

Responding to accessibility issues in business

A thesis submitted in fulfilment of the requirements
for the degree of Doctor of Philosophy

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Declaration

I certify that except where due acknowledgement has been made, the work is that of the author alone; the work has not been submitted previously, in whole or in part, to qualify for any other academic award; the content of the thesis is the result of work which has been carried out since the official commencement date of the approved research program; any editorial work, paid or unpaid, carried out by a third party is acknowledged; and, ethics procedures and guidelines have been followed.



C.M. Law

February 21, 2010

For my friends and family
who live with disabilities.

And to the memory of Susie Scarlett
“the sword of time will pierce our skins
it doesn’t hurt when it begins
but as it works its way on in
the pain grows stronger, watch it grin”
(Altman)

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Contents

Declaration	ii
Acknowledgments	iv
Contents	vii
List of tables	x
List of acronyms and abbreviations.....	xi
Summary	1
Chapter 1. Everyday accessibility issues faced in	
business	5
Everyday accessibility issues	6
Legal frameworks in Australia.....	10
Social and medical models of disability	12
Solving technology problems: the predominance of	
Assistive Technologies.....	14
Terminology used in this thesis	19
Research question and significance	22
Chapter 2. Accessibility in mainstream product and	
service development: past research and knowledge	
gaps.....	23
Universal Design in business	24
Barriers and facilitators.....	25
Design and management resources.....	30
The business case	32
Knowledge gaps	36
Chapter 3. Research methodology	43
Placing business rather than disability at the centre	44
Issues of agency	45
Changing research questions.....	48
Evolution of the sample	50
Open-ended interviews	57
Coding.....	61
Missing elements	65

Chapter 4. Embedding accessibility in organizational culture	73
Executive backing and priority	74
Shared accountability and responsibility	80
Enabling resources and support mechanisms	83
Awards and recognition	85
Proactive versus reactive approaches.....	86
Summary: successes of TheatreCo and StadiumCo, and the importance of organizational culture.....	91
Chapter 5. Striving for organization-wide change	94
The champion/change-agent role, and executive support.....	95
Initiating change: turning proactive	97
Change, and a reactive organizational culture: the problem of scale	110
Summary: CollegeCo—difficulties in transforming organizational culture.....	120
Chapter 6. Difficulties turning ‘organizational priority’ into successful action.....	123
Only one department’s responsibility	124
It is every department’s responsibility (but ours)	128
An uncoordinated approach	135
A detailed, unachievable plan.....	137
The need for comprehensive organization-level guidance on accessibility—The museums example.....	141
‘They’re not our customers’—when the medical model of disability prevails.....	143
Languishing as the last item on the agenda	148
Summary: priority and action	154
Chapter 7. Conclusions: Organizational success factors for addressing the needs of customers with disabilities	159
Laying the groundwork as a prerequisite for successful action.....	160

Success factor #1—Adopting the social model of disability	161
Success factor #2—Establishing executive-level backing	162
Success factor #3—Establishing accessibility as a priority on the agenda.....	162
Success factor #4—Taking a planned, proactive approach	163
Success factor #5—Making accessibility a shared task.....	164
Success factor #6—Providing enabling resources	164
Success factor #7—Providing sources of accessibility expertise	165
Organizational success factors for accessibility— summary and theory	166
Recommendations for further research	168
References.....	170
Appendix A. Regulatory framework summary	186
Appendix B. Interview guide	195
Appendix C. Participant details	198
Appendix D. Taking an organizational perspective and approach to accessible product and service development—<i>Recommendations</i>	208

List of tables

Table 1 - Top-level codes used in successive phases of data analysis	63
Table 2 - Number of participating businesses, interviews, and interviewees.	198
Table 3 - Demographic information collected from participants.	205

List of acronyms and abbreviations

ABCB	Australian Building Codes Board
ACIF	Australian Communications Industry Forum
ACMA	Australian Communications and Media Authority
ADA	Americans with Disabilities Act
AHRC	Australian Human Rights Commission (was ‘HREOC’)
APM	Accessibility Program Manager (TheatreCo)
APO	Accessibility Program Office
APOC	Accessibility Point-of-Contact
APO-SR	Accessibility Program Office—Support Role
APO-TR	Accessibility Program Office—Task Role
APP	Accessibility Point-Person
APP-SR	Accessibility Point-Person—Support Role
APP-TR	Accessibility Point-Person—Task Role
AT	Adaptive Technology / Assistive Technology
ATM	Automated Teller Machine
BCA	Building Code of Australia
BOP	Bottom Of the Pyramid (poorer communities)
CBD	Central Business District (of Melbourne, Australia)
CEO	Chief Executive Officer
DAP	Disability Action Plan
DBA	Design Business Association (UK group running an annual competition on Inclusive Design)
DDA	The Disability Discrimination Act (Australia)
EEO	Equal Employment Opportunity
EEOO	Employee Equal Opportunity Office (CollegeCo)
ETSI	European Telecommunications Standards Institute
FCC	Federal Communications Commission (USA)
GT	Grounded Theory
GTRI	Georgia Tech Research Institute
HR	Human Resources

HREOC	Human Rights and Equal Opportunity Commission. Note: the name was changed in September 2008 to the ‘Australian Human Rights Commission’. The older term ‘HREOC’ is favoured in this thesis.
ICT	Information and Communication Technology
IT	Information Technology
ITS	IT Services department (CollegeCo)
ITU	International Telecommunication Union
KPI	Key Performance Indicator
MNC	Multi-National Corporation
MS	MicroSoft
NCD	National Council on Disability (US Government), Washington, DC
NEA	National Endowment for the Arts (US Government), Washington, DC
POC	Point-Of-Contact
PWDs	People With Disabilities
RMIT	The Royal Melbourne Institute of Technology (RMIT University)
SAC	Student Accommodation Centre (CollegeCo)
SOE	Standard Operating Environment (CollegeCo)
TIDE	Telematics applications for the Integration of Disabled people and the Elderly (European Union research funding program).
UD	Universal Design. Note: The term ‘Universal Design’ is predominately used in Australia, and is widely used in North America and Japan. UD is commonly called ‘Inclusive Design’ in the UK, and ‘Design-for-All’ throughout Europe.
UI	User Interface
UIAM	User Interface Accessibility Manager (BankCo)
UIG	User Interface Group (BankCo)
UN	United Nations
USAB	United States Access Board (US Government), Washington, DC

Summary

Problems that many people with disabilities (PWDs) experience as a part of their *everyday lives* are the result of decisions made by people in mainstream businesses. Interactive technologies, for example, have interfaces that many of us take for granted, but such interfaces can be difficult or impossible to use for many who have sensory and/or physical disabilities. In this study, I examine what people in mainstream businesses do in response to accessibility issues that affect the design of their products and services, with the aim of understanding the *everyday issues* that they themselves face as they try to make the best choices for their customers, and for their organizations. This is a new approach to investigating root causes of some of the problems that PWDs experience, an approach that places business activities at the centre of the study. I present in this thesis a list of *organizational success factors for addressing the needs of customers with disabilities*. These factors can be applied in business as a means of laying the groundwork, and implementing a successful plan, for improving the accessibility of products and services.

In Chapter 1, I examine instances where business decisions on accessibility seem to defy explanation. Cases exist where businesses have on the one hand spent large amounts of money on disability access in one area, and/or made a bold proclamation on how important accessibility is to them; but on the other hand they have made developments elsewhere that incorporate little or no accessibility features. This examination serves as a means of bringing the *everyday issues* that people in business face to the forefront of the discussion.

Businesses in Australia have no legal obligation to make their products and services directly accessible to PWDs, although there is an obligation not to discriminate against PWDs in the delivery (terms and conditions) of services. Many businesses make a commitment to accessibility even without a legal mandate. They see either a wider social benefit in doing so, or they see it as a means to increase the size of their consumer base, or both. Where businesses *are* trying to have an impact, the question is what are the factors exemplified in the

most successful approaches, and what factors seem to derail organization-wide accessibility efforts? The research question for the study is, therefore:

What organizational factors are involved in successfully addressing the needs of customers with disabilities in the design, development and delivery of products and services?

In Chapter 2, I look at past research relating to the research question. A number of earlier studies had an aim of discovering why there is a low uptake of design for accessibility (or ‘universal design’) practices in mainstream businesses. These studies have generated summative lists of ‘barrier’ and ‘facilitator’ factors, the results of which—along with other research results—form part of the foundations of guidance targeted at developers of mainstream business on how to improve designs and design processes to be more accessible. Knowledge gaps remain, however. In particular, past research has not taken a business-centric approach to the problem. In order to answer the research question there is a need to investigate how accessibility work is being conducted in business organizations, how accessibility responses evolve, and what factors are leading to organization-wide success in product and service developments.

The grounded theory research methodology (Chapter 3) employed for this study is qualitative, and interviews are the primary means of data collection. Twenty-eight interviews have been conducted at ten mainstream businesses. The businesses include three museums, five primarily service-oriented businesses (a large airline, bank, and a theatre complex, a city college and a sports stadium complex), and the Australian branches of two multinational telephony manufacturers.

Chapters 4, 5 and 6 convey stories at these ten organizations concerning their response to issues of product and service accessibility. The chapters are divided into three main themes: (i) *success*, (ii) *change*, and (iii) *difficulty*. First, I focus on the more successful organizations (the theatre and the stadium) where accessibility efforts have been embedded as a part of organizational culture. Second, I look in detail at the efforts of a person working to ‘champion’ accessibility (at the college), and having varying degrees of success as an agent of

change. Third, the remaining seven businesses are examined together, because each of the seven exhibited a form of difficulty in moving accessibility from being a ‘priority’, to implementing successful actions throughout the organization.

Lastly, in Chapter 7, I present the list of organizational success factors based on the results of this study. The seven factors are:

1. Adopting the social model of disability (as a means to promote the concept that people with disabilities are a part of the customer-base);
2. Establishing executive-level backing;
3. Establishing accessibility as a priority on the agenda;
4. Taking a planned, proactive approach;
5. Making accessibility a shared task;
6. Providing enabling resources; and
7. Providing sources of accessibility expertise.

The seven success factors answer the research question, and can be worth considering when approaching accessibility issues from an organization-wide perspective. The list is not intended to be prescriptive because what works in one organizational context will not necessarily work in all organizational contexts. (A list of recommendations for people who want to apply an organizational perspective to accessible product and service development is provided in an appendix).

The most common difficulty appears to be in making the transition from ‘priority’ to ‘action’. At the end of the thesis, I provide recommendations for further research. The list of success factors provides a theoretical framework that might, in the future, be built upon in order to develop analytical and diagnostic tools for examining accessibility-related practices in mainstream businesses. It is my hope that the success factors that I have identified in my study will serve as a useful tool for examining and helping to improve the *everyday lives* of people in business, so that PWDs may then benefit in their *everyday lives* from more accessible products and services.

“In an environment where product group profits are paramount, groups that develop software products view ATG [the accessible technologies group] with skepticism. The ATG has been likened to a police force, a government enforcer, or a welfare state, with a mission to promote disability.”

*The quest to make accessibility a corporate
article of faith at Microsoft: case study
of corporate culture and human resource dimensions*

Leonard Sandler and Peter Blanck

(Sandler & Blank, 2005, p.47)

Chapter 1.

Everyday accessibility issues faced in business

“After all, in the last twenty years we have built a lot of curb cuts, installed accessible public toilets, and learnt to speak nicely to the people formerly known as handicapped. What more could be needed? Perhaps the best answer lies in the every day lives of Australians with disabilities, their families, friends, and carers.”

*Disability in Australia: exposing a social apartheid,
Gerard Goggin and Christopher Newell
(Goggin & Newell, 2005, p.15).*

There are many aspects of *everyday life* that pose problems for people with disabilities. Many of these problems result from decisions made by people in mainstream businesses. There has been a good deal of research and development on technology solutions for disability access, and on overcoming the sort of everyday problems that people with disabilities are presented with in society. I ask a new type of question in this thesis, by taking a different perspective that is focused on the needs of people in business. People in businesses are responsible for choosing how they design and deliver their products and services, and deciding whether to purposefully endeavour to incorporate accessibility features in the products and services they develop. Therefore, the question is about everyday accessibility issues faced by people in mainstream businesses. They will encounter their own *everyday issues* as they attempt to make sense of accessibility and try to make the best choices for their customers, and for their organization. Looking at development in mainstream businesses, I ask what organizational factors are involved in successfully addressing the needs of customers with disabilities?

Everyday accessibility issues

The exterior walls of the National Museum of Australia¹ are covered with various phrases in Braille. Not Braille for reading, the kind with characters less than a centimetre high, but an artistic/decorative representation, with characters perhaps a metre high. The tour guide explains that the phrases are welcoming messages, showing that the museum is accessible to people with disabilities (PWDs).

There are numerous accessible features at the museum. There are plenty of ‘disabled’ car parking spaces allocated. Inside the museum, wheelchair users can get around easily. For the exhibits, some of the video displays have captions (subtitles) for people who have trouble hearing. Most of the interactive elements of exhibits can be reached by someone sitting in a wheelchair. There are, however, numerous accessibility problems. None of the touchscreen interactive exhibit displays are usable without vision. In fact, there are no technological solutions that would help visitors who are blind access any of the exhibit information. Most exhibit elements are within reach of wheelchair users, but some have been placed where they can only be reached from a standing position. Deaf patrons might wonder why certain videos are captioned and others are not.

Given the bold statement of the Braille decoration on the exterior walls, it is hard to explain why accessibility features are only sporadically implemented for the exhibits. For PWDs, the positive welcoming messages of the Braille decorated exterior presents a stark contrast to their customer experience. Information for visitors with disabilities on the museum’s website² confirms the accessibility of the physical elements of the building, while neglecting to mention anything about exhibit accessibility.

In Australia, almost 20 per cent of the population has a disability (almost four million people) and the proportion of the population is increasing as the population ages (HREOC, 2005). In the opening quote to this chapter, Goggin and

¹ The organizations cited in this introductory section are *not* participant organizations in my doctoral study.

² [National Museum of Australia: http://www.nma.gov.au/](http://www.nma.gov.au/)

Newell (2005) ask us to consider the everyday lives of PWDs as they are today, and question whether we as a society are doing enough. The everyday lives of PWDs are impacted directly by the actions of people in business who supply the environments, goods, and services for public consumption. Museum exhibit accessibility is just one example—there are plenty of other examples all around us in our society. Take the experience of buying electronic gadgets as an example. People who have good vision can go into their local electronics store and buy a cellular phone, an MP3 player, a personal digital assistant, or all three of these things rolled into one gadget. Such ‘mainstream’ devices do not include audible (talking) menu controls that would enable a non-visual user to use the device. Talking devices are available, but they have to be purchased from specialty suppliers, and are purpose-designed ‘for the blind’. Specialty devices such as these are typically much more expensive than their mainstream counterparts, have less functionality, and are usually less attractively designed. Despite the higher costs and lower functionality, non-mainstream devices have been lauded by people in the disability community since they provide *some* access rather than the usual offering of *no* access (e.g., Barber, 2006). Some mainstream manufacturers of gadgets have incorporated speech output features, but with shortcomings that make their use problematic for many PWDs (e.g., AFB, 2008). As stated in a report by the Australian Human Rights and Equal Opportunities Commission (HREOC):

Every day, one in five Australians experiences difficulties or frustrations in performing everyday tasks with everyday things, such as consumer electronics and appliances. [...] These one-in-five Australians are what the author terms the ‘overlooked consumers’ (HREOC, 2007, no page numbers).

