ATFA

Assistive Technology for All

The Australian Assistive Technology Equity Studies:

Improving access to assistive technology for people with disability who are not eligible for the NDIS

COTA VICTORIA

MONASH University

ALPHA CRUCIS GROUP

Citation
Layton, N., & Brusco, N. (2022). *The Australian assistive technology equity studies: Improving access to assistive technology for people with disability who are not eligible for the NDIS.* Monash University; COTA Victoria. https://doi.org/10.26180/21113887

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Assistive Technology for All

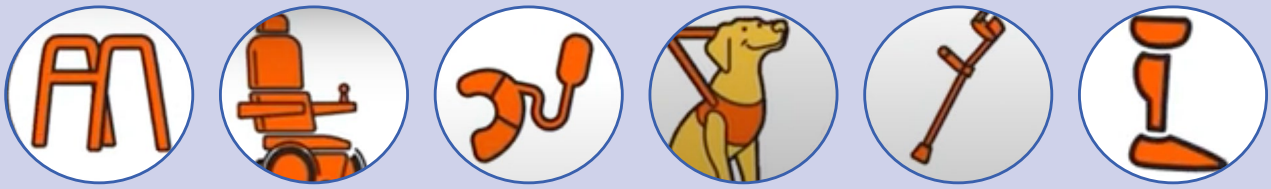
'Assistive technology' is an umbrella term that is used to describe any aid, piece of equipment or home modification that helps someone overcome the impact of disability or ageing.

According to the World Health Organization:

"Assistive technology enables people to live healthy, productive, independent, and dignified lives, and to participate in education, the labour market and civic life. Assistive technology reduces the need for formal health and support services, long-term care and the work of caregivers. Without assistive technology, people are often excluded, isolated, and locked into poverty, thereby increasing the impact of disease and disability on a person, their family, and society." [1]

Some basic examples of assistive technology include:

- A rubber stall on a finger to help someone turn the pages of a book
- A walking frame to support balance and mobility
- Voice dictation software to enable someone with limited dexterity to use a computer
- A wheelchair to enable mobility and independence
- An electronic communication device to enable someone who cannot use their voice to communicate their thoughts
- A prosthetic limb to enhance balance, mobility, and functionality.



Home modifications are often covered under the broader definition of assistive technology. Examples include:

- A stepless shower recess
- Grab rails
- Wired smart home technologies
- Ramps with handrails.

In this document, assistive technology and home modifications are referred to as two distinct, yet equally critical service categories.

Introduction

"What we're talking about here is just basic needs. It's nothing special. It's just the basic supports that we need to help us live a normal life."
– Consumer with spinal cord injury

This document presents two separate, but interrelated studies that were completed in 2022. Together, they provide a rich evidence-base to support the call for a national assistive technology and home modifications program to support people with disability who are not eligible for the National Disability Insurance Scheme (NDIS). National advocacy around this issue is being coordinated through the Assistive Technology for All (ATFA) campaign – an initiative of Council on the Ageing Victoria. This campaign is now supported by more than 60 organisations spanning the health, ageing and disability sectors.

STUDY 1 was led by Dr Natasha Layton from Monash University. It was funded by Monash University and supported by Council on the Ageing Victoria. It is titled "Assistive technology expenditure in Australia: an equity benchmarking study". This study:

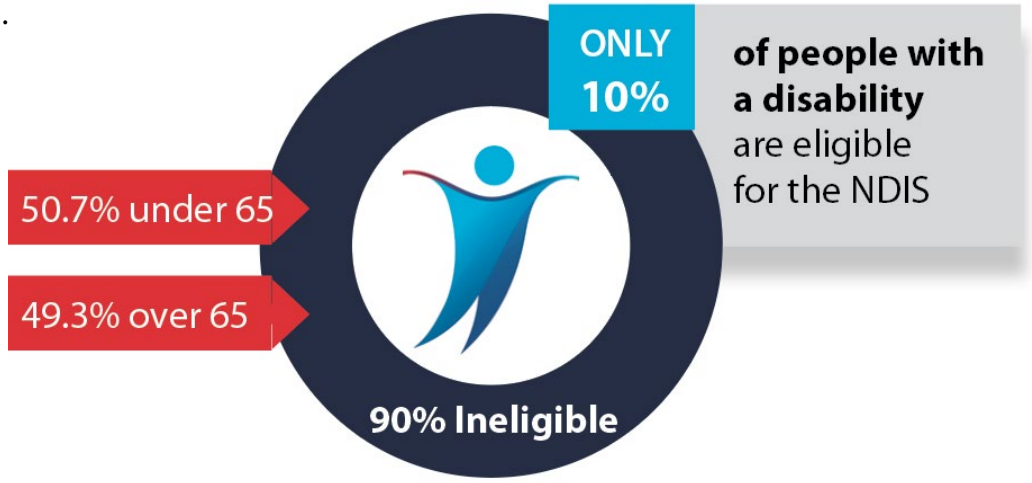
- Examines Australia's obligation to provide timely and equitable access to assistive technology and home modifications from a human rights and policy perspective.
- Examines the number of Government-funded pathways for accessing assistive technology and home modifications in Australia, noting that this data has never been collated on a sector-wide scale.
- Examines issues of equity and access across these existing government-funded pathways.
- Discusses policy principles that would help achieve a more equitable approach to the provision of assistive technology and home modifications, with a focus on the needs of people with disability who are not eligible for the NDIS.

STUDY 2 was commissioned by Council on the Ageing Victoria and led by Dr Natasha Brusco from Alpha Crucis Group. It is titled "Establishing and costing a single national assistive technology and home modifications program to support people with disability who are not eligible for the NDIS". This study:

- Reports the economic findings from Study 1 and examines the cost burden of relevant funding pathways from the government perspective.
- Establishes the number of people with disability able to access assistive technology and home modifications through existing funding pathways.
- Establishes the annual cost of a single national program to provide equitable access to assistive technology and home modifications to all people with disability who are ineligible for the NDIS.

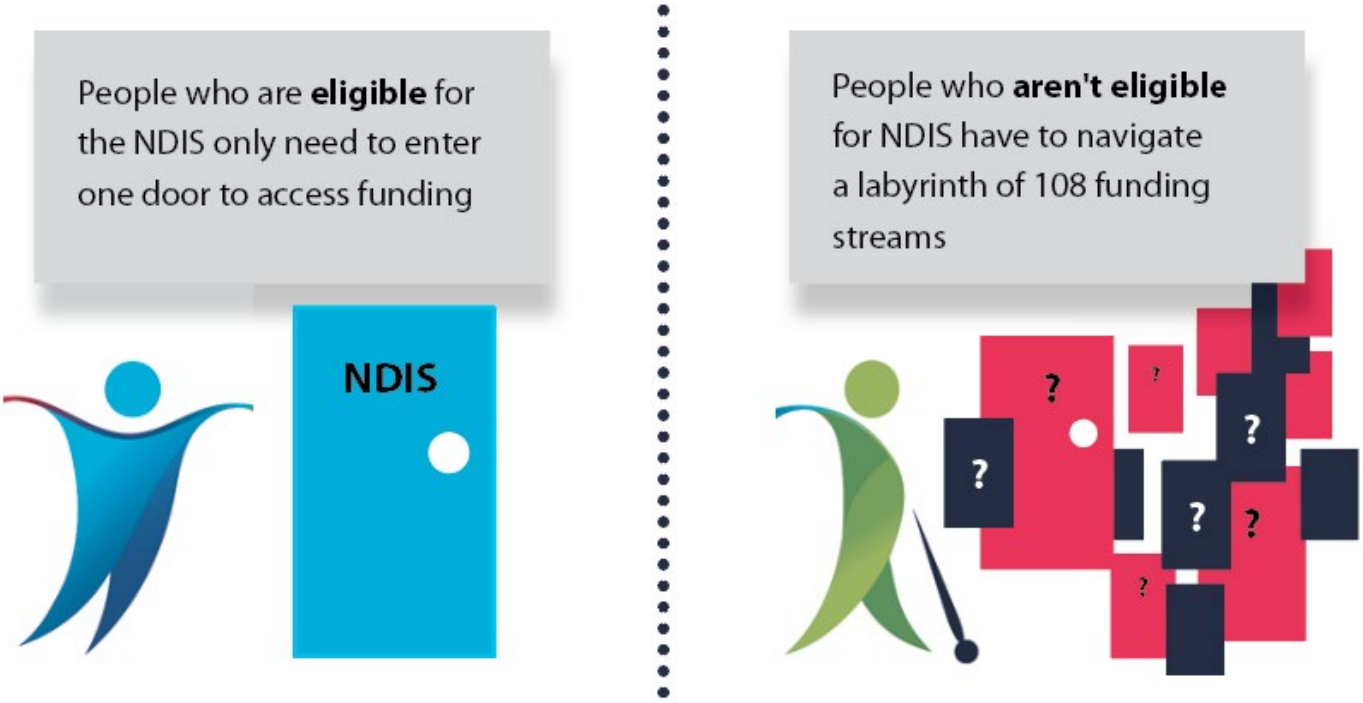
Combined key findings from studies 1 and 2

- Australia's National Disability Insurance Scheme (NDIS) only funds assistive technology and home modifications for approximately 10% of Australians with disability. Of the 90% of people with disability who are ineligible for the scheme, 50.7% are under the age of 65 and 49.3% are over the age of 65.

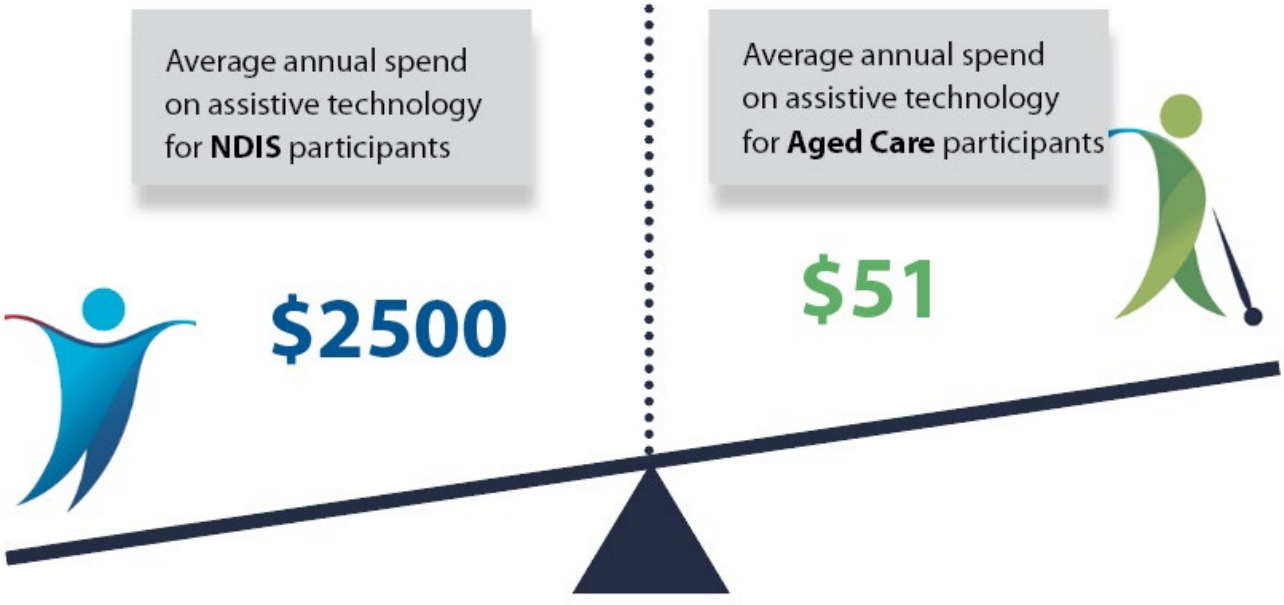


- Study 1 located 87 Government funders, administering 108 assistive technology and home modifications schemes outside the NDIS. It is possible that there are additional government-funded schemes that were not identified through the research. This shows that people with disability who are ineligible for the NDIS are required to navigate a complex and fragmented maze of funding to try and access the assistive technology and home modifications they need.
- Of the schemes identified, 90 are funded by state and territory governments and 18 are funded by the Commonwealth.
- There is a distinct lack of equity and consistency across the 108 schemes operating outside the NDIS. People with similar needs receive different amounts of support depending on their age, geographic location and when and where their disability was acquired. As an example, each Australian state and territory has a flagship assistive technology and home modifications scheme. These schemes have different eligibility criteria, fund and exclude different types of assistive products, and have different subsidy rates.
- The eligibility criteria across many of the 108 non-NDIS schemes identified are historic in nature and are not fully aligned with assistive technology provision guidelines or good practice standards. The categories of assistive technology and home modifications listed on funder websites represent less than 10% of the range of assistive technology available according to the international standard AS/ISO 9999 Assistive Products for Persons with Disability.
- While all schemes identified provide assistive products, few fund the wraparound services that are critical to supporting effective service delivery. These include:
  - Early access to skilled assessment and referral
  - Equipment trials, demonstration and loan, where appropriate
  - Procurement and customisation
  - Delivery and setup where required
  - Training to ensure the individual can use their assistive products safely and effectively
  - Timely maintenance and review.

- While NDIS participants have access to fully funded assistive technology and home modifications, this is rarely the case for people who are not eligible for the scheme. Many funding streams outside the NDIS provide subsidies for a small fraction of market costs. This can leave the recipient with a significant out of pocket expense for any assistive technology or home modifications they need. As a result, people frequently go without or continue using products that are unsafe or are not fit for purpose. They may also forgo other critical aspects of care or essential services so they can afford the equipment or home modifications they need.

