Providing Assistive Technology within Individualised Service Delivery Frameworks

An issues paper for the Emerging Technologies Group authored by Natasha Layton June 2013

Purpose

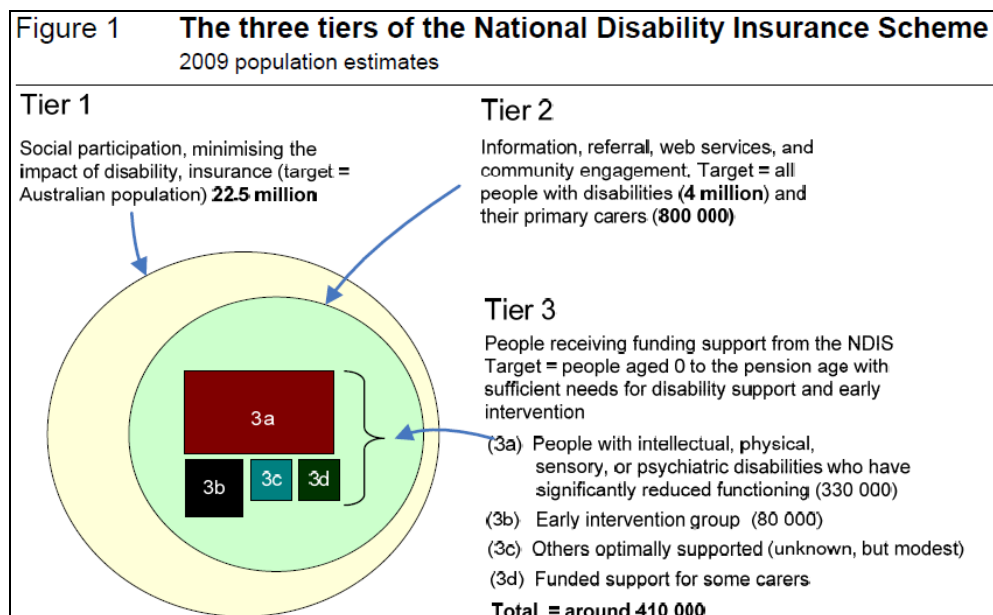This issues paper was commissioned in May 2013 in order to:

- Summarise current best practice related to the delivery of assistive technology (AT)

- Provide information regarding the potential integration of AT into individualised service delivery (such as My Way or NDIS / DisabilityCare)

- Inform the Emerging Technology Group of the work underway to integrate AT provision into DisabilityCare, where this information is in the public domain.