Another example: in the city of Melbourne, Australia, the public transport tram system is over a hundred years old, and therefore pre-dates accessibility legislation. Until recently, all riders of trams had to climb steps in order to board. Newer trams allow level access for wheelchair users, but only at stops that have been retrofitted with raised platforms. To comply with the 1992 Australian

Disability Discrimination Act (Australian Government, 2006), the state government began building raised ‘super stops’ in 2001, and by 2008 had built 300 of them (State of Victoria, 2008). These new platforms are not cheap, requiring investments in the hundreds of millions of dollars (State of Victoria, 2008). Even with the investment, these 300 stops are only a fraction of the number of stops on the network, and the ability of 100% boarding accessibility is projected to be not before the year 2022³ (Yarra Trams, n.d.).

Some of the newer trams include on-board wheelchair ramps that can be deployed at regular stops that do not feature level access. Citing safety concerns—that the ramp could lead a wheelchair user into the roadway at certain stops—the tram company disallows use of the ramps on their entire network (Yarra Trams, n.d.).

Tram riders who are blind can benefit from having the name of each stop announced. The Australian Government’s transportation guidelines for complying with the law state that “Operators could choose to announce scheduled stops as one way of informing passengers of their whereabouts during a journey.” (Australian Government, 2004a, p.30). Melbourne’s tram providers, Yarra Trams, do not require stop announcements in the information section of their disability action plan (DAP), but instead claim that because riders can ask questions of tram drivers while the vehicle is stationary their trams are, as far as information is concerned, “100% compliant” (Yarra Trams, n.d., p.19). Even so, the practice of tram drivers is to announce over the tram’s public address system the name of every next stop, but *only* in Melbourne’s central business district (CBD); in the surrounding suburbs the drivers remain silent.

With the large investments of money to tackle accessibility issues with the ‘super stops’, it is curious that the tram company has chosen *not* to implement stop announcements throughout the system. For the rider who is blind and travelling outside the CBD, their challenge is to either find the driver, which may not be easy on a crowded tram, or ask others for help which may not be reliable.

³ The government set a 30 year timeframe, beginning in 2002, for trams to become accessible (Australian Government, 2004a).

In the museum example above, it is clear that accessibility has been seen as a high priority in constructing and defining the appearance of the building. That high priority is not evident in the way the exhibits have been designed.

In the tram example, the priority is high, in terms of retrofitting the stops so that they are wheelchair accessible, however, available ramps on trams are unused throughout the system because of safety concerns at *some* stops. Furthermore, announcing the stops for riders who are blind is a priority, but only within the CBD.

In transportation, education, technology and entertainment, it is easy to find both examples of progress, and examples of continuing problems that negatively impact the everyday lives of PWDs.

The difficulties that PWDs face are understood, but what of the everyday issues and problems experienced by people in business? As people in business try to meet the accessibility challenges before them, how do they typically deal with them, and what makes for successful outcomes that benefit both the business and PWDs?

There is a knowledge gap in researchers' understanding of how people in business respond to accessibility issues. Explanations that can adequately account for the everyday happenings in business which result in unsuccessful situations—as far as customers with disabilities are concerned—such as those in the examples presented above, are not readily available. Little is known about (a) how people in business deal with daily issues concerning their customers with disabilities (juggling priorities, assigning responsibilities, attending to design problems etc.); and (b) what makes certain approaches more successful than others. The research question for this thesis addresses the knowledge gap. In order to set the question in its proper context, I must first introduce three key background elements: (i) the legal situation in Australia as far as businesses are concerned; (ii) the two main models of looking at 'disability' (the medical and the social model); and (iii) the types of solutions to accessibility problems that businesses and PWDs have typically relied upon to now.

Legal frameworks in Australia

Under the provisions of the Disability Discrimination Act (DDA), it is illegal in Australia to discriminate against PWDs in employment, education, the provision of products and services, and in other areas.⁴ The DDA came into effect in 1992 (Australian Government, 2006). It is underpinned by a common social concept of a ‘fair go’ in Australia (Australian Government, 2004b)—a term that is commonly used to imply that in all aspects of life, people should have a ‘fair’ opportunity to succeed.

The provisions in the DDA include:

- defining the roles of the Australian Human Rights and Equal Opportunity Commission⁵ (HREOC) with respect to disability, including the establishment of a commissioner within HREOC to oversee disability issues;
- standards for implementation in certain areas are allowable, and if developed, these standards will become an extension of the Act; and
- that businesses ‘may’ make disability action plans (DAPs) to demonstrate what they are doing to comply with the DDA, and that these DAPs may be provided to HREOC.

The DDA is complaints-based legislation (Australian Government, 2009a). If a person feels that they are being discriminated against, they can either complain to HREOC, who will work with the complainant and the subject of the complaint in a form of arbitration termed a ‘conciliation conference’ (HREOC, n.d.-e). If arbitration fails, a private right of action (the ability to file a lawsuit) is possible in cases concerning harassment, employment or education; but not possible in cases concerning access to premises or the provision of goods and services.

⁴ An extended description of the legal framework is provided in *Appendix A*.

⁵ The *Human Rights and Equal Opportunity Commission* officially changed its name to the *Australian Human Rights Commission (AHRC)* on August 5th, 2009. Since the interviewees in this study use the previous name, ‘HREOC’, I will continue to use this name throughout this thesis.

In the DDA, the concept of ‘unjustifiable hardship’ is used. It is a nebulous term. It implies that compliance with the DDA is necessary except where the expenses related to change would be financially detrimental to a business. In other words it is permissible for financial imperatives to outweigh the benefits to the consumer (PWDs).

Beyond the over-arching requirements of the DDA for non-discrimination, the following points briefly summarise obligations imposed on businesses in certain areas by the DDA and other aspects of the law (see also *Appendix A*):

- **Access to premises:** the accessibility requirements in the Building Code of Australia (BCA) must be followed when constructing new buildings or renovating existing buildings (Australian Government, 2009a). The BCA is not a part of the DDA. An attempt to make a DDA standard for access to premises is in process, but not yet available (Australian Government, 2009a; HREOC, 2008).
- **Access to products and services:** Beyond the requirement to not discriminate against PWDs in the provision of goods and services, there is no requirement to actually make goods and services directly accessible and usable by PWDs (HREOC, n.d.-d).
- **Access to telecommunications:** In general, telecommunications accessibility is omitted from the DDA in favour of the terms in the Telecommunications Act 1997 (Australian Government, 1997). This Act dictates that certain authorities ‘may’ make accessibility standards relating to telecommunications equipment. The only standards that have resulted require manufacturers to provide a tactile marker or ‘pip’ on or near the number ‘5’ key of a telephone handset (to allow people who are blind to orient themselves), to have a hearing aid coupling mechanism to allow use by people with hearing aids (cellular phones and cordless phones are exempted) and for manufacturers to provide information about accessible features of their phones, if there are any (ACIF, 2001, 2005; ACMA, 2002).
- **Access to transportation:** A detailed DDA standard on transportation accessibility (Australian Government, 2005a) and associated guide (Australian

Government, 2004a) cover various aspects relating to the development of an accessible public transport infrastructure. There is a provision in the standard for changes to be phased in over a period of 20 years (30 years for trams), with much of the anticipated benefits coming from the introduction of new vehicles as older ones are retired (Australian Government, 2004a).

- **Access to education:** Under the DDA and the DDA standards for education access (Australian Government, 2005b), PWDs need to be accommodated in the admissions process, development of the curriculum, and delivering of the curriculum.
- **Access to employment:** Under the DDA it is unlawful to discriminate in all aspects of work, including the recruitment process, terms and conditions of employment, promotion and transfer, dismissal or demotion. There are no DDA standards relating to employment, but there is a body of case law that HREOC uses to help in the arbitration process (HREOC, n.d.-b).

Social and medical models of disability

There are two primary models used in the study of disability, the medical model, and the social model (Galvin, 2003; Leonardi, Bickenbach, Ustun, Kostanjsek, & Chatterji, 2006; Pullin, 2009):

The medical model of disability

The underlying assumption of the medical model of disability is that disability is an aspect of the person. In this model, someone who is blind cannot read print because of the medical condition that affects their visual system.

The medical model of disability has dominated the history of PWDs in society. Separating PWDs from the rest of society because of their disability (through institutionalization and asylums) was the norm for PWDs in the 19th century and well into the 20th century (Boyce et al., 2001). This separation based on medical diagnosis came with a view that PWDs did not have the same rights as others in society.

Gradually, society as a whole has moved away from separating PWDs from the ‘mainstream’, and the rights of PWDs have been increasingly recognised. Half way through the 20th century, the United Nations (UN), in the Universal Declaration of Human Rights (United Nations, 1948, Article 25), stated that PWDs have a right to a “standard of living adequate for [their] health and wellbeing”. The UN expanded that small part of the 1948 declaration with thirteen more statements concerning the welfare and rights of PWDs a quarter of a century later in the *Declaration on the Rights of Disabled Persons* (United Nations, 1975). Thirty-one years after that, the UN has adopted a 50-article *Convention on the Rights of Persons with Disabilities* (United Nations, 2006). While this most recent declaration from the UN retains language that is identified with the medical model of disability (Leonardi et al., 2006), the *rights* of PWDs have been elevated, according to the UN and signatory member countries including Australia (McClelland, Smith, & Shorten, 2008), to be in line with those of the rest of society.

The social model of disability

In the social model, the underlying assumption is that disability is a function of how society is constructed and designed. In this model, someone who is blind cannot read print because the print has not been rendered in such a way that allows them to read it (e.g., tactually with Braille, or electronically allowing the use of speech output). The social model allows for *design* (designing organizational and socio-technical systems, designing interfaces etc.) as an approach to accessibility problems (Pullin, 2009).

While the medical model is still very much in evidence in the way society considers ‘disability’, the social model has become much more accepted in recent years (Bickenbach, Chatterji, Badley, & Ustun, 1999; Galvin, 2003). Civil rights legislation which embodied social model concepts (Scotch & Schriener, 1997) was enacted in the US at the start of the 1990s in the form of the ADA, the Americans with Disabilities Act (Americans with Disabilities Act of 1990, 1990). Under the ADA and its associated guidelines, the ADA Accessibility Guidelines (USAB, 1991), there was a requirement to change the design of the publicly-accessible

built environment, and certain products and services, to allow them to be used by PWDs. The ADA in the US was followed soon after by the Australian DDA legislation (Australian Government, 2006), which also contains language commensurate with the social model.

Solving technology problems: the predominance of Assistive Technologies

Many PWDs experience difficulties with, or cannot use, mainstream technologies. They require from the user capabilities such as good vision, good hearing, and physical dexterity. The medical and social models of looking at disability are important to keep in mind when examining the development of solutions to these difficulties.

The point of interaction between the user and a technology product is the ‘user interface’ (UI). Historically, solutions to technology access problems have been dominated by special versions of technology products that are intended only for use by PWDs. Examples include devices to render electronic text in dynamically generated Braille, or as speech output; computer software to ‘magnify’ information shown on screen; and telephone systems that use text instead of voice for people who cannot hear. Such products are designed to be used by PWDs, not people who are non-disabled. The Assistive Technology (AT) field resides primarily outside of mainstream business. Historically the design philosophy of product manufacture specifically for PWDs has lent itself more to the medical model of disability (i.e., the problem lies with the individual).

The growth of the assistive technology field

The AT field grew during the late 1970s and 1980s. The development of the microprocessor and the availability of machines and technologies to manufacture AT were catalysts for the development of electronic-based AT starting in the mid 1970s (Scherer, 1993). As the AT field grew, policymakers in the US urged congress to amend laws and policy to encourage the development of AT and its use by PWDs. A period of rapid growth followed, and by the end of the 1980s, a

catalogue with thousands of products, services and documents, in book and CD format, was being produced (Trace Center, 2003).⁶

The AT field continued its growth in the 1990s. In 1999 the annual sales of AT products and services was estimated to be USD \$25 million from Australian companies, and USD \$2.9 billion from US companies (USDC, 2003).

Even though it is outside of mainstream business and mainstream design thinking, the existence of AT can facilitate social participation by PWDs in mainstream employment, education, and other areas of life. Many PWDs are able to use standard computers if they are designed to be compatible with AT (Forrester Research Inc., 2004; Potok, 2002; Scherer, 1993).

Drawbacks of AT

With the AT field being dominated by medical model thinking, PWDs are often missing the social benefits afforded by mainstream design thinking. Pullin (2009) describes how in the latter part of the 2000s, there remains a design tension between the medical model and the social model. While AT provides greater opportunities for inclusion, there are distinct drawbacks to employing the AT design philosophy.

One major drawback is the cost of AT. As a specialized piece of equipment it often has to be purchased *in addition to* the mainstream technology with which it works. Unfortunately, PWDs often do not have the financial capacity to benefit from AT:

To achieve the independence that the nondisabled take for granted, a disabled person must be able to afford certain adaptive equipment. For the most part, however, these devices are out of financial reach. With disability unemployment

⁶ The database of products moved to an online service in the late 1990s. It is now hosted by [ABLEDATA \(www.abledata.com\)](http://www.abledata.com).

numbers stagnating at about 70%⁷... the money for all those wonderful technologies at market prices is simply not there. (Potok, 2002, p.300).

Another drawback is the ‘otherness’ problem. Having to use ‘special products’ designed exclusively for use by PWDs compounds the idea that PWDs are set apart from the rest of society. Continuing an extensive history of separation from mainstream society, some sectors of society still maintain the ‘otherness’ concept that the medical model of disability facilitates: (e.g., Galvin, 2003; Goggin & Newell, 2005; Jaeger & Bowman, 2005; Potok, 2002).

In Australia, Goggin & Newell (2005) talk of the continued ‘otherness’ in disability as a form of ‘apartheid’:

‘Apartheid’ (‘apart-ness’), signifies a people set apart: human beings who are regarded as fundamentally and radically other from their kindred people. [...] In Australia, and in other countries, a kind of apartheid exists too, partitioning those who are ‘able-bodied’ (at least temporarily so) and those who are ‘disabled’. There are special places, practices and accommodations that mark a line not to be crossed between ‘normal’ and ‘disabled’. People with disability have special accommodation, special transport, special access, special income, and even special sporting events. (p.20).

In her book *Living in the state of stuck*, Scherer (1993) suggests that properly designed ATs on their own will not bring about significant change to the lives of PWDs. She asserts that “Technology is the answer, but that’s not the question” (p.2). Her assertion comes after a number of years of growth in the AT field, and she sums up the problem thus:

⁷ In the US, where Potok is based, about 70% of PWDs were unemployed in 2001. This figure relates to non-institutionalized persons who were able to work (RRTC, 2003).

Several [PWDs] said that, in spite of such efforts as the UN Decade of Disabled Persons (which ended in 1992), the Americans with Disabilities Act and their own accomplishments, they still feel inadequate, like marginal participants in society. (p.165).

In the early 1990s, Scherer issued a challenge, urging people in the AT development community to think about the bigger contexts in which AT exists (Scherer, 1993). They should consider, she argued, not just the physical devices, but also the social and psychological impact on the people using them. This challenge is echoed in the policy field, with the argument that medical and social models of disability are both ‘minority group’ models that define PWDs as separate members of society (Scotch & Schriener, 1997). There is a call for considering disability as simply an aspect of *human variation*, in that all of us can consider our abilities as on a continuum—that some of us have lesser or greater abilities, and that policy and design should accommodate these differences (Scotch & Schriener, 1997). This is a concept that underpins ‘universal design’.

