



Cardiovascular Grand Challenge - 2026 -

Foreword

BHF's new **Cardiovascular Grand Challenge** competition challenges the research community across its breadth to combine forces and develop innovative programmes that aim to generate significant impact towards patient benefit through improved understanding, prevention, diagnosis and/or treatment of cardiovascular disease.

In the competition's inaugural round, we plan to make an award of up to £10 million over five years to underpin the most compelling research proposal(s) addressing significant unmet needs or opportunities in one or more areas under the theme of:

**AI-powered transformation in cardiovascular health:
From discovery to clinical practice**

Why this theme?

Recent developments in artificial intelligence (AI) methodologies provide unprecedented opportunities to extract novel and actionable insight from big data towards improved understanding, prevention, diagnosis and treatment of cardiovascular disease. At the same time, there is now an increasing wealth of structured and unstructured data available from multiple sources, ranging from contemporary omics techniques through to wearable technologies, clinical imaging modalities and patient records, which are ripe for AI analyses to deliver impactful advances.

Strategic investment at scale that catalyses and empowers the research-driven development and/or deployment of AI methodologies towards maintaining cardiovascular health has the potential to deliver impactful advances in multiple areas, including:

- understanding disease mechanisms
- determining disease risk and implementing preventive measures
- early and accurate diagnosis of evolving disease (when medical intervention is likely to be more effective)
- discovery and development of new drugs and other innovative treatments
- delivery of improved clinical care and information to patients

Through this Challenge, BHF aims to fund at least one research programme that aims to deliver AI-powered transformational progress in one or more such areas.

What are BHF expectations from applicants?

Teams entering the competition need to mobilise knowledge, talent and resources from multiple fields and sectors, working on a scale that goes above and beyond conventional research programmes.

As dictated by the specific area(s) that they address, proposals should aim to integrate a range of complementary research approaches (e.g. discovery, translation, clinical validation, epidemiology), disciplines (e.g. biomedical/non-biomedical researchers and clinicians), technologies (in particular, AI and complementary data science approaches) and sectors (e.g. academia, biotechnology, pharma).

Each application should be led by a principal investigator based at a UK research institution (which will manage the award if the application is successful) and should strive to engage the “best in the field” as partners. International partners who bring defined and unique contributions towards the proposal’s aims are allowed.

The successful application(s) will be those scoring the highest against the following key criteria, as assessed by peer review and expert advice, including by BHF lived experience representatives.

Timely and ambitious: We are seeking innovative proposals that are primed to deliver a big leap forward, utilising state-of-the-art expertise and technologies. The scope and ambition of the proposed research programme, which may focus on a specific manifestation of cardiovascular disease or address cardiovascular disease more broadly, should justify funding at the scale requested.

Clear path to impact: Proposals should articulate clearly the leap forward that they intend to deliver, how the team plan to achieve this through integrated workstreams and associated milestones, and the anticipated impact of successful delivery. They should demonstrate familiarity with regulatory requirements for clinical implementation of any product(s) that are expected to arise and articulate their strategy for fulfilling these.

Outstanding team and partnerships: The expertise, resources and track records of the proposed partners should impart confidence that the team collectively has the capability to achieve the proposal’s stated aims. Engagement of partners from multiple disciplines and sectors is expected, particularly where such engagement advances a translational trajectory (partnership with small or medium-sized enterprises and industry is encouraged). Where appropriate, proposed programmes should also engage relevant national or international research-enabling infrastructures.

Leveraged support: BHF funding is expected to leverage matched funding and in-kind contributions, such as people/skills and facilities, from partnering academic institutions, commercial/industrial organisations and/or other funders, which is commensurate with the scope and scale of the proposed research programme.

Patient and public involvement: Applicants are expected to demonstrate meaningful involvement of people with lived experience of cardiovascular disease (e.g. patients and carers) in the development of their proposals and present plans for their continued involvement throughout the proposed research programme.

Robust management and governance: Proposed management and governance structures must be appropriate for the programme’s scope and scale, adhering to BHF equality, diversity and inclusion (EDI) principles and providing a strong, ethical framework for successful delivery.

Competition Process

Cardiovascular Grand Challenge is a two-stage competition, requiring first an outline application and subsequently a full application from shortlisted teams. Outline applications will be assessed against the key criteria outlined above, to select those to be invited to progress to full application.

Following assessment of outline applications, BHF may suggest that complementary elements of two or more proposed programmes are combined to create a joint full application. Additional guidance on full application will be provided to teams selected to progress to that stage.

Applications will be considered by the BHF Chairs & Programme Grants Committee, guided by peer review and supported by *ad hoc* Committee members comprising a bespoke Expert Panel. Assessors will not grade applications where they have a conflict of interest.

All applications should be submitted through the BHF Grants Management System at <https://researchgrants.bhf.org.uk/>

Timeline

Competition open for outline application: 01 April 2026

Submission deadline for outline application: 03 August 2026

Outcome of outline application: December 2026

Submission deadline for full application: March 2027

Interview of shortlisted applicants: June 2027

An extended time period is provided for the preparation of outline applications, in recognition of the effort that is likely to be required at this initial stage to engage the strongest possible research teams, consolidate investigator ideas and contributions, and secure leveraged support.