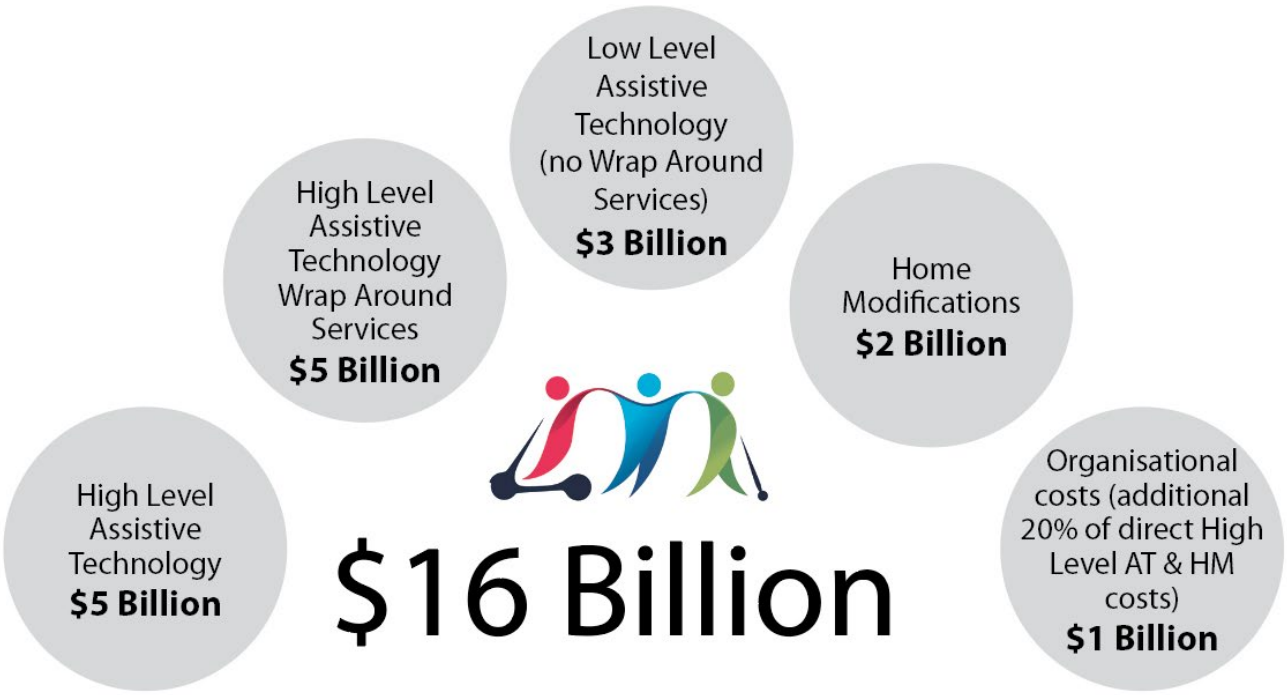


- Two out of three older people with disability who are not eligible for the NDIS access support from the aged care system. The final report from the Royal Commission into Aged Care Quality and Safety addressed the needs of this cohort. It recommended that people with disability accessing support from the aged care system have access to assistive technology and home modifications equivalent to what would be available under the NDIS. Currently the average spend on assistive technology and home modifications per person per year for NDIS participants is $2,500, compared with just $51 per person per year for aged care recipients.



- Study 2 demonstrates that current levels of unmet need would best be resolved through the establishment of a single national assistive technology and home modifications program. This would support all people with disability who are ineligible for the NDIS, irrespective of age.
- A single national assistive technology and home modifications program will require an annual investment of approximately $16 billion. This can be divided into $8 billion to cover recipients under the age of 65 and $8 billion to cover recipients over the age of 65.

  This would not all be new funding, as it is proposed that all existing non-NDIS state and commonwealth government funded assistive technology and home modifications schemes would have their government funding consolidated into this new national program.



- A $16 billion investment would provide funding at levels equivalent to those available under the NDIS. This $16 billion includes funding for low-cost assistive technology (under $1500), high-cost assistive technology (over $1500), wrap around services, home modifications and organisational costs.
- An annual investment of $16 billion could ultimately save $32 billion. For every dollar spent on assistive technology and home modifications, there is a conservative estimated two-fold return on investment relating to savings on the cost of paid carers, support and medical services. The timely provision of assistive technology and home modifications can also prevent or delay entry to residential care, the cost benefits of which are not included in this estimate.
- Data suggests that for every $1.00 spent on high level assistive technology and/or home modifications, up to an additional $1.98 is spent on organisational/administrative costs. Consolidating the 108 existing funding streams into one national program could create further cost efficiencies for Government by reducing the administrative burden associated with operating multiple schemes.

Case Study

Robert and Steve both have left above knee amputations resulting from aggressive infections. Robert is 67 years old and Steve is 56 years old.

Robert does not meet the age eligibility requirements for the NDIS. He has had to access support under his state-based Artificial Limb Scheme which does not provide him with appropriate access to assistive technology. He has no choice over the type of prosthesis he receives and currently uses a mechanical knee unit which is not suited to his individual needs. This compromises his safety as it results in regular falls. He also has a very basic prosthetic foot which does not provide energy return and leads to fatigue. After a fall or when he is feeling fatigued (because of the type of prosthesis he has been fitted with), Robert uses an old manual wheelchair which is weighty and quite difficult for him to push around.

Robert has made minimal modifications to his home because he would need to self-fund them and he is not in a financial position to do so. Consequently, he only uses a board across his bath for personal washing and does not have grip bars in the wet areas (bathroom, toilet). This further increases his risk of falls.

Up until last year, Robert worked full-time. Unfortunately, the regular falls he experiences have had a significant impact on his body and he has had to reduce his work hours to part-time as a result.

By contrast, Steve has access to an array of fully-funded reasonable and necessary supports under his NDIS Plan as he is several years younger than Robert and meets the age eligibility requirements for the scheme. The NDIS has enabled him to trial a variety of prosthetic devices to determine which one best meets his needs. He was subsequently funded for a Microprocessor Knee Unit (MPK) and multi-axis prosthetic foot in his first NDIS Plan two years ago. All of the home modifications Steve has needed have also been funded through his NDIS Plan, including a ramp at the rear of his home.

Steve is able to lead an active lifestyle with his wife and two children because he has had access to the appropriate assistive technology to facilitate this. And unlike Robert, he has never experienced a fall because the knee unit he has been fitted with is well-suited to his individual needs. He has also been able to return to full-time work.

Acknowledgements

Special thanks to the following organisations for their generous financial support of this research:

- The Australian Federation of Disability Organisations
- The Australian Rehabilitation and Assistive Technology Association
- Assistive Technology Suppliers Australia
- The Commonwealth Department of Health
- Limbs 4 Life
- Monash University Rehabilitation, Ageing and Independent Living Centre
- MS Australia
- Occupational Therapy Australia
- People with Disability Australia
- Spinal Cord Injuries Australia
- Speech Pathology Australia
- The Victorian Department of Families, Fairness and Housing
- Vision 2020 Australia

COTA Victoria also gratefully acknowledges the support received from:

- The two primary authors of this research, Dr Natasha Layton and Dr Natasha Brusco, for the spirit of collaboration in which they have approached this work.
- Members of the Assistive Technology for All Alliance who provided feedback on and helped to refine the studies.

List of abbreviations

ABS	Australian Bureau of Statistics
AT	Assistive Technology refers to assistive products (also known as aids and equipment) and the 'wraparound' systems or services needed to deliver them, such as assessment, adaptation, trial, training, maintenance and review
ATFA	Assistive Technology for All
CHSP	Commonwealth Home Support Programme
HCP	Home Care Package
HM	Home Modifications
NDIS	National Disability Insurance Scheme
PWD	People with Disability
SDAC	Survey of Disability, Ageing and Carers
STRC	Short Term Restorative Care
TCP	Transition Care Program

Study 1: Assistive technology expenditure in Australia: an equity benchmarking study

About the study

The AT Equity Benchmarking study was funded through a Seed Grant from the Monash University RAIL (Rehabilitation, Ageing and Independent Living) Research Centre. The study set out to establish the national government spend on AT, defined as aids and equipment, and home modifications. This data has never been collated on a sector-wide scale. It will inform an economic analysis of the costs of establishing a nationally equitable assistive technology program to support people with disability who are not eligible for the National Disability Insurance Scheme (NDIS).

Ethical support

In 2021, the Monash University Human Research Ethics Committee informed the research team that this project did not require ethical approval due to the nature of the deidentified aggregate data being collected.

Authors and Contributors

This report is authored by Dr Natasha Layton and Dr Natasha Brusco, with contributions from Ms Lauren Henley and Ms Alexia Huxley from Council on the Ageing Victoria. The advice of the project steering group is also gratefully acknowledged.

Citation

Layton, N., & Brusco, N. (2022). Study 1: Assistive technology expenditure in Australia: an equity benchmarking study. In (N. Layton & N. Brusco, 2022) *The Australian Assistive Technology Equity Studies: Improving access to assistive technology for people with disability who are not eligible for the NDIS.* Monash University; COTA Victoria. https://doi.org/10.26180/21113887

Why did we need this study?

"Access to assistive technology is a fundamental human right, a legal obligation for all countries within the Convention on the Rights of Persons with Disabilities and a prerequisite for the full and equitable achievement of the Sustainable Development Goals. [2]"

Australia's Disability Strategy [3] defines assistive technology as "any device or system used by people to make tasks easier. Most people use assistive technology in their daily lives, such as smart phones or remote controls. Assistive technology also includes grab rails, hoists, wheelchairs, hearing aids, text captioning services, home modifications, digital assistive technology, prosthetics and devices to support memory. For people with disability, assistive technology supports inclusion, participation, communication and engagement in family, community and all areas of society, including political, economic and social spheres."

AT includes both assistive products and the 'wraparound' systems or services needed to deliver them, such as assessment, adaptation, trial, training, maintenance and review [4, 5, 6].

Assistive Technology and home modifications (AT/HM) are cross cutting interventions, required across:

- health
- aged care
- employment
- mental health
- early childhood development, school education and higher education
- vocational training
- housing
- community infrastructure
- transport

They are essential facilitators of independent living and participation for 10% of Australians.

The United Nations Convention on the Rights of Persons with Disabilities (CRPD) [7], which has been signed and ratified by Australia, identifies AT/HM as necessary to realising a range of rights including equality, accessibility and the right to live independently and be included in the community.

Article 4 of the CRPD sets out the general obligations placed upon governments who have ratified this international treaty, including:
"g) To undertake or promote research and development of, and to promote the availability and use of new technologies, including information and communications technologies, mobility aids, devices, and assistive technologies, suitable for persons with disabilities, giving priority to technologies at an affordable cost" [8]

Article 19 of the CRPD establishes the right of people with disability to live independently and be included in the community. It requires that:

"b) Persons with disabilities have access to a range of in-home, residential and other community support services, including personal assistance necessary to support living and inclusion in the community, and to prevent isolation or segregation from the community." [9]

Article 20 of the CRPD relates to personal mobility, noting that governments have a role to play in:
"a) Facilitating the personal mobility of persons with disabilities in the manner and at the time of their choice, and at affordable cost;

b) Facilitating access by persons with disabilities to quality mobility aids, devices, assistive technologies and forms of live assistance and intermediaries, including by making them available at affordable cost;

c) Providing training in mobility skills to persons with disabilities and to specialist staff working with persons with disabilities;" [10]

More than 2.3 million Australians use assistive technology (AT) and home modifications (HM) to live, work and play, and the need for these supports increases with age [11]. Evidence suggests there are large gaps in how well Australia is delivering on the above human rights obligations [12, 13]. The patchwork of schemes make it unclear how governments provide access to AT/HM in Australia. Previous work by the peak body for assistive technology in Australia, Australian Rehabilitation and Assistive Technology Association (ARATA) [14] identified more than 100 AT funders and schemes across Australia. These funding pathways, all with different requirements and benefits, provide widely different levels of access to AT/HM.

The 'gold standard' case for the provision of AT/HM, laid out by the Productivity Commission [15] and enacted by the National Disability Insurance Scheme (NDIS) [16], delivers on many of the tenets of good practice including:

- Full funding for individualised supports (rather than a subsidy from a shortlist of eligible products)
- Funding for assessment and training
- The provision of AT to enable participants to meet outcomes relating to participation and inclusion, rather than just safety and autonomy around the house.

There is still substantial unmet need for AT and HM for the 90% of Australians with disability who are ineligible for the NDIS [17]. Evidence also points to the potential for significant return on investment [18, 19].

The AT Equity study aims

Our goal is to fill a key AT/HM evidence gap. The AT Equity study represents co-ordinated sector co-production to establish a foundational evidence pillar about met and unmet need for AT/HM. The AT Equity study asks: what is the government spend on AT/HM and which Australians benefit from it?

Offering Australian-first research which is aligned with relevant recommendations from the Royal Commission into Aged Care Quality and Safety our research aims to:

- Identify funded pathways through Commonwealth and State governments for the Australian community to access AT/HM
- Establish the cost burden of current funding pathways from the perspective of government
- Establish the breadth of the Australian population able to access AT/HM through these pathways, identifying any equity gaps
- Identify policy implications resulting from the above factors.

Met and unmet need for AT/HM in Australia

In 2018:

- More than half of Australians with disability (53.1% or 2.3 million of 4.4 million) used AT to assist with their functioning, improve their independence and increase their participation in social and economic life.
- The prevalence of disability increased with age - one in nine (11.6%) people aged 0-64 years and one in two (49.6%) people aged 65 years and over have a disability [11].