The emergence of the universal design field

The term ‘universal design’ (UD) has its roots in architectural changes to the built environment (i.e., buildings, facilities and thoroughfares that are open to the public).⁸ The UD concept is to change the way standard/mainstream

⁸ The first use of the term ‘universal design’, beginning in 1985, is attributed to architect and designer Ron Mace (Ostroff, 2001). Other terms for UD exist. For example, ‘Inclusive design’ is more common in the UK, ‘Design for All’ and ‘Barrier-Free Design’ are terms used commonly throughout Europe. There is no single dominant term in the Australian vernacular, although UD is employed as a term in a number of government documents (e.g., Australian Government, 2004c; HREOC, n.d.-d). While I acknowledge that there are differing opinions in the field as to compatibility between the terms, for consistency I am using the term ‘Universal Design’ throughout to refer to anything that is commensurate with the underlying concept. Later in this thesis, where I report on research that uses a term other than UD, I first give the term that the authors use, but I then keep to the term ‘UD’ in my discussion of their work.

environments, products and services are designed in order that they become more accommodating to PWDs. This concept, that the wider environment should be accessible—rather than PWDs always struggling to ‘fit in’ with their AT and ‘special considerations’—gained traction in the late 1980s and early 1990s. In the US at that time, the social model of disability was becoming more accepted, and the law was changed with a distinctly social agenda. The ADA (Americans with Disabilities Act of 1990, 1990) enshrined into law provisions dictating modifications to mainstream employment practices, the provision of mainstream services, accessible public transportation, and accessible public-use buildings.

A *functional limitations* approach is central to the UD concept in order to account for human variation. In its simplest terms, the designer is urged to consider the absence or limits of function in the end user of the product (e.g., USAB, 1998, 2000). Functional limitations are to be accommodated by making products which are usable *without vision*, and *with limited vision*. The same holds for the functions of hearing, physical manipulation and movement, and speaking. Cognitive limitations are also considered, but by definition an *absence* of cognition is not possible to design for.

UD was increasingly being introduced and promoted as something that mainstream businesses could and should do. One of the main arguments in favour of UD is that side-benefits for nondisabled persons emerge from having a more accessible environment. Curb cuts in sidewalks (‘dropped kerbs in pavements’) intended to allow wheelchair access also prove useful for people with strollers (‘prams’), those with shopping carts, rollerbladers, cyclists, and people using delivery carts (Vanderheiden, 1990). There is a similar proposition for technology: that similar benefits for a wide range of technology users—not just PWDs—would come from UD in mainstream technology (Vanderheiden, 1990).

The prevailing situation in business

The prevailing situation in business, throughout the 1990s and into the 2000s, is embodied in the following quote from a mainstream technology developer:

As Creative Director of the company over the last ten years, I have probably seen hundreds of briefs for different projects. In my experience, I have to tell you, designing solutions to be as inclusive as possible has never been a primary, secondary, or even tertiary requirement of any (Adrian Caddy, quoted in Cassim & Dong (2003, p.540)).

Researchers have sought to understand why this situation remains, even though legislation in the US, Australia and elsewhere promotes the UD approach. Mainstream technology developers seldom receive any kind of motivating request to employ the UD approach in their designs. The work of Cassim and Dong that generated the above quote is part of a growing academic interest in responding to a societal problem—namely the lack of appropriate, universally designed technologies in the mainstream marketplace, and the ‘otherness’ implication that this brings for many PWDs on an everyday basis

Researchers have examined barriers to, and facilitators of, adopting UD approaches in business. Researchers, industry experts and government agencies have worked together to produce guidelines and standards on incorporating UD in business settings. While the body of knowledge is growing, some important gaps remain in understanding how people in business act in relation to accessibility issues. These issues are addressed in detail in the next chapter, as background to the research question that I now pose.

Terminology used in this thesis

Before I lay out the research question to be addressed in this thesis, I provide the following definitions to disambiguate how certain terms are being applied.

‘Business’: The term is used broadly in this study to refer to organizations as well as the work done by people in organizations. While some definitions of ‘business’ describe making goods or providing services to make a profit, the ‘profit’ element is loosely defined in this study: for example, I include not-for-profit organizations like government funded museums in my definition of a ‘business’.

‘Mainstream’: This study investigates the responses of people in businesses catering to the public as a whole.⁹ If the rights of PWDs are upheld (via the DDA and *UN Convention on the Rights of PWDs*), then customers with disabilities are a subset of customers as a whole, and they should not be discriminated against by the business.

‘Products’: The DDA uses the term ‘goods and services’, but I use the term ‘*products* and services’. Although ‘goods’ and ‘products’ are in many ways interchangeable as terms, I favour ‘product’ in this thesis because I am more interested in something that has been *produced* through a process of design and manufacture.

‘Services’: The term ‘service’ refers to any act for the benefit of, or interaction with, customers. This may or may not involve products. ‘Services’ is used both to refer to monetary and non-monetary services. For example, a patron of a government-funded museum might not be charged an entry fee, but conceptually the public as a whole is paying for the service through taxes. In such a case there is a ‘service’ being provided to ‘customers’.

‘Disability’: In its’ simplest terms, ‘disabled’ means not being able to do something that other people can do’ (i.e., ‘dis-abled’ means ‘not-able’). A functional capabilities definition is useful in understanding how ‘disability’ relates to ‘products and services’. Functional capabilities may be absent or reduced. Absent or reduced functional capabilities include vision, hearing, mobility, physical dexterity and various cognitive capabilities. For example, if the user of a given product cannot see, but the product requires the user to be capable of seeing, then the user is disabled.

⁹ In the case of one business (TelephonyCo) the customers are people in other businesses, but the products are intended to be usable by anyone who works in those businesses, which would include PWDs. Absent from this study is any business whose purpose is to cater to the needs of PWDs exclusively, such as a business that provides rehabilitation services, or a business that makes specialised products for people who cannot see.

‘Accessible’: The term ‘accessible’ follows on from the term ‘disability’ with the implication that if a user cannot do a task because of a functional capability limitation, then a solution/resolution will be needed to provide access. The resolution might require a physical change to a product that makes the task possible for a person with a functional limitation, or it might require making service environments compatible with assistive tools and devices that PWDs typically use (wheelchairs, for example).

‘Success’ (in accessibility terms): A goal at the outset of the present research was to understand what people in business do to make their products and services better (i.e., more accessible) for customers who have disabilities. Absolute- or degree-based measures—such as *how accessible a product or service is considered to be*—are not available. This is because *how accessible* something is changes—it depends on things like the specific capabilities of the individual user, the environment in which it is used, and the context of use. Giving something a percentage or other rating of ‘accessibility’ is impractical. However, *relative judgments* are possible in many respects: for example, it is acceptable to say that text rendered electronically is *more accessible* to a person who cannot see than text rendered as print on a page, because the electronic format more easily allows conversion to a more suitable format (like speech output, or Braille printing). Another example would be that captions provided on video clips are *more accessible* than having no captions at all (for people who cannot hear or who have difficulty hearing), and providing an additional volume control makes the same system *even more accessible* (allowing people who are hard of hearing to increase the volume to a level that they can hear). In a similar vein, absolute measures are not possible in judging the success of any given business activity. Therefore, in this study I define a ‘successful’ activity/business-response as one where the people involved are working to make their existing or future products/services *more accessible* than they were previously.

Research question and significance

The research question for this study concerns business responses to accessibility issues:

What organizational factors are involved in successfully addressing the needs of customers with disabilities in the design, development and delivery of products and services?

In order to answer this question there is an underlying need to first discover what it is that people in business typically *do* in response to accessibility issues. That knowledge will serve as a foundation for determining what it is that makes certain types of responses more successful than others.

The types of responses that are chosen by people in business impact society. PWDs experience *everyday issues* with the built environment, transportation, education, and technology. An understanding of the way people in business attend to the ‘everyday issues’ that their customers face will reveal the *everyday issues* that people in business face themselves. Such a perspective—one that places business persons at the centre and examines their problems and their needs—is a new and important element that is intended to contribute to the body of knowledge on how to appropriately design UD guidance and other UD resources for use by people in business.

The next chapter examines in detail past work on understanding and supporting accessibility and UD practices in business settings.

Chapter 2.

Accessibility in mainstream product and service development: past research and knowledge gaps

“In many cases, personnel responsible for a company’s accessibility efforts come from human factors, usability, or disability support groups. In general, these groups do not have a large amount of input in corporate decisions.”

Design for Inclusion: Creating a New Marketplace, National Council on Disability (NCD, 2004, p.181).

In this chapter, I review past research relating to the question posed in this thesis. Studies have been conducted with the aim of discovering why there is a low uptake of universal design practice in mainstream businesses. These studies have generated summative lists of ‘barrier’ and ‘facilitator’ factors, the results of which have formed one of the foundations of guidance targeted at mainstream businesses, including standards to assist businesses in managing projects incorporating universal design principles. There is also promotion of the business case for accessibility, whereby mainstream businesses are urged to consider the benefits of expanding their customer base. However, universal design remains a marginal rather than a common approach in mainstream technology businesses. To build on past research, it is necessary to take a business-centric approach in order to find out how accessibility work is being conducted in business organizations. We need to know how accessibility responses evolve, and what factors within the organization facilitate or derail internal initiatives aimed at improving product/service accessibility.

Universal Design in business

Currently there are numerous centres around the world working on UD in the built environment, in technology, in education and other areas. UD as an academic field has been growing since the early 1990s. At the end of the 1990s, there were sufficient numbers of UD guidelines and scholarly works to warrant the publication of compendium volumes (e.g., Clarkson, Coleman, Keates, & Lebbon, 2003; Nicolle & Abascal, 2001; Preiser & Ostroff, 2001; Stephanidis, 2001).

Concurrent with the growth of UD in academia, the approach was being adopted by standards and legislative bodies. UD approaches for access to the built environment were adopted in the US in the form of the ADA Accessibility Guide (USAB, 1991). In Australia, UD as an approach was embodied in the building code (Australian Government, 2009a). For telecommunications, the United States Access Board (USAB) developed guidance and standards commensurate with UD principles (USAB, 1998). Standards were also adopted by the US government for the procurement of electronic and information technologies (USAB, 2000). Though the DDA did not require products and services to be accessible, the Australian government promoted UD (through HREOC and others), suggesting that UD is the preferred design option (Australian Government, 2004c). The UN obliges the signatory nations of the *Convention on the Rights of Persons with Disabilities* “to undertake or promote research and development of universally designed goods, services, equipment and facilities [...] and to promote universal design in the development of standards and guidelines” (United Nations, 2006, Art.4, Para.(f)).

Near the end of the 1990s, the academic research agenda around UD of IT (Stephanidis & Salvendy, 1998, 1999) was dominated by UI development. The interface research agenda proposed by a number of academic and industry experts at two meetings (during 1997 (Stephanidis & Salvendy, 1998) and 1998 (Stephanidis & Salvendy, 1999)) included the quest for such things as more advanced AT, greater compatibility between AT and mainstream technologies, and universal interfaces for mainstream technologies.

Despite the general availability of information and guidance during the 1990s and early 2000s¹⁰, adoption of UD approaches by technology businesses was a rarity (Goggin & Newell, 2003; NCD, 1998, 2004). In earlier recognition of this problem, a part of the UD agenda from 1997/8 proposed to look at business practices. There was a call for (1) more collaboration between industry and academia; (2) a faster standards development process; and (3) the provision of appropriate legislation (Stephanidis & Salvendy, 1998, 1999).

Barriers and facilitators

In the late 1990s and early 2000s, a number of academics sought to understand the reasons behind the low uptake of UD approaches in mainstream businesses.

In the UK in October, 1999, Keates et al. (2000) were part of a project called i~design. The project was “formulated to address a number of the very basic issues affecting the uptake of Universal Design by industry” (p.276). The idea of working with mainstream designers, understanding their needs and supporting them was an underlying focus of the i~design project. To launch this project, they held a workshop with participants from industry, academia, and other sectors, in order to “assess the level of industry awareness of the needs of the disabled and elderly communities and their openness to Universal Design” (p.277).

Keates et al. found that even though there were a number of misconceptions about the meaning and purpose of UD, industry participants were willing to implement UD. However, industry participants asserted that there were conditions: (1) UD had to be either easy for them to do, or it had to be done by someone else on their behalf (e.g., a UD consultant); and (2) UD must not increase the cost of the product or service, otherwise it would be considered an ‘undue burden’ (Keates et al., 2000).

¹⁰ For example, the Royal National Institute of Blind People (UK) administers a database of such guidance, with “over 400 standards” on IT/ICT accessibility in production or in final form, as part of the [Tiresias project \(http://www.tiresias.org/research/standards/\)](http://www.tiresias.org/research/standards/).

In addition to the ‘workshop’ paper by Keates et al., four research studies were conducted, seeking an understanding of industry conceptions of and approaches to UD. The researchers conducting these studies sought to discover factors that were ‘barriers to’ or ‘facilitators of’ UD practice in industry/business. Two of the studies were located in the US, by the National Council on Disability and by the Trace Center; one was in the UK as an element of the *i~design* project (Dong, 2005); and the other was Europe-wide as part of the European Union funded TIDE research program (Telematics applications programme disabled and elderly sector). The following briefly describes the methods and principal findings of each of the four different studies. Following these descriptions, I provide a summary of the majority-findings of the four studies.

TIDE study (Europe)

In the first study, researchers conducted interviews with 68 experts in design institutions and industry in a number of different European countries (van Dusseldorp, Paul, & Ballon, 1998). The van Dusseldorp study is strongly focused on design practice as it relates to the needs of end-users, and particularly end-users who have disabilities. The report states that in the design process there is a “failure to consider or involve end-users in general”; there is a “failure to consider or involve older users and disabled users”; and there is a “failure to apply ‘Design for All’ [UD] principles” (p.14).

Trace Center study (US)

The second study was conducted in the US by an academic group, The Trace Center, with the assistance of a consultancy firm, Inclusive Technologies (Vanderheiden & Tobias, 1998).¹¹ There were two parts to this study: (1) people in 22 companies¹² were interviewed (Vanderheiden & Tobias, 1998); (2): based on the part 1 results, a survey was sent to the same companies from part 1 to

¹¹ Although I worked at the Trace Center at this time, I was not a part of the core research team for this project. However, I did provide some input to the research team.

¹² In the first paper this number is reported as 22, and in the second paper it is reported as 26.

confirm the initial results and investigate the relative importance of the factors that had been identified (Vanderheiden & Tobias, 2000). Twenty-one survey responses were received and a number of respondents were interviewed again to gather further information (Vanderheiden & Tobias, 2000). In this study, two factors were found to have a permanent/lasting effect on UD practice in business. These factors are (i) regulation, in that the threat of it sparks action, at least until people realize there is no enforcement; and (ii) high profit, in that if products that are universally designed happen to make a profit that is considered a good thing; but this does not necessarily mean that UD will spread to other products made by any given company (Vanderheiden & Tobias, 2000). The authors also note that concepts like ‘good citizenship’ and ‘endorsement’ from upper management are useful, but these concepts typically come and go over time depending on the current product focus and the personnel assigned to product development.

National Council on Disability study (US)

The third study was conducted by academics at the Georgia Tech Research Institute (GTRI) as part of a report for a US Government group, the National Council on Disability (NCD, 2004). GTRI conducted the study in two main phases. In the first phase, they examined prior publications and other source materials to describe and analyse facilitators and barriers. In the second phase, they studied six ‘industry partners’. The participants in this phase—points of contact (POCs) at various companies—were given a “list of topics related to accessibility in the company” (p.183). Topics of interest to the researchers included current product design and evaluation practices (with an emphasis on user interface design and UD), personnel issues, current and proposed product developments, company forecasts relating to UD, and company funded research on UD (NCD, 2004). Subsequently, the researchers conducted telephone interviews and in-person onsite interviews with the POCs and others. The main findings were summarized as follows (p16-17):

- A market for universally designed products and services exists.
- UD principles can be easily incorporated into current design practices.
- Products designed to be accessible sometimes do not meet the needs of users.

- Legislation is currently both a facilitator and a barrier to UD.
- Many barriers to UD remain and must be addressed before significant progress can be made.

i~design project study (UK)

In the fourth study, Hua Dong examined UD practices in UK companies (Dong, 2005).

