

The National Disability Insurance Scheme: Using the ICF to uphold rights of persons with disabilities

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Abstract

The UN Convention on the Rights of Persons with Disabilities promises a transformation in the lives of persons with disabilities through their full participation in all aspects of the societies in which they live. Additional costs of providing equitable economic and social rights to persons with disability are often used as a barrier to realising such rights. The Australian Productivity Commission and the subsequent economic modelling by PriceWaterhouseCoopers have quashed many of these additional cost arguments as part of the preliminary work for setting up a National Disability Insurance Scheme.

However, these global economic models do not explain the potential costs and savings at an individual level. These potential costs and savings become important when individuals are assessed for their eligibility under the proposed scheme. This article explains the development of a novel economic methodology utilising the International Classification of Functioning, Disability and Health (ICF). It shows how the resulting economic analyses can be utilised at an individual level as well as the broader societal level. We argue that both are needed for upholding Australia's obligations under the UN Convention.

Key words:

Human Rights; Persons with Disabilities; Economic Analysis; System-focussed Stress-testing; International Classification of Functioning, Disability and Health ICF;

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1. Introduction

In contributing to the debate on the rights of persons with disabilities, this article presents an economic methodology which takes the perspective of the person with the disability. Economic modelling by the Australian Productivity Commission and subsequently by PriceWaterhouseCoopers takes a global approach arguing that it is cost effective for the Australian economy if people with disability are afforded their rights to equal treatment and opportunities to participate in society. These arguments have satisfied the Australian Government, which has recently announced that they will introduce a funding model which embraces the concepts of the UN Convention, namely the National Disability Insurance Scheme (NDIS). However, this type of economic modelling does not apply when analysing the costs and benefits of the scheme for individuals.

As part of the NDIS process, individuals will be assessed for their 'needs' and a dollar amount will be allocated to them based on these needs. The processes and practices of how this assessment will take place, who will make the decisions, and how dollar allocations will be applied are yet to be decided. It is clear however, that assessment tools of one kind or another will be used in the assessment process. Listing the type and number of supports a person might need could be complex in itself, but it is likely that assessing the dollar value applied to each of these needs will be more complex.

The question therefore arises in the context of the self determination of the UN Convention, of who will undertake the assessment and what assessment tools will be utilised. While the Productivity Commission and the PriceWaterhouseCooper reports recommended the introduction of the scheme begin in 2014, the Australian Government has decided bring forward the launch date by one year to July 2013. This means that they will begin the assessment process with existing assessment tools, many of which, if not all, are likely to have their basis in the medical model. The Government's plan, however, is to use existing tools until other tools can be developed. The issue here is that by reverting to the medical model for assessment, the rights of the person under the UN Convention will be compromised. While the existing tools claim to be person-centred, they are person-centred from the perspective of the tool developer and subsequent tool user, the assessor, usually health professionals.

This article reports on the development of a novel economic methodology that uses the International Classification of Functioning, Disability and Health ICF (WHO 2001) such that the analysis is undertaken in the perspective of the person with a disability. This use of the ICF is combined with an economic technique developed by the Financial Sector Assessment Program of the International Monetary Fund IMF, system-focused stress-testing of scenarios. The building of scenarios provides a framework in which all the desirable and functional aspects of daily life relevant to an individual with a disability can be documented. System-focused stress-testing allows the complex cost structures of attaining these aspects of daily life to be compared with the costs of not attaining them.

The article discusses some of the key findings from the first in a series of in-depth interviews to analyse the economics of the situation of an individual with a disability using this methodology and then discusses how this methodology might underpin an assessment tool suitable for use within the framework of the NDIS.

2. A Novel Economic Methodology

2.1 Using the ICF

This research grew out of investigations into the economics of assistive technology (AT), a term that includes devices that can range from high-tech mobility aids and communication equipment to low-tech devices for turning taps and door handles and include such common aids as glasses. AT devices are never used in a vacuum, rather, they are used in a particular person's specific life situation. These life situations vary considerably, but, in principle, they are systems that all include three components:

- (a) one or several AT devices;
- (b) more or less care work in the widest sense of the word, from a specialised nurse or equipment engineer, to a person holding the door open; and
- (c) an accessible built environment, where architectural barriers that prevent individuals from entering a building or being able to follow a continuous path of travel are eliminated.