Outline Application Guidance for Applicants

Online Data Entry:

Applicants will be asked to enter the following data online:

- Application title and one-sentence description of the programme's main aim.
- Principal Investigator (PI) details (name, role, institution/organisation). *An individual may lead only one application as PI, but participation as a Co-Investigator in other application(s) is allowed.*
- Co-Investigator details (name, role, institution/organisation).
- Lead Institution and its administrative authority (name and contact details). *An institution may lead up to three applications that have distinct objectives and teams, provided each application carries institutional commitment to support.*
- Accessible summary (max 300 words).
- Scientific abstract (max 500 words).
- Selection of Research Activity and Subject codes from standard lists.
- Numbers of participating team members (Principal and Co-Investigators), academic institutions, industrial/commercial organisations, countries.
- Requested budget from BHF (in GBP) and a high-level breakdown by work package.
- Leveraged support as matched funding (in GBP) and in-kind contributions (in GBP equivalent).
- Proposed award duration (maximum 5 years).

Case for Support:

In addition, applicants will be asked to upload a single, 11-page PDF document (A4 page size, 1.5 cm margins, Calibri font, font size 11; with PI name and page number in the header), which provides structured information as outlined below.

Section:	Content:
1 (max 2 pages)	Title and summary
2 (max 3 pages)	Scientific details of the proposal
3 (max 2 pages)	Expertise and resource contributions of team members
4 (max 1 page)	Key workstreams with milestones and anticipated costs
5 (max 1 page)	Leveraged support
6 (max 1 page)	Management and governance plans
7 (max 1 page)	Any additional information

Letters of support are not required for outline applications, but written confirmation of partner contributions will be necessary if selected to progress to full application.

Explanatory notes for Case for Support:

Section 1: Under the application title, summarise the problem, describe the unmet needs or opportunities that you wish to address and why they are of patient/public relevance, what your research solution is, how it will have a significant impact and why it needs funding of this scale. **In brief, sell us your grand idea and explain how your proposal meets the key Challenge criteria.**

Although we recognise that better implementation of evidence-based solutions is a significant challenge and may result in important gains, proposals based primarily around implementation without a substantial research component are not within the remit of the Cardiovascular Grand Challenge.

Section 2: Explain the background to your proposal, including the involvement of people with lived experience of cardiovascular disease (e.g. patients and carers) in its development, the current state of the field and competitive landscape and your scientific aims and methodology, providing indications of feasibility. Outline the key hurdles that you need to (and expect to) overcome, including brief details of risk mitigation. Provide key references that support your proposal but keep them to a minimum. **In brief, tell us what your research programme is and how it will deliver your desired objectives.**

Section 3: For the PI and each Co-Investigator: (1) Provide their name, professional role, institution/organisation and professional web page link; (2) Describe their expertise and/or resource contribution(s) to the research programme. We expect engagement from multiple disciplines and institutions/organisations and encourage partnership with small or medium-sized enterprises (SMEs) and industry. **In brief, demonstrate that you have assembled an outstanding multi-disciplinary and cross-sector team that is equipped to successfully undertake the proposed programme.**

Note that participating Co-Investigators may be modified, in discussion with BHF, if the proposal is selected to progress to full application. In such cases, other aspects of the outline application may be amended in preparing the full application, to reflect the contributions of the revised team.

Section 4: Describe the milestones and associated workstreams of the proposed programme, providing estimates of the time and investment required to deliver each milestone (a Gantt chart must be included). **In brief, convince us that you have thought carefully about the key steps in delivering your research programme and the potential staging of stop/go decisions on key elements.**

Section 5: Describe the leveraged support, such as matched funding and in-kind contributions, that will be provided by participating institutions/organisations or other sources, if your application is successful. For in-kind contributions, such as people/skills and facilities, please estimate their monetary value, briefly describing how those estimates were made, and include the sum total in online data entry. **In brief, illustrate how BHF funding will leverage significant complementary support that will help drive the research programme forward.**

Section 6: Describe your proposed operational model and management and governance structure, including how progress towards impact will be monitored and strategic decisions made, with the support of independent external advice as appropriate. Explain how programme activities will adhere to BHF EDI principles, as outlined in our EDI strategy [*Igniting Change*](#), and outline how meaningful involvement of people with lived experience of cardiovascular disease will be maintained (see [*Patient and Public Involvement in Research*](#)). **In brief, convince us that that you have robust plans for programme management and governance that will provide a framework for successful delivery.**

Section 7: This is an opportunity to include any other information, such as a graphical abstract, to articulate your vision and support your proposal. **In brief, provide any additional information that you believe should be considered when assessing your application.**

Conditions:

By applying, the PI and Lead Institution confirm that they have approval from all named participants. Co-Investigator signatures are not required at the outline stage.

Submission of an outline application also confirms that applicants agree to:

- The information provided to be shared within the BHF and with external individuals for the purpose of assessing the application (see section on Assessment). All such individuals will be bound by rules of confidentiality.
- The lay summary and extracts from the application to be used in confidence with potential donors for the purpose of raising funds for the Cardiovascular Grand Challenge.
- Anonymised aggregate data from all applications to be used for the purpose of discussing and promoting the Cardiovascular Grand Challenge.

*Any award following full application will be subject to a funding agreement broadly in line with BHF [*Standard Conditions of Grant*](#), with bespoke governance and reporting elements that reflect the scope and scale of the award. Relevant Key Principles will be shared with applicants who are shortlisted to progress to a full application.*

Please address any queries related to this document to:

[**cvgrandchallenges@bhf.org.uk**](mailto:cvgrandchallenges@bhf.org.uk)