The Design Business Association (DBA) in the UK had started an annual competition in 2000, targeted at mainstream design consultancies, with an award given to the best ‘inclusive’ designs.¹³ A number of academic researchers took advantage of the competition as an opportunity to learn how designers engaged in inclusive design approaches. Dong and colleagues hoped to develop methods and tools that would support designers in the ‘real-world’ by studying the competition participants and their entries—even though they acknowledged that this sort of competition was not a true reflection of ‘real’ design commissions (Dong, Keates, Clarkson, & Cassim, 2002).

The DBA competition had provided the initial participants for interview studies for Dong’s doctoral study (Dong, Keates, & Clarkson, 2004; Dong et al., 2002). In the competition, the consultancies had six to eight weeks to develop product concepts, and they were afforded the use of ‘user forums’ which consisted of volunteers with various disabilities (Dong et al., 2002). Dong (2005) conducted interviews with one to four people from eight design consultancies in the DBA competition. Dong used the results of these first phase interviews and other information to develop questionnaires sent to manufacturers, retailers and design consultancies on the barriers to UD. Each questionnaire started with the same definition of UD “to make sure that all respondents were aware of the definition of inclusive design used in the questionnaire and [to avoid] any ambiguity resulting from different interpretations of each respondent” (Dong et al., 2004,

¹³ The [DBA annual competition \(http://www.dba.org.uk/awards/challenge.asp\)](http://www.dba.org.uk/awards/challenge.asp) is ongoing.

p.307). The definition statement was followed by Likert-scale type questions on the barriers and drivers of UD.

Dong (2005) defines the main barriers for manufacturers as the lack of a business case, and a perceived sacrifice of aesthetics. For retailers in particular, the top barriers are the perception that UD adds cost and complexity to the product. For consultants, the main barrier is that there is a lack of UD requirements coming from people commissioning designs and a subsequent lack of a budget to incorporate UD into those projects.

UD barriers and facilitators studies: majority findings

In addition to the principal findings of each study (given above), the following is a list of ‘barriers’ and ‘facilitators’ that were commonly reported:¹⁴

- **Cost is a barrier:** UD would add cost in terms of making the products, re-tooling, changing designs, retrofitting etc.;
- **Market perceptions are a barrier:** UD represents a niche market, and one that is not the domain of mainstream businesses;
- **Time is a barrier:** in typical product development environments, there is a lack of time to learn, and actually do, UD;
- **A lack of UD resources is a barrier:** there is a perception that there are not enough good UD resources to aid designers;
- **Laws and regulations can be barriers or facilitators:** UD-type laws and regulations can help guide product development, but they can also hinder development by restricting the flexibility afforded to businesses in their choice of designs;
- **Including UD in the development process can be a barrier or a facilitator:** UD in the process can help achieve UD goals, but it can also detract from other development requirements;

¹⁴ The list includes factors that were included in the majority (at least three) of the four studies. The list is a paraphrasing of the statements made by the authors of the various studies.

- **Knowledge and awareness can be a barrier or facilitator:** On the one hand, higher awareness helps educate people with regards to UD; conversely the time and resources needed to develop awareness detracts from general product development;
- **More customer requests for UD would be a facilitator:** Study participants typically asserted that because the customers for their products did not request UD solutions, they had no impetus to do it; and
- **Testing with PWDs would be a facilitator:** Although most study participants did not regularly test product usability and accessibility with PWDs, they thought it would be helpful in the design process.

Design and management resources

The earlier research agenda proposed in the late 1990s (Stephanidis & Salvendy, 1998, 1999) had called for more collaboration between industry and academia, faster standards development, and more appropriate legislation. The research agenda around studying and solving UD problems expanded in the 2000s to encompass the need to solve problems such as those revealed by the studies of ‘barriers and facilitators’. These problems include (broadly speaking) agenda items such as the need for ‘real world’ design resources that are tailored towards designers in mainstream businesses; guidance on how to manage a design team to achieve UD within the larger organizational context; and solid information on what the business case is for making mainstream products and services accessible. A number of research and development activities have taken place along these lines, and the results of these activities have direct relevance to the question of how people in business respond to accessibility issues in general. The activities have been located primarily in the UK, via the *i-design* project, and in the US, through a number of disconnected projects. The following briefly outlines the research and development work on the business response in the UK and US.¹⁵

¹⁵ Research and development targeted specifically in this area has not been conducted in Australia during this decade (other than the doctoral study described herein), although a number of people in Australia have cited the UK and US studies, and generally advocated

Real-world design and countering design exclusion

An early output of the *i~design* project¹⁶ was an edited book, *Inclusive design: design for the whole population* (Clarkson et al., 2003). The book's editors advocate employing the social model of disability (Clarkson et al., 2003). In the book, various authors describe their work with design teams in industry, and overall the book's focus is on the ways in which design takes place in the 'real-world'. Of the 36 chapters in the book, two chapters by Keates and Clarkson introduce the concept of 'design exclusion' (Keates & Clarkson, 2003b) and 'countering design exclusion' (Keates & Clarkson, 2003a). These two chapters have been expanded into their own guide book entitled *Countering design exclusion* (Keates & Clarkson, 2004).

The works on design exclusion by Keates et al. have cited problems regarding the practice of interface design, and particularly problems raised by Alan Cooper (Cooper, 1999). One of Cooper's primary assertions is that it is often software programmers rather than trained interaction designers who dictate the design of a product's interface for the end-user. Cooper says that leaving control of the interface in a programmer's hands is detrimental to the usability of the product, because programmers typically build interfaces that fit with their own interpretation of the system, and their own logic. This often runs counter to the interpretation and logic of end-users, and can lead to frustration at best, and fatal disasters at worst (Cooper, 1999).¹⁷ The same problem—designers and programmers thinking that users have capabilities similar to their own—needs to be actively tackled in countering design exclusion (Keates & Clarkson, 2003a, 2003b, 2004).

the use of UD approaches in business (e.g., Australian Government, 2004b, 2004c; Goggin & Newell, 2003, 2005; HREOC, n.d.-d).

¹⁶ The [i~design](http://www.hhc.rca.ac.uk/961/all/1/i~design.aspx) (<http://www.hhc.rca.ac.uk/961/all/1/i~design.aspx>) project was started in 1999 and will continue to at least 2010. It is funded by the European Union and is a collaboration between a number of institutions in the UK.

¹⁷ Cooper's argument is supported by the conclusions of researchers in the fields of psychology and human factors—interfaces that do not match the way people actually use products can and do lead to disastrous consequences (e.g., Casey, 1998, 2006)

The difference between designing for people who are nondisabled, and designing for PWDs, is that functional limitations need to be accounted for, not just psychological factors (interpretation and logic). The task of designing for people with little or no vision, little or no hearing, reduced physical capabilities etc. requires new methods to be learned and practiced by designers, enabling them to ‘counter design exclusion’ in a structured, methodical manner (Keates & Clarkson, 2003a, 2004).

Managing for Universal Design

Also coming out of the *i~design* project, and related research,¹⁸ is a focus on managing for inclusive design (UD). A management standard was proposed to help urge industry to ‘get on board’ as a regular part of business practice, with UD being considered in design briefs (Coleman, 2003). The subsequent British Standard, *BS 7000-6:2005. Design Management systems - Part 6: Managing inclusive design—guide* (BSI, 2005) was developed with the aim of helping companies adopt UD practices, and showing them how they could do this “in a manner that actively helps their commercial prospects” (Keates, 2004, p.333). The standard is targeted at an organizational and project management level, specifically to introduce a ‘professional approach’ to the practice of UD in industry that goes beyond adjusting current processes and guidelines (Topalian, 2005).

The business case

A report for the National Council on Disability (NCD) on access to technology in the US, calls for “...broader recognition of the importance of the ‘business case’” (NCD, 2006, p.34). In the report, recommendations are made to policymakers that the ‘business case’ should drive policy decisions:

¹⁸ For example, the [Include Conference \(http://www.hhc.rca.ac.uk/kt/include/\)](http://www.hhc.rca.ac.uk/kt/include/) has brought together people from diverse academic and industry fields, including UD, to present research and ideas. The conference, part of the *i~design* project, has been held on a bi-annual basis since 2001.

Base all policy regarding information and communication technology (ICT) accessibility on a realization of the importance of the business case. Where a solid business case cannot be built based on market forces alone, create accessibility regulations and effective enforcement mechanisms that provide a clear profit advantage to those who comply and a disadvantage to those who do not. (p.6).

Keates was one of the committee members who developed the 2005 *British Standard* for managing UD (Keates, 2004). Keates' (2007) guide book, *Designing for accessibility: a business guide to countering design exclusion*, also addresses the question of the business case. Keates (2007) provides a number of propositions and arguments on how UD can benefit business, and summarizes the main point of the business case as:

The aging population and the 20 percent prevalence of disability in the adult population demonstrate that there is a significant number of people who would benefit from more accessible products. [...] Accessibility represents a business opportunity. (p.32)

In the four earlier studies of 'barriers and facilitators', the business case is also mentioned. For example, van Dusseldorp et al. (1998) assert that considering the needs of end-users with disabilities would expand a company's market-base; and the GTRI-based authors of the report for NCD (2004) assert there is an un-tapped market for universally designed products. Other authors on business and accessibility have also argued in favour of the business case for UD (e.g., Hogan, 2003; Lengnick-Hall, 2007; Riley II, 2006).

In Australia, even though the law does not specifically mandate making products and services accessible, the government endorses UD in part because of the 'business case':

It makes good business sense for manufacturers and designers to make their goods accessible to as wide a range of people as

possible. ‘Universal design’ approaches benefit not only people with disabilities - a sizeable section of the population, particularly among older people - but other users as well. (HREOC, n.d.-d, no page numbers).

Although there is much advocacy for the ‘business case’ for accessibility and UD, detailed explanations and examples are yet to be published in the literature. An illustration of this is seen in the report for the NCD (2006), which uses the term ‘solid business case’, but does not specifically define what the term means or provide concrete examples. Similar calls for taking note of the business case of a certain concept have been made in other fields, and they have benefitted from concrete examples and thorough investigations of the rationale. Two examples of note are from Cooper, in the field of interaction design, and Prahalad, in discussions of poverty and emerging global markets.

One of Cooper’s stated aims in writing *The inmates are running the asylum* was to give a compelling business case for why anyone in business should want to devote resources to interaction design, and why it should not be left to programmers (Cooper, 1999). Up to this point in time, there had been several books on *how* to do programming, and *how* to do interaction design, but not *why* programmers should listen to interaction designers (and why this makes business sense). Through real-world examples of technology frustrations, mishaps, and even disasters—that can be demonstrably traced back to user interface problems, and management processes that are clearly set to fail—Cooper is able to provide the necessary (and compelling) business case.

In research on emerging markets, Prahalad (2005) presents a business case for multinational corporations (MNCs) to consider the lower echelons of society—the ‘Bottom of the Pyramid’ (BOP)—as potential consumers:

We start with a simple proposition. If we stop thinking of the poor as victims or as a burden and start recognizing them as resilient and creative entrepreneurs and value-conscious

consumers, a whole new world of opportunity will open up.

(p1).

Prahalad asserts that MNC's typically apply a mistaken form of 'dominant logic' when they look at BOP markets. Specifically, he tells how this 'dominant logic' states that "The poor are not our target customers. They cannot afford our products or services."; "The poor do not have use for products sold in developed countries"; and "Only developed countries appreciate or pay for technological innovations" (p.8). Prahalad's work focuses on consumerism in the countries where poverty is rampant, and shows through real-world examples that tapping into this market with the right strategy can pay big dividends for MNCs.

A similar shift in MNC thinking (required for BOP markets) may be required for the UD field. However, while there are a number of separate examples of *product* success highlighted in the UD literature (e.g., Clarkson et al., 2003; Hogan, 2003) the 'solid' business case argument for UD in *technological product* development needs to be bolstered by the existence of a good many examples from which to draw inferences and conclusions. Unfortunately, the vast majority of mainstream technology businesses are not practicing UD as the norm in their product offerings. As stated earlier in *Chapter 1*, PWDs commonly have to resort to specialized AT from specialist suppliers, with the lower functionality and higher price that comes with such specialization. As HREOC has reported, 20 percent of the population can be considered the 'overlooked consumers' (HREOC, 2007).

Given that businesses are not doing UD as the norm, one question to ask is: what *are* people doing in mainstream business instead—what *is* the typical business response? From this question, gaps in our understanding of organizational behaviour with respect to accessibility and product/service development are discernible.

Knowledge gaps

Past research on accessibility in mainstream product and service development has provided insights into the sorts of problems (‘barriers’) that people in business say they have with accessibility and the UD approach. Standards, guidance, books and other resources have been developed, targeted towards people in business settings (managers and designers) who need to respond to accessibility issues, questions, and challenges. A logical way to build on this knowledge is to examine the ways in which people in business settings respond to accessibility issues.

The need for a business-centric approach

The four research studies of ‘barriers and facilitators’, discussed above, generated detailed lists of barrier factors, the main ones being negative perceptions of cost, unfavourable estimations of the potential market, and the perception that time and resource limitations prohibit including UD in the design process. Similar conclusions were drawn after conducting a simple one day workshop with industry—the one held by Keates et al. (2000) to start the *i~design* project. A possible explanation—why similar answers might be received from industry regardless of the research methodology—is found in literature on decision making, self calibration and reducing cognitive dissonance.

We have, as human beings, a storytelling problem. We’re a bit too quick to come up with explanations for things we don’t really have an explanation for. (Gladwell, 2005, p.69)

In the book *Blink: the power of thinking without thinking*, Gladwell (2005) presents the ‘theory of thin slices’. The concept is that in responding to a situation needing a decision, people naturally take any small chunk of knowledge they have of a topic and try to apply it to the problem at hand. This is a snap-reaction (i.e., ‘*thinking without thinking*’). If this is correct, then the manager or designer at a mainstream business, responding to an academic’s question of why they have not done UD in the past, will first make an instantaneous decision based on their (probably) limited experience of disability. Since people in society typically think of disability in terms such as ‘difficulty’, ‘challenge’, and ‘handicap’, and are

more commonly influenced by the medical model of disability, it would be reasonable to assume their first response will be along the lines of ‘accessibility sounds like a hard thing to achieve’.

Work on overconfidence shows that “people are more miscalibrated when they face difficult tasks, ones for which they fail to possess the requisite knowledge, than they are for easy tasks, ones for which they do possess that knowledge” (Lichtenstein & Fischhoff, 1977, in Kruger & Dunning, 1999, p.1132). Combining a lack of experience in disability with negative cultural perceptions, the overconfidence that Lichtenstein and Frischhoff talk of may be manifested in the resolute belief of a survey respondent that UD cannot be achieved.

The problem of cognitive dissonance must not be overlooked. Cognitive dissonance is a state of thinking in which a person decides on a path, but it later becomes clear to them that they have chosen the wrong path. Instead of accepting the mistake, research shows that people go to great lengths to reduce cognitive dissonance, and they do not see their past actions as requiring correction, but as requiring justification (Pratkanis & Aronson, 2001; Tavris & Aronson, 2007). Applying this conclusion to the problem of surveying people in business, we can see how cognitive dissonance might be a factor. The concept of UD—benefitting PWDs in society and reducing marginalization, through changes to the ways in which technology, services, and environments are designed—is actually quite a hard principle to argue against. Most surveys present a definition of UD along these lines to the respondent, providing them with a description of something that sounds good in principle; but if they do not currently practice UD then it is something they have either never considered, or if they have considered it they consciously chose not to do it. They are thus presented with something that causes dissonance, and their compulsion is to justify rather than correct their actions.