Overarching Policy Context

The disability community has identified a range of principles as essential to promote equity for Australians living with disability[1], whether they are enacted within or outside of DisabilityCare. These include contemporary disability principles (found in Australia's National Disability Strategy[2]) and a commitment to person centred, joined-up policy across and between government sectors (summarised as the Social Inclusion Agenda[3]).
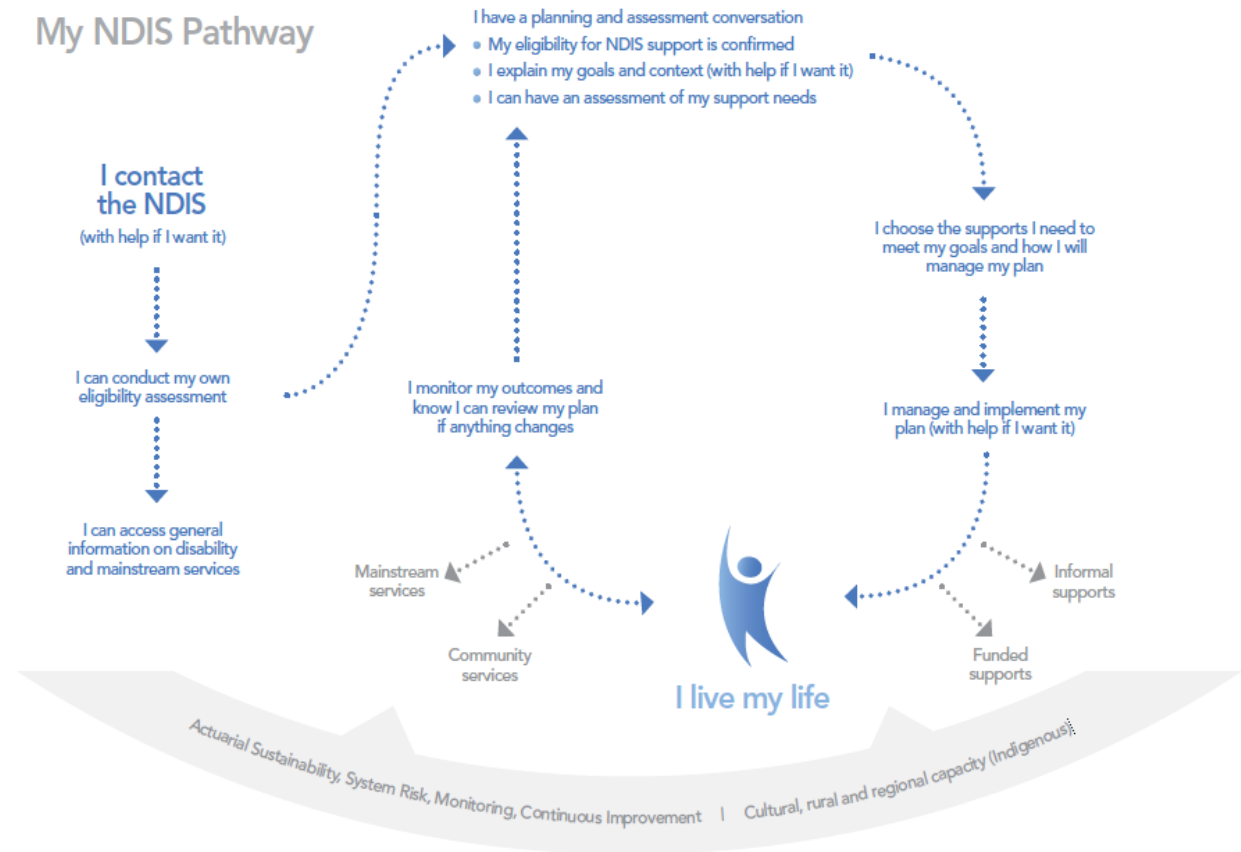
Australia is committed to several key international mandates (UN CRPD[4]) and frameworks (WHO ICF[5]) which guide any policy related to AT and EI.

DisabilityCare is broadly designed to enact these overarching principles. DisabilityCare has passed through legislation and will be launched on 1 July 2013, with planned rollout around Australia, with the current exception of WA, by 2018. Current disability service provision will in many instances continue, as DisabilityCare 'replaces' (and improves upon) a range of current services for Tier 3 of the population only. Aged care, health, education and related sectors continue to provide services but will intersect with NDIS. As part of the paradigm shift to equitable and inclusive communities, a range of actions to strengthen services to Tier 2 and Tier 1 are planned, such as Local Area Coordinators (LAC) working to build capacity across sectors and communities[6] (see Figure 1 from page 15, Disability Care and Support Final Report).

Figure 1 **The three tiers of the National Disability Insurance Scheme**
2009 population estimates

Tier 1

Social participation, minimising the impact of disability, insurance (target = Australian population) **22.5 million**

Tier 2

Information, referral, web services, and community engagement. Target = all people with disabilities (**4 million**) and their primary carers (**800 000**)

Tier 3

People receiving funding support from the NDIS Target = people aged 0 to the pension age with sufficient needs for disability support and early intervention

(3a) People with intellectual, physical, sensory, or psychiatric disabilities who have significantly reduced functioning (330 000)

(3b) Early intervention group (80 000)

(3c) Others optimally supported (unknown, but modest)

(3d) Funded support for some carers

Total = around 410 000

In other words, DisabilityCare participants (Tier 1) will enter the NDIS Pathway (see Figure 2) and, with input from a NDIS Planner, set goals[7] and identify support needs. Whilst intended for under 65's, current lobbying from the aged care sector appears to be shifting the intersections of the Scheme and aged care services.

