

ISL Advanced Technology Working Group Updates and Plan for 2026-2027

Goals and Key Deliverables

The primary purpose of the **ISL Advanced Technology Working Group** is to advance interdisciplinary research, innovation, and training at the intersection of **aging and emerging technologies**, including artificial intelligence, digital health, human-computer interaction, smart and assistive technologies, data science, and related areas.

The Working Group will bring together investigators and trainees from across FSU to identify important technology-related challenges in aging, develop interdisciplinary collaborations, pursue major external funding opportunities, and create opportunities for students and trainees to contribute to aging and technology research.

A major long-term goal is to help position ISL as a nationally recognized hub for **AI, technology, and successful longevity** and to build the interdisciplinary research infrastructure and track record needed to compete for major NIA center and training mechanisms. This direction is consistent with ISL's broader strategic goal of developing an integrated research ecosystem capable of supporting center-level funding.

Key areas of focus include:

- Building interdisciplinary collaborations around **AI and technology for healthy aging, independent living, healthcare, caregiving, social connection, accessibility, and well-being**.
- Developing the research teams, infrastructure, pilot projects, and preliminary evidence needed to prepare for an **NIA Artificial Intelligence and Technology Collaboratory (AITC) P30** application.
- Developing a concept for an interdisciplinary **T32 postdoctoral training program focused on aging and technology**, drawing on expertise across ISL and FSU.
- Creating opportunities for faculty, postdoctoral scholars, graduate students, and undergraduate students to collaborate on aging-and-technology research and innovation.
- Launching an **ISL AI + Aging Innovation Challenge** to engage interdisciplinary student teams in developing human-centered AI solutions to real-world challenges facing older adults, caregivers, healthcare providers, and communities.
- Facilitating collaborative manuscripts, pilot studies, grant applications, technology development, and other scholarly activities arising from Working Group interactions.

Achievements and Foundation from the Past Year

Over the past year, ISL has strengthened its foundation for a broader aging-and-technology initiative by growing research activity in AI, digital health, and emerging technologies and by strategically planning for major NIA funding opportunities.

This foundation includes increasing interdisciplinary engagement across ISL's network of faculty affiliates and growing interest in AI-enabled approaches to healthy aging, healthcare, independent living, and patient engagement.

ISL's strategic planning has also identified the **NIA AITC P30 as a major near-term center-level funding opportunity**. The proposed model would integrate informatics and AI capabilities with clinical and behavioral translation and community/recruitment infrastructure.

These developments create an opportunity for the Advanced Technology Working Group to serve as an organizing mechanism for faculty and trainees interested in contributing to this emerging research direction.

Plans for the Coming Year: 2026–2027

The Advanced Technology Working Group will focus on several achievable activities that simultaneously generate near-term engagement and build toward larger institutional initiatives.

1) Develop the foundation for an NIA AITC P30 application

The Working Group will help identify faculty expertise, research projects, technologies, datasets, infrastructure, and external collaborators that could contribute to a future NIA Artificial Intelligence and Technology Collaboratory (AITC) P30 proposal in collaboration with UF Pepper Center and Institute on Aging.

Activities may include mapping existing ISL/FSU capabilities; identifying scientific themes in which FSU can develop a distinctive national profile; identifying potential Core leaders and investigators; developing collaborative pilot projects; and discussing infrastructure needed to support shared AI and technology research in aging.

This effort will contribute to ISL's broader goal of developing an integrated Research Innovation Core spanning Informatics & AI and Clinical & Behavioral Translation.

2) Develop an Aging + Technology T32 concept

The Working Group will explore development of an interdisciplinary **NIH/NIA T32 postdoctoral training program in aging and technology**.

The initial year will focus on defining the scientific and training vision, identifying participating faculty and existing courses and training resources, assessing potential training gaps, and identifying opportunities for interdisciplinary mentorship.

Potential training areas could include AI and data science, digital health, human-computer interaction, assistive and smart technologies, gerontology, clinical and behavioral science, responsible AI, implementation and translational research, and community-engaged research.

The goal for 2026–2027 would be to develop a sufficiently mature concept, faculty training network, and preliminary training structure to determine readiness and timing for a future T32 application.

3) Launch the ISL AI + Aging Innovation Challenge

The Working Group will develop and launch an ISL AI + Aging Innovation Challenge: Designing AI-powered solutions for healthier, more connected, and independent lives as we age.

Students will form interdisciplinary teams to identify an important challenge facing older adults, caregivers, healthcare providers, or communities and develop an innovative AI-enabled solution.

A central principle of the competition will be:

Start with an aging problem, not with an AI tool.

Potential challenge areas will include Technology Access & AI Readiness; Health & Independent Living; Social Connection & Well-Being; Healthcare & Caregiving; and Safety, Trust & Financial Well-Being.

Rather than requiring a traditional coding hackathon, ISL will consider a 2–4 week innovation challenge culminating in a one-day pitch and demonstration event. Teams may develop working prototypes, applications, conversational agents, smart-device concepts, service models, mock-ups, or well-developed solution concepts.

An “Aging Problems Marketplace” could launch the challenge, with ISL faculty, older adults, community organizations, healthcare partners, and caregivers presenting real-world problems. Teams could then form around these challenges and receive mentorship from an ISL faculty member and, when possible, an older-adult or community advisor.

Projects would be evaluated on the importance of the aging problem, innovation and appropriate use of AI, human-centeredness and accessibility, feasibility and potential impact, and responsible AI/privacy/ethics.

The Working Group will also explore an **ISL Accelerator Award** through which selected teams could continue developing promising projects with ISL faculty after the competition, potentially leading to UROP projects, research studies, publications, startup concepts, or external funding opportunities.

4) Create opportunities for interdisciplinary collaboration

Working Group meetings will provide a forum for members to share research projects, emerging technologies, datasets, methods, funding opportunities, and potential collaboration ideas.

Particular emphasis will be placed on collaborations that can generate pilot data, interdisciplinary publications, technology prototypes, and external grant applications relevant to the future AITC P30 and other aging-and-technology funding opportunities.

5) Strengthen the aging-and-technology trainee pipeline

The Working Group will identify opportunities to engage undergraduate students, graduate students, and postdoctoral scholars in ISL technology initiatives.

The Innovation Challenge, collaborative research projects, faculty mentorship, UROP opportunities, and development of the T32 concept can collectively form the beginnings of a more visible aging + technology training ecosystem at FSU.

Opportunities for Member Participation

Participation in the Advanced Technology Working Group will be flexible and designed to accommodate members with different disciplinary backgrounds and levels of available time.

Members may contribute by bringing forward an aging or technology challenge; sharing relevant research, technologies, datasets, or infrastructure; participating in the AITC P30 planning effort; contributing to development of the T32 training concept; mentoring an Innovation Challenge team; proposing problems for the Aging Problems Marketplace; serving as a judge or advisor; identifying collaborators or funding opportunities; or joining a focused manuscript, pilot project, or grant-development team.

Members do not need to be AI or technology experts. The Working Group will benefit equally from expertise in aging, healthcare, behavioral science, social science, engineering, design, policy, communication, community engagement, and other areas that can help ensure that technologies are developed around meaningful aging needs.