



Request for Proposal (RFP) for

exploring opportunities to advance the utility of digital sensors for mental health.

1. RFP Background & Objectives

Wellcome is a politically and financially independent charitable foundation. We improve health for everyone by funding research, leading policy and advocacy campaigns, and building global partnerships. In 2020, Wellcome announced our new strategy to tackle three global health challenges: mental health, infectious disease, and the impact of climate change on health.

1.1. Mental Health Vision and Mission

Our vision for mental health is a world in which no one is held back by mental health problems. To advance this vision, our mission over the next 10 years is to drive a step change in the ability to intervene as early as possible in the course of anxiety, depression, and psychosis.

Wellcome has two core goals in mental health:

1. Improve understanding of how the brain, body, and environment interact in the trajectory and resolution of anxiety, depression, and psychosis.
2. Find new and/or improved usable ways to predict, identify, and intervene as early as possible in anxiety, depression, and psychosis.

We are aiming to support a vibrant global mental health science community to produce breakthrough discoveries that are rapidly translated to develop targeted, effective, and scalable early interventions in one or more of anxiety, depression, and psychosis.

1.2. Digital Sensors for Mental Health

Digital sensors are devices that can measure, or sense, a person's behaviours and environments as they go about their everyday lives. Mobile phones have GPS trackers and accelerometers to measure where people go and how many steps they take to get there. Wearables, like smart watches, use sensors to measure heart rate during exercise or sleep. And internet of things (IoT) sensors like thermistors or optical sensors can measure temperature and lighting in a person's environment.

Rich sensor data could make substantial contributions to Wellcome's mission in mental health. The ability to measure and monitor mood, activity levels, sleep patterns etc. provides clinicians and researchers with objective real-time data on mental health conditions and their symptoms. These data can be used to detect mental health conditions early on in their progression and track changes over time, to stratify populations according to their condition, and to deliver more effective and timely interventions.

While digital sensors could have a positive impact in mental health research, there are barriers to their use. A workshop held at UCLA in early 2023 aimed to advance the utility of digital sensors for mental health research and clinical practice. The workshop made progress on many fronts, including kickstarting a standard-setting process in the field for how



sensors are used and reported in mental health research. However, significant *technical* challenges identified in the workshop remain unaddressed. These are:

1. **Within- and between-device differences make data management difficult.** It's difficult to harmonise data collected using different hardware (e.g., Fitbit vs Apple Watch, or Apple Watch Series 7 vs Apple Watch Series 8) or using similar devices that are running different software (e.g., Apple Watches running different versions of watchOS).
2. **Researchers only have limited access to raw sensor data.** Device manufacturers offer post-processed sensor data in most cases, and the processing pipelines that sit between devices and researchers are opaque. Researchers therefore often do not know enough about the data they are working with for it to be useful.
3. **There is no common ground between device manufacturers.** No industry standards exist for how device manufacturers communicate with researchers on device updates (hardware or software), nor on how sensor data or sensor properties are shared with researchers. This makes interacting with multiple devices, operating systems, and sensor types unnecessarily difficult.
4. **There is only limited support available for building study infrastructure.** The above three complications make it difficult to set up the technical infrastructure required to collect, store, and analyse sensor data from the many different devices that research participants own and use. While there is support available, current offerings cannot keep up with researcher demand.
5. **We may not have the most effective sensor measures/devices.** The sensors used in mental health research were, mostly, developed for their commercial value. There is therefore no guarantee that these are the most appropriate sensors for mental health.

The aim of this project is to build on the work completed at the UCLA workshop (you can find the outputs [here](#)) by providing a complete view of the technical challenges and potential solutions for sensor use in mental health research all over the world. The objectives of the work are:

1. Articulate the value and difficulty of using sensors in MH research and clinical practice. Investigate:
 - i. Whether, where, and how sensor data is and conceivably could be valuable for MH research and clinical practice.
 - ii. What the key technical challenges are when using digital sensors in MH research and clinical practice, with the view to identifying solutions to these challenges. Use the output of the UCLA workshop as a starting point but expand to consider any additional challenges faced in low-resource settings and/or when using sensors with specific populations. Categorise these challenges into those that are *foundational* (i.e., relevant in fields other than MH) and those that are *specific* to MH. For every challenge identified a suggested way forward should be included (as per the below objectives).



