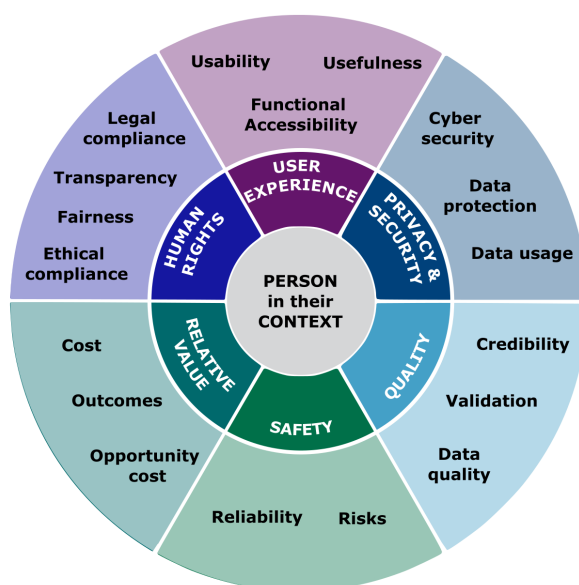


Unlocking the Potential of Artificial Intelligence-enabled Assistive Technology for People with Disability

Developing a principles-based framework to guide stakeholders of the National Disability Insurance Scheme (NDIS) through the development of safe and effective AI-enabled Assistive Technology (AT).



Background

Artificial intelligence (AI) is increasingly transforming the role of technology-based solutions in the lives of people with disability. AI, particularly where it is embedded into AT has the potential to promote better functioning and greater independence. While AI can offer improved access and quality outcomes, not all AI is right for everyone and there is often limited guidance on its use.

The Commonwealth Scientific Industrial and Research Organisation's (CSIRO) Australian e-Health Research Centre (AEHRC), in collaboration with NDIA, developed a principle-based evaluation framework (The Framework) to guide AI-enabled AT market development and support better matching of technologies to a person's individual needs.

Our Approach

The Framework draws on current frameworks, guidelines and academic research and multiple rounds of stakeholder consultation with people with disability, their carers, representatives from industry, peak bodies, service providers and government departments.

The Framework

The Framework supports a person-centric approach for assessing AI-enabled-AT, with a consideration of the context (e.g. environment, social and cultural factors) in which AI-enabled-AT is to be used. It also acknowledges the unique capabilities, preferences, and goals of end-users. The principles-based framework is guided by a set of six core domains. Each domain encompasses a principle, and two or more critical measurement areas.

User Experience

AI-enabled AT should provide a productive and positive experience to people with disability.

Measures: Usability, Usefulness, Functional Accessibility

Privacy and Security

AI-enabled AT should ensure all people's data is protected.

Measures: Cyber Security, Data Protection, Data Usage

Quality

AI-enabled-AT should reliably produce desired or intended results. Quality should be sustained.

Measures: Credibility, Validation, Data Quality

Safety

AI-enabled AT should do no harm, minimise negative outcomes and not deceive people.

Measures: Risks, Reliability

Relative Value

AI-enabled AT should provide better benefit to cost ratio in comparison to alternate options.

Measures: Cost, Outcomes, Opportunity Cost

Human Rights

AI-enabled AT must protect human rights and fundamental freedoms.

Measures: Legal Compliance, Fairness, Transparency, Ethical Compliance.