The difficulty for economic analysis is the potential substitution opportunities that exist in replacing technology with human effort: for example, installing an automatic door opener to the shop doorway, or using human effort to open the door for customers.

How do you compare the costs of one with the other? It should be noted that everyone uses various technological devices to assist with day to day activities, such as a pair of scissors, a power drill, a sewing needle or a knife and fork. However, when the technology or device is specifically designed to help overcome the loss of a particular functional capacity, it is known as Assistive Technology. This is a debatable issue in itself, but not within the scope of this article.

The International Classification of Functioning, Disability and Health ICF (WHO 2001) provides an internationally recognized framework that facilitates a systematic and structured approach to understanding and analyzing a person's life circumstances, whether or not they have a disability. For our purposes we used the two components of the classifications "Activities and Participation" and "Environmental Factors". Activity is defined in the ICF as 'the execution of a task or action by an individual' and participation as 'involvement in a life situation', while '[e]nvironmental factors make up the physical, social and attitudinal environment in which people live and conduct their lives' (WHO, 2001, p. 10),

The ICF is part of the World Health Organization's family of classifications and has been internationally tested in a wide range of different cultural and socio-economic contexts. Hence a description of a person's life situation through the ICF allows for a certain level of comparability between people and across cultural and socio-economic contexts. It is the wide use of the WHO's family of classifications in the health sector that makes the ICF a more meaningful framework to analyze AT systems than other frameworks such as Amartya Sen's capability approach, despite the fact that Sen's approach is better known amongst economists.

The ICF can be used as a guide for considering all aspects of an AT user's life situation. The ICF should, however, only be used as a guide and not as a checklist, because although it is comprehensive in its coverage, it is not sufficiently detailed in many categories. It is thus important to use the ICF in a way that encourages the exploration of perspectives rather than limiting the exercise to checking off items in a list.

Following the logic of the ICF, the methodology focuses on the activities and participation considered important by the person with disability. These activities and participation are then identified as measures of effectiveness, both in the current situation and in a situation the individual considers optimal. In both situations the

relevant environmental factors and their costs are then identified. This process has been systematised into a seven step process, which identifies, measures, values and compares the relevant costs and consequences.

This process begins with a two-tiered approach to establishing effectiveness in the first two of these seven steps.

Step 1: all the 21 blocks into which the ICF organizes activities and participation are considered and discussed with the person with a disability, and an overall level of effectiveness is identified for each block, in the current situation and in one the AT user considers optimal.

Step 2: he or she identifies the three blocks that are of most importance to him or her.

Step 3: the three blocks are analysed in more detail and the relevant environmental factors for these three blocks are discussed with the person, namely the provision of facilitators and the removal of environmental barriers in the current situation. The environmental factors the person considers relevant in the optimal situation are established in the same way.

Step 4: the costs of the environmental factors in both situations are then identified together with the person and other relevant stakeholders, and using system-focused stress-testing techniques the two situations are compared.

Step 5: the remaining 18 blocks are then reviewed to identify the activities and participation that can be achieved based on the environmental factors identified for the three blocks discussed in detail – again in both the current and the optimal situations.

Step 6: additional beneficiaries are then identified, namely other parties that benefit from the environmental factors identified in step three, to obtain a more complete picture of the real effectiveness achieved for the costs incurred.

Step 7: a traditional scenario analysis is performed that stress-tests the key assumptions made in steps three to six.

By integrating our use of the ICF into these seven steps we can develop our analysis in a systematic and transparent way from the perspective of the individual concerned, the person with disability.¹ Consequences for the practical use of the ICF have been outlined

elsewhere (Schraner et al. 2008). This use of the ICF allows us to describe the complex, individual and specific situation of a person with disability in a way that can be linked to other individual and specific situations without losing sight of the whole of society.

2.2 Drawing on System-focused Stress-testing of Scenarios

Scenario analysis has been successfully used in strategic planning since the 1970s (Schoemaker 1995). In the 1990s banks began using scenario analysis to stress-test their portfolios. At the beginning of the twenty-first century the Financial Sector Assessment Program of the International Monetary Fund IMF developed the technique further (Hilbers; Jones 2004, Jones; Hilbers; Slack 2004), so that very different kinds of impacts on a complex system could be considered at the same time, including the structure of a country's economy, its institutional settings, its history and traditions, its political system and actual political and social developments to name just a few.