2. Outline the current state of the art. Identify where sensors are currently used in mental health research and clinical practice, whether/how the value for MH is realised, and whether/how technical challenges are resolved. Consider the following applications:
 - i. Usage in high- and low-resource settings.
 - ii. Mental health research studies.
 - iii. Clinical deployment.
3. Provide examples from other domains in which technical solutions for sensor use in research or clinical practice exist. Evaluate the impact these solutions have had in these fields. Describe their relevance for MH and outline any lessons that can be learned.
4. Based on the above analysis, and any other relevant information, describe opportunities for advancing the utility of sensors for MH. These opportunities should solve technical challenges to sensor use in mental health. Examples include (but are not limited to): maintaining and improving existing digital tools or platforms; developing entirely new tools or platforms; developing new, MH-specific sensors or sensor measures. For these opportunities, outline:
 - i. *Impact*: what would be the impact of realising these opportunities on sensor use in MH?
 - ii. *Specificity*: would opportunities benefit MH research/clinical practice alone, or would they also be beneficial for other fields?
 - iii. *Setting/population*: are opportunities 1) relevant for all settings, 2) relevant in high-income settings alone, 3) relevant in low-/middle-income settings alone, or 3) relevant only to specific populations within any of these settings?
 - iv. *Sector*: which sectors and delivery models are best placed to realise these opportunities (e.g., academia vs industry; open-source vs commercially licensed)?

The above work should be completed by a combination of literature reviews, desk research, and interviews with expert researchers, clinicians, lived experience experts, research software engineers, industry representatives, and any other relevant groups.

To be clear on scope: the focus of this work should be on technical solutions to advance the utility of sensor use in MH. While other challenges do need solving, such as the many ethical considerations around privacy, these challenges are not in scope for consideration here. We would, however, consider technical challenges to ethical and inclusive research conduct to be in scope. We also expect the supplier to engage with people affected by sensor data collection to understand the technical challenges and associated solutions identified in greater depth.

2. RFP Specification

Key deliverables to be included are:



- D1. Form a governance and evaluation structure that will consist of (at least) expert consultants (e.g., academics or practitioners with experience using digital sensors in their work, or research software engineers with experience building the technical infrastructure required to collect sensor data) and Wellcome contacts, which includes representation from lower-/middle-income contexts.
- D2. Participate in a Wellcome-organised workshop which will aim to explore the ethical and public-interest issues surrounding sensor data collection. Embed learnings and contextual awareness drawn from the workshop into the proceeding work.
- D3. Draft report.
- D4. Content for final report.
- D5. Co-design of final report with Wellcome's branding team following [Wellcome's accessibility guidelines](#), handover of report, and preparation for dissemination.
- D6. A slide deck of summary findings.
- D7. A presentation of the findings to the Wellcome team.

The final deliverables will be agreed at the contract negotiation stage but please note that we aim for the draft report (D2) to be delivered by the end of June 2024. Wellcome expects deliverables to be made available under a CC BY licence.

We expect the supplier's team to be diverse in membership and inclusive in practice. We expect the supplier to engage meaningfully with experts by lived experience in all areas where their input could conceivably be of use.

We expect the budget for this work to be in the range £200-275K (inclusive of 20% VAT).

3. RFP Timetable

#	Activity	Responsibility	Date
1	RFP issue to Suppliers and issue on Contract Opportunities webpage	Wellcome	24 th Nov 2023
2	Submission of Expression of Interest and Supplier Q&A	Supplier	08 th Dec 2023
3	Return of Supplier Q&A to Suppliers	Wellcome	15 th Dec 2023
4	Submission of RFP Response	Supplier	26 th Jan 2024
5	RFP Evaluation Period	Wellcome	29 th Jan 2024 to 07 th Feb 2024
6	Supplier Presentations	Supplier	12 th Feb 2024 to 16 th Feb 2024



7	Notification of Contract Award	Wellcome	February 2024
8	Contract Negotiation	Wellcome & Supplier	March 2024
9	Contract Start Date	Wellcome & Supplier	March 2024

4. Response Format

The following headers support the timetable by providing further detail of the key steps.

4.1. Expression of Interest and Supplier Q&A

Suppliers are asked to submit a short expression of interest by e-mail to the Wellcome contact in accordance with the RFP timetable, which should contain the following information.

