



## ROUND 1 APPLICATION – FOURTH ANNUAL a2 PILOT AWARDS

**NOTE:** This application PDF is a preview only and cannot be submitted. All applications must be submitted via AcceleratorApp. [Login](#) to your AcceleratorApp account to access in-progress applications or visit <https://www.a2collective.ai/pilotawards#Apply> to initiate a new application.

### SUBMISSION REQUIREMENTS

To be eligible for consideration, Round 1 a2 Pilot Awards applications must be completed and submitted by 5 p.m. ET on Tuesday, April 30, 2024. Late, incomplete, or otherwise noncompliant application submissions will not be accepted or considered. Should technical difficulties interfere with submission, the applicant is responsible for immediately contacting the a2 Collective Coordinating Center at [support@a2collective.ai](mailto:support@a2collective.ai) for assistance.

Applicants may submit multiple a2 Pilot Awards applications within a single competition cycle provided that each application proposes a unique project. Simultaneous submission of substantively similar or overlapping projects in a single competition cycle, whether to one AITC or to multiple AITCs, is not permitted. Violation of this policy will result in disqualification of one or more of the submitted applications.

By submitting an a2 Pilot Awards application, applicants acknowledge that all components of the application may be shared with affiliates of any of the three AITCs, the a2 Collective Coordinating Center, and the National Institute on Aging for internal evaluation purposes.

By typing my name below, I confirm that I have read and understand the above a2 Pilot Awards competition rules. (Required)

### PROJECT OVERLAP

National Institutes of Health (NIH) policy prohibits the funding of research with any scientific, budgetary, or commitment overlap with another funding source. a2 Pilot Awards applicants are responsible for disclosing any such overlap, and the submission of an a2 Pilot Awards application constitutes attestation that the proposed project and team do not include scientific, budgetary, or commitment overlap with any previous or current funding. In the case of funding that has been applied for but not yet awarded, the applicant is responsible for promptly disclosing any overlap that arises due to another award and either withdrawing from the a2 Pilot Awards competition or resolving overlap between the relevant award and the proposed pilot project.

Please [review the NIH grants policy on scientific, budgetary, and commitment overlap](#) before responding to the following question.

I certify that the pilot project and team for which I am requesting a2 Pilot Awards funding are in compliance with NIH overlap policy. (Required)

- ☐ Yes, the project is compliant with NIH policy prohibiting scientific, budgetary, or commitment overlap
- ☐ No, the project is not compliant with NIH policy prohibiting scientific, budgetary, or commitment overlap



In the question above, you indicated that your project is not compliant with NIH overlap policy and is therefore not eligible for the a2 Pilot Awards competition. If this is not accurate, please review the NIH policy above and change your answer. If you cannot confirm your project is compliant but still wish to submit it for consideration, please provide a detailed justification below. Applications determined to be ineligible for funding will be disqualified.

(Required) (Words Left: 500)

## DATA AND RESOURCE SHARING POLICY

In keeping with NIH policy, the a2 Collective is committed to the broad sharing of data and resources to facilitate collaboration, enhance reproducibility, and advance scientific knowledge. To the extent that consent, confidentiality, and intellectual property considerations allow, data, tools, protocols, informational materials, policies, and practices collected or developed in the course of a2 Pilot Awards projects are to be shared and archived as outlined in the [a2 Collective Data and Resource Sharing Plan](#).

By typing my name below, I confirm that I have read the a2 Collective Data and Resource Sharing Plan in full and agree to follow its principles if selected for a2 Pilot Awards funding. (Required)

## PILOT PROJECT FOCUS, AITC SELECTION, AND CONFLICT OF INTEREST

For the project title question below, please consider how your project title will appear in marketing, outreach, and project announcement materials. We recommend a short, descriptive title that emphasizes the project's end goal or deliverable(s). Examples of funded project titles include "Enhancing Slow-Wave Sleep in Older Adults Using Acoustic Stimulation" and "Smartphone Blood Pressure Monitoring for Healthy Aging."

What is the title of your proposed pilot project? (Required) (Characters left: 80)

Which of the following best describes the focus of the proposed project? (Required)

- ☐ Healthy Aging
- ☐ AD/ADRD
- ☐ Both, but predominantly healthy aging
- ☐ Both, but predominantly AD/ADRD

In plain language, provide a brief description of the proposed project and its relevance to improving care, outcomes, or quality of life for older adults in relation to healthy aging or AD/ADRD. The description should identify the need the project addresses, provide a brief overview of the proposed technology, and specify how the project will improve on the current standard of care or innovate beyond existing technology solutions. We recommend providing a concrete and concise description that will enable evaluators to quickly grasp and distinguish your proposal from others when prioritizing projects for funding.