Figure 2 illustrates the NDIS Planning Pathway.

My NDIS Pathway

I contact the NDIS (with help if I want it)

I can conduct my own eligibility assessment

I can access general information on disability and mainstream services

I have a planning and assessment conversation
• My eligibility for NDIS support is confirmed
• I explain my goals and context (with help if I want it)
• I can have an assessment of my support needs

I choose the supports I need to meet my goals and how I will manage my plan

I monitor my outcomes and know I can review my plan if anything changes

I manage and implement my plan (with help if I want it)

Mainstream services

Community services

I live my life

Informal supports

Funded supports

Actuarial Sustainability, System Risk, Monitoring, Continuous Improvement | Cultural, rural and regional capacity (Indigenous)

SOURCE: David Bowen, CEO of NDIS Transition Authority November 2013[8]

Principles of DisabilityCare[8]

The principles of DisabilityCare are as follows:

Sustainable
- Equity and sustainability to be embedded in scheme design and culture
- Consistent application of eligibility criteria
- Consistent consideration of reasonable and necessary supports
- Looking at long term costs and benefits and allocating resources appropriately

Choice and Control
- Each person has the right to participate fully in society and to direct their own lives by exercising control over their supports
- Every individual supported by the NDIS will determine the types of supports, who provides them, how they are designed and provided, and how their funding is managed
- Each part of the Scheme's design should be judged against whether it protects, supports and enhances choice and control

Emerging Technology

Technology is ubiquitous and, arguably, all technology is 'assistive'. Varied terms are used to delineate technologies of interest to rehabilitation, aged care, community and disability stakeholders[9], in other words: technologies which mediate the effects of impairment, or barriers within the environment[10].

In the context of this issues paper, emerging technology is taken to incorporate AT, everyday technology, ICT and monitoring technologies and have a focus on new developments and synergies between varied aspects of technological research and development.

Assistive Technology

Assistive technology (AT) and environmental interventions (EI) have been demonstrated to be effective interventions across multiple outcome areas including:

- Preserved independence and decreased functional decline
- Reduced hospital admission rates and reduced residential care
- Overall health and community life outcomes
- Alleviating carer burden

- Prevention of secondary medical complications
- Enabled activity and participation in specific life domains
- Prevention of falls
- Improved quality of life

In terms of cost-effectiveness, the Audit Commission (UK)[11] note *'If a drug was discovered with a similar cost-profile, it would be hailed as the wonder-drug of the age'*. AT and EI are applicable across populations and diagnoses, and are of increasing interest as the population ages, in terms of independent living and cost containment. DOHA note AT to be a relatively untapped area with *'enormous potential to improve the quality of life, mobility and independence of many Australians, enabling them to continue living at home and to remain connected to their communities for longer'*[12].

It is likely significant unmet and undermet need for AT and EI is present in the community, with a recent study describing 'unknown, unmet need' for elderly people whose lives 'contract' and whose social engagement decreases, despite the potential of AT to maintain lifestyle and social engagement[13].

The scale of complexity for AT devices ranges from non-complex such as a shower stool; to standard such as a mobility scooter; to specialised such as hoists in the context of environment and carer manual handling considerations; to high complexity such as a power wheelchair with a seating and switching system.

The supports available through NDIS

Supports available through NDIS are anticipated to fit in the following categories[14]:

- Aids and Appliances
- Specialist accommodation support
- Domestic assistance
- Crisis & emergency support
- Guide dogs;
- Assistance dogs
- Specialist transition to work programs

- Personal Care
- Whole of life personal planning
- Vehicle modifications
- Transport assistance

- Supported employment services
- Therapies' such as occupational, speech and physiotherapy; counselling, and specialist behavioural interventions

- Community access
- Local area co-ordination & development
- Respite
- Home modifications

- Orientation and mobility training

Work has commenced to articulate the responsibilities of various other service sectors which also provide supports[15].