- Confirming whether you are an organisation or individual
- If an organisation please provide registered name, address, and registration number.
- A non-binding cost estimate as a single figure in GBP
- Any questions you have about the exercise and activity

Prior to the submission of your full proposal to the RFP, Suppliers are provided the opportunity to submit any questions they have about the exercise and the activity. All questions will be collated, anonymised, answered and returned to all Suppliers who have submitted an expression of interest in the RFP process. Please make sure you ask all questions at this stage. Once Wellcome have responded to all questions if you have any additional questions after this deadline these will not be answered to ensure that this is a fair and equitable process.

Submitting an EOI/Q&A is not a binding commitment to submit a full proposal should your organisational priorities change, you will not then be penalised for future opportunities.

Please note, if we have an overwhelming response, we may choose to use this EOI stage as a selective phase, this is at Wellcome's discretion.

4.2. RFP Response

Suppliers submitting a full proposal should cover the following areas in their response:

#	Question	Max Words
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1	<p>Experience:</p> <p>Outline your experience in the area and whether/how you will work with experts to cover the gaps in your knowledge. Include any relevant experience completing qualitative research and landscaping analyses. Also include any relevant experience with digital sensors, mental health research, climate and health research, or infectious disease research.</p>	500 words
2	<p>Methodology:</p> <p>Detail your methodology for completing this analysis, including:</p> <ul style="list-style-type: none"> • The approach and methodology • Proposed project plan including timelines. • Management plan, including role of team members. • Plan for engagement with Wellcome during contract. • Plan for production of final report, including copy editing, formatting and graphics. • Diversity and inclusion planning (how you will ensure that interviews conducted will be inclusive of different groups of people and locations and your methodology does not introduce bias). 	2000 words
3	<p>Case Studies:</p> <p>Provide case studies of where you have successfully provided similar services to those described in this RFP.</p> <p>Please also consider Wellcome's D&I principles (section Error! Reference source not found.) and outline any previous relevant experience that demonstrates your ability to work in line with these principles.</p>	750 words
6	<p>Timeline:</p> <p>Provide a timeline for the work, including key milestones and Deliverables against each of these.</p>	300 words
4	<p>Delivery & outputs:</p> <p>Describe anticipated risks and challenges, ways to mitigate them, and quality assurance efforts for your work.</p>	500 words
7	<p>Budget:</p> <p>Provide a detailed budget including all costs and expenses, specifying all day rates of individuals involved, the allocation</p>	300 words



	of days between members of the team, and the cost of activities. The budget must include allocation of funds for at least two senior academic consultants/senior research software engineers.	
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4.3. Evaluation Criteria

Experience 30%	<i>Skills and Experience:</i> Does the supplier have the relevant skills, experience, and contextual understanding to deliver this work?
Methodology 30%	<i>Coverage:</i> How well are the desired focus areas (as outlined in the specification) covered in the proposed methodology address? <i>Quality:</i> Is the proposed methodology aligned with our needs? <i>Utility:</i> Will the proposed methodology deliver desired, credible, and useful results? <i>Diversity & Inclusivity:</i> Does the proposed methodology align with Wellcome's D&I principles (i.e., is the planned research inclusive of different groups of people and locations, and does the methodology mitigate potential biases)?
Delivery & Outputs 20%	<i>Communication:</i> Is there a good plan for communicating with the Wellcome team? <i>Delivery plan:</i> Is the proposed delivery plan appropriate and achievable? <i>Feasibility:</i> How feasible is the delivery plan? Are there significant risks associated with the proposed timelines, and how well are they mitigated?
Budget 20%	<i>Value for Money:</i> Is the proposed work within budget and good value for money?

4.4. Contract Feedback

This section allows Suppliers to provide specific feedback to the contractual agreement which will be used should their proposal be successful. This is the suppliers' opportunity to provide negotiation points on Wellcome's terms and conditions, we will not consider negotiations that are only raised after the contract has been awarded so as not to delay the contracting process. Please ensure you engage with a relevant legal contact if applicable. Contract feedback is to be incorporated into your proposal as an annex and in the following format:

Clause #	Issue	Proposed Solution/Comment
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Suppliers submitting proposals as a registered company should review Wellcome's Standard terms and Conditions [document](#).

Individuals submitting proposals as a sole trader (not registered) should review this [document](#).

Individuals submitting proposals through their own personal services company please highlight this to the Wellcome contact immediately (see point 6 below).

