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President

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To whom it may concern,

The Australian Academy of Technological Sciences and Engineering (ATSE)<sup>1</sup> welcomes the opportunity to provide its response to the National Disability Insurance Agency's Discussion Paper - *Towards Solutions for Assistive Technology*.

The Academy has identified that technologies can play a major role in reducing healthcare costs when they are socially accepted and widely adopted. Such technologies can also enhance Australia's economy if they are developed from a strong Australian industry base which draws on world-class research and development (R&D). To deal effectively with changing demographics and patterns of disease, Australia must develop and deploy advanced technologies that are effective across all the population, including the aged and people with disabilities.

Healthcare must be effective and affordable, and assistive technologies (AT) have the potential to improve health outcomes and quality of life, reduce healthcare costs and offer solutions for independent living, particularly for the aged and people with disabilities. The rapid national large scale deployment of AT is essential if the growth in healthcare costs is to be contained, to reduce unnecessary hospitalisation and enable self-management of health.

Central to the deployment of AT is the need to develop policies and funding mechanisms to support efficient home services and the widespread use of AT. This could bring significant cost savings to both State and Federal Governments and health and age care consumers. Policies and funding models are needed that are consistent, robust, and auditable, long term and directed to those most in need.

Advancing technological solutions for a healthy Australia has been a focus of ATSE activities for a number of years. In July 2014, ATSE published a Position Statement on Health Technology and three Action Statements that set out key priorities for the development and application of health technologies. These Statements are attached for your information.

The ATSE Action Statement '*Deploy Assistive Technologies to Improve Quality of Life*' provided four recommendations for action to enhance development, deployment and wide spread use of AT:

1. State and Federal Governments should implement policies that facilitate a range of services and service delivery mechanism that enable citizens to remain independent, safe and healthy in their own homes for as long as possible.
2. Research funding agencies and the private sector should work together to support research and development and innovation across the whole range of assistive technologies, recognising the particular challenges and complexity of delivering healthcare services in unsupervised settings.

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<sup>1</sup> ATSE advocates for a future in which technological sciences, engineering and innovation contribute significantly to Australia's social, economic and environmental wellbeing. The Academy is empowered in its mission by some 800 Fellows drawn from industry, academia, research institutes and government, who represent the brightest and the best in technological sciences and engineering in Australia. The Academy provides robust, independent and trusted evidence-based advice on technological issues of national importance. ATSE fosters national and international collaboration and encourages technology transfer for economic, social and environmental benefit.  
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3. Regulatory and ethical approvals processes should be streamlined to reduce costs of the design, development and marketing of new assistive technology products and to ensure the wide implementation of new health service delivery models that are safe and efficacious.
4. Education and capacity building activities are needed throughout the aged care sector, including health care providers, carers, ICT specialists, service providers and members of the community.

The Action Statement was based on earlier major studies by ATSE, and in 2010, ATSE published the report '*Smart Technology for Healthy Longevity*'<sup>2</sup> which surveyed the field in Australia and overseas and which put forward nine recommendations to enable greater knowledge and uptake of health associated benefits of health technologies in Australia. This report highlighted that national coordination is essential to make optimum use of the available resources, that Australian business and industry need to be alerted to opportunities for commercialisation of outputs from technology, and that continuous R&D support is needed.

Most recently, in 2014, ATSE conducted an interdisciplinary research project '*Assistive Health Technologies for Independent Living*'<sup>3</sup> on behalf of The Australian Council of Learned Academies. This report is attached for your information. The key findings from the report highlight a number of factors for healthcare delivery based on the use of AT, such as:

1. A market focus is critical - there is not yet sufficient market demand, and widespread operational implementations are minimal.
2. Expert 'champions' are required - well-respected champions who have skills in planning for sustainability and who can promote this agenda and bring together clinicians and organisations are required
3. Long-term business models are crucial - achieving success calls for a business model that has a focus on the value the technology and innovations can bring and their ability to improve productivity.
4. New interdisciplinary players will be involved - the healthcare market is changing, and external players are seeing the opportunity to break into the industry, and large-scale coordination requires incentives and support to connect the groups. Participation should be encouraged.

Several members of the *Assistive Health Technologies for Independent Living* Expert Working Group alongside others are forming a national network named the Smart and Enabling Technologies for Independent Living (SETIL), to support technology development and uptake in the disability and aged care sector. The network will be an industry-led collaboration that facilitates and promotes the adoption of smart and emerging technologies for independent living. The Steering Committee includes two ATSE Fellows, Professor Greg Tegart AM FTSE and Dr Erol Harvey FTSE, and SETIL will also be submitting a response to the NDIA Discussion paper.

The Academy is pleased that other groups also acknowledge the role that technology has to enable healthy living, and believes that this is an area which requires an interdisciplinary network of individuals and organisations to coordinate their efforts to ensure the needs and wants of end-users is met.

Currently, there are very limited mechanisms for bringing together stakeholders across a range of sectors, and the inclusion of networks within your discussion paper is commended. The Academy would welcome a meeting to discuss its recent work and to explore opportunities to benefit the health and wellbeing of all Australians.

To organise follow up discussions, please contact Ms Sarah Parker (Research and Policy Officer) on (03) 9864 0914 or via email at [sarah.parker@atse.org.au](mailto:sarah.parker@atse.org.au).

Yours sincerely,



Dr Alan Finkel

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<sup>2</sup> ATSE 2010, '*Smart Technology for Healthy Longevity*', Report of a study by the Academy of Technological Sciences and Engineering, Melbourne.

<sup>3</sup> ACOLA 2014, '*Assistive Health Technologies for Independent Living*', a report prepared by ATSE on behalf of ACOLA.