What the AT sector think the NDIS should know

A vision for excellence in AT provision has been formulated[16] and communicated to NDIS decision makers through various channels including direct communication with the NDIS Transition Authority, submissions to the four NDIS Expert Working Groups and responses to various consultation drafts and public hearings[17].

Submissions were made by a range of organisations concerning AT, including ARATA Australian Rehabilitation and Assistive Technology Association, Occupational Therapy Australia, NAERA (National Aids and Equipment Reform Alliance), and ATSA (AT Suppliers Australasia).

As the AT sector is relatively small and collegiate, significant information sharing and pooling of expertise led to a unified message being put across. Anecdotally, feedback upon the impact of various campaigns suggests that this unified message across the AT sector has been influential.

Of most relevance to WA is the ARATA policy platform which calls for:

1. ***Establishment of a coordinated national NDIS AT system***
   When discussing NDIS at the ILC / OT Australia presentation on 14 May 2013, a number of participants felt that WA has good coverage with CAEP, as well as options such as philanthropic funding (LotteryWest). However, based upon perspectives from Australians living with disability (including West Australians)[18] [19], upon emerging evidence as to the awareness of CAEP[20], and upon a lack of research regarding unmet need[21], I suggest that West Australians, along with other Australians, do not currently have an outcomes-based scheme where eligibility is based upon need. Further, the NDIS perspective upon disability is broader than health and community perspectives (noting that CAEP sits within these sectors)[22]. No other State and Territory government funding schemes has an existing policy framework that would enable the stated goals of NDIS to be achieved: *(g) promote the provision of high quality and innovative supports that enable people with disability to maximise independent lifestyles and full inclusion in the mainstream community* REF: NDIS Act p4.

2. ***All AT should be covered: rule out (eg oxygen) rather than ruling in via a 'list[23]***

CAEP operate an Equipment List, which is commercial in confidence. Most State and Territory funding schemes [24] covers less than 10% of AT device categories of ISO 9999, which is the most comprehensive international listing of AT devices for disability. This indicates that around 90% of applicable technologies for disability are excluded. While some of these are funded through different pathways (eg optical, prosthetics), many are not (recreation devices, Segways). CAEP state that the Imprest List is responsive to areas of increased demand. It is suggested a more streamlined and flexible method is to in principle include all AT which is evidenced to support participant outcomes, where it is not provided through other sectors (such as oxygen or continence).

3. ***Funding must cover 'soft technology' aspects of AT***

Equipment abandonment[25] is clearly linked with lack of soft technology (prescription, assessment, adaptation/fitting, training, maintenance, repairs). New evidence as to the lifetime costs of soft technology has been provided to NDIS **Transition Authority to guide costings for soft technology[26].**

4. ***Personal goals, aspiration and choices are central to decision-making***

- NDIS aims to deliver *social and economic outcomes*: we have worked to operationalised these in line with WHO ICF activity and participation areas[5].

- Our approach to the concept of '*reasonable and necessary*' for AT provision is to identify as reasonable any effective device or solution which leads to a desired outcome. Further, using social cost tools, to make economic arguments[27] for better provision 'up front' to prevent downstream costs (such as titanium wheelchair to avoid rapid replacement of aluminium wheelchairs) or cost offsets (such as pressure cushion to prevent admission costs). In other words, provide supports in line with ISO9999 (what is possible) and the UN CRPD (the rights to which we can aspire).

5. ***Consumer-held discretionary funding of up to $1000 annually***
   The capacity to purchase low cost devices (such as pick-up sticks) and replacement items (such as tyres and cushion covers) is a low risk, high autonomy solution for AT users.

6. ***Establishment of accreditation for practitioners and suppliers, and AT user education and training, and other knowledge transfer strategies to support consumer control and decision-making***
   Recommend a competency framework to encompass AT practitioners (tertiary qualified and VET qualified), AT suppliers, and AT users and carers.