4.5. Information Governance

Wellcome is committed to upholding data protection principles and protecting your information. The [Wellcome-Privacy-Statement-2023.pdf](#) explains how, and on what legal basis, we collect, store, and use personal information about you. This includes any information you provide in relation to this proposal.

Under [GDPR/Data Protection law](#), Wellcome must keep a record of all personal information it is processing (i.e., collecting, using, and sharing). This record will be made available to the Information Commissioner's Office upon request.

[This is Wellcome's record of data processing activities which meets GDPR article 30 requirements.](#)

Suppliers will be asked to complete the [TPSRA2](#) assessment before presentation stage to assess how you handle data.

5. Supplier Presentations

Following a submission of the proposal successful proposals will be invited to a virtual meeting which will last 50 minutes in total and will be a PowerPoint presentation followed by questions and answers session.

6. About Wellcome

Wellcome improves health for everyone by funding research, leading policy and advocacy campaigns, and building global partnerships. Collaborative research that involves a diverse range of people from different fields of interest is key to progress in health science – and to achieving our aim of fostering a healthier, happier, world. We're taking on the biggest health challenges facing humanity – climate and health, infectious disease, and mental health – to find urgent solutions and accelerate preventions. Find out more about Wellcome and our work at: [wellcome.org](#).

7. Prospective Suppliers Personnel - IR35 and Off Payroll Working Rules

Before the RFP response deadline, Prospective Suppliers must make the Wellcome Contact aware if they are intending to submit a proposal where the services will be provided by any individuals who are engaged by the Prospective Supplier via an intermediary i.e.



- Where the Prospective Supplier is an individual contracting through their own personal services company; or
- The Prospective Supplier is providing individuals engaged through intermediaries, for the purposes of the IR35 off-payroll working rules.

8. Equity Diversity and Inclusion

Embracing [diversity and inclusion](#) is fundamental to delivering our mission to improve health, and we are committed to cultivating a fair and healthy environment for the people who work here and those we work with. We want to cultivate an inclusive and diverse culture, and as we learn more about barriers that disadvantage certain groups from progressing in our workplace, we will remove them.

Wellcome takes diversity and inclusion seriously, and we want to partner with suppliers who share our commitment. We may ask you questions related to D&I as part of our RFP processes.

9. Disability Confident

The Wellcome Trust is proud to be a Disability Confident Employer (DC Level 2) and we encourage all our partners and suppliers to do the same. More information about this can be found on the government website [Disability Confident employer scheme and guidance - GOV.UK \(www.gov.uk\)](#). Disability Confident is creating a movement of change, encouraging employers to think differently about disability and take action to improve how they recruit, retain and develop disabled people.

10. Accessibility

Wellcome is committed to ensuring that our RFP exercises are accessible to everyone. If you have a disability or a chronic health condition, we can offer adjustments to the response format e.g., submitting your response in an alternate format. For support during the RFP exercise, contact the Wellcome Contact.

If, within the proposed outputs of this RFP exercise, specific adjustments are required by you or your team which incur additional cost then outline them clearly within your commercial response. Wellcome is committed to evaluating all proposals fairly and will ensure any proposed adjustment costs sit outside the commercial evaluation.

11. Independent Proposal

By submission of a proposal, prospective Suppliers warrant that the prices in the proposal have been arrived at independently, without consultation, communication, agreement or understanding for the purpose of restricting competition, as to any matter relating to such prices, with any other potential supplier or with any competitor.



12. Funding

For the avoidance of doubt, the output of this RFP exercise will be funded as a **Contract** and not as a **Grant**.

13. Costs Incurred by Prospective Suppliers

It should be noted that this document relates to a Request for Proposal only and not a firm commitment from Wellcome to enter into a contractual agreement. In addition, Wellcome will not be held responsible for any costs associated with the production of a response to this Request for Proposal.

14. Sustainability

Wellcome is committed to procuring sustainable, ethical and responsibly sourced materials, goods and services. This means Wellcome seeks to purchase goods and services that minimise negative and enhance positive impacts on the environment and society locally, regionally and globally. To ensure Wellcome's business is conducted ethically and sustainably, we expect our suppliers, and their supply chains, to adhere to these principles in a responsible manner.

15. Wellcome Contact Details

The single point of contact within this RFP exercise for all communications is as indicated below:

Name: Alyce O'Connor
Pronouns: She/Her
Role: Procurement Officer
Email: A.OConnor@wellcome.org