The specific situation of a person with disability can also be viewed as a system that can be stress-tested. If we visualise a continuum where no assistance is at one end and optimal assistance is at the other, the current situation would fall between these two extremes. The system-focused stress-testing can then encompass any position of the system along the continuum. In this process we can calculate the costs of the current and of the optimal AT systems by identifying the relevant environmental factors in the framework of the ICF and then identify their costs. We then relate these costs to the activities and participation achieved in both situations. Step five then re-visits the remaining 18 blocks of activities and participation that had not been analysed in the same detail as the three the person had selected. The sixth step outlined above explicitly relates the specific, individual AT system of a particular person with the rest of his or her environment and society as a whole.

The technique of system-focused stress-testing is seen by its proponents as a process that starts with 'the identification of specific vulnerabilities or areas of concern, followed by the construction of a scenario' (Hilbers; Jones, 2004, p. 3). The process of constructing a scenario with relevant characteristics is undertaken in consultation with a wide range of stakeholders. This is both a strength and a weakness of the methodology, as the richness and depth of the scenario has to be balanced against the cost of the process in terms of time and resources used. This also applies when discussing the key characteristics of a

particular situation with the person with disabilities and with stakeholders such as assistive equipment providers, health professionals and health insurance providers. Such discussions make it evident that what needs to be measured is not determined *a priori* or in a power vacuum. This gives the person with disabilities space to speak up – and allows for conflicts and contradictions between the views of the various stakeholders to surface and to be addressed (Kersten; George; McLellan; Smith; Mullee, 2000). At the same time this process allows for a constructive exchange of knowledge and insights, which in itself contributes to improving the situation, whether this is the management of financial systems or the self-efficacy of people with disabilities.

However, this process ensures that the life experiences of the people concerned are taken seriously in a structured way that enables the identification of trends and allows comparisons between people with disabilities and their life situations. When analysing the relationship between cost and effectiveness in the current situation on the one hand and cost and effectiveness in an optimal situation on the other hand, there are two cases of particular interest: cases in which more activities and participation could be achieved for the same costs, and cases in which the same activities and participation could be achieved for lower costs.

4. Findings from the First Set of Interviews

We spent considerable time working through the seven steps outlined above with our first interviewee, refining the methodology in the process. As indicated earlier, we did this in the context of analysing the economic effectiveness of assistive technology and accessible environments, but the implications for the debate on human rights, the UN Convention and the NDIS remain. So we provide here first an introduction to our participant, whom we shall call Kim.

4.1. The Participant

Kim was recruited from a disability advocacy group, a voluntary member who is active on several committees and working parties. We deliberately sought a disability activist because we believed a passion for the cause would help sustain them through the rigours of being closely questioned over an extended period about their life and lifestyle. We

also believed a disability activist with expertise in “working the system” would have sufficient knowledge to depict her optimal situation.

Kim has lived with a disability since childhood and now in her later years she has the added disabilities associated with ageing such as loss of vision and hearing. Kim mobilises using a powered wheelchair and lives alone in accommodation that is designed specifically for people with mobility impairments. Although it is not perfect for her needs, she is able to perform daily household and personal care tasks herself with some paid carer help once a week for heavier tasks. Kim is located in an inner Sydney suburb, which is yet to have railway station upgrades to accessible standards. Most buses and routes are accessible, but Kim feels unstable in her wheelchair because of the risk of sudden stops and starts. Therefore Kim uses accessible taxis to travel to community and social activities, which as public venues are generally accessible.

4. 2. Analysis of the three most relevant blocks

The first step was to identify and record an overall level of Kim’s activities and participation in each of the 21 blocks of ICF categories of activities and participation and then ask her to choose the three blocks of most importance to her. The three blocks chosen by Kim in this second step were:

- d630-d649 Moving around using transportation
- d470-d489 Household tasks
- d910-d999 Community, social and civic life.

In the third step the level of activity limitations and participation restrictions were discussed in greater detail with Kim and the information was recorded on an Excel spreadsheet. At the same time the relevant Environmental Factors (social, physical and attitudinal) which form barriers or facilitators were recorded in the spreadsheet. Costing information was then added to the spreadsheet as part of the fourth step.