7. ***Workforce issues - gap analysis, national training/mentoring, encouraging & supporting rural and remote practitioners***

Realising Emerging Technologies within individualised service delivery frameworks

Expertise is critical at the initial (planning) phase to ascertain goals and support options. Planners must have an understanding of the unique and individualised requirements of participants that arises through the interaction of person, environment and task[28]. Further, planners must envision potential supports broadly, understanding that addressing any or all of these elements in the person – environment - task interaction can occur via a range of AT and/or other disability supports. Strategies or tools will be required to sensitise stakeholders to impacts of supports across the solution and across timelines.

It is suggested planners follow a best practice pathway based in Europe's Quality Indicators for AT service delivery. These indicators (comprising accessibility; competence; coordination; efficiency; flexibility and user influence), have been mapped to Australia's context. Appendix 1 provides a proposed flowchart of AT expertise as a pathway for planners to follow.

Suggestions to support early identification and triage of AT requirements by planners include:

a) **Consider the technology chain in assessment and referral.** The conceptual basis for this understanding is outlined by AAATE[29]: 'a disability can be overcome by an assistive solution often composed of a mix of mainstream and assistive technologies that is different from one individual and another, and from one context to another. Thus a broad view should be taken of the entire technology chain that encompasses:
   - built environment; ambient intelligence distributed across the environment;
   - transport / mobility infrastructure and devices; communications infrastructure and devices; and
   - the individual devices specifically designed to compensate for functional limitations'.

For example:

- a shower stool and grab rails may be required when a step is present in a shower cubicle, but not required if the environment is built with a level access shower entry and a built in propping ledge.

- A ceiling track hoist in a person's home may decrease personal care from two carers to one.

- Provision of a stand-up wheelchair may eliminate the need for a carer to assist in transferring to the toilet, thus eliminating a long term cost and representing a cost effective solution[30].

b) **Embed understanding of the interrelationship of disability supports.**
Understand the critical interrelationships of all elements of an AT solution (AT devices; environmental interventions, personal support and inclusive environments[31]).

c) **Sensitise planners to multiple outcomes possible across WHO ICF.**
These points above are in part illustrated with the AEAA 20 minute training DVD in which consumers demonstrate AT and related supports across WHO ICF life areas. This DVD, alongside a study guide, is recommended to sensitise planners to the potential of a range of non-complex to high complexity solutions[32].

Appendix 1 Consumer's Experience of the AT System – Flowchart[1]