The knowledge gap identified here is that while the UD-centred view has been established in the literature, the business-centred view has not. The business-centred view can be identified by discovering what businesspeople do when accessibility concerns are presented to them in the normal course of their work. This research task must be conducted without reference to one type of design

approach or another (AT-centric or UD-centric approaches, for example). In other words, the more important question to consider is what people in business are doing regardless of the practices that any researcher would like to see them doing.

How the organizational response evolves

In the UD and accessibility literature, assessments differ as to the types of people who actually do the ‘accessibility work’ in business organizations.

As part of research to discover barriers and facilitators to UD (NCD, 2004), GTRI’s researchers described the APO (Accessibility Program Office) model of operation in a number of organizations . The staff make-up of different APOs varied from one member to a staff of five to six with a background in accessibility issues. The researchers said:

The mission of the accessibility program offices also varied widely. In some cases, the program offices were mostly reactive, responding to requests for information or to particular accessibility concerns. In other cases, the accessibility program offices were very proactive and focused on developing and testing new technologies that might be integrated into future products. (NCD, 2004, p.190).

The APO model of operation in business responses to accessibility has been explicitly discussed in the NCD study, where four of six companies had created APOs. In other research six of seven organizations had created APOs (Law, Yi, Choi, & Jacko, 2006). In other research,¹⁹ and in the *British Standard* on managing for UD,²⁰ the APO model is not acknowledged or addressed as a part of

¹⁹ For example, a study advocating for accessibility being integrated in design and testing during software development is “based on experience of the authors with over 50 companies” (G. Zimmerman & Vanderheiden, 2007. p.118); but the role of APO personnel in the design or testing process is not mentioned.

²⁰ The British Standard (BSI, 2005) prescribes 18 stages of a “Process for adopting a professional approach to inclusive design at the organizational level” (p.6) and a further 11 stages describing the “Map for [inclusion of UD in the] primary design project stages”

any organizational mode of operation. In the NCD report that discussed the creation of APOs, they also said that the APOs “demonstrated very little control over design decisions that directly affected the accessibility of the final product” (NCD, 2004, p.190). This conclusion in the NCD report may be a possible explanation of why the APO or an equivalent is not mentioned elsewhere—that such a model will have little effect on the final product. However, since the other materials do not explicitly address the pros and cons of APOs, it is difficult to determine which is the preferred model of operation.

On the question of how the accessibility response does (or should) evolve in a given business, there is notable related evidence to draw from in the field of usability. In the usability field people with specific skills (of a kind not usually possessed by designers and programmers), form into specialist groups/offices within businesses (Bias & Mayhew, 1994; Cooper, 1999; Trenner & Bawa, 1998). Usability departments naturally form, and to maintain their viability within the business, usability professionals need to be able to ‘cost-justify’ their existence (Trenner & Bawa, 1998) they must also recognize and understand the ‘politics’ that go on within their organizations, and adapt accordingly (Bias & Mayhew, 1994). The message embodied in these texts (Bias & Mayhew, 1994; Cooper, 1999; Trenner & Bawa, 1998) is that simply knowing how to do usability is not enough if you want to get it done systematically in the organization within which you work (i.e., you also need to know how to do usability in practice in the business context).

The knowledge gap in terms of accessibility and business is how the response evolves in organizations, and whether APOs naturally form or not. The evolution of business responses are not well documented in case studies in the literature. Case studies of product development have tended to focus on the product outcomes more than they have focused on the interactions of team members involved in development.

(p.17). The set up of a separate APO or equivalent is not described/prescribed in the standard.

There are very few accessibility and UD experts in the world compared to the number of people who are in business positions and responsible for dealing with accessibility issues. Therefore, an understanding is needed of how people generally work in businesses when there are no experts available to guide them. Questions to be answered include: whether people in such situations seek out the types of resources that would guide them towards UD solutions?; do they pay attention to laws and regulations?; and how do societal attitudes to disability shape their response?

How employment diversity initiatives relate to product and service development

In one of the four studies on ‘barriers and facilitators’ of UD (NCD, 2004) it is proposed that making efforts to increase the diversity of a business’s workforce (by employing more PWDs), may yield corporate culture benefits that in turn could increase the accessibility of products and services that the business produces. A similar link is also proposed in discourses on disability in corporate culture (e.g., Hogan, 2003; Lengnick-Hall, 2007; Riley II, 2006). Sandler & Blank (2005) studied Microsoft’s corporate culture, attempting to provide a model of business operations that linked employee diversity with product accessibility. That study failed to realise its primary objectives in part because of the low numbers of PWDs working at Microsoft on which to base any firm conclusions.

Is it possible to have a truly successful approach to designing products for PWDs in mainstream business without proactively working to diversify the workforce and including PWDs on the payroll? This remains an important question that is yet to be fully addressed in the literature. However, there is an inherent problem with tackling this question at present, as demonstrated by the Sandler & Blanck study. On the one hand, there is the lack of ‘groundswell’ activity in producing universally designed products. On the other hand, PWDs are vastly under-represented in the workforce. For these reasons, it must be accepted for the time being that links between the two are going to be difficult to ascertain in any study of business, although the issues of the two elements (employee diversity and product/service development) are likely to both arise in any given business under study.

This gap in our knowledge of the business response to accessibility I acknowledge at this time, but it is necessarily postponed in favour of a study of just one element, namely business responses to requirements concerning product and service accessibility.

A return to 'everyday issues' in business

In the UD field researchers are seeking explanations for the types of business response where accessibility is ignored, especially in cases where it would seem that it should be paramount. For example,

- Jaeger and Bowman (2005) describe how the website of the 2003 movie *Daredevil*—about a blind superhero—would not be easy for a blind person to use with a screen reader;
- The huge Braille lettering on the side of the museum that contains exhibits that people who are blind cannot use (*Chapter 1*).
- The audible announcement of stops for tram passengers is highly useful for blind passengers, but this service relies on the ability of the driver to remember to make announcements and is restricted to only the central part of the city.

In the museum example, there was an imperative to make the building conform to building codes relating to accessibility. If the architects had not done so, the building would not have been approved for construction. There was no imperative to make the bold statement about accessibility with the decoration on the museum's walls, but there was a desire on the part of at least one of the executives at the museum to demonstrate to the outside world how strongly he or she felt about the need for Australia to be accessible. There was no imperative imposed on the museum by the government, in terms of legislation, to make the exhibits themselves accessible.

Legislation on its own has thus not brought about radical change when it comes to technology and other aspects of society. PWDs continue to struggle in their everyday lives with hard- or impossible-to-access mainstream products and services. For today's users of trams, museum exhibits and MP3 players who

happen to be blind or have other physical or sensory disabilities, there remain frequent encounters where they are still ‘stuck’ (to echo the term used by Scherer (1993)).

We do not have adequate explanations in the literature for the types of business response seen in the examples listed above. Goggin and Newell (2003), discussing Disability in Australia, have asked:

Given the scope and the scale of disability, why then do people with disabilities still continue to be an afterthought when it comes to most aspects of everyday life? (p.xiii).

My aim in this study is to contribute to knowledge in the field of accessibility in business, and add an additional level of explanation to the research that has come before. Part of the knowledge gap may be bridged by examining broad aspects of the development process across many different types of product or service.

This chapter has examined past research in mainstream product and service development in business. The knowledge gaps identified are at the heart of the research question for this study:

What organizational factors are involved in successfully addressing the needs of customers with disabilities in the design, development and delivery of products and services?

The next chapter describes the methodology that is employed to address and answer this research question.

Chapter 3.

Research methodology

“Knowledge is the sense made at a particular point in time-space by someone.”

*Sense-making theory and practice:
an overview of user interests knowledge seeking and use,
Brenda Dervin (1998, p.36).*

In this chapter, I describe the research approach that has been employed to focus in on *everyday issues* faced by people in business. A grounded theory method has been employed, with interviews being the primary method of data generation. I came into this study with a background and experience in universal interface design, and of analysing universal design guidance, looking at its use by, and suitability for, people involved in mainstream product development activities. As a result of my past experience in the universal design field, my own agency has shaped the research methods. Agency has thus been a factor in the development and evolution of (a) the research question; (b) the sample; (c) the means of interviewing; and (d) the progression of coding during data analysis.

This chapter describes the research methods as applied to data from 28 interviews at ten businesses. One of the main themes is how the focus went from being techno-centric, to then being business-centric, and finally to be success-factor centric. This chapter also describes elements I found to be missing from the data and story. These missing elements are important to the story of the research process, and to the interpretation and utilization of the data and research results from this study.

Placing business rather than disability at the centre

To provide the epistemological approach taken in this study, it is first necessary to clarify that this is a study of business, and not a study of disability. Moore, Beazley, & Maelzer (1998) describe how studies of Equal Employment Opportunity (EEO) and disability issues necessarily focus on the activities of Human Resources (HR) staff who often do not have disabilities, and therefore such studies should be classified *less* as ‘disability’ studies and *more* as ‘organizational’ studies. A similar interpretation and approach is something that I had in mind from the outset of this study—with business activities rather than disability concerns at the centre, but with disability concerns underlying the basic need to conduct the study. This is not to say that the points of view of PWDs are not important. Boyce et al. (2001) point out that policymaking in disability has been (for a prolonged period) dominated by people who do not have disabilities. It has also been argued that the voices and needs of PWDs are necessary to understand how businesses are progressing with respect to accessibility (e.g., Goggin & Newell, 2003; Potok, 2002).

While I concur and support these positions, my doctoral study is purposefully *not* a study of the concerns of PWDs as customers of mainstream business. Instead, my study investigates how (or whether) people in business listen to the accessibility concerns of their customers as part of their business response, and how (or whether) they make and implement policies to address those concerns. The research question at the centre of my study (*p.19*) is concerned with the factors that are involved in successfully addressing the needs of customers who have disabilities. The knowledge gaps that I identified in the previous chapter highlight the need for (a) a business-centric approach; (b) an explanation of what people *do* in business; and (c) to show how business responses to accessibility issues evolve.

I must also note that the social model of disability lies behind my research question. The social model is more appropriate than the medical model for mainstream business practices in that such businesses are situated well outside of

the medical and care professions. Their response, if it is an active one, is by definition limited to what they can do to their own products and services.

Choosing grounded theory methods

I utilized a qualitative, grounded theory (GT) approach in this study. GT is an appropriate method when there are few or no extant theories on a given topic of interest (Charmaz, 2000; Collis & Hussey, 2003; Locke, 2001; Strauss & Corbin, 1998b). Such is the case with the research question for this study.

GT is a method of ‘sense making’ (Langley, 1999). The term ‘grounded theory’ is commonly used to refer to a system of *analysis*, even though the term also refers to the *method of inquiry* and the *product of the inquiry* (Charmaz, 2005). Since its introduction, GT has evolved in numerous directions, with considerable debate in the field regarding what is the best way to apply GT methods. Charmaz (2005), for example, describes the quite different paths that the two original authors (Barney Glaser and Anselm Strauss) took with the GT method over the years. GT methods are thus *malleable*, as evidenced by the divergent evolution of GT methods.

As a flexible method for sense-making, I have used GT not in a strict set of sequential steps, but as a general constructionist approach (Charmaz, 2005; Easterby-Smith, Thorpe, & Jackson, 2008). The ways in which I have employed GT methods are described in the remaining sections of this chapter, covering the participants, how the data was collected, and how the data was analysed. The processes of data collection and data analysis have been evolutionary and dynamic. As Dervin (1998) explains, *knowledge* and *information* are conceptualized as a *verb*.

Issues of agency

Interviews are the primary means of collecting data in this study. Interviews are an active and collaborative method of generating data (Holstein & Gubrium, 1995; Mishler, 1986). As such it is important to recognize one’s own role in shaping the data.

In interview research, the ‘unbiased researcher’ is a myth (Boucher, 2001b; Moore et al., 1998). The concept of agency, being an active part in the generation of the data (Bandura, 2001; Singh, 1996) is inevitable and is a key acknowledgment necessary to facilitate sense-making of data (Dervin, 1998). Agency is therefore something to be embraced in data generation, and it must be considered in my commentary and presentation of my findings. My contribution in the interview process was to help people describe their thoughts, and to seek elaboration on certain topics of conversation rather than others—and thus I took an *active* role in uncovering the issues that were pertinent to my research questions.

In discussing constructivist methods in grounded theory, Charmaz (2005) states researchers must take a “reflexive stance on modes of knowing” (p. 509), and locating oneself, as a researcher, in the rendering of reality through interpretation. In the following paragraphs I thus describe my situation, background and outlook on disability and UD, and how I believe this impacted my study.

I do not identify myself as having a disability, and I do not claim to know what it is like to have a permanent disability affecting my daily life. I am thus *not* attempting in this study to present arguments on behalf of PWDs based on first-hand experience. Extending my earlier statements in the above subsection, I personally support the notion that PWDs themselves are best placed to offer opinions on what is in their best interests, but at the same time reaffirm that this thesis represents a study of business, not a study of disability.

I did come into this study with a research background in UD and what I consider to be a broad awareness of disability issues. I have experience as a researcher and developer of UD solutions for access to mainstream technologies and have co-authored a number of papers on this topic (e.g., Law & Vanderheiden, 2000; Vanderheiden & Law, 2000; Vanderheiden, Law, & Kelso, 1999). I have worked to develop evaluation methods for website accessibility (Law, Jacko, & Edwards, 2005). I have also been involved with the design and evaluation of guidelines and standards for UD, as a former member of standards committees, and a researcher on projects examining the suitability of UD guidance for industry and government users (e.g., Law et al., 2006; Law, Yi, Choi, & Jacko, 2007, 2008a, 2008b).

My past UD research and involvement with this field has led me to (1) concur with assessments made in the field that UD is not as prevalent as it should be (e.g., HREOC, 2007; NCD, 2004); and (2) concur that it is necessary to understand the needs of people who are making products and services if researchers are to be successful in supporting them (as has been asserted in the human factors and user interface design fields (e.g., Burns, Vicente, Christoffersen, & Pawlak, 1997; Cooper, 1999; Lawson, 2006; Norman, 1990; Stewart & Travis, 2003), and in the UD field (e.g., Jaeger, 2008; Lebbon & Coleman, 2003; Moss, 2006; Stienstra, 2006)).

Most of my prior research can be classed under the positivist paradigm, i.e., “quantitative, objective, scientific, experimentalist, traditionalist” (Collis & Hussey, 2003, p.47). Starting a qualitative, grounded theory project requires an introduction to many new concepts and techniques (e.g., grounded theory methods, open-ended interviews, qualitative coding strategies, and using computing software for qualitative analysis).

My background presented some difficulties in data collection/generation at the beginning of the study. My first few interviews were hampered by my tendency to view problems as component-based, such as ‘architecture’, ‘computing’, and ‘electronic-devices’; rather than allowing participants to lead the conversation. In correcting this error, conversations became more about things that were important for the business response, like ‘organizational behaviour’, ‘customer service’, and ‘business plans’. Through this process the interviews went from being semi-structured to open-ended.

As a person who has background experience in UD and accessibility, I also sometimes found myself in the position of knowing about potential accessibility solutions that interviewees seemed unaware of. It was sometimes difficult, therefore, to maintain the role of ‘dispassionate researcher’ when the role of ‘accessibility expert’ crept into the conversation. This expertise changed the researcher/expert dynamic on a few occasions, especially at the outset of the data collection phase of the research.

My style of interviewing adapted and became more open-ended as my awareness of the implications of my own role in the interviews evolved. While I was placing business and not disabilities at the centre of the study, it was also necessary to *not* place the social model and/or the UD approach at the centre of conversations. To approach interviewees and seek to find out through directed questions how or why they responded to concepts like ‘UD’ and the ‘social model of disability’, when they may not have considered these concepts before, would have been detrimental to the need to find out what it is that they do now, and what they have been doing in the past. It was therefore necessary for me to ‘step back’ from my own background, and take concepts like UD and social models of disability out of the equation during the interviews that I conducted.