Aligned with the principles of universal access to healthcare is an expectation of fairness in resource allocation. Equality means each individual or group of people is given the same resources or opportunities. Equity recognises that each person has different circumstances and allocates the exact resources and opportunities needed to reach an equal outcome [20]. Equality of outcome, that is, living a good life enabled by AT/HM suited to your individual needs, can involve different amounts of AT/HM [21]. Equitable resource allocation would enable sufficient AT/HM for each person to achieve the type of outcomes to which Australians have a right.

AT users' access, and rights to equity, are governed by a range of conventions and statutes. In addition to the CRPD cited above, other key international documents include:

- the World Health Organisation's policy brief on access to AT [2]
- The Report on the Rights of Older Persons with Disabilities [22].

Research undertaken by civil society and government has identified substantial inequities in the provision of AT/HM to Australians depending on age and disability status. This suggests major policy and program gaps.

Furthermore, this inequity appears to have increased since the inception of the NDIS. Public campaigns are raising the issue that the NDIS only supports a proportion of individuals with disability, with no person over the age of 65 able to enter the scheme. [23]

Who needs and uses AT/HM in Australia?

A first task was to define the populations of Australians in need of AT/HM. We use the term persons with disability (PWD), inclusive of age-related and chronic illness-related AT/HM use, to identify the following populations [3] (noting that as required, numbers have been rounded):

PWD in Australia (all ages) = 4,370,300 [24]

- PWD (all ages) with access to NDIS = 466,619 [25]
- PWD (all ages) with access to Aged Care (however services not fit for purpose for all of their AT/HM needs) = 1,300,627 [18]
- PWD (all ages) currently not accessing Aged Care or NDIS = 2,603,054

PWD under 65 years in Australia = 2,427,600 [24]

- PWD under 65 years, with access to NDIS = 450,038 [25]
- PWD under 65 years, currently not accessing NDIS = 1,977,562

PWD 65 years plus in Australia = 1,942,700 [24]

- PWD 65 years plus, ageing within the NDIS = 16,581 [25]
- PWD 65 years plus, with access to Aged Care (however services not fit for purpose for all of their AT/HM needs) = 1,300,627
- PWD 65 years plus, currently not accessing Aged Care or NDIS = 625,492 [18]

What do we know about AT/HM expenditure?

Currently, the AT/HM landscape for Australians does not fully deliver on international benchmarks for good practice in the provision of AT/HM. Significant numbers of Australians do not have their human rights fully realised, as they do not have equal access to AT/HM. Australians seeking to access AT/HM face a range of hurdles including geography, compensable status, capacity to contribute, type of disability or injury, and age.

Once eligibility is established, assessment is undertaken, recommendations are identified, paperwork is completed and wait times are dealt with. Wait times may be considerable, anecdotally up to 18 months in some cases. The AT/HM on offer may include AT/HM subsidy, loan, or purchase.

In 2018, the National Aged Care Alliance [26] asked government to review the AT spend. A subsequent review of AT funding programs in 2020 generated a partial list, focussing on over 65's, with no cost data [18]. Costing information for all Australians is therefore not yet complete.

The specific needs of older people are outlined in the Report on the Rights of Older Persons with Disabilities [22].

The Final report from the Royal Commission into Aged Care Quality and Safety (2021) made four recommendations relating to the provision of assistive technology and home modifications in its 2021 report [27, 28].

In summary they include:

"Recommendation 34: From 1 July 2022, the Australian Government should implement an assistive technology and home modifications category within the aged care program that: a. provides goods, aids, equipment and services that promote a level of independence in daily living tasks and reduces risks to living safely at home b. includes the assistive technology, home modifications and hoarding and squalor service types from the Commonwealth Home Support Programme c. is grant funded.

Recommendation 72: By 1 July 2024, every person receiving aged care who is living with disability, regardless of when acquired, should receive through the aged care program daily living supports and outcomes (including assistive technologies, aids and equipment) equivalent to those that would be available under the National Disability Insurance Scheme to a person under the age of 65 years with the same or substantially similar conditions.

Recommendation 73: By 1 July 2024, the Disability Discrimination Commissioner and the Age Discrimination Commissioner should be required, as part of the new National Disability Strategy, to report annually to the Parliament on the number of people receiving aged care with disability who are aged 65 years or older and their ability to access daily living supports and outcomes (including assistive technologies, aids and equipment) equivalent to those available under the National Disability Insurance Scheme.

Recommendation 125: Abolition of contributions for certain services 1. Individuals who are assessed as needing social supports, assistive technologies and home modifications, or care at home should not be required to contribute to the costs of that support."

Australian Disability Strategy 2021-2031 (2022)

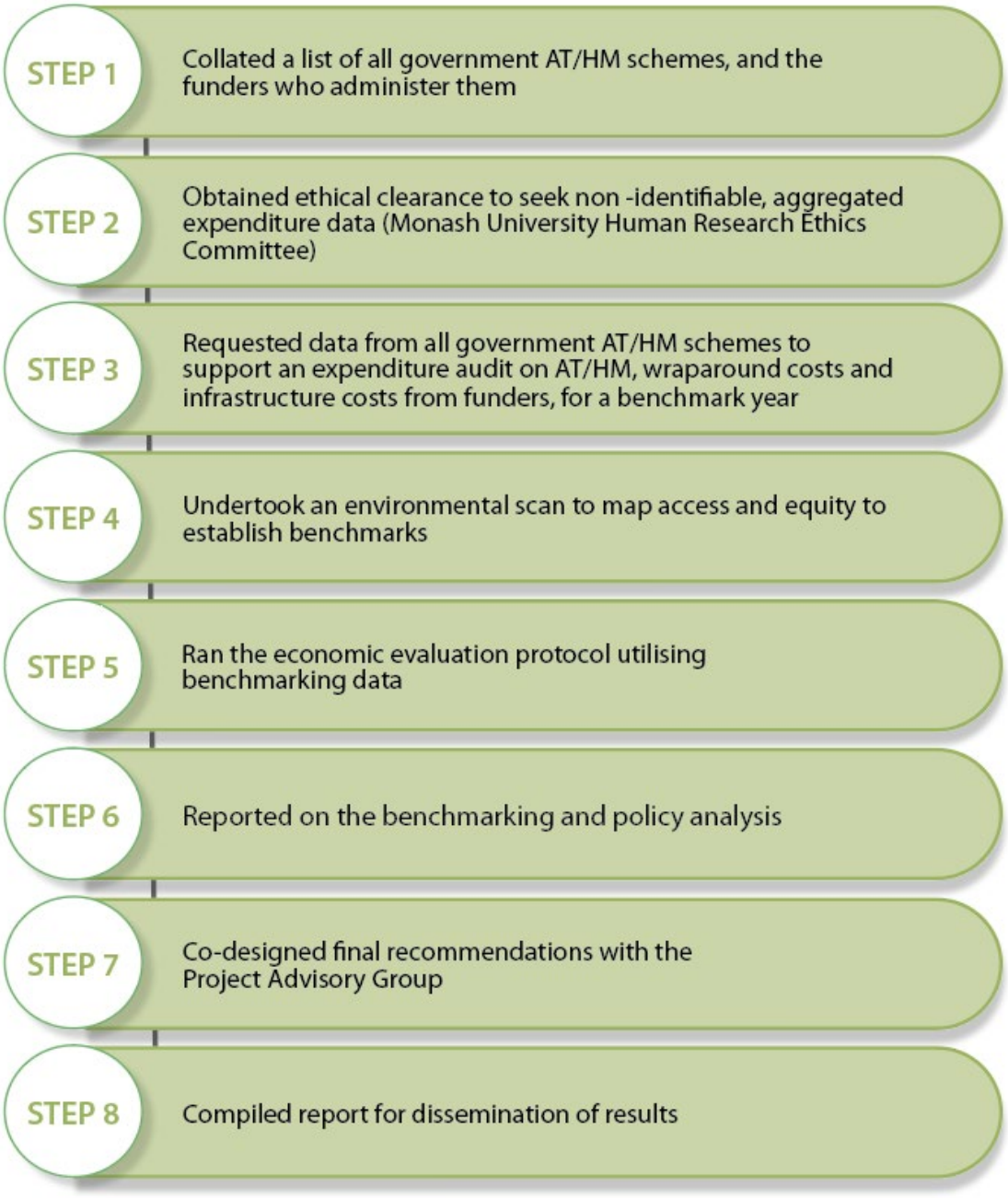
Australia's Disability Strategy 2021-316 requires that: "People with disability have access to a range of supports to assist them to live independently and engage in their communities". The following two policy priorities are listed underneath this outcome area:

- Policy Priority 1: People with disability are able to access supports that meet their needs
- Policy Priority 4: People with disability are supported to access assistive technology.

Over 100 government and non-government schemes form a patchwork of assistive technology and home modifications (AT/HM) schemes. Estimated at $4.5bn a decade ago, several attempts have been made to identify the government and private spend upon AT/HM, and to ascertain unmet need [29, 30]. This background contextualises the urgent need to benchmark AT/HM access through an equity lens, that is, standing in the shoes of Australians who require AT/HM, regardless of age or circumstance.

What did we do?

Figure 1: Project process



When did we do this?

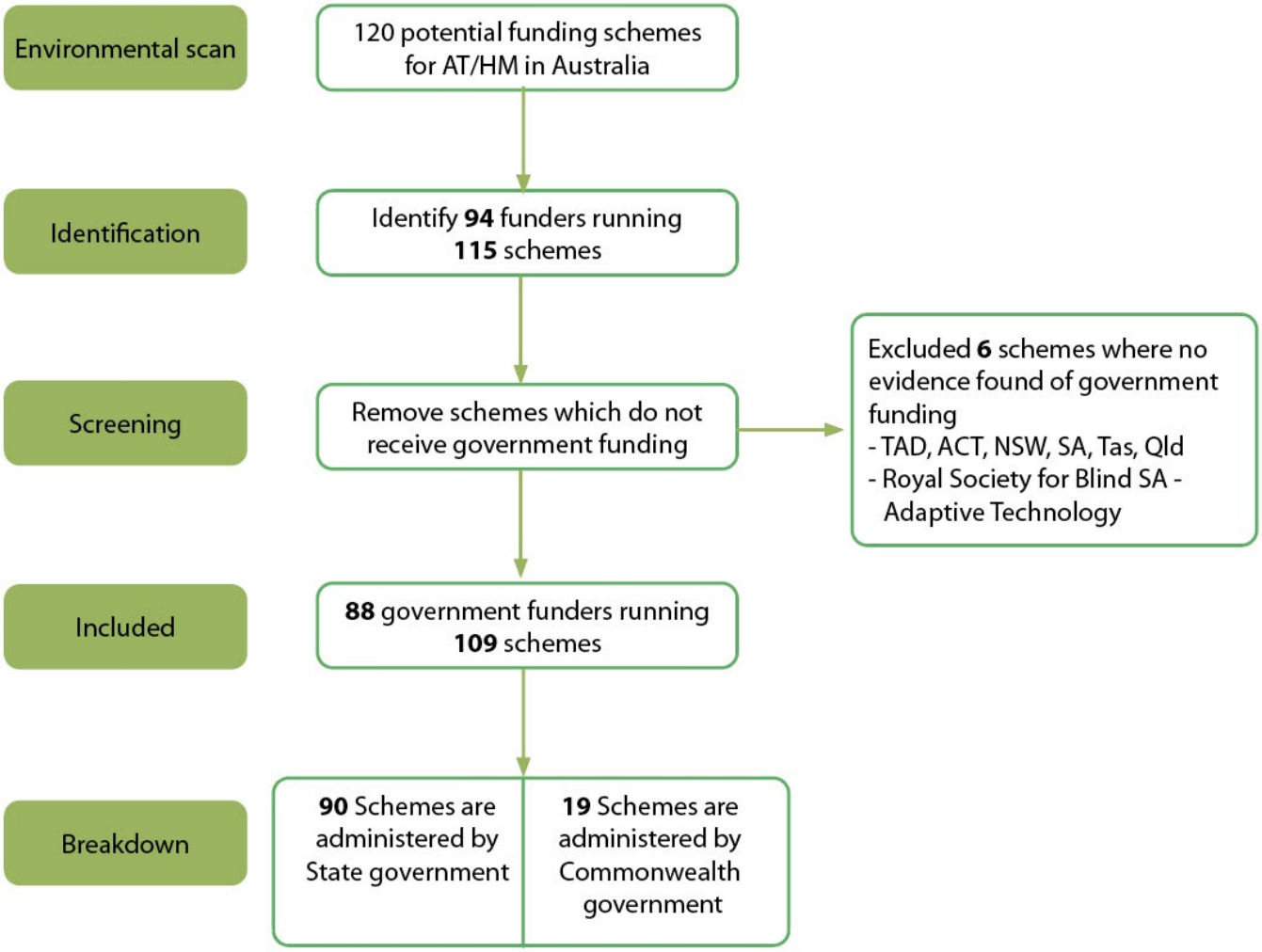
Figure 2: Project timeline

Results

The initial environmental scan identified 120 potential funding schemes for AT/HM in Australia. Multiple approaches were taken including web searches, asking AT/HM funders to advise on further funding sources, and consulting AT, HM and disability peak bodies and experts. Data cleaning involved removing duplicates, identifying the difference between schemes and funders, and removing schemes which receive no regular government support (such as charities and some NGOs). Funders were then contacted via email with a letter explaining the project, and a data collection form (see Appendix 1). Email or telephone follow-up occurred to trace key contacts, further explain the research, or issue reminders if no response had been received. Several schemes, located in the environmental scan as they still had a web presence, were removed at this stage. Since inception of the NDIS they were no longer operating, for example multiple government-run early intervention services and supports.