An initial analysis showed that for Kim transportation, inaccessible public environments and societal attitudes were the most limiting. At home, Kim had secured much of the help she needed in terms of devices and care work to support her current level of independence. Nevertheless, the discussions revealed that this was not without its problems. Kim’s original wheelchair was reaching the end of its lifespan at the time of the interview process. If an identical model had been supplied, she would have

experienced limitations to the number of community and social activities she could undertake. As Kim has difficulty holding her head erect for any length of time. Consequently when her head falls forwards, it looks as if she is falling asleep, which is particularly problematic when at meetings and watching live performances. The most suitable powered wheelchair for Kim was one that has a seat that tilts backwards (tilt-in-space wheelchair), so that Kim could continue participating in volunteer work, civic and recreational activities. Because the cost of the tilt-in-space wheelchair was approximately double (A\$13,000) the cost of a similar model to her existing wheelchair (A\$6,000), Kim was forced to wait eighteen months for the state government supply agency to accrue sufficient funds to purchase the wheelchair.

During this eighteen months Kim sustained additional injury from using her existing wheelchair and now she takes pain medication each day which amounts to A\$1000 per year. The personal cost, apart from pain, is loss of function such that she now needs one and a half hours of paid care help each week to carry out tasks she could previously do herself (A\$90 per week). If we add in the potential loss of ten of her volunteer hours, say at a nominal A\$15 per hour, we see that over a five year period the wait for the wheelchair has cost some A\$70,000 and that does not include the loss of social and recreational life and the continued deterioration in her health status. In effect, over the expected lifetime of the wheelchair, say five years, not having an A\$13,000 wheelchair cost more than five times its price. Table 1 summarises these costs to show how a more timely supply of an appropriate wheelchair is far cheaper than rationing supply².

Table 1. Summary of costing considerations relating to the timely provision of an appropriate wheelchair

Item	Costs in current situation	Costs in optimal situation
Basic powered wheelchair	A\$6,000	n/a
Tilt-in-space wheelchair	n/a	A\$13,000
Home care: 1.5h/week @ A\$60.00/hour over 5 years	A\$23,400	n/a
Medication costs over 5 years	A\$5,000	n/a
Loss of Kim's volunteering hours @ A\$15/hour, 10hours/week over 5 years	A\$39,000	n/a
Loss of social and recreational life and effect on health	???	n/a
Total costs over 5 years	A\$73,400	A\$13,000

An important factor in the acquisition of the tilt-in-space wheelchair is that Kim was informed by a friend that this type of wheelchair was commercially available. If she had not possessed this information, or had not felt sufficiently empowered to ask for it, she

would now be looking at a future of reduced activity and participation. (The issue of having easily accessible information about AT is another important factor but is not discussed here.)

Eventually, Kim would be experiencing a significant reduction in her quality of life, the community would lose the labour of an experienced volunteer, and it is likely that she would be calling on more health services sooner rather than later. By using just one factor as an example, that is, the timely provision of a device, we can see how measuring the initial cost of a wheelchair (A\$13,000) is insufficient. While best practice in economic analyses in general requires the consideration of opportunity costs, standardised techniques do not allow for considerations at such a detailed and individual level, and consequently the insights discussed here are not considered.

Whilst we feel it is likely that using the same kind of analysis we would find similar cost burdens on individuals like Kim being repeated across the nation, the costs of remediating the public environment poses greater analytical difficulties than the relatively simple example of the timely supply of the wheelchair. Nevertheless, it was the external environment (physical, social and attitudinal) that caused the most problems for Kim in achieving her optimal situation and therefore we cannot leave this out only because it is complicated.

4. 3. Getting out and about

Whilst Kim was able to manage most domestic tasks and home-based activities due to the acquisition of some AT devices and paid care work, life outside the home was another matter. The not yet accessible public transport system, the not yet accessible public facilities, and the patronising attitudes present in the social environment all contrive to make life more difficult than necessary. In this context, Kim is not yet able to realise her rights under the UN Convention. The costs of access and inclusion are relevant and the reason why public transport systems were granted a long lead time to bring infrastructure to accessible standards. Likewise, owners of existing buildings are allowed to use the natural renovation and refurbishment cycles of buildings before needing to heed the access codes. Although cost estimators can chart the costs of upgrading transport systems and existing buildings, they cannot price the cost to the

persons who wait for their rights to be realised. Some of the details of Kim's life illustrate this point and are discussed below.