(Required) (Words Left: 300)

Please review the following clinical/behavioral health domains and their definitions before answering the next question:

**Research:** Collection and analysis of health-related information (e.g., biomarker, patient, and population data, clinical trials data, data regarding health care delivery processes) with the goal of ultimately improving individuals' health and well-being through future interventions and applications. This can include studies to improve understanding of the mechanisms of disease; discover how to better detect disease states; find better ways to treat diseases; and learn how to enhance health care delivery processes. The results of a Research study are not expected to lead to a tangible product during the pilot project period.

**Prevention:** Discovery, evaluation, and modification of actionable risk factors related to adverse health outcomes, with the goal of maintaining an individual's health status before an illness develops. Prevention may also involve mitigating the risk of comorbidities or complications in existing illness. The latter is distinct from direct treatment of an illness, which falls within the Treatment/Care domain.

**Diagnostics:** Development, use, and evaluation of methods (such as decision support tools or imaging studies) to detect and predict adverse health conditions or events. This may involve use of assistive technologies (such as in-home or remote monitoring) to detect manifestations of illnesses or adverse events. The process of diagnosis can continue over months to years to follow the course of an illness as new findings arise, including determining the clinical stage and prognosis of a patient's illness.

**Treatment/Care:** Development, adaptation, and improvement of interventions (e.g., therapeutic procedures and devices, medication management, change in environment) to mitigate the causes or effects of an illness or facilitate patient care. This may include determining the safety or efficacy of an intervention; using decision support tools to select or modify therapy; documenting the effects of treatment on the progression of a patient's illness over time; and assessing the effectiveness of care delivery, coordination of care, or quality of care.

Select the primary clinical/behavioral health domain that best describes your project. (Required)

Research Prevention Diagnostics Treatment/Care

What specific area(s) of need does the proposed project address? Select all that apply, but please limit selections to focus areas that the project substantively addresses (1 to 3 selections are anticipated for most projects). [Clear] (Required)

- ☐ Cognition (e.g., AD/ADRD, delirium, brain health)
- ☐ Chronic age-related conditions and comorbidity
- ☐ Treatment and management of care (including end-of-life care)
- ☐ Mobility and activities of daily living (e.g., physical fitness, falls, frailty, transportation, hygiene, nutrition, continence, and toileting)
- ☐ Decision support and education for older adults, caregivers, and clinicians (e.g., to inform care or financial decision-making)
- ☐ Social and emotional well-being (for older adults or caregivers)
- ☐ Availability and accessibility of resources and care
- ☐ Stage-appropriate technology adaptations (e.g., human-centered computing, usability)
- ☐ Technology acceptance, trustworthiness, and ethics
- ☐ Other (specify)

What is your primary AITC choice? Please visit each AITC's website to learn more about their objectives, teams, and resources before selecting your choice below. (Required)

JH AITC MassAITC PennAITech



Does the project's Principal Investigator or any other key personnel have a potential conflict of interest (COI) with any AITC member institution? (While a COI is not a disqualifier, it does need to be reported and managed.) Please see the [COI Reference List](#) for additional guidance. [\[Clear\]](#) [\(Required\)](#)

**Yes**

No

Select all AITCs for which potential COI(s) may need to be managed. [\[Clear\]](#) [\(Required\)](#)

☐ JH AITC

☐ MassAITC

☐ PennAITech

Please briefly describe the COI(s) to be managed. [\(Required\)](#)

## PILOT PROJECT BUDGET, AI/TECHNOLOGY APPROACH, AND CONTEXT

Estimate the **total direct costs** (excluding facilities and administrative costs) to support your pilot proposal. Total direct costs for an appropriately scoped 1-year project are typically between \$50,000 and \$100,000 (the direct costs maximum is \$200,000). [\[Clear\]](#) [\(Required\)](#)

Select any of the following AI approaches that the proposed project will substantively leverage. Select all that apply, but please limit selections to the primary approaches leveraged during the project period (1 to 3 selections are anticipated for most projects). For projects with no AI component, select N/A only. [\[Clear\]](#) [\(Required\)](#)