Once duplicates and outliers were removed from the environmental scan data, 94 funders and 115 schemes were identified. We then screened out six schemes which did not appear to receive government funding (TAS ACT, NSW, SA, Tas, Qld; Royal Society for the Blind SA - Adaptive Technology). In total 88 government funders, representing 109 government schemes, were identified by the researchers, noting more government schemes may exist which were not captured by our data gathering methods. Of these, 90 Schemes are State government funded and 19 Schemes are Commonwealth government funded. (These figures include the NDIS.)

Figure 3: Flowchart for AT/HM scheme identification



An initial enquiry was made to all 88 funders administering the 109 schemes. Data was received for 38 schemes, including the NDIS. Of the schemes where data was not received, some stated that data was not able to be released (n-3), some did not respond (n-25), and some were unable to locate data or obtain permission for release in time (n-12). Progress could not be made with the remainder (n-31) as contact details could not be established beyond the initial enquiry to a generic web address. The dataset was checked with contributors for accuracy and omissions. The majority of funders elected to share data in deidentified formats, therefore reporting is done in aggregate, rather than identifying individual funder expenditure (see Study 2 for more details).

AT/HM funding is provided across multiple government jurisdictions. The Commonwealth funds AT/HM in the following areas:

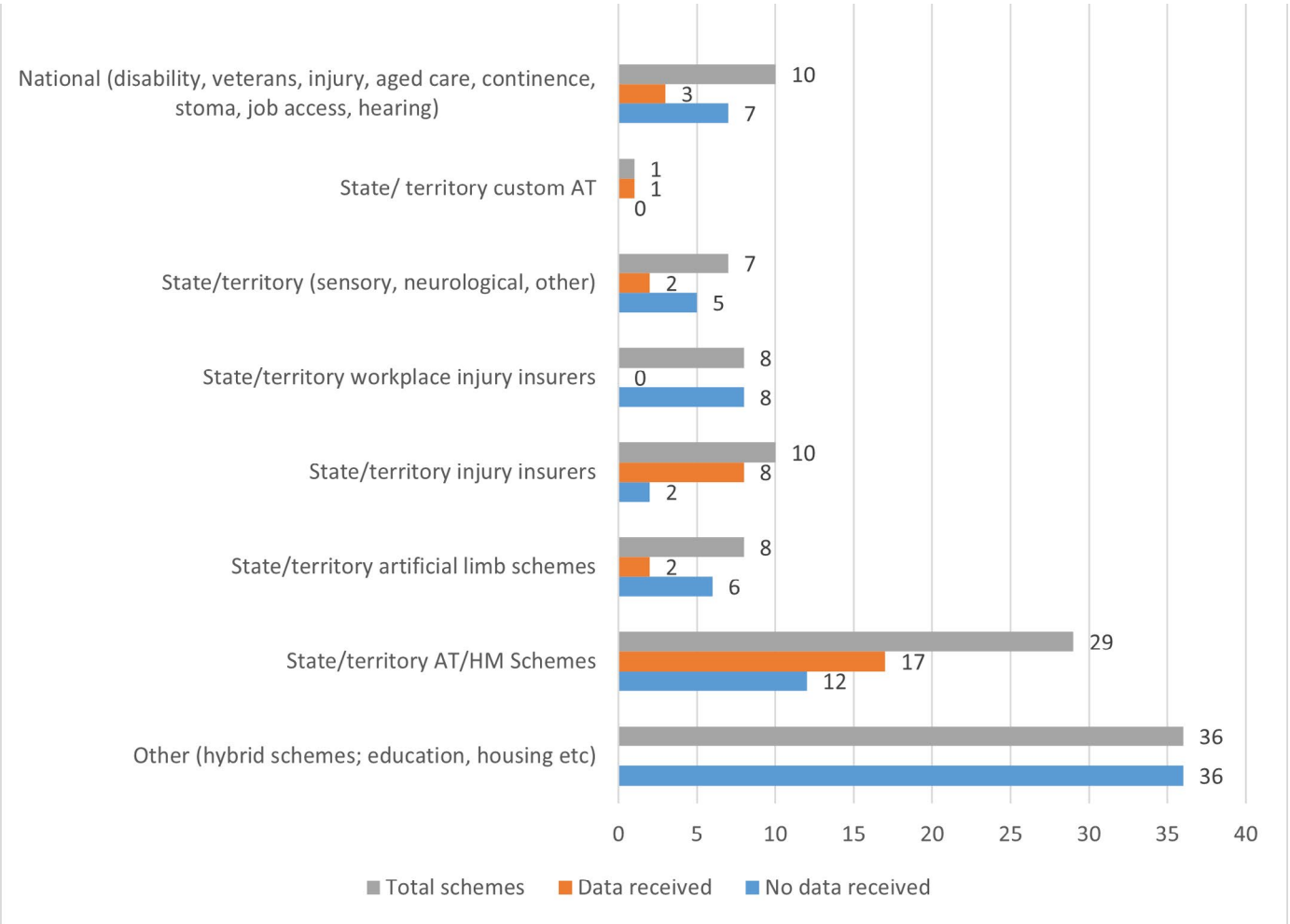
- disability (a single National Disability Insurance Scheme)
- veterans (several schemes run by Department of Veterans Affairs)
- injury insurance (a National Injury Insurance Scheme, currently only operating in Queensland)
- aged care (with AT/HM funding included in several schemes such as Home Care Packages and Commonwealth Home Support Programme (CHSP), and Residential Aged Care)
- education (note: we were unable to ascertain national AT spend in the government departments responsible for tertiary education (university and TAFE), secondary schooling, primary schooling or early childhood education
- employment (Employment Assistance Fund).

Several national schemes were located which target specific functions (continence, stoma) or disabilities (hearing).

In each state and territory jurisdiction, AT/HM is funded by injury insurers (road or workplace) or by dedicated legacy AT/HM schemes. Additional schemes address specific types of AT. These include custom-made AT (e.g. Technical aid to the Disabled, although the government contribution to these non-government organisations is not substantial) and artificial limb schemes. Finally, some state/ territory-based schemes address specific disability types (for example vision or hearing or neurological, such as the Motor Neurone Disease loan schemes).

Appendix 2 lists each AT/HM funder and scheme identified, and whether data was provided.

Figure 4: Types of AT/HM funder and breakdown of data received



Equity Issues in Australian AT/HM funding

Australians do not necessarily get the AT/HM that is clinically indicated for their needs. AT/HM provision is based primarily on the level of funding available from the scheme (that is, subsidy or full payment for assistive products); or scope of the schemes for which they are eligible (that is, the type of assistive products the scheme covers). Eligibility depends upon the state/ territory in which people live, their age and the nature of their disability.

Fragmented and complex 109 separate AT/HM schemes were identified. Dozens more charitable, NGO and philanthropic funding sources were uncovered. The eligibility criteria across the 109 Australian schemes we located were often historic in nature and are not fully aligned with AT provision guidelines or good practice standards.

Lack of equity across state/territory boundaries Each state/ territory has a flagship AT/HM Scheme. All have different eligibility criteria, different AT/HM in scope and different rationing methods e.g. subsidy rates.

> For example in Victoria, beds/mattresses/bed accessories are available. However, in Queensland, beds have only become available recently, and only for home palliation.
>
> Overall the categories of AT/HM listed on funder websites represent less than 10% of the range of AT available according to the international standard AS/ISO 9999 Assistive Products for Persons with Disability – classification and terminology [31].

Lack of public access to data on government expenditure on AT/HM
We identified 88 funders administering 109 AT/HM funding schemes operating in Australia. We obtained data from only 38 of these schemes. A minority of AT/ HM funding schemes put data in the public domain (annual reports, websites, regular reporting), some will provide on request, some were unable to retrieve or disaggregate from other expenditure. Some information was deemed not for release.

AT/HM funded but not identified, making it difficult to count met and unmet need
Hybrid schemes providing packages of support for bundled services may, or may not, provide sufficient AT/HM. A range of funding sources are used for AT or AT/HM or HM alongside other supports. It is difficult to ascertain the extent of AT/HM provided, or the expenditure on AT/HM line items. Appendix 3 lists 'hybrid schemes' and, in the absence of expenditure data presents vignettes from state/territory home modification schemes; Short Term Restorative Care and Transition Care Programs; school education (primary and secondary) funding sources which include elements of AT; higher education funding sources which include elements of AT; and philanthropic Funding Sources e.g. Suzanne Elliot Charitable Trust.

Wraparound services: Few schemes provide the full good practice steps in AT service delivery
Assistive technology, by definition, refers to assistive products and to the supports and services necessary to fit them. While all AT funding schemes provide assistive products, few also fund the wraparound services benchmarked as good practice in AT service delivery [6] by the World Health Organisation [2, 32] and in Australia [33]. Finding out about AT, getting appropriate AT, using and replacing that AT is listed in eight steps below. Sometimes these steps are bundled together, for example a study of older Australians accessing everyday technologies found visiting a pharmacy covered some steps all at once [34].

Good practice steps for effective implementation of AT

STEP 1 Initiation

Few schemes engaged in outreach or marketing to inform consumers of the AT/HM support available, and no co-ordinated overview of AT/HM service pathways was located, other than those maintained by civil society in an effort to inform the public. The lack of information regarding access can function as a rationing strategy [35, 36].

STEP 2 Assessment/ evaluation

Most schemes required some level of assessment, for example from an allied health professional, to obtain a recommendation or 'prescription' for AT/HM. Insurance based schemes were among the only schemes to offer funded assessment in order to identify the AT/HM required. Many schemes require assessment to be sought from other sources such as private health professionals or community health networks. This requires people to engage with multiple concurrent systems and their waiting lists.

STEP 3 Trial and solution selection

Trying out AT in likely environments of use is a crucial factor in AT retention and satisfaction [37, 38]. Trialling AT requires time with AT suppliers and AT practitioners such as allied health staff to enable the person to fully evaluate which AT will be fit for purpose at home, at work, in conjunction with other AT, in relation to travel and transport, and in the community. Few schemes provide reimbursement to fund AT suppliers and AT practitioners to support this process.

STEP 4 Procurement (the paperwork)

Navigating the procedures required to apply for funding has been identified as a hurdle and barrier by AT/HM funding recipients. People requiring support to engage with funding schemes have difficulty accessing advocacy services, and difficulty funding allied health practitioners to complete what can be time-consuming application and follow-up processes. These very real pragmatic barriers have been described by AT users and the AT practitioners who support them in multiple statements and government submissions [39]. Schemes which provide a funding package to the recipient rather than administering the purchase themselves, may have more minimal assessment requirements. (See the recent revision of the NDIS operational guidelines for mid-cost AT [40]).

STEP 5 Implementation: delivery and setup

Setting up AT to fit the person and the environment is a further critical step which, if not implemented, is linked to AT abandonment [41]. Anecdotally, gaps occur where no duty holder is nominated (or funded) to implement setup, and long wait times may exacerbate the challenge in specifying who should undertake this role. The AT user may find themselves in the position of hoping an experienced AT supplier can partially implement this phase, or that the AT practitioner involved in the initial recommendation is available.

STEP 6 Training in use and in maintenance

As with assessment, training in AT product use, and training to maintain and troubleshoot the AT, is not a feature of most AT funding schemes, yet is closely linked to AT outcomes and longevity [38].

STEP 7 Regular maintenance and review

All AT is subject to lifespan limitations, usually requiring some element of maintenance which may include servicing of parts, battery replacement and refurbishment of wear and tear. Digital AT may also require upgrades to operating systems. Some AT, including low-cost AT, has a product lifecycle and may need replacement, either like with like, or an upgrade to newer model. Maintenance and review is also an opportunity, in the best practice world, to review and adjust in light of a person's changing condition, activities, or goals.

STEP 8 support to re-enter based on product lifecycle

Funders are aware that all assistive products have a limited lifespan [42], but few schemes have clear review and replacement protocols. Initial work to specify when low to mid cost AT might need to be reviewed and replaced, was commissioned by the Department of Health in 2020 [18].

Falling through the gaps. Despite the presence of multiple schemes operating, some people fall through the gaps.

People who have short term, remitting/ relapsing illnesses or require palliative care may have considerable AT costs, yet scheme eligibility criteria generally exclude this group.

For example, in Victoria they are funded for 30 days post discharge from hospital. However, there are often significant delays before their NDIS package or State-wide Equipment Program (SWEP) funding becomes available, resulting in significant costs to the client.

Lack of coordination across policies means people residing in public housing who need home modifications can receive these through state-run public housing home modification services. This is not the case when the housing is administered by a third party, such as a social housing organisation. Where a third party administers the housing, the tenant is ineligible for either public housing home modification services or for the state equipment provider.

Interpretation of guidelines in national schemes may differ in different places. Anecdotally, interpretation of My Aged Care level 3 and 4 homecare packages guidelines around 'capital improvements' (for home modifications) and expenditure on AT appears to create inconsistencies.

Where people are eligible for one scheme, they may be ineligible for others. This is despite the reality that one scheme will not meet their AT/HM related needs.

The following vignette provided by Peter Willcocks of Bayside Polio Group illustrates this point:

Falling through the gaps

Despite guidelines which infer access, people can be caught out with broad program limits and left without support. For example, Peter has saved $17k from a level 4 homecare package, towards the cost of a replacement power wheelchair. These savings were made by relinquishing other aspects of care such as personal support. The current power wheelchair is a reissued model and is causing severe posture and pressure issues, as well as significantly curtailing Peter's family, social and community life.