Visiting others

The Australian Disability Discrimination Act (1992) (DDA) covers all public domains, but it has no jurisdiction over privately owned homes. In some cases the public areas of multi-dwelling developments must include a measure of disability access, but this does not guarantee access within the dwelling. Consequently, whilst Kim's home is accessible, others' homes are not, and Kim's right to visit people in their own homes is seriously compromised.

Fifteen homes of friends and family are inaccessible to Kim and consequently she no longer visits them. Friends and family must always come to her or Kim meets them in accessible public places: not conducive to maintaining close relationships. The cost of retrofitting these homes would vary considerably depending on what she would consider the optimal. For example, if she only wanted to visit for an hour or two and did not need the toilet then a level entry and doorways of with a minimum of 800 mm clearance would suffice. If she stayed longer, say for a family gathering, she would need access to a toilet. Most Australian homes have a ground floor toilet, so given she can weight-bear and walk a step or two, albeit with difficulty and a risk a fall, a visit to the toilet is possible, but clearly not optimal, particularly if she needed assistance.

If the gathering was outdoors on a veranda or patio, she would need assistance with access. Typically Australian outdoor areas are at least one step down from the level of the floor of the house. Access might be facilitated by a portable ramp, which Kim could bring with her in a taxi (it is not possible to carry it on public transport) when there are only one or two steps to traverse. However, she would need help to convey and erect the ramp and whilst this provides access it is not optimal for two reasons: one, the inconvenience of having to organise her own individual access, and two, the lack of dignity it affords. The cost of a simple portable ramp is around A\$500 and this cost is borne either by Kim or the occupant of the dwelling she is visiting. The cost of providing level entry and egress into homes is negligible if designed in at concept stage (Landcom 2008). The cost of modifying the home to provide level access throughout, however, would be greater than the cost of a portable ramp.

The cost of modifying homes is too variable to be measured with any accuracy, and people in rented accommodation would likely be refused permission by the landlord even if the tenant paid for the work. Using figures published by the New South Wales State-funded Home Maintenance and Modification Scheme (New South Wales Home Maintenance and Modification Service, 2010) and by the Department of Human Services (Department of Human Services, 2010), it can be calculated that in 2009-2010 86% of modifications (1,919) cost less than A\$5,000 and averaged out at A\$1,370 each.

Street access

Footpaths are also a concern for Kim as many are uneven and narrow and contain access plates for services such as telephony and power. Most street crossings have a kerb ramp, but some kerb ramps are difficult to negotiate either due to a steep incline or a small change in level where they join the roadway. Overhanging foliage from street plantings or front gardens is also a problem. Many Australian residential streets have trees for shade, but the root system often dislodges paving, and extremes of weather also destabilise the base upon which the paving slabs sit. Local councils are responsible for the maintenance of footpaths, but once laid, the cost of maintenance remains a low order priority for councils

Access to transport

Transportation in all its forms is also not optimal for Kim. Although she can use her senior's card and travel anywhere for A\$2.50 a day, she prefers to use taxis albeit at greater expense. One of the main reasons she pays the additional cost is that she feels risks to her personal safety are minimised in taxis. Feeling safe is an important factor in participating in activities outside the home, as some people with disabilities fear they will either be physically assaulted, or be subjected to demeaning or patronising attitudes and behaviours.

As Kim is a full time wheelchair user she is entitled to use the government subsidised taxi scheme, which provides a subsidy to a maximum of A\$30 for any one trip. Travel to most of her activities average out to A\$70. Because volunteers are able to claim out of pocket expenses from most organisations, many of these trips are paid for by the relevant organisation, and consequently Kim is not out of pocket. However, other volunteers who can drive their own vehicles rarely claim such out of pocket expenses,

and thus Kim's lack of easy and safe access to public transport is a cost borne by the organisation. Although buses on some routes are accessible for wheelchairs, Kim does not feel safe travelling on buses because of sudden stops and starts. The buses do not allow for the wheelchair to be secured in any way, unlike taxis which have an inbuilt tie-down system. Kim also feels very obvious and a nuisance to other travellers. Although the train stations near her home will eventually become accessible, the routes are not suited to her destinations. However, Kim does feel safer on trains than buses because they are more predictable and in off-peak times she is not an inconvenience to others.