☐ Affective computing (i.e., AI that can recognize, interpret, and simulate human emotion)

☐ Ambient intelligence (i.e., environments and smart agents responsive to human presence)

☐ Computer vision

☐ Natural language processing

☐ Decision networks and probabilistic programming

☐ Machine learning (e.g., generative AI, predictive modeling, neural networks, distributed machine learning)

☐ Heuristic AI (e.g., symbolic reasoning, expert systems, inductive logic programming, robotic process automation)

☒ Other AI approach (specify)

☐ N/A



Select any of the following technology approaches that the proposed project will substantively leverage. [\[Clear\]](#) [\(Required\)](#)  
Select all that apply, but please limit selections to the primary approaches leveraged during the project period (1 to 3 selections are anticipated for most projects). For projects with no direct technology component, select N/A only.

- ☐ Environmental sensors (e.g., wall-mounted sensors, cameras)
- ☐ Wearables (e.g., mobile sensors, wearable assistive devices, neuroprosthetics)
- ☐ Robotics
- ☐ Smart household devices and utilities (Internet of Things)
- ☐ Smartphone hardware enhancements/add-ons (e.g., for diagnostics and monitoring)
- ☐ User-facing software and platforms, including mobile applications
- ☐ Virtual assistants and chatbots (including interfaces to enable their use)
- ☐ Virtual and augmented reality systems
- ☒ Other technology approach (specify)

☐ N/A

What is the name of the technology, product, or tool on which the proposed project focuses? [\(Required\)](#) [\(Words Left: 150\)](#)

What is the current stage of the development of the technology, product, or tool on which the proposed project focuses? [\(Required\)](#)

- ☐ Technology concept or discovery
- ☐ Initial prototype development and beta testing
- ☐ Evaluation of prototype in real-world conditions
- ☐ Commercial deployment or scaling

Who are the target consumers or users of the proposed technology, product, or tool? Select all that apply. [\[Clear\]](#) [\(Required\)](#)

- ☐ Older adults with intact cognitive function
- ☐ Older adults with impaired cognitive function or AD/ADRD
- ☐ Caregivers and social support network members (including relatives)
- ☐ Health care professionals, systems, and payers
- ☒ Other (specify)

In which U.S. state or territory will the pilot project work primarily occur? [\(Required\)](#)

Select...



In what setting(s) will the proposed technology, product, or tool be deployed during the pilot project? [\[Clear\]](#) [\(Required\)](#)  
Select all that apply.

- ☐ Home or independent living community
- ☐ Residential living community or subacute care (e.g., assisted living, nursing facility, skilled nursing facility)
- ☐ Ambulatory care (e.g., clinic, outpatient rehabilitation center)
- ☐ Hospital (e.g., emergency department, hospital ward, ICU, inpatient rehabilitation)
- ☐ Research laboratory
- ☒ Other setting (specify)



In what setting(s) is the proposed technology, product, or tool intended to be deployed after the pilot project? Select all that apply.

[\[Clear\]](#) [\(Required\)](#)

- ☐ Home or independent living community
- ☐ Residential living community or subacute care (e.g., assisted living, nursing facility, skilled nursing facility)
- ☐ Ambulatory care (e.g., clinic, outpatient rehabilitation center)
- ☐ Hospital (e.g., emergency department, hospital ward, ICU, inpatient rehabilitation)
- ☒ Other setting (specify)

Provide an estimate of the proposed project's sample size (e.g., numbers of participants, users, records, sites, health systems, etc. to be included in the pilot project). [\(Required\)](#) [\(Words Left: 100\)](#)

Will serving members of underrepresented or underserved populations be a primary focus of the proposed project?

[\[Clear\]](#) [\(Required\)](#)

Yes

No

Which underrepresented population(s) will the proposed project focus on serving? Select all that apply, but please limit selections to the primary populations the project is designed to serve.

[\[Clear\]](#) [\(Required\)](#)

- ☐ Disabled individuals
- ☐ Individuals who identify as LGBTQIA
- ☐ Individuals with low educational attainment (high school or less)
- ☐ Individuals with low socioeconomic status
- ☐ Members of underserved racial and ethnic groups
- ☐ Neurodivergent individuals
- ☐ Non-native English speakers
- ☐ Rural-dwelling individuals
- ☐ Women

## HUMAN SUBJECTS, RESEARCH EXEMPTIONS, AND CLINICAL TRIALS

Does the proposed pilot project involve human subjects or the prospective or retrospective use of private, identifiable data or materials derived from humans?