The costs are $35k upwards for an appropriately tailored power wheelchair which will be fit for purpose for Peter's post polio symptoms and ongoing function. The state equipment funding scheme usually provides **$6k** towards purchase. Peter has recently been advised he is unable to put these two sums together to approximate the cost of the new power wheelchair due to the funding program guidelines below:

The HCP Program cannot be used to purchase types of care that are funded, or jointly funded, by the Australian Government through other initiatives such as the Medicare Benefits Scheme (MBS) and the Pharmaceutical Benefits Scheme (PBS). ***Nor can it be used toward purchasing care or services the care recipient already accesses or plans to access through another program or scheme, including those funded by State/Territory Governments. For example, aids and equipment schemes, patient transport and accommodation schemes, and sensory impairment support schemes (excerpt from page 14 of the HCP Operational Manual; Sep 2021)***

Peter now faces a limited choice of reissued stock power wheelchair from the state funder or finding upwards of $20+k to make up the shortfall between subsidy and market costs. The administrative process to this point has consumed significant time and anxiety, and the delay has exacerbated physical problems through lack of an appropriate wheelchair. This is detrimental to Peter's health and wellbeing and to his family functioning, as his ability to get out and about without pain is limited. It also represents a major opportunity cost given the substantial volunteering, advocacy, and other participation which Peter would like to enjoy as a retired Australian.

Policy Implications

Silo funding, administered along jurisdictional lines, has been a defining characteristic of the Australian AT/HM funding landscape since the 1970's under a series of Commonwealth, State and Territory Disability Agreements. The Council of Australian Governments moved to the first of several National Disability Agreements in 2009, prioritising the achievement of more consistent access to aids and equipment by the end of 2012. Then came the NDIS. The general obligations set out under the Convention on the Rights of Persons with Disabilities (CRPD) require Governments to *'adopt all appropriate legislative, administrative and other measures for the implementation of the rights recognized in the present Convention'.* This study suggests that, to date, the Australian Government has failed to do so.

> Australia's new Disability Strategy 2021-31 does require that: "People with disability have access to a range of supports to assist them to live independently and engage in their communities"
>
> The following two policy priorities are listed underneath this outcome:
>
> - Policy Priority 1: People with disability can access supports that meet their needs;
> - Policy Priority 4: People with disability are supported to access assistive technology.

As yet there is no action plan in place to outline when and how the barriers to accessing assistive technology outside the NDIS will be resolved. This is a complex issue that requires collaboration between State and Commonwealth governments and multiple Commonwealth agencies. The Australian Government Cross Agency Taskforce on Regulatory Alignment [43] is consulting regarding aligning regulation across Australia's care and support sectors, looking to align NDIS, disability services (other), aged care, and veterans care provision. We suggest this is a key strategy required to address the equity issues raised in this study. A targeted action plan is required to drive change across service systems. Without this it is unlikely that Australia's Disability Strategy will result in improvements in the provision of assistive technology to people with disability who are not eligible for the NDIS.

AT/HM are crosscutting strategies underpinning outcomes across health, housing, education, work, leisure and many other arenas. Therefore, governments cannot expect to achieve significant change without addressing all areas referenced under Australia's Disability Strategy 2021-31. This is essential because, unless people with disability have access to the AT/HM they need, they will not achieve safety, independence, inclusion and participation in everyday life [32].

The best way to address the existing inequities for people with disability who are not eligible for the NDIS would be to establish a harmonised, nationally consistent AT/HM program.

Limitations and Next Steps

It is possible other A/HM funders were missed. Freedom of Information is a further resource to complete the dataset. Ideally, a full policy and procedure review would enable the program guidelines for each scheme to be compared against AT good practice benchmarks. This is a feasible extension which would also enable a blueprint for an equitable AT/HM program to be developed and offered to government.

Study 2: Establishing and costing a single national assistive technology and home modifications program to support people with disability who are not eligible for the NDIS

Authors and Contributors

This report was authored by Dr Natasha Brusco and was commissioned by the Council on the Ageing Victoria. The advice of the project steering group is gratefully acknowledged.

Citation

Brusco, N. (2022). Study 2: Establishing and costing a single national assistive technology and home modifications program to support people with disability who are not eligible for the NDIS. In (N. Layton & N. Brusco, 2022) *The Australian Assistive Technology Equity Studies: Improving access to assistive technology for people with disability who are not eligible for the NDIS*. Monash University; COTA Victoria. https://doi.org/10.26180/21113887

Introduction

Led by Council on the Ageing Victoria, the Assistive Technology for All Alliance (ATFA) advocates for a single national assistive technology and home modifications program to support people with disability who are not eligible for the NDIS. According to the 2018 Survey of Disability, Ageing and Carers (SDAC) survey from the Australian Bureau of Statistics (ABS) [44], there are 4.4 million Australians with disability. 56% (n=2,427,600) are aged 0-64 and 44% (n=1,942,700) are aged 65+. Of these 4.4 million Australians, 2.3 million use assistive technology and half a million have made home modifications. While this provides an insight into the current utilisation of assistive technology and home modifications, it does not indicate whether there is access based equity between all Australians living with disability.

NDIS and Aged Care (CHSP, HCP, Residential Aged Care Facilities, STRC, TCP) are two of Australia's largest government funded service providers for people who require support for disability and/or health conditions. In 2021, Aged Care serviced 1.3 million participants and NDIS serviced 467 thousand participants. Together they serviced 1.8 million people who require support for disability and/or health conditions, including access to assistive technology and home modifications. The next largest is DVA which services 340 thousand participants; however, this covers a range of services such as pensions, war widow and disability support including assistive technology and home modifications.

For Australian's aged 0-64 with a disability, only 1 in 5 (18%; n=450,038/2,427,600) are accessing assistive technology and home modifications through the NDIS. ***This leaves two million (4 in 5 or 81%; n=1,977,562/2,427,600) younger Australians with disability who are not accessing assistive technology and home modifications through the NDIS.***

For Australian's aged 65+ with a disability, 2 in 3 (67%; n=1,300,627/1,942,700) are accessing assistive technology and home modifications through Aged Care. ***This leaves 625,000 (1 in 3 or 32%; n=625,492/1,942,700) older Australian's with disability who are not accessing assistive technology and home modifications through Aged Care.***

Outside of the three major schemes (Aged Care, NDIS and DVA) there are 102 additional schemes in Australia that provide access to assistive technology and home modifications. These additional schemes service some of the 81% of people aged 0-65 and 32% of the people aged 65+, who are living with a disability, and do not have access to NDIS or Aged Care.

Key messages

- The final report from the Royal Commission into Aged Care Quality and Safety recommended aged care recipients receive AT/HM benefits equivalent to the NDIS. At present, the 467,00 NDIS participants average $2,500 per year on assistive technology and home modifications, while the 1.3 million Aged Care participants average $51 per year on assistive technology and home modifications.
- Of the 4.4 million Australians with disability, 2.3 million currently use assistive technology and half a million have made home modifications. Many of the 4.4 million Australians with disability have issues with access to assistive technology and home modifications at a level which will meet their current needs.
- When planning for a single national assistive technology and home modifications program, data suggests that for every $1.00 spent on high level assistive technology products, up to an additional $1.00 is spent on wrap around services (e.g., allied health therapist assessment, equipment modifications and maintenance). In addition, data suggests that for every $1.00 spent on high level assistive technology and/or home modifications, up to an additional $1.98 is spent on organisational costs (e.g., capital costs and staff administration costs).
- An annual investment of $16 billion, on a single national assistive technology and home modifications program, is required to fund assistive technology and home modifications for Australians with disability who are not currently accessing the NDIS. This funding would be at levels equivalent to those that would be available under the NDIS. The estimate includes the cost of high- and low-level assistive technology, wrap around services, home modifications and organisational costs.
- An annual investment of $16 billion can save $32 billion. For every dollar spent on assistive technology and home modifications, there is an estimated two-fold return on investment relating to savings on the cost of paid carers, support services and medical services.
- Based on available cost data, 34% (n=37/108) of the non-NDIS state and commonwealth government funded schemes have a combined annual assistive technology and/or home modification spend of half a billion dollars. Consolidating these 108 funding streams into a single national assistive technology and home modifications program could help contribute to equity of access for all people with disability who are ineligible for the NDIS, and potentially create cost efficiencies for government.

Vision of the Assistive Technology for All campaign

Assistive Technology for All (ATFA) is an initiative of Council on the Ageing (COTA) Victoria. The campaign is supported by more than 60 organisations spanning the health, ageing and disability sectors. Together, they represent millions of people with disability, their families and carers. They have joined forces to advocate for a single assistive technology and home modifications program to meet the needs of people with disability who are ineligible for the NDIS. This approach would simplify current funding arrangements while providing people with the assistive technology they need to lead better quality lives and maintain their connection in the community.

The national program would:

- Harmonise existing state-based assistive technology programs and those operated by not-for-profit organisations. This would streamline access and drive nationally consistent outcomes for consumers while reducing the administrative burden on governments.
- Be aligned with the NDIS Assistive Technology Strategy to address the inequity between the support that is provided under the NDIS and other service systems.
- Be driven by key performance indicators relating to the timely provision of equipment, in line with the aspirations of the NDIS Participant Service Guarantee.

The program would need to be adequately funded to cover:

- Operational and management costs
- Skilled assessment and referral; particularly in complex cases where an individual's capacity can quickly diminish
- The provision of high and low-cost aids and equipment
- Training to enable participants to use assistive technology safely and effectively
- Maintenance and repair of assistive technology.

To be eligible for the program, participants would need to:

- Have a disability or health condition that affects activities of daily living
- Not be eligible for the NDIS.

The program would be open to all people who are not eligible for the NDIS. This would include:

- All older people who do not meet the age eligibility requirements for the NDIS.
- All younger people with disability (an estimated 2,000,000) people under the age of 65 who are not eligible for the NDIS.

Economic study aim

To establish the annual cost of a single national assistive technology and home modifications program available to all people with disability who are ineligible for the NDIS.

Statistical methods

All data was provided to the research team in a de-identified and aggregate format. Data was entered into a purpose-built Microsoft Excel spreadsheet. Missing data resulted in exclusion from that particular analysis. Only a few schemes granted permission (or had publicly available data) to enable program cost data to be reported in isolation. The other schemes had cost data presented as an average or range, across the schemes. Data was presented in three primary groups:

(1) combined assistive technology and home modifications;

(2) assistive technology only; and

(3) home modifications only, for the 2019/20 financial year.

For each scheme, the 12-month data described the size of the population accessing assistive technology and/or home modifications, the total annual cost of assistive technology and/or home modifications, and the average cost of assistive technology and/or home modifications per person per year.

NDIS data was the primary comparative data. The population size was taken from the 2020/21 financial year (n=466,619) as this was the most recent complete year prior to data analysis commencing. This number was reported as the NDIS participant count at 30 June 2021 in the "PB Average Support Category Payments Jun2021 CSV" data file available on the NDIS website (https://data.ndis.gov.au/data-downloads#payments). This same file reported that across all participants (n=466,619) the average payment per year, per person, was $1,000 for assistive technology, $1,000 for home modifications and $1,000 for consumables of which approximately 90% is spent on low level assistive technology (noting that these figures are rounded to the nearest thousand).

High level assistive technology requires wrap around services, for example a motorised wheelchair or modified kitchen setup, and this is reported in the "assistive technology" category on a NDIS plan. Low level assistive technology generally does not require wrap around services, for example continence pads, and this is reported in the "consumables" category on a NDIS plan. The consumables category is reduced to 90% as approximately 90% of the consumables budget is spent on low level assistive technology and 10% is spent on other items.

The "PB Average Support Category Payments_DEC21_CSV" data file available on the NDIS website (https://data.ndis.gov.au/data-downloads#payments) also reported average assistive technology, home modification and consumable costs for only participants who had assistive technology support, home modification support or consumable support, in their NDIS plan. This data indicated that of the 502,413 participant count as of Dec 2021, 151,586 (or 30.17%) had assistive technology in their NDIS plan, with an average payment of $4,000 (rounded to the nearest thousand); 54,873 (or 10.92%) had home modifications in their NDIS plan, with an average payment of $5,000 (rounded to the nearest thousand); and 431,637 (or 85.91%) had consumables in their NDIS plan, with an average payment of $1,000 (rounded to the nearest thousand). The consumables category is reduced to $900 (90% of the $1,000) as approximately 90% of the consumables budget is spent on low level assistive technology.

Based on these multiple data sources, cost and population calculations for the NDIS population over the period of 2020/21 are based on the following variables:

Whole NDIS population = 466,619

- **High Level AT:** Population who had an assistive technology support in their NDIS plan in the last 12 months = 466,619 participants x 30.17% x $4,000 = $563 million
  - Cost extrapolations across people with disability who sit outside the NDIS used these same variables (30.17% requiring assistive technology purchase within 12 months, at a cost of $4,000 per person)
- **Low Level AT:** Population who had a consumables (low level assistive technology) support in their NDIS plan in the last 12 months = 466,619 participants x 85.91% x $900 = $361 million
  - Cost extrapolations across people with disability who sit outside the NDIS used these same variables (85.91% requiring consumables (low level assistive technology) purchase within 12 months, at a cost of $900 per person)
- **Home Modifications:** Population who had a home modification support in their NDIS plan in the last 12 months = 466,619 participants x 10.92% x $5,000 = $255 million
  - Cost extrapolations across people with disability who sit outside the NDIS used these same variables (10.92% requiring home modifications within 12 months, at a cost of $5,000 per person)

Some programs provided data on the whole population they service, in addition to the population they service who access assistive technology and home modifications. Where both population sizes were provided, we were able to report the cost of assistive technology and home modifications over the whole population they service, as well as the cost of assistive technology and home modifications for only those who access assistive technology and home modifications. For example, Aged Care services provide this cost data on both the whole population they service as well as only for the population they service who access assistive technology and home modifications.