The research questions changed over the course of the study as a result of my own agency in the data collection and analysis. This was partly as a result of my coming into a qualitative study with a primarily quantitative background, and partly as a result of the learning process I was going through—learning about the viewpoints of people who are (or in some cases are not) doing accessibility work for their various organizations. The changes to the research question constitute an important part of the methodology, and are addressed below.

Changing research questions

Changes evolved to the research question as I became aware of the need to centre on business responses.

Prior to the study, I had been conducting research on UD and examining the suitability of guidance for designers and other people involved in product development. Central to my research at the time was the question of why there was such a disparity between architectural access, where success in developed countries is fairly widespread (although many problems still exist), and technology access, where mainstream developments were mostly lacking. To this end, my questions concerned what was going on in business to explain this disparity.

I soon dropped my focus on specific technologies in favour of trying to find out how decisions are made in general. As Dervin (1998) has pointed out in her discourse on sense making and knowledge management:

On the one hand, the call to knowledge management is accompanied by calls for less emphasis on technology, outcomes, routines, isolation, centrality, explicitness and obedience; and more emphasis on people, context, process, creativity, collaboration, diversity, tacitness and initiative. (p.37).

The research questions changed to be more concerned with general decision-making processes that people go through in business. Dervin's observation reflects the change in thinking that I underwent. I had to learn to appreciate the richness of qualitative research, acknowledge and accept my own role as an agent of data generation, and re-focus on the research questions concerning *people* and what they do in business contexts.

At this stage I focused on decision making and how they related to organizational processes around accessibility. Beach and Connolly (2005) point out that most literature on decision making is on what *to* do, rather than on what people actually *do* do. The latter is more helpful for diagnosis. The research questions changed for a final time to be more about sense-making, in terms of finding out what people do in business, and then trying to find general explanations for success and failure.

The transition from a decision-making to sense-making focus in the research question took place between two rounds of interviews. After the first round of interviews and the open coding of the data, the theme of the business response completely replaced my earlier technology-centric and decision-making viewpoints. To address the missing elements of the stories from the first round of interviews—namely how a successful response had pervaded an organization—the second round of interviews concentrated on issues such as responsibility and accountability for accessibility and how these are handled in organizations.

There were three separate questions at the outset of drafting the thesis: (1) How do people in business respond to disability access issues concerning their products and/or services?; (2) When a business actively engages with accessibility issues, how is this done and why are certain approaches favoured over others?; and (3) What are the factors for successfully addressing the needs of customers with disabilities in the design, development and delivery of products and services? Through the process of writing and refining the analysis, it became clear that the first two questions I had posed would be addressed by answering the third. Thus the final research question is a refinement of the above:

What organizational factors are involved in successfully addressing the needs of customers with disabilities in the design, development and delivery of products and services?

Evolution of the sample

In this section, I first describe who the participants are, and then describe an area of participation that has been dropped from the study. I then describe how participants were recruited, the methods used for sampling and gaining access to participants and businesses. I also describe how anonymity assurances have been handled.

The participants

I sought participation from people in any type of business that either makes goods for use by the general public, or provides services for the general public. Past research on accessibility in business has focused mostly on design and product development, with some coverage of service delivery. Even though I was seeking a balance between the two, Australia is not a major manufacturing base for consumer goods. The final make up of the 10 businesses contains two manufacturers and eight service providers:

- The Australian branches of **two MNC telephony manufacturers**—CellularCo and TelephonyCo;

- **Three museums**, all of which are either a state government department in their own right or part of a larger state government department—The Museum of Culture, The Museum of Industry, and The VisCom (‘visual communications’) Museum; and
- **Five primarily service-oriented businesses**—AirlineCo, BankCo, CollegeCo, StadiumCo, and TheatreCo.²¹

Thirty people, all of whom are located in Australia and working in one of these 10 businesses, have been interviewed.

Participants dropped from the sample

Because the prior studies of ‘barriers and facilitators to UD’ had all been based on research outside of Australia, at the outset of the study I considered it pertinent to gather a sample of perspectives from people with local expertise. I wanted to discover whether the same themes and arguments were represented in the community of UD and accessibility experts in Australia. I had also considered the possibility of comparing the responses of people in business to those of people working outside of business. To this end, I sought out people who had Australia-specific experience as experts from outside of mainstream businesses. Seventeen people were interviewed for what I had termed *additional opinion sources*, including consultants, academics, staff from disability advocacy groups, government policymakers, and staff at an AT/rehabilitation business.

²¹ For the two manufacturers, people at the Australian offices of MNC’s have been interviewed (TelephonyCo and CellularCo). While the majority of the design and manufacture of their products is carried out overseas, the interviewees were responsible for handling issues relating to customers, policy, service delivery and so forth in the Australia and Pacific regions. The other eight businesses are service-oriented, but they rely heavily on products that they buy, maintain, or sell to the public. This inter-relatedness blurs the division between product development and service delivery, but in general service providers are more prominently represented in the sample. More detail on the individual businesses and interviewees is provided in *Appendix C*.

The experiences relayed by these participants helped me to build a more complete picture of how accessibility issues were being handled in Australia. I had lived in North America prior to starting my doctoral study, and I gained through this experience the knowledge that the problems Australian accessibility experts faced did not significantly differ from those in the US. The types of reasons that interviewees gave for mainstream businesses not doing UD were similar to those reported in the earlier published studies of ‘barriers and facilitators’. Because the data from these interviews was not adding much new information beyond the results of previous studies, this data set was dropped from the analysis. Instead, the study focus was more tightly concentrated on perspectives from within businesses.

Snowball sampling, and gaining access in the first round of interviews

There were two rounds of interviews. In the first round, I interviewed people from each of the 10 businesses, and all of the people who were considered *additional opinion sources*. Although the *additional opinion* cohort was later dropped from the study, it was integral to the overall recruitment strategy in the first round. The following describes how this process took place.

I gained access to people for the most part via snowball sampling. Starting with people whom I knew from my career in the UD field, and people known to my supervisors and others interested in accessibility in the local academic community, I began to build up a network of advice on potential participants. In addition, I presented at three academic conferences in Australia, generating some leads.²² Also, each interviewee was asked at the end of their interview if they

²² These conferences were CPRF 2009, the Communications Policy and Research Forum, (Law, 2006); OZCHI 2009, the annual conference of the Australian Computer-Human Interaction Special Interest Group (Law et al., 2006), and OZeWAI 2006, the Australian Web Adaptability Initiative Web adaptability conference (presentation only).

knew of people in similar positions who might be interested and willing to participate.²³

The importance of ‘happenstance’ is acknowledged in this method of gaining access, in that it is useful to already know people to begin with, because they will happen to know others who are potentially useful contacts. This snowball sampling method is associated with phenomenological studies where finding people with relevant experience is required (people who know people with relevant experience are approached to assist in identifying potential participants (Collis & Hussey, 2003; Creswell, 1998)).

Gaining access to organizations and individuals was a continuous process that began after RMIT University’s ethics approvals were obtained.²⁴

In general, when I first contacted a given organization, I was pointed in the direction of whoever was most involved with or responsible for accessibility.²⁵ During each initial contact I normally pointed out four key things to potential

²³ When contacting potential participants, if their name had been referred by someone who was already a participant, the latter’s anonymity was maintained.

²⁴ Individual consent was obtained from all participants in this study. As required for all human-participant research at RMIT University, data collection and data handling in this study conforms to the *National Statement on Ethical Conduct in Research Involving Humans* (Commonwealth of Australia, 1999). As part of the consent process, I gave participants the choice to opt-out of being audio recorded (the purpose of the audio recordings was described to the interviewee as enabling transcription). Only at one organization was audio recording declined (TelephonyCo). Organizational consent was also obtained where necessary. The form was used to affirm that I could approach potential participants in the organization, and to give permission for things like tours, photography, and the collection of artefacts where appropriate (e.g., internal reports).

²⁵ Each organization has at least one person in this kind of role, and the roles of these individuals are diverse in their nature. Some participants have roles that are clearly defined in their job title as being related to accessibility, e.g., ‘accessibility program manager’, whereas others deal with accessibility as a subset of a broader role, e.g., ‘regulation and policy specialist’. For full details of job titles, roles and responsibilities, see *Appendix C*.

participants: (1) the name of the person who recommended that I contact them (except where this would compromise participant anonymity)—‘name dropping’ was an essential part of gaining trust—that I was not a student who was simply ‘cold-calling’;²⁶ (2) that the aim of the study was to find out more about how businesses operated in order to understand the ‘bigger picture’ of product development and service delivery as it relates to disability access; (3) that the participants would remain anonymous, and that they would be given the opportunity to review publications to ensure they were comfortable that their anonymity was maintained; and (4) that there were no incentives offered other than early access to the research results (as a result of point 3).

An unusual feature of the sampling was a very high acceptance rate. In the recruiting process of the mainstream business organizations and people at the *additional opinion source* organizations, only one group declined to be involved. One possible factor to account for the high acceptance rate was that it had proven useful to ask participants to recommend other potential contacts. Perhaps this had bolstered perceived legitimacy of my inquiries seeking additional participants. Another possible explanation for high acceptance could be that I had been working as a researcher in the UD field for some time, and so it might be that potential participants ‘googled’ me and earlier papers I have written, perhaps lending legitimacy to my enquiry. Another reason that was stated by a few participants was the subject matter. One participant said that his group gets hundreds of requests per year from students, and invariably he declines interviews; however, my study subject really interested him and he would be very interested in the results. Another participant who dealt with accessibility issues on a regular basis said that she was thankful anyone was taking an interest in the sort of work she did because it was generally a “thankless task” and an “uphill battle”.

²⁶ Cold-calling turned out to be un-necessary for the most part. Only two of the businesses were cold-called, TheatreCo and the Museum of Industry. These businesses had been mentioned by a number of people as possible sources of participation, but without naming anyone specific. After looking at the two organizations’ websites for information it was possible to identify someone to contact who dealt with accessibility issues.

The fortuitous acceptance imposed a logistical constraint in data collection. The ‘by-the-book’ GT method is to take an initial sample, conduct data collection and analysis, and then based on the analysis take another sample (e.g., Charmaz, 2005; Creswell, 1998; Glaser & Strauss, 1967). Because I was not physically located in Australia for a large portion of my doctoral study, all of the first round interviews were conducted before data coding began.

Critical case sampling, and gaining access in the second round of interviews

A gap in the data that I had collected thus far was evident. It was clear that at two of the businesses (StadiumCo and TheatreCo) there was a high priority assigned to accessibility, and responsibility had been assigned widely. These two organizations were dealing with accessibility more successfully than the other businesses in the study, but I did not know how or why the business response had evolved at these businesses (to achieve high priority, wide responsibility, and high levels of success). This data was missing from the first round interviews. Missing data can be useful to lead us to new research questions (Singh & Richards, 2003). My research questions did change, and the focus shifted more towards the ‘business response’ as it pervades (or does not pervade) an organization. I was placing less emphasis on decision making and questions such as mandatory versus optional action paths.

A second round of data collection thus turned out to be necessary, and so I revisited StadiumCo and TheatreCo to learn more about these factors of interest. It was also evident from the first round interviews that an attempt had been made at CollegeCo to achieve the same types of results (high priority and wide responsibility), but success had only come to one part of the business. I therefore decided to include CollegeCo in the second round, to try to find out why success was only seen in one part of the organization.

The selection of these particular businesses was based on the findings of the first round of data analysis, so sampling for this second round was based on specific criteria. This sampling method is an example of ‘critical case’ sampling, where the identification of critical elements of interest that happen in a given sample

might be generalizable and therefore applicable in other organizations (Creswell, 1998; Denzin & Lincoln, 2000).

Ten additional people were interviewed in the second round, and one person from the first round at each business was re-interviewed. I worked together with the first round interviewees at each of these three organizations (Francesca at StadiumCo, Tamara at TheatreCo, and Emily at CollegeCo) to identify people who might be worth interviewing to investigate the emerging issues.

Anonymity

All interviewees and organizations are located in Australia. The specific locations (cities, towns) have been deliberately omitted to protect anonymity. It has also been necessary to omit certain details such as the funding sources and the exact sizes of the organizations. In some cases where I felt that the participating organization's anonymity might be compromised, the nature of the business has been partly modified (e.g., a museum of toys becomes a museum of clothing fashions). This has been done in such a way as to maintain, as far as possible, the integrity of the data while avoiding misrepresentation of where the data came from.

Where secondary data has been collected, these documents are not included in citations or references in this thesis in order to preserve participant anonymity.

While the standard RMIT University consent form has an option of having the participant's name and identity published, this was pre-checked as "no" (i.e., I wanted to assure anonymity even if the participant stated informally that they would not mind or even would be happy to be identified).²⁷

²⁷ I also gave an information sheet to each participant containing the following statement on anonymity: "In any publications of the results of this research, the names of interviewees, people at your organization, product and place names will not be used. Instead, anonymity of all participants is assured by use of pseudonyms (e.g. 'Bob' becomes 'Fred') and/or code letters (e.g., 'Company X') will be used in publications. The

The organizational consent form was used, where needed by participants, for documenting a named individual who could be contacted later on to conduct a 30-day review of potential publications, including this thesis. The purpose in my offer of this review opportunity was for representatives of participating organizations “to review the publication to ensure that confidentiality is maintained”, as opposed to any kind of editorial or content review. Representatives at five of the 10 businesses opted to be included in this anonymity review process. For three of the businesses, comments were received and necessary changes have been made. At one of the businesses, the interviewee had left the organization prior to my completion of the thesis, and the current staff of the organization declined my offer to allow them to review the manuscript. At the last organization, the interviewee’s business unit had become defunct, and had left the organization. I made repeated but unsuccessful attempts to contact a representative who could take the place of the interviewee in the anonymity review for this organization. Since the business unit is no longer in existence and contact has not been possible, this one anonymity review has not taken place.

Open-ended interviews

Interviews are the primary method of data collection / generation in this study. I conducted 28 separate interviews, 15 in a first round of data collection covering all 10 businesses, and 13 interviews in a second round of data collection, covering three of the 10 businesses. The number of people interviewed at each business is given in *Appendix C (Table 2, p.198)*. All interviews but one (TelephonyCo) were audio recorded and later transcribed. Interviews in the first round of data collection took an average 69 minutes (the transcribed portion), and the range was 42 to 105 minutes. Interviews in the second round were generally shorter, about 40 minutes on average, with a range of 25 to 65 minutes. All interviews took place at the participants’ places of business, with one exception (Dave from CellularCo was interviewed at an RMIT University office while he was visiting Melbourne). The majority of the interviews were with one participant at a time,

organization you work for may have requested an opportunity to review proposed publications to ensure that confidentiality of organizational information is maintained.”

but there were exceptions at TelephonyCo, the Museum of Culture, the VisCom Museum, and AirlineCo, where two or more people were interviewed at the same time (see *Appendix C* for full participant details).

In my previous research and consulting work I had used structured methods for interviews (e.g., Hackos & Redish, 1998) with the aim of obtaining data that related to particular design issues. I knew I wanted a more open-ended discourse in my doctoral study, but at the same time I also wanted to ensure that I had covered the issues I thought were pertinent (i.e., based on prior research in the field and my own experience). To this end I made a detailed interview guide that was modified a number of times between the first few interviews.

I had initially chosen a semi-structured method of interviewing but two drawbacks to this method quickly became apparent. One drawback was that I was trying to dictate the flow of the interview and follow this guide, but the issues that emerged as pertinent in the discussions were not ones that I had anticipated. My guide had been based on questions from the UD perspective. Because there was a disparity between the issues I had anticipated as important, and what was actually being discussed, I was trying to jump from page to page of my interview guide to make notes under relevant headings. This interview process was awkward at best. The interview guide was more distracting than helpful. The semi-structured method was also causing a stop/start flow to the conversation, which was unhelpful.