[\[Clear\]](#) [\(Required\)](#)

Yes

No

I don't know

Has the project previously been ruled as exempt human subjects research as defined by NIH?

[\[Clear\]](#) [\(Required\)](#)

- ☒ Yes (provide exemption number)

☐ No

Projects that include any component that constitutes a clinical trial are not eligible for funding in the fourth annual a2 Pilot Awards competition. NIH defines a clinical trial as any research study in which one or more human subjects are prospectively assigned to one or more interventions (which may include placebo or other control) to evaluate the effects of those interventions on health-related biomedical or behavioral outcomes.





Note that under this definition, it does not matter if your study includes only one intervention that all participants undergo—if you plan to evaluate the effect of any intervention (e.g., interaction with software, use of a device, completion of training) on a health-related biomedical or behavioral outcome in one or more human subjects, then your study is considered a clinical trial and is not eligible for funding in the fourth annual (2024) a2 Pilot Awards competition. Feasibility studies that evaluate how usable, acceptable, or scalable a product is in order to inform technology development but do not evaluate its effect on a health-related biomedical or behavioral outcome are eligible for funding. Additional guidance on how NIH defines clinical trials can be found [here](#).

By typing my name below, I attest that my proposed project is not a clinical trial, and that the Project Statement (Required) included in my application reflects a study design for which the answer to at least one of the following questions is “no.”

As you complete the following questions, please follow the included links for additional context on how NIH defines each term and review your selections carefully for accuracy.

Are study participants **prospectively assigned** to an **intervention**? (Note that the answer to this question is “yes” if one or more human subjects will undergo an intervention of any kind in your study [e.g., interaction with software, use of a device, completion of training].) (Required)

Yes No

Is the study designed to evaluate the **effect of the intervention** on the participants? (Note that the answer to this question is likely “yes” if you plan to collect data on the effect of the intervention on human subjects.) (Required)

Yes No

Is the effect that will be evaluated a **health-related biomedical or behavioral outcome**? (Required)

Yes No

## PROJECT STATEMENT

The Project Statement must be no longer than 2 pages (not including citations) and provide a brief overview of the following project elements:

- (1) Scientific approach
- (2) AI/technology approach
- (3) Relevance to healthy aging and/or AD/ADRD
- (4) Aims and expected outcomes
- (5) Plans or potential for translation or commercialization of project deliverable(s)

Font size should be at least 11 point (Arial font is recommended). Spacing should include no more than 15 characters per horizontal inch and no more than six lines of text per vertical inch. Margins must be at least 0.5” on all sides.

The Project Statement should not include links to additional sources of information, except for citations. Citations are optional but you are strongly encouraged to include them as needed to provide evidence for scientific rationale and claims related to feasibility and significance. Citations *do not* count against the 2-page Project Statement limit.

The file name for your project statement must include the AITC you are applying to, the name of the project’s managing institution or organization, the last name of the AcceleratorApp account user submitting the application, and the application round. For example, an individual named Jane Jones affiliated with Princeton applying to MassAITC would title their Project Statement upload: *MassAITC\_Princeton\_Jones\_Round1\_ProjectStatement*



Please upload the Project Statement (PDF only). (Required)

max file size is 100MB

Choose File No file chosen

## PROJECT TEAM, BIOSKETCH(ES), AND AFFILIATIONS

Which of the following options best describe(s) the proposed project's managing organization(s)? Select all that apply. [\[Clear\]](#) (Required)

- ☐ Academic institution
- ☐ Health care organization
- ☐ For-profit organization
- ☐ Start-up or small business
- ☐ Non-profit organization
- ☐ Government institution
- ☒ Other (specify)

Please provide the name(s) of the proposed project's managing organization(s). (Required)

Has your project team or product ever been affiliated with an accelerator, incubator, or startup challenge?

[\[Clear\]](#) (Required)

Yes No

Please specify the accelerator, incubator, or startup challenge. (Required)

(Words Left: 75)

Does any member of your project team have previous experience with NIH or other federal grant application and funding processes?