---
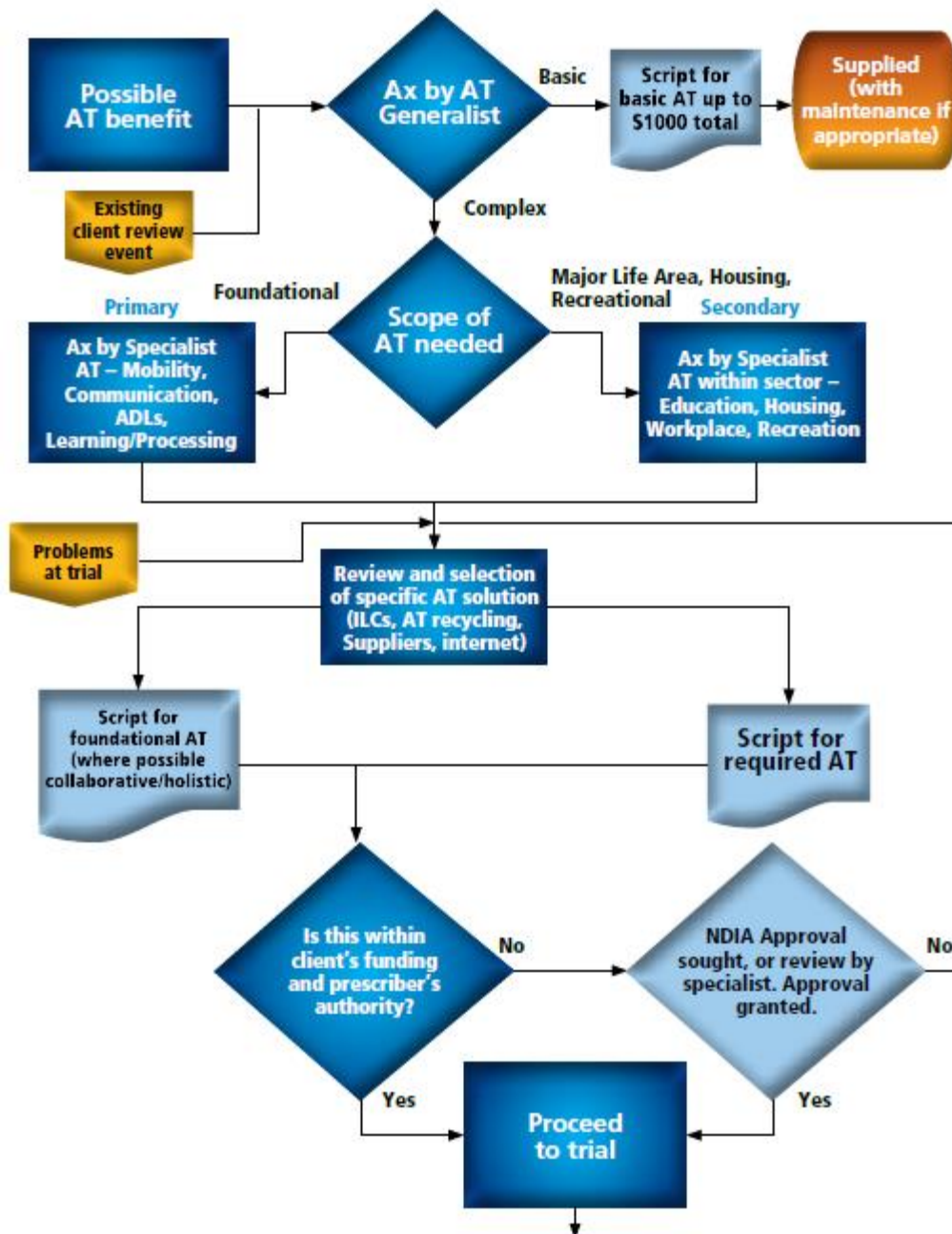
[1] ARATA: Assistive Technology within the NDIS: Position Paper. Caloundra: ARATA, 2012 download from www.arata.org.au

[1] National People with Disabilities and Carers Council (2009) Shut Out: the experience of people with disabilities and their families in Australia - National Disability Strategy Consultation Report. Canberra, Commonwealth Government.

[2] Commonwealth of Australia (2011) National Disability Strategy 2010-2020

[3] Social Inclusion Unit (2009) The Australian Public Service policy design and delivery toolkit. Canberra, Department of the Prime Minister and Cabinet Australian Social Inclusion Board (2010) Social Inclusion in Australia - How Australia is faring Canberra, Department of the Prime Minister and Cabinet

[4] United Nations (2006) Convention on the rights of persons with disabilities and optional protocol. Geneva, United Nations

[5] W.H.O. (2001) *International Classification of Functioning, Disability and Health,* Geneva, World Health Organisation.

[6] Productivity Commission (2011) Disability Care and Support Final Report. Canberra

[7] Participants may have many life goals, however the NDIS mandate is to support achievement of social and economic goals

[8] : David Bowen (CEO of NDIS Transition Authority): Barwon NDIS Forum Geelong, 2011

[9] Cook, A. & Hussey, S. (Eds.) (2008) *Assistive Technologies: Principles and Practice,* St. Louis, Mosby Elsevier

[10] Scherer, M. (2012) *Assistive Technologies and Other Supports for People with Brain Impairment,* New York, Springer.p 141

[11] Heywood F, Turner L: Better outcomes, lower costs: Implications for health and social care budgets of investment in housing adaptations, improvements and equipment: a review of the evidence. Bristol: University of Bristol; Office for Disability Issues, 2007: p.3

[12] Connell J, Grealy C, Olver K, Power J: Comprehensive scoping study on the use of assistive technology by frail older people living in the community. Canberra: Urbis for the Department of Health and Ageing, 2008, p. 6.