Conclusions

Kim's situation highlights several issues. First, only the activity limitations and participation restrictions in one of her three key blocks can be addressed when the focus of reasonable accommodation for her is on her activities of daily living, and on AT devices and home modifications.

Second, the public environment, insofar as it is covered by the DDA, still has a long way to go in making accommodations that are in principle considered reasonable, but delayed due to the unjustifiable hardship clause. In economic terms, protecting the individual business or service from facing undue hardship is likely to cause greater overall costs, only that they are spread between different parties, not least the persons with disabilities and their families, who carry a disproportionate share of these additional costs. Once these costs from preventing persons with disabilities from fulfilling their human rights are made visible to economists, they provide a strong case for society to find ways to openly fund the costs of ensuring human rights for all – because once the invisible costs are revealed, it is likely that overall and over time this will result in lower total costs to society as a whole.

Third, Kim's case clearly illustrates that one of the key barriers to exercising one's human rights is societal attitudes. Whilst legislation can change behaviours, which is one necessary step towards changing attitudes, this needs to be supplemented by appropriate policy development and community education programs. The very public political lobbying campaigns calling for the NDIS and subsequent media attention may assist in gaining increased community understanding and acceptance of people with disability.

5. Proposal for a Lifetime Support Scheme in Australia

5. 1. Background to the Scheme

Whilst income support for people with disabilities is provided by the Australian Government, disability support services are currently administered by individual State and Territory governments. This has led to inequities in service provision and in particular, the eligibility criteria for acquiring State-funded assistive technology devices. In seeking to redress this, and to provide improved support for people with disabilities, the Australian Government commissioned an inquiry into the feasibility of replacing the current system with a disability care and support scheme, now known as a National Disability Insurance Scheme (NDIS).

The Australian Productivity Commission was asked to examine the costs and benefits of a scheme that looks at care and support across a person's lifetime that can also coordinate options and allow individuals to choose the type of support they need. In short, the Inquiry was set up to consider how people with disabilities can be supported so that they can engage with their community and live a happy and meaningful life (Australian Government, 2010, p. 3).

The Issues Paper specifically mentions the UN Convention (Australian Government, 2010, p. 12) and acknowledges Australia's obligations. It also explicitly acknowledges that the principles of the Convention may have implications for the objectives and design of any proposed scheme. The Commission claims some of these may require trade-offs: existing infrastructure changes might be costly to implement; giving individuals complete control over their funding might result in accountability issues and; more choice might mean greater uncertainty for service providers and therefore less coordination. The final trade-off listed in the Issues Paper is that of competition for taxation dollars, and the paper mentions that there are likely to be constraints on meeting all the preferences of people with disabilities and their families. Nevertheless, at the launch of the draft report of the Productivity Commission (Australian Government, 2011), a journalist asked the Assistant Treasurer how much the scheme would cost. The Assistant Treasurer said that the focus at this stage should be on providing the best possible services to people with disabilities and their carers and that the discussion about dollars and cents will be had at a later date.

5. 2. Key Issue for Discussion in Light of the Convention

The Assistant Treasurer made an important political statement in putting the consideration of people before the consideration of costs. He was indicating that first we find out what is needed and then see if the money can be found. This is a reverse of the usual trend of governments faced with difficult budgetary decisions. It also provides the opportunity to extend the debate to include discussions based on a three hundred and sixty degree view of a person's life, and this means life both inside and outside the home. Whilst the NDIS will fulfil many human rights obligations for people on an individual level, particularly in the home environment, it does not link to the inequities in access to and within the public environment. These inequities are the subject of the Australian Disability Discrimination Act.

The rights of persons with disabilities are sometimes realised only partially because of two main tenets in the DDA: the need to make a formal complaint against a business or service that does not comply with the Act, and the inclusion of an “unjustifiable hardship” clause that allows businesses and services to claim that they would, in effect, be driven out of business by complying with the legislation. However, this is not contrary to the UN Convention's concepts of “reasonable accommodation” and “disproportional or undue burden”. When the costs of realising the human rights of persons with disabilities can be an obstacle, it is of crucial importance to identify these costs correctly – and for economists this means to consider these costs in the context of the costs of not realising these human rights.