I had to learn that the interview process is an *active* one, in that the researcher and interviewee create the data together, i.e., knowledge is not derived *from* the participant, it is created *with* the participant (Holstein & Gubrium, 1995; Mishler, 1986). The resolution was to simply move to an unstructured, open-ended style of interviewing for the first round of data collection. Corbin & Strauss (2008) argue for using unstructured interviews in grounded theory studies, as they are the most ‘data dense’ (in their experience). The unstructured form of interviewing evolved to better enable me to hear each interviewee’s story from their point of view. After the participant had completed a brief demographic data form,²⁸ I started each

²⁸ For demographic information collected, see *Appendix C (Table 3)*.

interview with a statement to the effect that I was trying to find out how people handle accessibility issues at different types of organization. I then asked the interviewee to describe their job, their roles and responsibilities, and then I let the conversation flow from there. This style of interviewing was used for all but the first three interviews.

During the open-ended interviews, I employed a backup interview guide (See *Appendix B*) as a prompt for discussion points if the discussion stalled and for circumstances where the discussion went totally off topic. This was a judgment call but it was only made in a couple of instances. Without the luxury of unlimited time, it was sometimes necessary to corral the conversation back to things that related to the research questions. It is impossible to say whether this resulted in lost data, because it is not possible to know what was missed as a result.

In addition to any notes made during or after each interview, I transcribed five of the 14 first round interview recordings. A transcription company did the remaining nine. While doing my own transcriptions and reading through (and cleaning up) the other transcriptions, I began formulating ideas and making memo notes. Thus the transcription process was an element of the data analysis, even though the actual coding process took place after the individual transcriptions had been completed.

For the second round of interviews I used a different approach. Instead of employing the open-ended method of interviewing used in the first round, the second round of interviews were more targeted. I wanted to find out more about issues that were emerging for me as important through the coding process. These issues concerned the organization-wide business response, and I needed to establish whether views on accessibility were shared by different people in three of the ten businesses. A semi-structured format was used in the second round. The questions were slightly different for each business, as I was incorporating in each set of interviews knowledge from the first round of data collection. I selectively transcribed the data from this round of interviews based on the earlier stages of axial coding and a 'business response' story thread.

The interviews were supplemented by my attendance at a meeting at one of the businesses,²⁹ taking facility tours at three of the businesses,³⁰ and gathering secondary data.

Secondary data

I collected supplementary information where possible and practical. I sought publicly available information that related to the accessibility of the products and services offered by each participating business. I looked at their main website,³¹ and downloaded any published reports (e.g., corporate annual reports) and other pertinent documents that were available. Some publicly available and non-public materials were also given to me by interviewees, including reports, internal guides, and disability action plans).

²⁹ I attended a scheduled meeting of managers at StadiumCo as a non-participant observer. The purpose of this meeting was to discuss outstanding accessibility issues across different departments.

³⁰ Facility tours took place at StadiumCo, TheatreCo, and the Museum of Culture. Tours were sought as opportunities were presented. These tours provided an opportunity to see disability access services in their ordinary settings/environments. Any discussions that took place between myself and the participants during the tours were summarized, but not transcribed (the interactions did not suit transcription).

³¹ In past research I have evaluated numerous websites for accessibility (e.g., Law et al., 2005) and evaluated documentation such as guidelines for its usefulness to designers in industry (e.g., Law et al., 2007). Systematically applying this experience was not within the scope of the present study, so I did not employ a process of evaluating the websites or documents to determine how accessible or usable they were. However, it was impossible for me not to notice where obvious accessibility and/or usability problems exist on a website or in documentation. While systematic analysis of this kind was not a purposeful part of the research methodology that I employed, I acknowledge that my interpretation of the data for each business was influenced by my impressions of the accessibility of their website and the design of their documentation.

Coding

One of the premises of Sense making is that there is an inherent intertwined connection between how you look at a situation and what sense of it you are able to construct of it. (Dervin, 1998, p.39)

My construction of the story has been guided by coding phases, creating story-threads as an aspect of sense-making, and also my own background as a researcher in the UD field. The following describes the ways in which the collected data has been analysed using the grounded theory approach.

As an aid for analysis of the data, I used a Computer Assisted Qualitative Data Analysis Software (CAQDAS).³² In addition to the collected/generated data, I also made a series of case notes for each business that summarized some of the main points about the organization, the interviewees, and points of interest gleaned from the data.

Data analysis occurred in a series of separate but overlapping stages. This type of approach can facilitate systematic comparisons of data in grounded theory studies (Langley, 1999). Three coding stages that are generally accepted in the literature for GT methods have been followed: open coding, axial coding, and selective coding (e.g., Creswell, 1998; Saunders, Lewis, & Thornhill, 2003; Strauss & Corbin, 1998a). The coding process provides a “shorthand synthesis for making comparisons between [data from] different people..., data from the same people [for different events, and] incident with incident” (Charmaz & Mitchell, 2001, p.165). The coding stages generally occurred one after the other, but they were not strictly linear. For example, while conducting the open coding stage, thinking of possible relationships was inevitable, so notes were made that contributed to axial coding during the open coding stage. Coding as a process generated immediate and ongoing interpretation and reflection, and the GT method helps place these

³² Specifically, the [QSR International \(www.qsrinternational.com\)](http://www.qsrinternational.com) CAQDAS software package *NVivo 7*. Demographic information and interview details (time, date, place, length, coding stage etc.), have been managed using separate spreadsheet software.

thoughts in a logical and structured sequence, even though they take place almost continuously.

The bulk of the data analysis took place during the coding and writing phases of this research project (i.e., after data collection had taken place). During the data analysis, a number of ‘threads’ were generated. Three main stages of analysis are delineated to describe how the story threads and coding strategy have evolved. In the first of these stages I analysed the data from a techno-centric standpoint. In the second stage I moved the analysis to a business-centric focus. In the third stage of analysis, I focused on success factors that were found. In the latter stages of these analytic processes, it became clear that some things were missing from the data and the various stories. These coding and writing stages are described in the subsections below, and then the missing elements are addressed in the next section of this chapter.

The techno-centric pitfall

My first open coding of the interview data was technology-centric. I fell back to what I knew best, and started off coding the interview data in chunks that I had traditionally dealt with in my past research. As Glaser has said of many GT studies:

I used to see many researchers trying to study what was not there but what was preconceived to be there. (Glaser, 1999, p.841).

I developed a coding system that identified elements such as the choice of design approach (e.g., AT or UD), standards and guidelines use, user testing, specific technologies, specific architectural elements, and type of disability being addressed (the top-level codes are shown in Table 1). This coding strategy did not relate to decision making and how people responded to accessibility issues.

Table 1 - Top-level codes used in successive phases of data analysis

Techno-centric coding	Business-centric coding	Business response success factor coding
<ul style="list-style-type: none"> • ICT relevant issues • Architecturally relevant issues • Use of standards and guidelines • Use of checklists and audits of accessibility • Influence of laws and government • Management issues (day-to-day) • Cost/budget • Making trade-offs in design decisions • Interacting with customers • Product and service development 	<ul style="list-style-type: none"> • Strategy at the organizational level • Business management and day-to-day operations • The role of sources external to the organization • Business decision dynamics 	<ul style="list-style-type: none"> • Impetus for attending to accessibility issues • Executive leadership • Finance and budget relating to resources for attending to accessibility issues • Importance (prioritization) • Plans for action • Process of setting up for action, and assigning responsibility for tasks • APP and APO operations • Active engagement with accessibility issues

A business-centric focus

I re-started the open coding with a consciously business-centric focus. This concerned factors such as business strategy, management and decision making (Table 1). One of the main questions pertinent at this stage was what people were doing in response to things that were mandatory (according to Australian law) versus things that were optional. However, what became clear as the analysis moved from open to axial coding of the interview and secondary data, was that the ‘mandatory versus optional’ perspective had little bearing on success. What emerged for me, as a more reliable indicator of success, was whether the business

response pervaded an entire organization (rather than just a subset of units within an organization). This analysis led to the next (selective) stage of coding.

Business response success factors

The focus of the analysis had shifted, and my research questions had changed to concerns with organization-wide factors rather than specific management or decision making processes.

I conducted a selective coding stage on business responses on the data from round 1 (Table 1). This process revealed the importance of organization-wide responses at StadiumCo and TheatreCo. The analysis also showed that at CollegeCo there had been a conscious effort by some staff to create a new organization-wide response to accessibility, but they had only had limited success.

After a second round of interviews to examine these factors at the three businesses, the second round data was also coded according to the selective codes. This process confirmed a number of the findings from the round 1 interviews, and extended the analysis with more sub-level codes relating to success factors.

As a final stage in the coding, I took the complete list of success factor codes and returned to the first round data to double check whether certain factors had been discussed but overlooked in my earlier analysis. This process revealed that only a few items had been overlooked (generally the other seven businesses were not doing as well as the three included in round 2). This process was key in revealing the importance of what was missing from the data collected in round 1 (discussed in the next section of this chapter).

Writing as analysis

As part of writing out the stories of the business response based on my coding of the data, I began to develop theories to explain the phenomena that I had observed and learned about throughout the process thus far. One of the essential elements of a GT study is to return to the literature as theory emerges. Returning to the literature facilitated a comparison of important findings in my study with research elsewhere. My review of the literature, based on the first draft of the thesis,

enhanced, and in places modified, my interpretations of the data. Literature from a range of academic disciplines was consulted, including organizational behaviour, psychology, decision making, and change management.

The literature review has not greatly affected the theoretical propositions that I first developed. However, a possible reason for this is that prior research has not approached the problem with questions of how accessibility responses actually evolve in business. For example, very little in the literature on organizational behaviour discusses organizational behaviour with respect to accessible product development. At the same time, very little in the literature on UD and accessible product design discusses organizational behaviour and how it impacts product development. In future research in this field these kinds of gaps in the literature might be better bridged.

The writing process itself is a part of the analytic process, with choices being made on which parts of the story to convey (Corbin & Strauss, 2008). Writing the stories of the successful organizations revealed what was missing from the stories of the other organizations. (Not necessarily what was missing from their business response; but what was missing from their stories.) This has important consequences for assessing and addressing issues of rigor in the data analysis.

As a part of the analytic writing process I applied the success factors that were primarily found at the three more successful businesses to the stories from the other seven. This process was useful in discovering what appeared to be missing in the business response at these seven organizations, and also limitations in the detail and extent of the stories that could be generated from these seven organizations. Thus a number of different types of missing elements could be discerned through the various processes of coding and writing.

Missing elements

Grounded theory processes should develop concepts and theories based not just on what is found, but also an acknowledgment of what is *not found*, i.e. ‘missing data’ (Singh & Richards, 2003). In examining what was, and was not found in the coding process, and reflecting on the evolution of the sample and the interview

methods that I employed, two main elements of ‘missing data’ are apparent. The first is the data that was not or could not be collected, and the second is what is missing in order to more thoroughly examine the business response to accessibility (i.e., to go beyond the answer to the research question in this study). These missing elements are important to consider in the analytic process, in drawing conclusions, and subsequently in making recommendations based on those conclusions.

Missing data elements

Prior to considering the issue of missing data, it is useful to consider what actually was achieved. As a researcher, my access to people in this study has probably been quite different to the access I would have achieved if I was a consultant. There was a very high acceptance rate from potential participants. Had I come into any of these businesses as an accessibility consultant, the participants probably would not have opened up as they did. Furthermore, had I gone into the interviews with a consultant’s mind-set, one of helping them to solve their accessibility problems, I would probably still be unaware of how important certain issues are as success factors (priority, responsibility and accountability, etc.).

At TheatreCo, StadiumCo, CollegeCo, and The Museum of Culture, I had the opportunity to interview a number of people at different levels in the organization. The opportunity was there in the first round of interviews at The Museum of Culture by virtue of its small size (four people were interviewed, and the museum has less than 10 full time staff). The opportunity was not there at TheatreCo, StadiumCo and CollegeCo in the first round of interviews, but I had the opportunity to return to these businesses to try to build a wider, cross-organizational picture in a second round of interviews. Thus at four of the businesses I have managed to obtain data from people at a number of different organizational levels.

Obtaining multiple viewpoints from people in a department or people in different departments was not possible in the other businesses. This is one aspect of what is missing when comparing the data from the different businesses. For example, at

AirlineCo, there was no possibility of returning to collect more data. I had asked about the possibility of doing this at the end of the interview. The two interviewees at AirlineCo represented the accessibility department. They said that there was a risk to themselves—that they might lose some built-up ‘capital’ or ‘favours’ from people in other departments—if I were to return and seek interviews across the organization. Lyle (41-50, the Customer Care Department Manager at AirlineCo) explained his predicament: “They’re already telling us that they can’t meet up with us on our issues! Let alone a student coming in from outside”.

Another aspect of missing data to consider is evidenced by the happenstance of who I interviewed at The VisCom Museum. If I had talked to only one person in the buildings department, then I would, in all likelihood, have come away with the impression that accessibility was a high priority for all staff. This transpired to be not the case. In my interview with people in the new media department, a very different story emerged. Here accessibility was not regarded with anywhere near the same level of priority. This highlights the need for obtaining views across the organization if seeking to make a diagnosis on the business response, and in considering the results from other businesses where it was possible only to interview a small number of people, there will inevitably be ‘missing’ viewpoints.

There is also the interviewee’s place in the organizational hierarchy to consider when trying to build up a detailed picture of what is going on. For example, at BankCo, the outward-facing corporate image through corporate reports, advertising, and press communications, is highly positive towards PWDs as customers. However, in my interview at BankCo I heard a story of struggle to achieve anything worthwhile in terms of improved accessibility for customers with disabilities. I only had access to one person who was below a managerial grade, but had I interviewed an executive at BankCo, I might have generated different data, and come away with a much different impression of how accessibility is handled at that business.

Finally, there is the issue of the closeness of the interviewees to the actual product and service development to consider. At both of the telecommunications

businesses, TelephonyCo and CellularCo, my view was restricted to the Australian representatives of MNCs, MNCs that design and manufacture their products mostly overseas. While the interviewees at both organizations have provided a snapshot of both the ‘corporate line’ (accessibility is important) and ‘corporate behaviour’ (accessibility is not important), the view of designers and product developers, at the corporate level, was not possible to obtain.

When initially contacting people at each business I was ushered towards whoever was the point of contact (POC) on accessibility issues. The staff levels I gained access to, and was ushered towards as a researcher, depended on the circumstances of each case. This shapes the data and the stories, not just in terms of what is found, but also what is missing. While there are inevitably going to be missing elements of any story generated through research, it is through the wider, deeper stories at a minority of the organizations in this study that an understanding of the incompleteness of the story at the majority of the organizations has been highlighted. This understanding is useful when recommending future research activities (see next subsection in this chapter).

Missing from the stories of the ‘business response to accessibility’

In my definitions of the terminology used in this thesis, (p.19), I defined ‘success’ as a relative measure (i.e., are people doing things to make their products and services more accessible than before?).

While conducting the study, I developed my own informal opinions on how well the different participating organizations were doing in terms of the accessibility of their products and services. For example, at StadiumCo I considered the physical accessibility of their facilities to be exemplary, whereas at CollegeCo, the physical accessibility was good only in the very new buildings, sub-par in fairly recent buildings, and very poor in older buildings.

Participants also make their own informal assessments of accessibility and acceptable measures. For example, some of the interviewees would say something was ‘x percent accessible’ (or even on occasions ‘100 per cent accessible’). Even if I did have the resources to do so, there are no formal methodologies in the

organizational behaviour and related literature for measuring ‘accessibility achievements of businesses’. There are checklists for assessing compliance with standards and regulations, but there is no possible ‘per cent’ measure of accessibility. The assessments that people throw out casually are completely informal.