[13] Gramstad A, Storli SL, Hamran T: "Do I need it? Do I really need it?" Elderly peoples experiences of unmet assistive technology device needs. Disability and Rehabilitation: Assistive Technology 2012; Posted online on July 17, 2012. (doi:10.3109/17483107.2012.699993)

[14] Box 5.1 Specialist disability supports page 227 Productivity Commission: Disability Care and Support Final Report (no. 54): Canberra, 2011.

[15] COAG: Principles to determine the responsibilities of the NDIS and other service systems. April 2013.

[16] ARATA: The ARATA 'Making a difference with AT' Papers. Caloundra: ARATA 2012.

[17] Productivity Commission draft report and public hearings (2009-2011); NDIS legislation Exposure Draft (2012); NDIS Act (passed 28 March 2013); NDIS draft rules (2013).

[18] see http://bolshydivas.weebly.com/

[19] National People with Disabilities and Carers Council (2009) Shut Out: the experience of people with disabilities and their families in Australia - National Disability Strategy Consultation Report. Canberra, Commonwealth Government.

[20] Of 31 stakeholders across 3 focus group re. non-complex AT provision to the HACC population held May 2013, 10% had never heard of the CAEP program, despite being involved with populations of AT users eg. day centre co-ordinators. Subsequent interviews with HACC clients also identify poor knowledge of CAEP.

[21] Discussions with CAEP co-ordinators re. data collection approaches May 2013

[22] NDIS ACT SECTION 24.Disablity Requirements (1) A person *meets the disability requirements* if:

> (a) the person has a disability that is attributable to one or more intellectual, cognitive, neurological, sensory or physical impairments or to one or more impairments attributable to a psychiatric condition; and

> (b) the impairment or impairments are, or are likely to be, permanent; and

> (c) the impairment or impairments result in substantially reduced functional capacity to undertake, or psychosocial functioning in undertaking, one or more of the following activities:

> (i) communication; (ii)social interaction; (iii) learning; (iv) mobility; (v) self-care; (vi) self-management; and

> (d) the impairment or impairments affect the person's capacity for social and economic participation; and

> (e) the person is likely to require support under the National Disability Insurance Scheme for the person's lifetime

[23] Broad view of AT: An assistive technology solution can be defined as an individually tailored combination of hard (actual devices) and soft (assessment, trial and other human factors) assistive technologies, environmental interventions and paid and/or unpaid care www.at.org.au

[24] FaHCSIA: Core Equipment for People with Disability. Canberra: Disability Policy & Research Working Group, 2011.

[25] A key measure of success in AT provision is abandonment or non-use rates. A number of studies report abandonment / non-use rates of up to 59%, but the generally cited figure is 30%.

[26] Layton N & Walker L: The economic potential of Assistive Technology solutions – an introduction. Making a difference with AT series. Caloundra: ARATA 2012.

[27] Andrich R: The SCAI instrument: measuring costs of individual assistive technology programmes. Technology and Disability 2002; 14: 95-99.

[28] Law, M., Cooper, B., Stewart, D., Rigby, P. & Letts, L. (1996) The Person-Environment -Occupation Model: A transactive approach to occupational performance. Canadian Journal of Occupational Therapy, 63, 9-23

[29] AAATE Position paper: a 2003 view on Technology and Disability. AAATE Conference. Dublin.pp3-4

[30] Examples drawn from Watchorn V, Layton N: Advocacy via human rights legislation - the application to assistive technology and accessible environments Australian Journal of Human Rights 2011; 17(1): 117-138

[31] Evidence suggests consumers use an average of 8 AT devices within up to 13 elements of EI, PC and environmental facilitators make up AT solutions Layton, N., Wilson, E., Colgan, S., Moodie, M. & Carter, R. (2010) The Equipping Inclusion Studies: Assistive Technology Use and Outcomes in Victoria. Melbourne, Deakin University

[32] Available from www.aeaa.org.au