain the healthy life science and biomedical research programme so needed by the world.

This document describes how the GBC will expand its activities over the period from 2023 to 2026 to advance long-term funding and sustainability of the global biodata resource infrastructure. It sets out the key strategic goals through which we will work to deliver our mission, and the ambitious targets we will seek to deliver.

Biodata resource sustainability: a global challenge

Research in the life and biomedical sciences depends on a highly distributed infrastructure of biodata resources that provides repositories for research data, value-added curation of these data, and drives scientific discoveries on a daily basis. These biodata resources are used by millions of scientists worldwide and are fundamental to the research enterprise, amplifying research investments made by funders by making research data readily accessible for re-use.

Despite the critical importance of biodata resources to the global research endeavour, this ecosystem is highly vulnerable. In particular:

- **There is no mechanism for regular, strategic coordination among funders to ensure the long-term health and sustainability of key biodata resources.** Many data resources are heavily dependent on support from a limited number of funding bodies, which is typically provided via short-term grant funding. As such, strategic changes by one funder can quickly lead to a significant reduction in the functionality or availability of a data resource, with direct impact on researchers and projects funded by other agencies worldwide.
- **New technologies have resulted in the precipitous growth in the volume and diversity of biomedical and life sciences data.** The aggregate current funding for biomedical and life sciences data resources barely supports the current levels of service and is inadequate for coping with the growing volume and complexity of data.

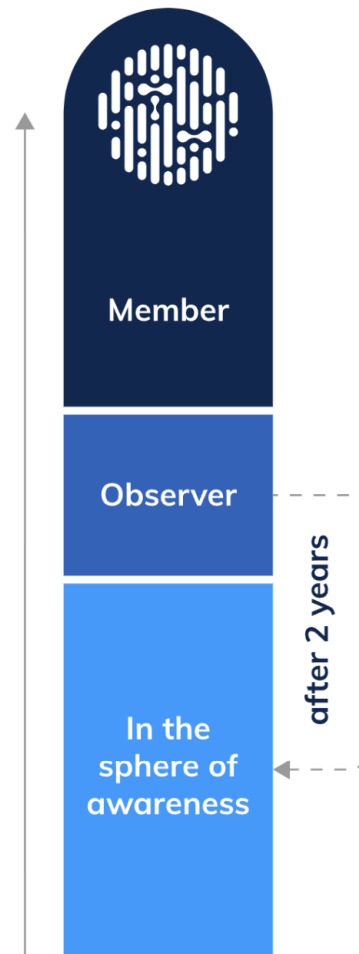
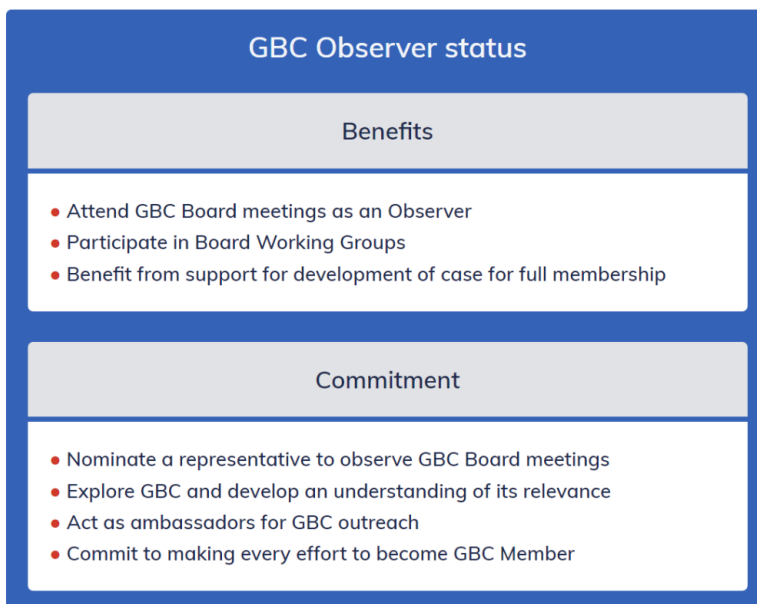
The Global Biodata Coalition: our role and value proposition

Established in 2019 by a global coalition of major research funders, the GBC is the first dedicated group which aims to address this lack of coordination of support and enhance the sustainability of biodata resources by sharing responsibility, effort, experience, and knowledge. The GBC offers an opportunity for all organisations that support life sciences and biomedical research¹ to participate, enhancing their own activities and increasing the overall impact of their funding.

Since its inception, GBC has worked with a specific remit to convene the world's leading life science funding organisations around the challenge of sustainable funding. It has made significant advances — building its membership to include 11 major funders, running a selection process to establish the first list of Global Core Biodata Resources, and developing the first comprehensive global inventory of biodata resources. Over the next three years the GBC will build on these foundations and expand its activities significantly to drive the delivery of cooperative solutions to address this challenge.