Where services reported the cost of wrap around services for assistive technology, this was reported as a ratio against the cost of the assistive technology and/or home modifications for that organisation. The same applied for the cost of organisational support to facilitate the provision of assistive technology and/or home modifications. The funders with non-government revenue sources provided data to assist with cost modelling, for example the ratio between assistive technology products and assistive technology wrap around services, as well as organisational costs. Cost modelling and assumptions included:

(a) equal division of costs between assistive technology and home modifications when these were reported together; and

(b) extrapolation of the Aged Care CHSP assistive technology and home modifications cost and utilisation data to the other Aged Care services including HCP, STRC, TCP and Residential Care; and

(c) whole-of-population extrapolation for assistive technology and home modification costs were based on the NDIS data described above.

It is noted that the NDIS cost and population calculations over a 12-month period, are compared to the SDAC data. This reports that of the 4.4 million people living with disability, 53.1% (2.3 million) use assistive technology. Of the 4.2 million people with disability and living in households, 12.2% (or 511,400) had made home modifications. However, it is unknown how many people in the SDAC data have all their assistive technology and/or home modifications needs met.

The available data was presented in $AUD2020/21 with any data from alternate years being adjusted by the Consumer Price Index into $AUD2020/20 [45]. The analysis took a government (both Commonwealth and State/Territory) spend perspective over a 12-month time horizon (2020/21 financial year). The analysis was completed in Microsoft Excel.

Results

From the complete set of 88 government funders representing 109 government schemes, cost data was obtained for 38 schemes. Cost data came from four funders (8 schemes) via the commonwealth government, and 15 funders (30 schemes) via the state and territory governments. In addition, there were 5 funders (5 schemes) which sat outside the 109 government schemes as they had alternate "non-government" revenue sources and this non-government data was used for economic modelling (e.g., not-for-profit organisations/use of philanthropic funds, services built on funding from individual NDIS plans, and services with out-of-pocket costs).

The 38 government funded schemes with data available included the NDIS, Aged Care, DVA as well as schemes which serviced people requiring support for a transport accident, workplace accident and artificial limbs. Only a few schemes granted permission (or had publicly available data) to enable program cost data to be reported in isolation and this included NDIS, Aged Care and DVA. This cost data has been reported in Table 1 and presented in Figure 6.

In 2020/21, our benchmark, the NDIS (using rounded numbers), has an average annual spend of $1,000 on assistive technology, $1,000 on home modifications and $900 on consumables (low level assistive technology) across all participants. Alternately, there is an average annual spend of $4,000 on assistive technology, $5,000 on home modifications, and $900 on consumables (low level assistive technology) for only participants who have this support category in their NDIS plan.

Using these rounded numbers combined with the percentage of NDIS participants with these three support categories in their NDIS plans, these calculations report that the NDIS 12 month spend (up to 30 June 2021) was $563 million on assistive technology (30.17% x 466,619 participants x $4,000), $361 million on consumables (isolated to the 90% spent on low level assistive technology; 85.91% x 466.619 participants x $900) and $255 million on home modifications (10.92% x 466,619 participants x $5,000), totalling $1.2 billion (Table 1).

These calculations are compared to the NDIS quarterly report Q4 2020-21 [46] which reports that the 12 month spend, up to 30 June 2021, was $568 million on assistive technology, $390 million on consumables (isolated to the 90% spent on low level assistive technology from the total $433 million spent on consumables) and $239 million on home modifications, also totalling $1.2 billion. This indicates that the algorithm used to extrapolate NDIS costs in this report are closely aligned to

the total spend presented in the NDIS quarterly report Q4 2020-21. Meaning that this algorithm is representative of the NDIS actual spend and therefore an appropriate way to extrapolate the cost of assistive technology and home modification costs across all non-NDIS participants, to represent equity between NDIS and non-NDIS spend on each person with disability.

Table 1: Aggregate program data for the NDIS, Aged Care and DVA

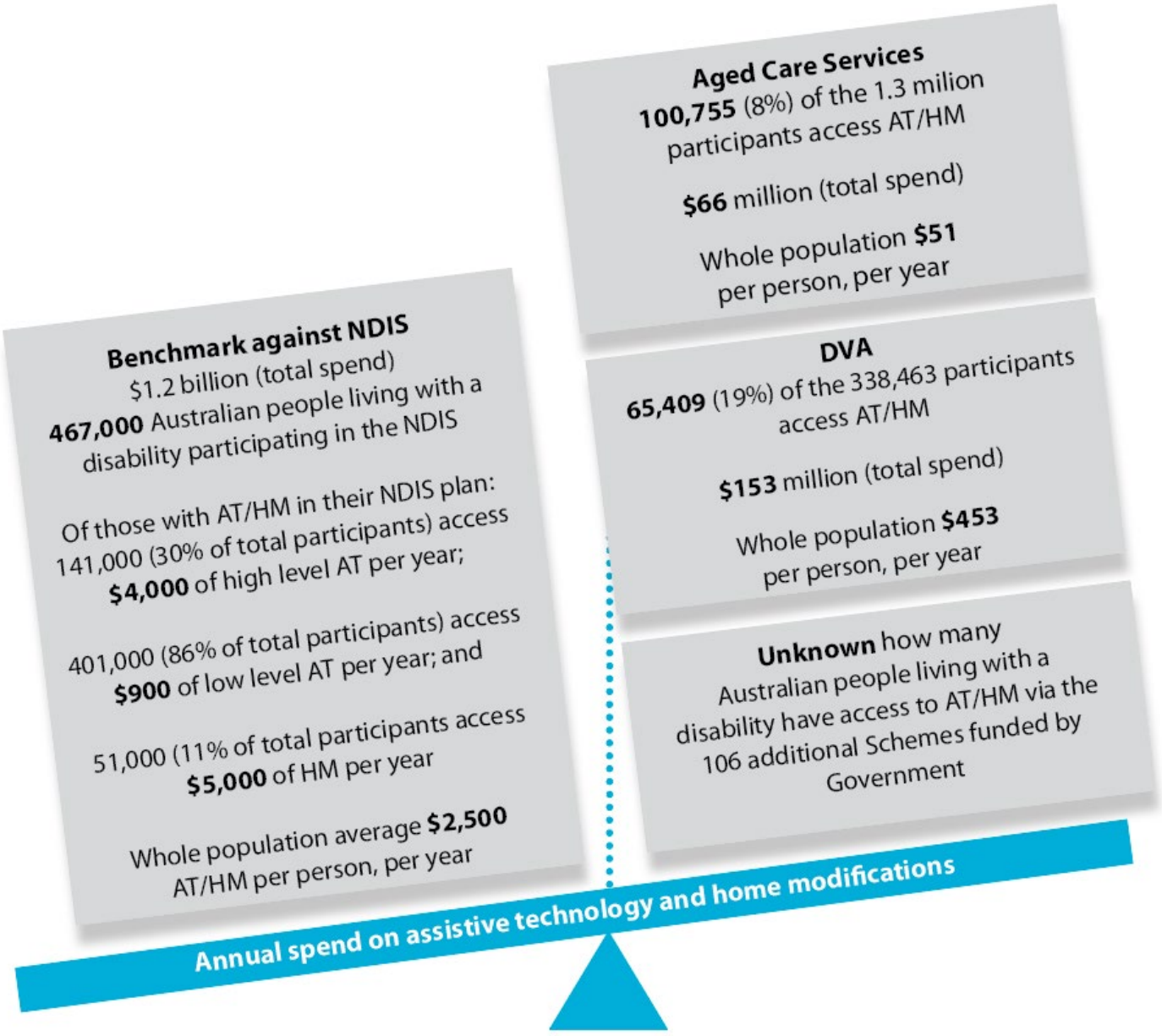
Converted into 2020/21 cost data	Aged Care*	DVA	NDIS# ALL AT	NDIS# HIGH LEVEL AT	NDIS# LOW LEVEL AT
Assistive technology and/or home modifications					
Total scheme population	1,300,627	338,463	466,619		
Population who accessed assistive technology and/or home modifications	100,755	65,409	Varied, pending HL AT, LL AT or HM		
Annual spend on assistive technology and/or home modifications	$66,246,820	$153,441,665	$1,178,760,453		
FOR THOSE WHO ACCESSED / HAD THIS SUPPORT IN THEIR PLAN: Average spend on assistive technology and/or home modifications per person, per year	$657	$2,346	Varied, pending HL AT, LL AT or HM		
FOR TOTAL POPULATION: Average spend on assistive technology and/or home modifications per person, per year	$51	$453	$2,526		
Assistive technology only					
Total scheme population	1,300,627	338,463	466,619	466,619	466,619
Population who accessed assistive technology	23,790	65,409	See high and low level AT categories	140,786	400,885
Annual spend on assistive technology	$8,394,289	$76,720,832	$923,942,362	$563,145,522	$360,796,840
FOR THOSE WHO ACCESSED / HAD THIS SUPPORT IN THEIR PLAN: Average spend on assistive technology per person, per year	$353	$1,173	See high and low level AT categories	$4,000	$900
FOR TOTAL POPULATION: Average spend on assistive technology per person, per year	$6	$226	$1,980	$1,207	$773
Home modifications only					
Total scheme population	1,300,627	338,463	466,619		
Population who accessed home modifications	76,965	65,409	50,964		
Annual spend on home modifications	$57,852,530	$76,720,832	$254,818,092		
FOR THOSE WHO ACCESSED / HAD THIS SUPPORT IN THEIR PLAN: Average spend on home modifications per person, per year	$752	$1,173	$5,000		
FOR TOTAL POPULATION: Average spend on home modifications per person, per year	$45	$226	$546		

* The Aged Care CHSP assistive technology and home modifications cost and utilisation data has been extrapolated to the other Aged Care services including HCP, STRC, TCP and Residential Care to present the combined Aged Care data.
#See statistical analysis section for all the data assumptions.

Across the 38 government funded schemes with data available, the average annual spend per person on assistive technology ranged from $82 (scheme with ~10,000 participants) to ~$15,000 (scheme with about 300 participants). The artificial limb schemes across the different states and territories ranged from ~$1,000 to ~$8,000 per person, per year. In 2020 the Australian Healthcare Associates completed a review of Assistive Technology Programs in Australia [18]. In this report, annual assistive technology costs and services for the public were estimated based on economic modelling. The cost of assistive technology products alone ranged from $447 ($431 x CPI) per year for a person with a mild impairment, to $1,828 ($1,761 x CPI) per year for a person with a profound impairment. This range of assistive technology costs approximates the NDIS annual spend of $1,000 per person.

Across the 38 government funded schemes with data available, 14 schemes reported on the cost of home modifications. The average annual spend per person on home modifications ranged from ~$300 (scheme with ~350 participants) to ~$34,000 (scheme with about 250 participants).

Figure 5: Annual spend on assistive technology and/or home modifications



Note: Use of rounding in the data sources may mean that numbers do not add up exactly.

Wrap around services for high level assistive technology, and organisational costs for the provision of high level assistive technology and home modifications, has been calculated based on the data obtained from the Commonwealth and State based assistive technology organisations.

Wrap around services for high level assistive technology include the people services required to initiate, assess, select, authorise, implement and manage assistive technology [47]. A small number of schemes reported the cost of assistive technology wrap around services and this ranged from $267 (scheme with ~450 participants) to $2,386 (scheme with ~200 participants) per person per year. Alternately this can be expressed as 33% to 100% of the cost of assistive technology products, or for every $1.00 spent on assistive technology products an additional $0.33 to $1.00 is spent on wrap around services (Figure7). Please note that this does not include low level assistive technology, such as that which can be purchased in the consumables category within a NDIS plan. It is assumed that low level assistive technology does not require wrap around services, for example continence pads.

Organisational costs to support the provision of assistive technology or home modifications includes things like capital costs, overheads, administrative and management staff. A small number of schemes reported the cost of organisational costs and this ranged from $102 (scheme with ~24,000 participants) to $1,820 (scheme with ~400 participants) per person per year. Alternately this can be expressed as 10% to 198% of the cost of assistive technology and/or home modifications, or for every $1.00 spent on assistive technology and/or home modifications an additional $0.10 to $1.98 is spent on organisational costs (Figure 6). By comparison, the NDIA has organisational costs of 6% (total budget $24.9billion with $23.3billion (94%) for participant plans and $1.5billion (6%) for organisational costs) [48].

For the following cost extrapolations, a conservative 20% has been specified for organisational costs for a single national assistive technology and home modifications program. This means that for every $1.00 allocated to high level assistive technology or home modifications, $0.20 is allocated to organisational costs.

Figure 6: Relative spend on assistive technology wrap around services and organisational costs

Note: Where services reported the cost of wrap around services for assistive technology, or the cost of organisational support to facilitate the provision of assistive technology and/or home modifications, this was reported as a ratio against the cost of the assistive technology and/or home modifications.

