

Research

Our aim is to empower researchers to access health data from around the world in a responsible way to tackle COVID-19. The ICODA Workbench provides the processes and tools to enable researchers to analyse data from many different datasets to address key research questions.



Tools for Researchers

The International COVID-19 Data Alliance (ICODA) exists to enable and accelerate responsible research. At its heart is the “Workbench (<https://www.aridhia.com/covid-19/>)” – a new data platform, provided by our alliance partner Aridhia Informatics (<https://www.aridhia.com/>) that allows researchers to discover, access and analyse global multi-dimensional datasets while respecting confidentiality and privacy. The Workbench brings together a combination of tools and processes and can connect to regional or national data infrastructures used by ICODA members.

The platform will consolidate data and metadata from federated repositories to allow teams to work collectively on a focused research question. Data access and use is subject to rigorous data governance processes, based on the five safes framework.

For researchers, ICODA and the Workbench, offer a unique combination of features – direct, controlled and federated access to curated datasets and to the most advanced analytical tools. All of these are being developed and tested using our “Driver Projects (<https://icoda-research.org/driver-projects/>)” – exemplar studies where ICODA is working in close partnership with data contributors and the research community to enable research into the questions they care about.

Access to the Workbench is provided free of charge once researchers have been accredited and project proposals approved. It is accessible to researchers from all parts of the world and we are particularly keen to welcome researchers from Low- and Middle- Income Countries (LMICs).

The Workbench is not just a place to access datasets. It will also act as a hub for the global research and innovation community, with access to expertise, training and support available – all with the aim of advancing our vision to support the global research response to COVID-19.

Watch a demo of the Workbench in action.

ICODA Workbench Video



"The Workbench adopts an ecosystem approach, supporting open science to tackle COVID-19. This means we want to enable people to form dedicated teams, bring data, code, expertise, and have freedom to operate within the domain of their driver project. And we want to do this while ensuring appropriate use and governance of the data."

David Sibbald

CEO Aridhia Informatics

Our policies

In order to provide clear and transparent ways of working, our policies address a number of key activities:

- Researchers are required to be accredited: qualifications are checked, institutional affiliation and bona fide researcher status is established
- Project proposals are reviewed for: scientific merit, patient benefit, appropriate statistical analysis plans, facilitation of high quality research, availability of relevant data that can answer the question proposed and whether participant privacy will be protected
- Project proposals in lay form are [published \(https://icoda-research.org/transparency-reporting/\)](https://icoda-research.org/transparency-reporting/)
- All of our researchers sign up to our [Alliance principles \(https://icoda-research.org/about/about-us/#ourprinciples\)](https://icoda-research.org/about/about-us/#ourprinciples)
- Our Workbench has a [Terms of Use agreement \(https://covid-19-alliance.github.io/Terms_of_Use.html\)](https://covid-19-alliance.github.io/Terms_of_Use.html) governing its usage
- Our Publications policy and an Attribution policy guiding publication of research results will be added here soon

How to join us

We are currently performing our research within a number of [Driver Projects \(https://icoda-research.org/driver-projects/\)](https://icoda-research.org/driver-projects/). These are designed to test our processes and systems whilst contributing to knowledge around COVID-19.

At our Alliance Forum event we will be inviting submissions for further Driver Projects as part of a Grand Challenge. We would love to receive your proposals. Please attend the Forum or watch its replay for more details on how to submit a Driver Project proposal and join the ICODA research effort.

FAQs

Can anyone use the Workbench?



How can I access data?



Are there review processes?



What tools are available on the Workbench?



Can I download data from the Workbench?



I need technical support



Grand Challenge

Overview

ICODA and Grand Challenges are delighted to launch the new Grand Challenges ICODE COVID-19 Data Science pilot initiative that will focus on addressing major questions about how to reduce the harm of COVID-19 and future pandemics. The initiative aims to unite data and develop processes, analytical tools and infrastructure to achieve rapid scientific progress and impact, and will be a pilot for the ongoing [Grand Challenges \(https://gcgh.grandchallenges.org/about\)](https://gcgh.grandchallenges.org/about) that seek to develop global collaboration and innovative approaches to major health challenges.

Grand Challenges is a family of initiatives, launched by the Bill & Melinda Gates Foundation in 2003, to solve key global health and development problems. Selected projects will become part of ICODE's portfolio of Driver Projects, helping to further develop processes, tools and infrastructure to accelerate scientific progress and foster collaboration between researchers and the public around the world. This pilot will lead to a larger Grand Challenges Data Science call in late 2021, which will be led by global Grand Challenges partners.