Our economic argumentation demonstrates that linking the issues addressed by the NDIS and the DDA and overcoming their shortcomings make part of the one debate that Australia needs to have – not only because of the country's obligations under the Disability Convention, but also because it is in the economic interest of society as a whole.

The second issue is ensuring the rights of persons with disability within the individual assessment process. Without an assessment tool that allows the voice of the individual to be heard and acknowledged, individuals will continue to be subjected to the value judgements of the assessors and the hidden assumptions within the assessment tools. The ICF framework provides an opportunity for developing tools, together with persons with disabilities, not just ‘experts’, and in this way, the principles of the Convention can be upheld.

While much discussion surrounding the impending NDIS focuses on individual funding for aids, equipment, care services, and participation in education, recreation and employment, it falls short of addressing the wider built environment and societal attitudes. The PriceWaterhouseCoopers report, however, does address these issues in part, advising that these issues are part of a wider business and government responsibility which are addressed in an earlier document, the National Disability Strategy. For example, accessible transport is the domain of the various state transport authorities, and business groups should be responsible for increasing their willingness to employ people with a disability.

In this context it is important to notice that visible success appears to be one of the most powerful change agents. It would thus make sense to look for ways to fund success in the first place:

- Once people with disabilities are more visible in the public domain because reasonable accommodations for persons with disabilities have been made and they are now enjoying their full human rights, more likely attitudes will change.
- Once more businesses and services are accessible and enjoy the benefits of expanded patronage that includes also persons with disabilities and their carers who are now back in paid work and have more money to spend, or who are simply no longer at or below the poverty line, others are likely to follow suit.

These are just two examples, but they illustrate that there is a huge potential to change societal attitudes once the overall debate is based on minimising overall costs to society, rather than rationing visible expenses on accommodation by limiting the number of individuals who can access funding, and in so doing shifting costs to others.

Once the tension between reasonable accommodation for individuals and necessary changes to society as a whole is recognised and seen in its full economic context, the discussion around a National Disability Insurance Scheme and the National Disability Strategy become an opportunity to promote change in societal attitudes.

6. Conclusions

By integrating a particular use of the ICF with system-focused stress-testing, our novel economic methodology is able to highlight both the individual economic consequences and the wider societal economic consequences. System-focused stress-testing as an

economic technique and its focus on a financial system as a whole brings with it an appreciation of the contributions a wide variety of stakeholders can make, as well as a strong focus on the system, the economy as a whole.

While our methodology focuses on a person's assistive technology system, and shows how it can be used in the assessment process, it also shows that the system focus of the stress testing provides a powerful tool to keep our eyes on the public environment and societal attitudes as part of the wider system of society. Reflecting on our findings in the context of the rights of persons with disabilities and the role the UN Convention can play in their realisation has allowed us to explore some of the political implications of the economic questions we are asking in the context of current Australian debates.

Further research should now examine what economic investigations can learn from discussions of the tensions between accommodations for individuals and changes in society as a whole in the fields of human rights and disability studies. It has become clear that while we have good legislation in Australia at State and Federal level to protect people with disabilities from individual discrimination, we have not yet been successful with the next step, i.e. systematically ensuring and fulfilling the rights at a systemic level across all domains of society.

Our methodology offers ways to undertake economic analyses that can support this last step by revealing the society-wide economic costs of NOT ensuring the rights of persons with disabilities and their carers. It can highlight the economic benefits not only for individuals concerned, but to society as a whole once the country's obligations under the Disability Convention are met.

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Endnotes

¹ The philosophical background and implications of carefully developing the analysis in the perspective of the person concerned, particularly in situations where the person concerned has been made the other, the poor, the excluded, has been outlined in the work of the Latin American philosopher Enrique Dussel, whose work has influenced the first author since the early 1980s, when she worked with him in the context of EATWOT, the Ecumenical Association of Third World Theologians. Another intellectual debt of the approach developed here is owed to the feminist philosopher of science Sandra Harding.

² This is a very conservative calculation as it is based only on the health deterioration Kim actually did sustain over the 18 months she was waiting for the new wheelchair. Had she been forced to go without it for the full five years, Kim's health would have deteriorated much further and those costs, while hypothetical, would have to be considered too.