Cost of a single national assistive technology program

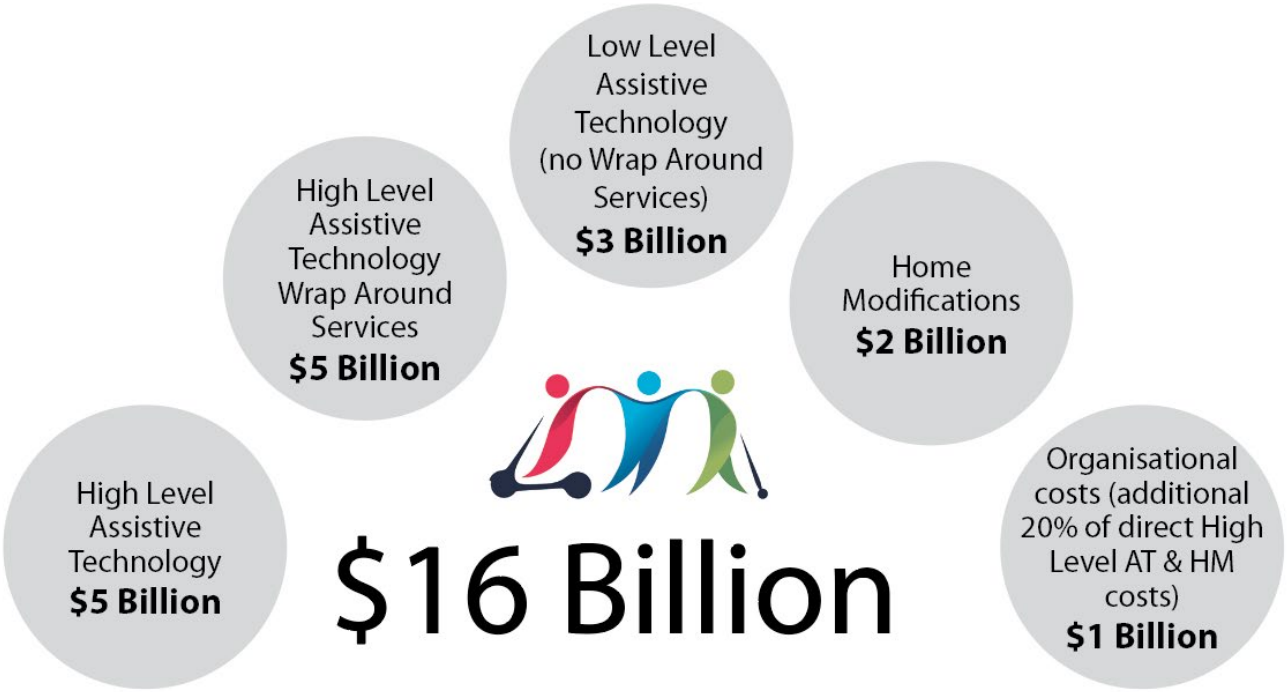
An annual spend of $16 billion dollars, on a single national aids, equipment and assistive technology program, is required to fund assistive technology and home modifications for Australians with disability who are not currently eligible for the NDIS (Figure 7). This funding is at levels equivalent to those that would be available under the NDIS. This includes the cost of high- and low-level assistive technology, wrap around services, home modifications and organisational costs. This is detailed in Table 2.

Table 2: Extrapolated costs for the national assistive technology program

2020/21		NDIS participants with a disability	Non-NDIS participants with a disability	Total population with a disability
Number of people with a disability				
Aged 0-64	Number	450,038	1,977,562	2,427,600
Aged 65+	Number	16,581	1,926,119	1,942,700
All ages	Number	466,619	3,903,681	4,370,300
HIGH LEVEL assistive technology: Number of people who need access to HIGH LEVEL assistive technology (based on 30.17% of population for NDIS and non-NDIS participants)				
Aged 0-64	Number	135,784	596,662	732,446
Aged 65+	Number	5,003	581,141	586,144
All ages	Number	140,786	1,177,803	1,318,589
HIGH LEVEL assistive technology: Annual cost of HIGH LEVEL assistive technology (based on 30.17% of population for NDIS and non-NDIS participants @$4,000)				
Aged 0-64	Cost	$543,134,515	$2,386,647,745	$2,929,782,260
Aged 65+	Cost	$20,011,007	$2,324,563,057	$2,344,574,063
All ages	Cost	$563,145,522	$4,711,210,801	$5,274,356,323
LOW LEVEL assistive technology: Number of people who need access to LOW LEVEL assistive technology (based on 85.91% of population for NDIS and non-NDIS participants)				
Aged 0-64	Number	386,640	1,698,979	2,085,619
Aged 65+	Number	14,245	1,654,782	1,669,028
All ages	Number	400,885	3,353,761	3,754,646
LOW LEVEL assistive technology: Annual cost of LOW LEVEL assistive technology (based on 85.91% of population for NDIS and non-NDIS participants @$900)				
Aged 0-64	Cost	$347,976,161	$1,529,080,729	$1,877,056,890
Aged 65+	Cost	$12,820,679	$1,489,304,226	$1,502,124,905
All ages	Cost	$360,796,840	$3,018,384,955	$3,379,181,795
Home modifications: Number of people who need access to home modifications (based on 10.92% of population for NDIS and non-NDIS participants, excluding people in residential care)				
Aged 0-64	Number	49,153	215,987	265,140
Aged 65+	Number	1,811	210,369	212,180
All ages	Number	50,964	426,356	477,319
Home modifications: Annual cost of home modifications (based on 10.92% of population for NDIS and non-NDIS participants @$5,000, excluding people in residential care)				
Aged 0-64	Cost	$245,763,298	$1,079,935,826	$1,325,699,124
Aged 65+	Cost	$9,054,794	$1,051,843,084	$1,060,897,878
All ages	Cost	$254,818,092	$2,131,778,910	$2,386,597,002

Note: Statistical analysis section of this report specifies all assumptions and data sources. Rounding of numbers has occurred where only rounded data was available, therefore individual cells may not add up to the totals. Based on public NDIS data, only 30.17% of NDIS participants access High Level AT in a year. This indicates that participants access High Level AT once per ~3 years. For example, this may be an electric wheelchair in year 1, and a track hoist in year 4. Similarly, only 10.92% of NDIS participants access Home Modifications in a year, indicating that participants access Home Modifications once per ~10 years.

Figure 7: Annual cost of the national assistive technology program – ALL AGES



Across all ages, to fund PWD for those who sit outside the NDIS, $5 billion is required for high level assistive technology, $3 billion for low level assistive technology and $2 billion for home modifications (Table 2). In addition, for each $1 allocated to high level assistive technology another $1 needs to be allocated for wrap around services; and for each $1 allocated to high level assistive technology and home modifications, an additional $0.20 needs to be allocated for organisational costs (Figure 7). These combined costs represent an annual spend of $16 billion across all persons with disability who sit outside the NDIS (Figure 7). This cost can be divided into $8 billion for PWD aged under 65 and $8 billion for PWD aged 65 plus (Table 3).

Table 3: Annual cost of the national assistive technology program

Non-NDIS participant with a disability	0 - 64 years	65+ years	All Ages
High Level AT	$ 2,386,647,745	$ 2,324,563,057	$ 4,711,210,801
AT Wrap around 1:1 ratio	$ 2,386,647,745	$ 2,324,563,057	$ 4,711,210,801
Low Level AT	$ 1,529,080,729	$ 1,489,304,226	$ 3,018,384,955
Home Modifications	$ 1,079,935,826	$ 1,051,843,084	$ 2,131,778,910
High Level AT & HM organisational costs 1:0.2 ratio	$ 693,316,714	$ 675,281,228	$ 1,368,597,942
Total	**$ 8,075,628,759**	**$ 7,865,554,652**	**$ 15,941,183,409**

When considering the development of a new single national aids, equipment and assistive technology program, it is envisaged that all smaller existing national and state-based schemes would join the new single national aids, equipment and assistive technology program and have their government funding consolidated into said national program.

Based on available cost data, 34% (37 of the 108) of the non-NDIS state and commonwealth government funded schemes have an annual assistive technology and/or home modification spend of half a billion dollars. This included $293 million on assistive technology provision, $154 million on home modifications and $4 million in organisational support. Consolidating these 108 funding streams into a single national aids, equipment and assistive technology program could create equity of access for all non-NDIS persons with disability, and potentially create some cost efficiencies for Government.

Return on investment

The following statement is based on data published in the 2020 Review of Assistive Technology Programs in Australia: Final Report [18]. This included a review of the literature as well as a Delphi technique study to gain consensus on the return on investment for assistive technology provision.

> An annual spend of $16 billion dollars can save $32 billion dollars. For every dollar spent on assistive technology and home modifications, there is a conservative two-fold return on investment relating to savings on the cost of paid carers, support service and medical services.

The Review of Assistive Technology Programs in Australia: Final Report [18] combined a number of scenarios to report an overall six-fold return on investment. However, taking a conservative approach, only three of the four scenarios presented a return on investment which was greater than two-fold (ranging from 2.9-fold to 47-fold). As such, the current economic evaluation estimates a conservative two-fold return on investment, indicating that for every $1 spent on assistive technology there is a $2 saving related to the potential cost of paid carers, support services and medical services. While the return on investment analysis described the benefits associated with delayed admission into a residential aged care service, this benefit was not costed or included in the return on investment analyses due to a lack of empirical evidence. This indicates that the full return on investment may be higher still should the delayed admission into a residential aged care service have been costed and included.

In addition, a 2021 report published by PerCapita, for National Disability Services for the Teamwork Works campaign, analysed the social and economic benefits of the NDIS [49]. The report focussed on the multiplier effect of the NDIS spend, and this was estimated at a conservative $2.25 economic contribution to society for every $1.00 invested in the NDIS. The economic contribution to society was based on employment created by the NDIS (direct employment, indirect employment to service NDIS participants, indirect employment to manufacture goods for NDIS participants, and NDIS participants engaging in paid employment), as well as an increase in spend on community goods and services by NDIS participants. In addition, it was estimated that people previously providing unpaid care to NDIS participants have been able to reduce this role and participate in paid employment. For example, over a 3-year period 8.2% of unpaid carers who cared for NDIS participants aged 0-14 years, commenced paid employment.

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Appendix 1: Survey to programs providing assistive technology and home modifications

Your program / organisation name:		
1. NUMBER OF PEOPLE	**WITH NDIS Funding** Number of people who accessed AT and / or Home Modifications in the 2019/20 financial year	Number of people =
	WITHOUT NDIS Funding Number of people who accessed AT and / or Home Modifications in the 2019/20 financial year	Number of people =
2. COSTS ASSOCIATED WITH ASSISTIVE TECHNOLOGY **How much did your program / organisation spend in the 2019/20 financial year?** **Put a $ amount in each category (or provide a total for all assistive technology costs)**	Assistive Technology (products)	$
	Home Modifications (labour and parts)	$
	Assistive Technology Wrap-around Services to prescribe, fit, modify, etc. (e.g. Occupational Therapy; Allied Health Assistants)	$
	Any other Organisational Support? This is internal support to enable AT / Home Mod services, e.g., manager and reception support, rental costs to house the AT (EXCLUDING Assistive Technology Wrap-around Services)	$
	OR PROVIDE A TOTAL FOR ALL ASSISTIVE TECHNOLOGY COSTS	$
3. SOURCES OF REVENUE **Where did the money come from in the 2019/20 financial year?** Put a % in each category (to equal 100%)	Organisational fund-raising, philanthropic funds, bequests, etc.	%
	From individual NDIS plans	%
	From other insurance / government plans (e.g. TAC, DVA, WorkSafe, CHSP / HCP, private health insurance)	%
	Other sources of revenue	%
	FREE TEXT: Briefly describe the other source of revenue…	
4. WHO CAN WE SHARE THIS INFORMATION WITH?	Please indicate how you would like this information managed?	1) Information can only be used in a combined format (not individually identified)
	Remove / delete the option you do not want (leaving the option you do want)	2) Information can be individually identified (e.g., as a case study in our report; you may be comfortable with this if this information is freely available in your annual report / on your website, etc.)

Appendix 2: AT/HM Funding in Australia: Funder, Scheme and Data Availability

Commonwealth or State/ Territory	Scheme	Type of AT/HM	Expenditure Data?
National / Commonwealth			
NDIS (National Disability Insurance Scheme)		AT/HM	✓
DVA (Department of Veteran Affairs)	Rehabilitation Appliances Program	AT/HM	✓
	Essential Medical Equipment Payment		
Comcare			X
My Aged Care	(CHSP, HCP)		✓
	RAC (Residential Aged Care)		X
	NATSIFAC (National Aboriginal and Torres Strait Islander Flexible Aged Care Program)		X
CAPS (Continence Aids Payment Scheme)		Continence products	X
SAS (Stoma Appliance Scheme)		Stoma-related products	✓
Job Access Employment Assistance Fund		Work-related AT	X
Hearing Service Program - Australian Government		Hearing devices & assistive listening devices	X
State / Territory AT/HM Schemes			
ACT	ACTES (ACT Equipment Scheme)	AT	X
	ACT Equipment Loan Service	AT	X
	DORSS (Domiciliary Oxygen and Respiratory Support Scheme)	Oxygen and related products	X
	SWAPS (Specialised Wheelchair and Posture Seating Service)	Wheelchair & seating	X
NSW	EnableNSW	AT/HM	X
	LHD (Equipment Loan Pools operated by Local Health Districts) NSW	AT loan	X
	ATEP (Assistive Technology and Equipment Program) NSW	AT to: 'expand opportunities for people with disabilities transition into, and employment and career development within the NSW public sector	X
	Spectacles program		X

Appendix 2: AT/HM Funding in Australia: Funder, Scheme, And Data Availability *continued*