Focus, timeline and application process

The Grand Challenges ICODE COVID-19 Data Science initiative will provide awards of up to US\$100,000 for studies lasting for between 6-12 months, starting in mid-March 2021 onwards. In addition, successful applicants will have access to ICODE's digital workbench, as well as technical and wider support from ICODE and its partners.

Proposals are welcomed from any country or region, with particular priority for those involving researchers and datasets from LMICs.

The Grand Challenges ICODE COVID-19 Data Science initiative launches on **17 December 2020**. The deadline for initial submissions will be **19 January 2021**.

For specific details and criteria please consult our [Request for Proposals \(https://icoda-research.org/wp-content/uploads/2020/12/Request_for_Proposal_GC.pdf\)](https://icoda-research.org/wp-content/uploads/2020/12/Request_for_Proposal_GC.pdf).

Potential applicants are invited to apply using this [application form \(https://icoda.cognitive.city/cognitive/welcome\)](https://icoda.cognitive.city/cognitive/welcome). To assist research teams in preparing joint applications, we have also made a [Word version \(https://icoda-research.org/wp-content/uploads/2020/12/Application-form-GC-ICODE-initiative.docx\)](https://icoda-research.org/wp-content/uploads/2020/12/Application-form-GC-ICODE-initiative.docx) and [PDF version \(https://icoda-research.org/wp-content/uploads/2020/12/Grand-Challenges-web-Application-form.pdf\)](https://icoda-research.org/wp-content/uploads/2020/12/Grand-Challenges-web-Application-form.pdf) of the form available: please note that these should **not** be used for final submission.

Please review the programme's [Terms and Conditions for Grant Awards \(https://icoda-research.org/wp-content/uploads/2020/12/Terms_and_Conditions_GC.pdf\)](https://icoda-research.org/wp-content/uploads/2020/12/Terms_and_Conditions_GC.pdf) prior to completing an application.

If you have questions, please review our [Frequently Asked Questions \(FAQs\) \(https://icoda-research.org/wp-content/uploads/2020/12/FAQ_GC.pdf\)](https://icoda-research.org/wp-content/uploads/2020/12/FAQ_GC.pdf) document in the first instance. If you do not find an answer there, please [contact us \(https://icoda-research.org/grand-challenges-contact-us/\)](https://icoda-research.org/grand-challenges-contact-us/).

Please note that the application form is hosted by our delivery partner Exaptive as part of ICODE's commitment to build global collaboration. Exaptive's Cognitive City connects a community of researchers and stakeholders to new ideas and collaborators. Exaptive Cities bring together people, data, the science of team science, and social network analysis to help tackle the world's biggest challenges.

Online Information Workshop

Main **agenda** points:

- An overview of the Grand Challenges ICODA COVID-19 Data Science pilot initiative, and what we are looking for in applications
- An outline of the longer-term vision for the Global Grand Challenges data science initiatives and how this pilot will contribute
- How the [ICODA Workbench and tools \(https://icoda-research.org/research/our-research/\)](https://icoda-research.org/research/our-research/), as well as other resources that we will make available to Grantees, will enable and support the selected research studies
- Further information on the terms of the grant awards and what will be supported
- Significant time to address the questions raised during the workshop.

A recording of the event is below, and the presentation slides are available [here \(https://icoda-research.org/wp-content/uploads/2021/01/Presentation-for-Workshop-GC-ICODA-initiative-07-Jan-2021_AG_v3.pdf\)](https://icoda-research.org/wp-content/uploads/2021/01/Presentation-for-Workshop-GC-ICODA-initiative-07-Jan-2021_AG_v3.pdf).

Grand Challenges ICODA COVID-19 Data Science grant programme: the online workshop



In partnership with



<https://gcgh.grandchallenges.org/about>



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Grand Challenges ICODA COVID-19 Data Science pilot programme

Request for Proposals

1. The opportunity

The Bill & Melinda Gates Foundation and its Grand Challenges partners established [Grand Challenges](#) to focus attention and effort on major global challenges, and to enable researchers to collaborate and address these in fast, innovative ways. [ICODA](#) – the International COVID-19 Data Alliance – is partnering with the Bill & Melinda Gates Foundation's Grand Challenges programme to pilot the Grand Challenges ICODA COVID-19 Data Science initiative, supported by the COVID-19 Therapeutics Accelerator. This initiative seeks to support projects that harness the power of health data in a safe and trusted way to respond to the current COVID-19 pandemic and have impact, as well as to enhance global health data responses to health challenges of the future.