As the volume and complexity of data generated by the research community continues to increase, a vibrant, stable and well-resourced global infrastructure of biodata resources is becoming ever more critical to research funders in securing their investments in research and realising the full benefits to society. Funders are recognising that the current fragmented funding model is inadequate and that there is an urgent need to take collective responsibility for stewarding these data resources, working in partnership to ensure their long-term stability and sustainability. GBC provides its member funders with the opportunity to shape and drive global strategies to address this challenge and work together to determine solutions that maximise the value of the data generated by the research they support. The specific benefits we offer to our members are highlighted in the graphic below.

¹ "Organisations that support life sciences and biomedical research" include large funders at national government level and large foundations with an international reach. They also incorporate entities who fund life science research at all levels, the commonality being the funding of science that generates valuable data. These entities range from commercial organisations working in, for example, drug discovery and agritech, to universities, institutes and other academic bodies of differing sizes, as well as philanthropies.



Our Mission

GBC's mission is to safeguard the world's open life science, biological and biomedical data.

Our Vision

The GBC envisions a world in which biodata, essential to science, are freely and openly available to all, with long-term access assured through the tools and services offered by global biodata resources. We look ahead to global inclusivity, whereby all countries have the opportunity to benefit from and contribute to secure and sustained biodata resources. This will be enabled through the alignment and committed support of a breadth and diversity of the world's life science funders.

Our Values

The inherent values of open science and open data underpin the operations of the GBC. We work to ensure free and equitable access to life science, biological and biomedical data for all citizens of the world.

Our Aims

The GBC has two core aims as set out in the Letter of Understanding agreed by its member funders:

- To be a forum for funders of biodata resources to better coordinate and share approaches for efficient management and growth of this infrastructure and share strategies.
- To stabilise and ensure sustainable financial support for the global biodata infrastructure, with a focus on an identified and prioritised set of Global Core Biodata Resources that are crucial for sustaining the broader ecosystem.

Our Strategic Goals for 2023-2026

Over the next three years, the GBC will advance its Aims through furthering six strategic goals.

Aim 1 - To be a forum of funders of biodata resources enabling better coordination and sharing of approaches and strategies for efficient management and growth of this infrastructure	
Goal 1	Expand the participation of global research funders in the work of the GBC - increasing our reach, effectively engaging funders and gaining their buy-in around our goals
Goal 2	Enhance cross-funder dialogue, exchange and cooperation around funders' support for biodata resources and the long-term sustainability of the global biodata infrastructure
Goal 3	Demonstrate the current and future need for, and value and impact of enhanced and sustained cross-funder support of biodata resources

Aim 2 - To stabilise and ensure sustainable financial support for the global biodata infrastructure, with a focus on an identified and prioritised set of Global Core Biodata Resources that are crucial for sustaining the broader infrastructure

Goal 4	Develop and implement new models for cooperative cross-funder support of biodata resources
Goal 5	Characterise the full diversity of biodata resources globally and enhance funding and sustainability of the global biodata infrastructure as a whole
Goal 6	Identify and maintain a list of Global Core Biodata Resources (GCBRs) and engage and work with them to advance the work of the GBC and thereby their sustainability

How we work

We have developed a detailed work programme setting out key tasks and outputs through which GBC will advance these Strategic Goals. Across all of our work , we will adopt a highly collaborative and inclusive approach. Highlights include that we will:

- Expand our outreach and communications activities to increase the number of funders engaged in, and actively supporting and contributing to the work of GBC.
- Run focused campaigns to engage funders, policymakers and the broader research community, raising awareness and securing pledges of support for long-term sustainable funding for biodata resources.
- Convene expert working groups — taking forward the work of our two existing cross-funder working groups to develop and implement cooperative approaches to enhance biodata resource sustainability and open data strategies, and establish new working groups to address other critical challenges.
- Develop the GCBR selection process — complete a second round of the Global Core Biodata Resource selection (GCBR) process in 2023, and develop the selection process to include controlled access resources by the end of 2026.
- Work with our GCBR Forum to establish indicators and approaches to enable GCBRs and other biodata resources to assess current levels of sustainability, enhance sustainability plans and demonstrate impact.
- Work with our Members and Observers, and with our GCBR Forum to identify and pilot new cooperative and sustainable funding models for biodata resources.
- Build a high quality evidence base on the impact of biodata resources and the tangible benefits of sustainable funding models and enhanced cross-funder cooperation, and use this to support and advocate policy change in the global ecosystem.

What we expect to achieve

We will use a range of metrics to track our progress and outputs in delivering our goals. By the conclusion this Work Programme, we will have:

- Increased the levels of funding and sustainability of the GCBRs and of the global biodata resource infrastructure more broadly (as measured through the indicators we will establish).
- Engaged at least 20 new funding bodies in the work of GBC, grown our membership to include at least 15 global funders and broadened the global representation of funders across our membership.
- Raised the profile of biodata sustainability through our campaigns and advocacy, securing widespread support and commitments from funding and research organisations around the world.
- Established a stable and representative list of GCBRs, whose members are actively contributing to and engaged in the work of GBC via the GCBR Forum.
- Published a series of consultation papers and white papers resulting from our working groups, attracting extensive input from our communities.
- Developed a portfolio of high-quality and widely used research products and resources around biodata resource sustainability — including case studies, commissioned research and published papers that stimulate debate and inform policy change.
- Piloted at least one new cooperative funding model in partnership with our member funders and GCBRs.