Commonwealth or State/ Territory	Scheme	Type of AT/HM	Expenditure Data?
Northern Territory	TEP Territory Equipment Program	'medical aids and equipment'	✓
Victoria	Victorian Aids and Equipment Program		
	Statewide Equipment Program (via Grampians Health):	AT/HM	✓
	Continence	Continence products	✓
	Oxygen	Oxygen and related products	✓
	Lymphodema	Lymphodema garments	✓
	Supported Accommodation Program	AT	✓
	Vehicle modifications	Vehicle adaptations	✓
	Electronic Communication Devices Scheme (via Yooralla)	Electronic communication devices	✓
	Custom AT (via Solve-TAD)	Custom AT	✓
	Low cost vision aids (via Vision Australia)	Vision-related AT (not spectacles)	✓
	Equipment Library (via MND Victoria)	AT loan	✓
	Smoke alarms (via Expression Australia)	Audible / visual smoke alarms	✓
	Personal alarms	Monitored personal alarms	X
	Spectacles	Spectacles	X
Tasmania	Tas Equip/ CES (Community Equipment Scheme)	'medical aids and equipment'	✓
Queensland	MASS (Medical Aids Subsidy Scheme)	AT: communication; continence; daily living and mobility; heat moisture exchangers; home oxygen; medical grade footwear; orthoses NOTE no adjustable beds	✓
	Spectacles		✓
	Laryngectomy subsidy scheme	Limited respiratory support products	X
	Palliative Care Equipment Program	beds	X
South Australia	DES (Domiciliary Equipment Scheme)	AT/HM	✓
Western Australia	CAEP (Community Aids and Equipment Program)	AT/HM	✓
State / Territory Artificial Limb Schemes			
ACT	ACT ALS (ACT Artificial Limb Scheme) and P&O (Prosthetic and Orthotic Service)	Prosthetics May include orthotics	X
NSW	EnableNSW Prosthetic Limb Service	Prosthetics May include orthotics	X

Appendix 2: AT/HM Funding in Australia: Funder, Scheme, And Data Availability *continued*

Commonwealth or State/ Territory	Scheme	Type of AT/HM	Expenditure Data?
Victoria	VALP (Victorian Artificial Limb Program)	Prosthetics May include orthotics	X
Northern Territory	Darwin Hospital Limb Service (NT)	Prosthetics May include orthotics	X
Tasmania	Orthotics and Prosthetics TAS TALS (Tasmanian Artificial Limbs Scheme)	Prosthetics May include orthotics	X
Queensland	QALS (Queensland Artificial Limb Scheme)	Prosthetics May include orthotics	✓
South Australia	Orthotics and Prosthetics SA SAALS (South Australian Artificial Limbs Scheme)	Prosthetics May include orthotics	✓
Western Australia	WALSA (WA Limb Service for Amputees)	Prosthetics May include orthotics	X
State / Territory: injury insurers			
Queensland	NIISQ (National Injury Insurance Agency QLD)	AT/HM	✓
	MAIC (Motor Accident Insurance Commission)	AT/HM	✓
ACT	Lifetime Care and Support Scheme ACT	AT/HM	✓
NSW	iCARE (NSW) (ACT)	AT/HM	✓
	Workers Care (NSW)	AT/HM	✓
Northern Territory	MAC Northern Territory (via TIAOFI)	AT/HM	X
Tasmania	MAIB (Motor Accident Insurance Board)	AT/HM	✓
South Australia	Lifetime Support Scheme SA	AT/HM	✓
Western Australia	Insurance Commission of Western Australia	AT/HM	X
Victoria	TAC (Transport Accident Commission)	AT/HM	✓
State / Territory: Work Insurers			
Victoria	Worksafe Victoria	AT/HM	X
NSW	Safework NSW	AT/HM	X
South Australia	Return To Work SA	AT/HM	X
Northern Territory	NT WorkSafe	AT/HM	X
Western Australia	WorkSafe WA	AT/HM	X
ACT	WorkSafe ACT	AT/HM	X
Queensland	WorkCover Queensland	AT/HM	X
Tasmania	WorkSafe Tasmania	AT/HM	X

Appendix 2: AT/HM Funding in Australia: Funder, Scheme, And Data Availability *continued*

Commonwealth or State/ Territory	Scheme	Type of AT/HM	Expenditure Data?
State/ Territory: Custom AT (Technical Aid to the Disabled)			
*NOTE at time of this Report, only one TAD was identified as receiving government support. 5 of the 6 TAD Schemes are therefore not counted as receiving government funding.			
ACT	TADACT (Technology for Ageing and Disability)	Custom A	X
NSW	TTAD (Technology for Ageing and Disability) NSW	Custom A	✓
South Australia	TASDA (Technology for Ageing and Disability SA)	Custom A	X
Tasmania	TADTAS (Technology for Ageing and Disability Tas)	Custom A	✓
Queensland	TAD Q (Technology for Ageing and Disability Qld	Custom A	X
Victoria	SOLVE	Custom A	✓
Western Australia	TADWA (Technology for Ageing and Disability WA)	Custom AT HM	X
State/ Territory: Sundry (focus on sensory and progressive neurological)			
South Australia	Motor Neurone Disease Association SA (MNDSA)	Limited reissue/ loan AT	✓
Victoria	MND Victoria	Limited reissue/ loan AT	✓
Western Australia	MND WA	Limited reissue/ loan AT	X
Queensland	MND Qld	Limited reissue/ loan AT	X
NSW	MND NSW	Limited reissue/ loan AT	X
Tasmania	MND Tas	Limited reissue/ loan AT	X
	Independent Living Centre Tasmania	AT/HM	✓
Schemes in existence with responsibility for AT and/or HM – no evidence able to be sourced			
South Australia	Royal Society for the Blind Adaptive Technology SA	Vision AT	-
National / Commonwealth	Disability Services - TAFE	AT for education	-
State	Secondary schools AT	AT for education	-
NSW	Secondary schools AT	AT for education	-
South Australia	Secondary schools AT	AT for education	-
Northern Territory	Secondary schools AT	AT for education	-
ACT	Secondary schools AT	AT for education	-
Queensland	Secondary schools AT	AT for education	-
Tasmania	Secondary schools AT	AT for education	-
Western Australia	Secondary schools AT	AT for education	-
Victoria	Secondary schools AT	AT for education	-

Appendix 2: AT/HM Funding in Australia: Funder, Scheme, And Data Availability *continued*

Commonwealth or State/ Territory	Scheme	Type of AT/HM	Expenditure Data?
Schemes in existence with responsibility for AT and/or HM – no evidence able to be sourced *continued*			
NSW	Primary schools AT	AT for education	-
South Australia	Primary schools AT	AT for education	-
Northern Territory	Primary schools AT	AT for education	-
ACT	Primary schools AT	AT for education	-
Queensland	Primary schools AT	AT for education	-
Tasmania	Primary schools AT	AT for education	-
Western Australia	Primary schools AT	AT for education	-
Victoria	Primary schools AT	AT for education	-
South Australia	Public Housing Home Modifications	HM	-
Western Australia	Public Housing Home Modifications	HM	-
Tasmania	Public Housing Home Modifications	HM	-
ACT	Public Housing Home Modifications	HM	-
NSW	Public Housing Home Modifications	HM	-
Northern Territory	Public Housing Home Modifications	HM	-
Queensland	Public Housing Home Modifications	HM	-

Appendix 3: Hybrid funding sources which include elements of AT and/or HM

Hybrid funding sources which include elements of AT and/or HM

A range of funding sources are used for AT or AT/HM or HM alongside other supports. It is difficult to ascertain the extent of AT/HM provided, or the expenditure on AT/HM line items. Some are listed below:

State/ Territory home modification schemes

Key informant interviews confirmed that the array of home modification funding options includes the following:
* HM included in commonwealth schemes: NDIS, DVA, NIIS (see data capture above)
* HM bundled with home maintenance included in national aged care funding (CHSP/ HCP) (see data capture above). Anecdotal data suggests major inconsistencies as different states and service agents interpret 'capital improvements' guidelines differently with regard to spending level 3 and 4 homecare packages on modifications and
* HM included in each state / territory aids and equipment scheme (see data capture above).

Additionally, the following sources:

Commonwealth or State/ Territory	Scheme	Type of AT/HM
Per state/ territory	Department of Families, Fairness and Housing	Home modifications (minor or major) in government-owned and managed housing stock. NOTE public rental housing tenants and community housing tenants (10% approx. of the housing tenure in Australia). NOTE anecdotally these Schemes only cover stock they directly manage, ie not all community housing.
NSW	EnableNSW SASH home modifications	
	Public Housing Home Modifications (NSW) / NSW Housing	
ACT	Disability ACT Housing and Tenancy	
Queensland	Public Housing Home Modifications / Queensland Housing	
Northern Territory		
Tasmania	Fusion (Australia) Home Modifications and Maintenance	
	Housing Tasmania	
South Australia	Housing South Australia	
Western Australia	Access Home Loans WA	
	Philanthropy eg via Anglicare Waugh Foundation, Young Care, NILS by Good Shephard (part of Bendigo Bank), gaming organisations	Home modifications (minor or major)
	Research projects	Eg. hoarding and squalor funding with households involves home modifications (National allocation of funds plus state/territory projects)

Hybrid funding sources - Short Term Restorative Care and Transition Care Programs

Hybrid Programs: A range of government funded programs include expenditure on AT or AT/ HM within a bundle of other interventions. Frequently these programs exist at the boundaries of government department responsibilities, such as disability and education; transitional care between disability, ageing and health; disability and indigenous affairs; disability, ageing and housing.

Health and disability and ageing:

Short Term Restorative Care and Transition Care Programs anecdotally provide limited AT and limited HM. However it is extremely difficult to estimate the spend. Reasons include:

- The amount of AT/HM within programs is likely to be variable. Itemised expenditure is not reported, and overall expenditure not made public.
- Programs are national but run by individual health networks which influences both data collection and reporting pathways.
- Extent of support ('doseage') within programs is variable; that is, it is likely there is an inconsistent spend on program interventions depending on factors such as the nature of the treating team and their scope of practice in regard to AT/HM; availability of AT/HM supports in the region, and available budget.

Appendix 3: Hybrid funding sources which include elements of AT and/or HM *continued*

School education (primary and secondary) funding sources which include elements of AT*

* Thanks to expert informant Dr Dianne Chambers, University of Notre Dame Australia, WA

Schools resource AT out of school budgets (if funded directly as part of an Independent school), or as part of special funding applications to the individual sector, as in Catholic and Government schools. AT devices may also be sourced centrally from District offices, often on a loan basis.

A recent national review (commissioned by Department of Education, Skills and Employment, 2019) of the loading for students with disability describes funding for making appropriate adjustments, which includes AT. Systems are able to achieve economies of scale by purchasing services centrally. For example, the Tasmanian Department of Education has centrally funded programs that provide assistance for students with disability in areas such as:

- transport assistance
- minor access works and building modifications
- assistive technology
- provision of specialist equipment
- therapy services
- mediation and liaison services.

Other aspects of the constellation of funds used for education, with examples from WA:

- Some students might use the NDIS equipment that they have acquired in school settings as well as home and community, however the NDIS do not directly fund schooling (this is considered to be the Education Department responsibility in each state).
- Some not-for-profit organisations may assist with funding, such as (for WA) Indigo (formerly Independent Living Centre WA), Rocky Bay or TelethonKids. It is unclear what schemes they may access or provide support to access.
- Some public hospitals (for example, Perth Children's Hospital, Fiona Stanley Hospital) have AT programs (particularly for physical and communication disability) that may offer schemes for acquiring AT which is then used in a school setting.

Higher education funding sources which include elements of AT*

* Thanks to expert informant Darren Britten of ADCET, University of Tasmania

The Department of Education, Skills and Employment were unable to provide data and recommended we engage directly with each university to obtain a picture of costs related to AT products and services. The Department also referred us to the national Assistive Technology Community of Practice across the tertiary sector who provided the following comments:

- Data from specific AT spend may be difficult to obtain as it is often not individualised of accounted for, particularly in universities where the funding changes over the past couple of years have reduced the record keeping;
- Individualised information may be collected at an institutional level and may not be reported back to the department as is only interested in the aggregate cost for each student. This may include the time of a support worker, an Auslan interpreter, an external agency providing transcripts or captions for videos in conjunction with any AT costs;
- Many universities have an institutional licence for some AT software that is used by many students so that would not be reported at an individual level either;
- Under the Additional Support for Students with Disability (ASSD) funding there are cut-off points where no reporting to the department occurs, and the institution has absorb the cost and only items over a certain value are claimable;

NOTE National Assistive Technology Community of Practice does not include TAFE.

Appendix 3: Hybrid funding sources which include elements of AT and/or HM *continued*

Philanthropic Funding Sources example: Suzanne Elliot Charitable Trust*

* Thanks to expert informant Cathy Olsson, speech pathologist and trustee of the Suzanne Elliot Charitable Trust

The trust supports causes related to the environment, to financially disadvantaged people, and to the general community in Australia. Funding to purchase AT is at times provided.

Examples include:

- Augmenting purchase to achieve a participation outcome: additional purchase of mainstream technology or technology necessary to achieve an outcome which falls beyond scheme boundaries e.g. Subsidized cost for a car for a NDIS participant, to support with transportation challenges (rural)
- Fully funding to achieve a participation outcome: for an otherwise eligible person, where the scheme boundaries exclude the purchase e.g. Subsidised swing for a NDIS eligible adult with autism (not considered reasonable or necessary)
- Funding when person ineligible elsewhere:
  - Purchasing a product to deliver a communication outcome where the individual is not eligible for Australian funding, and has a significant unmet need e.g. purchase of iPAD for a non-verbal disability advocate within the Western Pacific region (Cook Islands)
  - Supporting a systemic endeavour to bring AT related outcomes to another country eg. All Ears Cambodia.

The Trust comments: *The two Australian individuals who the Trust has partnered with to provide AT supports have been NDIS participants whose teams/supports felt that the process they would have to undertake to make the case for the item meeting 'reasonable and necessary' criteria from the NDIS was too onerous, or would prove pointless i.e. be unsuccessful, despite the judgements of the individual's themselves, or their supports.*

ATFA

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For more information go to cotavic.org.au
assistivetechforall.org.au or call 03 9655 2140

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