ICODA is a global alliance of leading life sciences, philanthropic and research organisations that has been convened by [Health Data Research UK](#). It acts as a global hub and supports researchers to address COVID-19 research questions and enable discoveries, through ensuring health data and analytical tools are accessible in a safe, secure and trusted environment.

This pilot initiative is coordinated by ICODA and is an open funding call that seeks to identify and support research studies using health data to address major COVID-19 research questions. It also seeks to involve patients and wider communities in both study design and governance. While this is a global call, priority will be given to research proposals involving researchers from lower and middle-income countries (LMICs). The pilot initiative will be followed by a larger Request for Proposals to be launched late in 2021, and run by global Grand Challenges partners.

Successful research studies for this pilot will have access to the COVID-19 [Workbench](#), a new digital platform that is hosted and operated by Aridhia Informatics Ltd on behalf of the Bill & Melinda Gates Foundation. The Workbench allows researchers to safely and securely analyse, discover and access global, multi-dimensional datasets, while respecting the conditions of use determined by the organisations that control the data. The selected research studies will also become part of ICODA's portfolio of [Driver Projects](#) and shape the further development of processes, tools and infrastructure to enable researchers to make faster progress on the global COVID-19 response.

2. The pilot initiative

This pilot Grand Challenges ICODA COVID-19 Data Science initiative is an open request for grant proposals. The desired outcome is to fund studies that will facilitate research collaboration among researchers to address major COVID-19 research questions and reduce the harm of the current COVID-19 pandemic, while fostering global, multi-disciplinary collaborations.

Proposals may focus on one of a range of COVID-19 research areas, including: 1) natural disease history, epidemiology and transmission; 2) vaccines and prophylaxis; 3) infection, prevention and control; 4) therapeutics; 5) clinical management.

Selected grantees will work together in close collaboration with ICODA and its partners to further develop processes, tools and governance that maximise the impact of data-focused research studies, as well as to identify and address the global data-related challenges that

might arise. A key objective for this pilot initiative is to lay the groundwork for the 2021 Global Grand Challenge Request for Proposals that will launch at the end of next year.

During this pilot, grantees will have access to the COVID-19 Workbench, a digital research environment to which researchers can bring their own data and work in a safe and trustworthy space to collaborate with others to answer research questions of interest.

Proposals should:

- Be driven by a shared commitment to open science, data sharing, and building collaboration and analysis infrastructure to enable discoveries that will benefit people everywhere
- Seek to strengthen global communities and multi-disciplinary collaboration, particularly from researchers in LMICs, and involve patients and the wider public
- Have access to the datasets needed to address their specific research questions
- Be legally permitted to contribute data and build on ICODA's portfolio of Driver Projects, helping to build infrastructure, processes and governance that are fit for purpose for a wide range of research challenges.

3. What we are looking for

We are seeking grant proposals that meet the following criteria:

- Have the potential to be enabled and contribute to the preparation of the 2021 Data Science-focused Global Grand Challenge
- Address research questions that can deliver insights on COVID-19 within 6-12 months of the grant award being made, be scalable and bring demonstratable benefits to patients and populations
- Use clearly defined datasets, with a commitment to providing access to data and all research products (methodology and reproducible results), whilst ensuring appropriate information governance
- Have the potential to be enabled and accelerated by the COVID-19 Workbench, and a commitment to helping develop processes, tools and governance to maximise the impact of data-focused research studies
- Demonstrate a commitment to involving patients and the wider public in design and governance of research studies

Applications are invited from researchers working in healthcare, academia, industry or research foundations, and will be welcomed from any geography, with priority placed on proposals that involve researchers from LMICs.

The initiative will not provide support for the following:

- Studies focusing on research questions that are not related to the COVID-19 pandemic
- Studies that do not involve clearly defined datasets, and/or aim to collect and generate new data through this funding
- Applicants and their host organisations who are unable to commit to Health Data Research UK's [Terms and Conditions](#). Please note that successful applicants will receive their awards directly from HDR UK, and therefore HDR UK's standard grant award terms and conditions will apply.

4. Programme structure

This Request for Proposals is for the Pilot Grant Programme only. This will be followed by the larger global Grand Challenges Request for Proposals, scheduled to launch in the last

quarter of 2021. Funding and scope for that larger Request for Proposals will be determined and announced later in 2021.