[\[Clear\]](#) (Required)

Yes No

Please identify the project team member(s) with this experience and briefly describe their relevant experience. (Required)





Does any member of your project team have previous experience conducting human subjects research or completing Institutional Review Board submission? [\[Clear\]](#) [\(Required\)](#)

**Yes** No

Please identify the project team member(s) with this experience and briefly describe their relevant experience. [\(Required\)](#)

What types of stakeholders will be directly involved in conducting the proposed pilot project? Select all that apply. [\[Clear\]](#) [\(Required\)](#)

- ☐ Academic researchers
- ☐ Clinicians
- ☐ Consumer advocates
- ☐ Federal or government employees
- ☐ For-profit organization employees
- ☐ Nonprofit organization employees
- ☐ Other (specify)

Key personnel are defined as anyone essential to the project's success. Starting with the Principal Investigator(s), fill in the information below, adding succeeding profile tabs as needed for additional key personnel.

*press the add button to add a new item*

1st + Add

Full Name [\(Required\)](#)

Email Address [\(Required\)](#)

eRA Commons User Name [\(Optional\)](#)

Organization / Institution [\(Required\)](#)

Role on Project (e.g., Principal Investigator, Project Director, Co-Investigator, Data Scientist, etc.) [\(Required\)](#)



Use the downloadable NIH Biosketch Template below to complete a biosketch for the project's Principal Investigator(s), as well as any Co-Investigator(s) or key personnel who are essential to project implementation, combining multiple biosketches (if applicable) into a single PDF for upload. While biosketches are only **required** for Principal Investigators (including Co-PIs and MPIs), applicants are encouraged to submit biosketches for other key team members as needed to demonstrate that the team includes suitable expertise for the proposed project.

A biosketch is used to highlight each individual's qualifications for a specific role in the proposed project. Do not include graphics, figures, or tables (other than those included in the template) in the biosketch. Do not embed or attach additional files (e.g., video, graphics, sound, data). Individual biosketches may not exceed 5 pages per person, including the table at the top of the first page.

Please upload one combined biosketch file (PDF only) that includes biosketch(es) completed using the NIH Biosketch Template for the project's Principal Investigator(s) and any Co-Investigator(s) or key personnel who are essential to project implementation. An NIH Biosketch Sample is also available as a downloadable reference. To download a document, click the icon that appears to the left of the file name. (Required)

#### FILE TEMPLATES



NIH Biosketch Template



NIH Biosketch Sample

max file size is 100MB

Choose File

No file chosen

Other Significant Contributors (OSCs) are defined as individuals who have committed to contribute to the scientific development or execution of the project, but are not committing any specified measurable effort (i.e., person months) to the project.

These individuals are typically presented at "effort of zero person months" or "as needed." Individuals with measurable effort may not be listed as OSCs. Consultants should be included if they meet this definition.

Biosketches for OSCs are not requested.

Please list all OSCs, adding succeeding profile tabs as needed for additional OSCs.

*press the add button to add a new item*

1st

+ Add

Full Name (Optional)

Email Address (Optional)

Organization / Institution (Optional)

Role on Project (Optional)



## ADDITIONAL QUESTIONS

Did you meet with any AITC or a2 Collective Coordinating Center representative(s) to discuss your proposed project or application prior to submission?

[\[Clear\]](#) (Required)

☒ Yes

☐ No

How many times did you meet with any AITC or a2 Collective Coordinating Center representative(s)?

[\[Clear\]](#) (Required)

☒ Once

☐ More than once

List the names of any AITC or a2 Collective Coordinating Center representative(s) you met with.

*press the add button to add a new item*

1st	+ Add
<b>First Name</b> (Optional) <input type="text"/>	
<b>Last Name</b> (Optional) <input type="text"/>	

Have you applied to a previous a2 Pilot Awards competition? [\[Clear\]](#) (Required)

☒ Yes, once

☐ Yes, more than once

☐ No

To which AITC(s) have you previously applied? Select all that apply. [\[Clear\]](#) (Required)

☐ JH AITC

☐ MassAITC

☐ PennAITech

The a2 Collective is committed to supporting investigators from underrepresented groups. The following questions are optional and are used only for internal analysis.

What is your gender? [\[Clear\]](#) (Optional)

☐ Male

☐ Female

☒ Other (specify)

What is your race/ethnicity? (Check all that apply.) [\[Clear\]](#) (Optional)

☐ White

☐ Black or African American

☐ Hispanic

☐ American Indian or Alaska Native

☐ Asian

☐ Native Hawaiian or Pacific Islander

☐ Middle Eastern or North African

☒ Other (specify)