What we are offering for the Pilot Grant Programme

Successful proposals will become part of a Data Science Grand Challenges pilot grant programme and be eligible for the following:

- Receive between \$25,000-\$100,000 in funding for 6-12 months from mid-March 2021 onwards
- Become part of a global community that brings together researchers with shared research interests and provides support and inspiration for their work.
- Become ICODA Driver Projects and contribute to the preparation of future Data Science-focused Global Grand Challenges programmes. Successful grantees will play an advisory role in developing these future programmes
- Access to the [ICODA Workbench](#) and analytical tools, as well as technical support and training to enable access and support research studies
- Gain facilitated access to additional data sources
- Gain access to processes and resources to implement reproducible research while enabling personal patient data protection.

5. Grant Terms and Conditions

The organisations that host the successful applicants for this grant award scheme will receive their awards directly from Health Data Research UK, and the awards will therefore be subject to Health Data Research UK's standard grant award [terms and conditions](#).

In addition, applicants should commit to ICODA's governance principles:

- Equity in developing a global approach
- Responsible data sharing, respecting the data sharing and privacy preferences of participants
- Transparency of governance and operations
- Proportionate approach to governance based on the '[five safes](#)' GDPR-grade safeguards
- Accountability to best practices in technology, ethics, and public outreach
- Inclusivity by partnering and building trust among stakeholders
- Commitment to share data and information to advance human health
- Innovation and agility to develop an ecosystem that accelerates progress
- Independence through structures and governance
- Commitment to high quality reproducible research through transparency and sharing best practice in analytics.

6. Selection criteria

Projects will be evaluated on the following criteria, as set out in the template below:

- Addresses a core research question using an approach that has potential to have a direct impact on addressing the challenges of the COVID-19 pandemic within proposed budget and timeframe of 6-12 months
- Uses well-defined datasets that directly address the core research question
- Engages researchers from different geographies, including LMICs
- Demonstrates a commitment to involve patients and wider communities throughout the project
- Builds on the research team and host institution's experience

- Can contribute to the development of the processes, tools and governance of the COVID-19 Workbench, as well as to the shaping and launch of the Data Science-centred Global Grand Challenges.

Evaluation template and scoring:

Section	Criteria	Word limit	Points available
Research study	Proposed research study has the potential to have a direct impact on addressing the COVID-19 pandemic Impact can be achieved by the end of the project cycle		20 10 NB: Applications that score 0 for these criteria will be de-selected at this stage of the review process
Data	Appropriateness of, and access to, data sets being used to address research question Appropriateness of data science methods/ tools being used to address research question		15 15
Geographical scope	Geographical scope of study: involvement of LMICs and applicability to other regions		10
Patient and public involvement	Patient and public involvement and engagement in study design and governance		10
Experience	Experience of research team and host institutions and capacity to deliver study		10
Budget	Proposed budget is reasonable and enables delivery		10

7. Application process and timeline

The call for submissions will be launched on **17 December 2020** and the deadline for initial submissions will be **24.00 UTC on 19 January 2021**.

The application process is as follows:

1. Completion of a short application form: <https://icoda.cognitive.city/>
2. Initial review by an international panel convened by Health Data Research UK and ICODA, including independent reviewers
3. Notification sent to those applicants that have been pre-selected by end January

4. Pre-selected applicants will be invited to make a supplemental submission by mid-February 2021, providing additional information about specific aspects of their project including the data they are proposing to use, methodology, public and patient involvement and engagement, and more detailed information on budget. This supplemental submission should also include:
 - Letter from the applicant's institution acknowledging they have read the Health Data Research UK terms and conditions for grant award holder
5. This supplemental information will then be reviewed by the international panel and a shortlist selected by end Feb 2021
6. Shortlisted projects will be interviewed by a wider review panel, including members of ICODA's Scientific & Strategic Advisory Council, in early March
7. Awards of \$25,000-\$100,000 for a 6 - 12 m duration will be announced in mid-March 2021 and research studies are expected to start as quickly as possible.

The table below summarises the timeline for the Grand Challenges ICODA COVID-19 Data Sciences initiative:

PHASE 1	
Call for submissions opens	17 Dec 2020
Application deadline	19 Jan 2021
Pre-selected projects announced	End Jan 2021
PHASE 2	
Full proposals submission	Mid Feb 2021
Shortlisted projects announced	End Feb 2021
PHASE 3	
Shortlisted projects interviewed	Early Mar 2021
Funded projects announced	Mid Mar 2021

8. Further guidance

A list of frequently asked questions can be found [here](#). These build on those raised for existing Grand Challenges Data Science initiatives. For further queries, please [contact us](#) and we will aim to address these by **14 Jan 2021** at the latest.

In addition, ICODA will be running an information workshop on **07 Jan 2021**. Please [register here](#) if you are interested in participating.