Informal assessments of success such as these do not give us a good yardstick with which to compare one organization to another, or even the organizations in this study to others elsewhere. Formal assessments are therefore missing from the stories in this thesis, but could be included in future studies.

An additional consideration in the business response is how organizations approach issues of employment diversity. Since my study focused on the products and services that were being developed, and I was attempting to discover what factors were influencing development, I deliberately omitted participants any pointed questions to participants on the issue of workforce diversity. The issue did come up in a couple of instances, but it did not emerge, during data analysis, as a major factor influencing product and service developers. While I recognize that the impact of HR policies and practices will influence organizational culture, the question of whether there is a cause-and-effect link between the two was not a part of this study.

Returning to my earlier point, that this is a study of business and not a study of disability, it is worth noting that a natural result of this stance is that the points of view of customers with disabilities is missing from my analysis of the ‘business response’ in these ten organizations. In addition to a formal review of how well accessibility goals are being achieved at any given organization, it is ultimately down to the question of whether the needs of PWDs are being met that determines true ‘success’. Finding out from customers if they feel their needs are being met should be a part of any future diagnoses of business approaches.

Making recommendations

Transparency is required in drawing conclusions and making recommendations (Easterby-Smith et al., 2008). Conclusions drawn later in this thesis are based on data gathered at both successful and less successful organizations (in terms of the response to accessibility issues). I have necessarily had to be selective in my analysis of the data, and in my choice of which organizations to follow up. I recognize that there remain story elements missing from the data, but in any study data collection choices need to be made based on such things as resources, the time available, and the perceived likelihood of gathering useful data. For the conclusions and theoretical analyses presented herein, I therefore acknowledge and recognize my own agency in terms of shaping the data through my analysis, interpretation and writing, and in terms of my awareness of what is missing from the data set.

Making recommendations is a final and important part of the research methodology. There are two forms of recommendations to make based on what knowledge is missing: what is missing from practice in the field, and what is missing from research in the field.

The final chapter of this thesis presents a number of success factors that have been discovered during the course of the study. In the related field of employment diversity, recommendations have been made on strategies for success (e.g., Matton & Hernandez, 2004; Schur, Kruse, & Blanck, 2005; Stone & Colella, 1996). Recommendations for corporate-wide cultural shifts have also been made. Ulrich (1997), for example, has presented a list of steps that can help a ‘champion’ achieve success in the field of HR, advocating corporate-wide (cross-organizational) measures to achieve an HR change-agent’s goals. Kotter (2007) similarly proposes a list of corporate-wide steps that leaders can employ to change their organization. Caution is necessary in taking lists of success factors at face value as ‘recipes for change’ (Buchanan & Badham, 2008). Citing the rational-linear models of Ulrich, Kotter, and others in various fields, Buchanan and Badham point out that change rarely unfolds in a tidy, logical sequence, and that the context in which any change agent resides is so variable that applying

recommendations can be far from straightforward. There is a paradox in the available advice in the literature, in that it includes messages of both ‘embrace rational-linear accounts of change’ and ‘beware of simple recipes for effective change’ (Buchanan & Badham, 2008).

The recommendations—that I present to businesses, consultants, and others working towards more accessible products and services—are therefore, not as recipes for change, but factors to consider when approaching accessibility at the organizational level in mainstream business. As other researchers have pointed out, understanding the current culture in any organization is necessary for knowing how advice and recommendations should be applied (e.g., Alvesson, 2002; Miles & Snow, 2003).

I make other recommendations (in the last chapter) for further research. These recommendations are made based on two questions: (1) if doing this type of research again, what other kinds of data should be gathered?; and (2) what is needed to build on this research and go beyond the research question that was answered in this study?

In addressing the first of these questions, it is worth revisiting the previous literature as well as my own role as someone with (primarily) UD expertise and experience. I discussed above how I initially started coding my interviews based on what I knew (p.62). It is an aspect of agency that preconceptions ‘come along for the ride’ and need to be accepted, addressed, and remediated in the methodological choices. It was after putting my own preconceptions aside that the importance of the organizational factors came through. It was also through this process, and gaining a deeper insight of what was going on at three of the businesses, that the importance emerged of what was missing from their stories, and from the data collected in the other seven businesses. To address what is needed in future research, I make my recommendations based on the missing elements found (missing data elements, the need for formal methods of evaluating ‘success’ of accessibility responses in business, and the need to go beyond the research question by taking into account the viewpoints of customers with disabilities).

In addressing the second question (what is needed to go beyond the research question in this study), it is important to note that the methods that I used did not start off by placing organizational culture at the centre of the investigation. There appears to be value in studying people further afield than the accessibility role in any given organization. To discover how accessibility is handled in a variety of organizational contexts, there will be a need to gather stories and views from a variety of levels (from executives to staff who have direct contact with customers) and from a variety of departments (sales, design, HR etc.). There is, therefore, a need to expand the scope of research and combine organizational research methods with disability research methods from the outset. The literature review conducted for this study has necessarily focused on the behaviours that were described in the interviews and interpretation of meaning as it relates to the production of accessible products and services. Similarly, I have specifically *not* focused tightly on any one literature domain, such as the psychology of problem solving, the science and art of decision making, management, or change. Instead the aim is to provide a coverage that situates the findings within the wider context of diverse fields of study. A focus on one or more fields of study as related to the research themes in this thesis could be a part of future research efforts.

Finally, and addressing both of the above questions together (how to examine business responses to accessibility, and what is needed to go beyond the research question), I see a need for a diagnostic approach in research in this area. The lack of success that I saw in certain organizational groups could not be explained by the perceived wisdom of experts (past research, standards and guidelines, or the ‘additional opinion’ interviewees that I interviewed). While there certainly is a contribution to understanding from these sources, it was only with the ability to conduct this multi-year study, examine diverse types of businesses, and using open-ended interviewing that issues of corporate culture came to the fore. Following from my main conclusion that organizational culture is at the heart of the issue, I recommend that research is needed to enable quick and accurate diagnoses of organizational responses to accessibility. My diagnosis process took over three years to complete. UD practitioners may possibly need to be able to do it in three days.

Chapter 4.

Embedding accessibility in organizational culture

“You want people to be independent, you don’t want access to just be a silo, like ‘This is access, and everything comes through me!’ Everyone has responsibility for access in the organization.”

*Tamara, Accessibility Program
Manager at TheatreCo.*

At TheatreCo and StadiumCo, a deliberate shift in organizational culture around accessibility has taken place. At both businesses, there has been a switch from previous modes of operation—where disability access was a low priority agenda item—to modes of operation that include disability access as part of a widespread customer-focused agenda. The positive attitudes towards accessibility combined with easy to recognize success at implementing accessibility solutions, led me to focus intensively on the business response at TheatreCo and StadiumCo. There were a number of factors common to both businesses that have enabled the successful implementation of features that have improved accessibility for customers with disabilities. There are also some factors that are handled differently between the organizations. In analysing these factors it appears that TheatreCo has been more proactive than StadiumCo, and as a result more successful in their quest to embed accessibility in their corporate culture.

Executive backing and priority

At StadiumCo Francesca (31-40) handles accessibility issues (ensuring that events are going to be accessible, and handling customer service problems/concerns during events), as a subset of her overall job responsibilities as an event manager in the events department. We discuss the fact that there is no standard or guideline in Australia for meeting the needs of stadium patrons who have disabilities.³³ Francesca asks a rhetorical question about having a shared standard:

Why would you want to just do what everybody else is doing?

Francesca goes on to explain that her organization's mission is to be 'the best' at everything it does, and so if there happens to be a minimum standard for accessibility embodied in a code of practice, then StadiumCo would scope out their competitors' efforts in order that they could do better. This is tied to their corporate agenda.

She says:

One of the strategic pillars is that we're aiming for 'world-class'. And developing the right systems and people and facilities for our customers and members is certainly high on the corporate agenda. That's what we're striving for.

The mission that StadiumCo publishes on their website talks of striving for the best possible service for its customers, gaining the respect of the customer base, and giving customers memorable experiences. Francesca explains what drives this customer focus:

I think it's really about caring for people. We actually want people when they come here to have a good time. [...] And there is a desire to do whatever we can do to make that experience [memorable]. We don't want people to come here and stand in a queue, or someone in a wheelchair not being able

³³ There is no guide in Australia, but one short guide was produced in the US Department of Justice relating to the physical features of stadia (USDOJ, n.d.).

to access the facilities. [...] We've gotta give them the service that they deserve. It's a deep-seated thing.

TheatreCo's mission statement, published on their website, contains language similar to StadiumCo's such as being the 'best host', having the 'best performances', 'inspiring every visitor', and 'increasing customer satisfaction'. Frank, 51-60, building manager at TheatreCo, says of the mission:

By the type of business, it has to be 'customer-first'. People coming to shows, to take a tour, take photographs, buy a coffee. Everything's about the customers.

A corporate culture of focusing on customers has *not* always been in place throughout the history of both StadiumCo and TheatreCo. People at both organizations had made purposeful changes towards this direction.

Anita, 41-50, the Administration and Planning Manager for TheatreCo has been with the organization for over 20 years, and involved with accessibility for approximately the last 10 years. In describing the historical context and the changes that had taken place recently, she says that TheatreCo changed to being customer-centric about eleven years ago (i.e., the mid-1990s):

My personal opinion is that we changed from being public service administrators to business operators in the last eleven years. We've learned that customers are part of the success of our business.

She added that while this shift in thinking caused cultural changes within the organization at the time, it did not solve many disability access problems. There was no systematic approach to handling accessibility issues at TheatreCo until Anita introduced a new strategy during development of their most recent DAP (Disability Action Plan).³⁴

Anita describes a "myths and legends" attitude that pervaded the organization prior to the new strategy being implemented—people used to automatically think

³⁴ For information on DAPs see *Appendix A, 'The Disability Discrimination Act (DDA)'*.

that anything to do with disability was going to be overly difficult, or would result in an ugly environment. Since the mid-1990s to the present, there had been a series of audits of TheatreCo's physical accessibility and its services, with some minor improvements made. Despite the audits and minor improvements, Anita says that at the time, in terms of the organization's agenda, accessibility "was like the last thing on the list to do." Only one department had been doing well prior to the new strategy, and this department was the front-of-house staff—the only staff who were dealing with customers on a face-to-face basis. Anita set out to change the situation with a new type of DAP. The DAP identified three types of potential customers with disabilities (patrons, performers, and employees) and six priority action areas (physical accessibility, promoting positive attitudes, staff training, service information, employee diversity, and customer feedback). Before talking to the managers, Anita asked the executives for their support:

We sat down with all people that had accountability—we worked with managers and we actually said 'can you deliver this?' So, rather than doing a plan that was 'pie in the sky' and would pretty much fail—a whopping big wish-list—we actually said 'let's do projects that people could be successful at, could achieve, even if they're only halfway to something'. [We] said to them 'Don't sign it off if you're not prepared to be behind it. Let's just do another plan if you don't want to back this up'.

The executives at TheatreCo accepted Anita's 'small steps' plan. Anita thinks that one of the reasons why the executives accepted her plan is that she played on their desire to be the best for their customers, and that it was *they* who could 'increase momentum'. She used a visual example for them, a train and a tennis ball in its carriage: asking the executives "did they want to be the train [pulling] or the tennis ball [bouncing around]?" Anita said that she recognized and addressed a limitation that the executives had. The executives did not possess extensive accessibility knowledge, but she had to find a way to present options so that the executives could feel empowered to instigate accessibility changes. She says of the executives,

Of course they didn't know about disability access either—they didn't know the technical standards. And basically, I said to them: 'There's only one thing you need to do. It's easy. Every time something comes across your desk from any person, you just ask "What access issues have been included in this project?", or "Have you included access features?" And if not, "Could you go away and think about them?"'

Once the executives approved Anita's approach, the DAP could include key performance indicators (KPIs) for measuring progress. The KPIs would be based on shared accountability between departments, and the executives reminding managers in any project that they expected accessibility to be included. The KPIs included how each part of the DAP was doing on a quarterly basis, the state of access for PWDs, customer satisfaction, and plans. The KPIs would be reported to the executives and the board of TheatreCo, and as such they would form part of each department's review.³⁵

When she presented this type of DAP approach to the TheatreCo board the reaction was positive, she says:

They were really, really positive. [...] In fact they've been pushing me [now], which is quite incredible. We do an annual review to them. [...] So now they are going 'What about this, that...?' And of course we can't do a million things at once. We have to stagger things to have the resources to do it. So, yeah, asking [the board] the same question, and asking if anything comes across at board level: 'What access improvements have you considered?' *And that's all you need to ask.*

The cultural shift to become more customer focused had a more immediate impact on accessibility at StadiumCo than it did at TheatreCo. Switching back now to StadiumCo, a customer focus has been in place for decades. Francesca says: "[it is] a cultural thing that has been embedded in the organization for at least the last

³⁵ In employee diversity, some companies have tied 'diversity success' directly to performance evaluations of executives, hoping to create a cascade effect that encourages more diverse hiring practices at managerial levels (Matton & Hernandez, 2004).

20 years or so.” Alfred, 51-60, is the executive assistant to the CEO at StadiumCo and has been with StadiumCo for over 30 years. Alfred, reinforcing Francesca’s view says: “I’ve got to say we were not nearly as good twenty years ago as where we are today.” Alfred says that the reason behind their push for excellence in physical accessibility was a “conscious, financial and moral decision” made by the leadership of the company some 20 years ago:

The rebuild of the stadium in 1990 [...] gave us the opportunity to make sure we were very ‘user friendly’ to disabled people. And you can see that in the design. [...] The old stadium, and part of the overall Australian culture (1940s, 50s and 60s) was that people in wheelchairs would stay at home. We had a bit of sympathy and empathy for blokes on crutches because they probably lost a leg in one of the wars—but none of our buildings, whether it was a sports stadium or shopping centre, picture theatre, or department store was catering for people of this nature.

Before the redesign in 1990, any changes made to the facilities regarding accessibility were, according to Alfred,

ad-hoc and piecemeal. We would have said ‘Oh god, could we put a wooden ramp in there? Because there’s a fella came the other day, a bloke with a broken back trying to carry his wheelchair down the stairs’. You know, once upon a time we would have said ‘What’s a bloke with a wheelchair even doing here?’ But we said ‘No, we’ve gotta do this!’

The opportunity for improvements to accessibility at StadiumCo has come about because of a chance to rebuild, combined with wider cultural shifts in thinking. Talking of the cultural changes, Alfred tells of social attitudes to disability, and how they had been changing in Australia through the 60s and 70s. As he sums it up, the results of these cultural changes were that

if you were in a wheelchair you could still go to a sports stadium. You could still make love. You could still get pissed. You could still do anything you liked. So we as a nation ‘got it’.

Alfred also says that the redesign of the stadium at the time introduced “[...] the loop for hearing [enhancement], disabled toilets and ramps”, and that even though his organization was not always at the forefront of technology, in terms of disability he thinks they were out the front.

Alfred says StadiumCo had been fortunate in that the lead architect of the 1990 redesign was also the vice president of the organization. That person had travelled widely in the mid- to-late-1980s, and saw what was being introduced in terms of stadium accessibility in the United States, where there was some relevant accessibility legislation. It was he who was the real catalyst for change, Alfred says—the change was essentially facilitated by the fact that he was both the lead architect and vice president of the organization at the same time. Alfred told me that this person

realized we had to embrace this worldwide trend—and then Australian trend—to look after disabled people who once upon a time would not have wanted to come [to the Stadium] but now do in ever increasing numbers.

StadiumCo was able to afford the changes, and it also helped that at the time the three most important people at the business (the President, Vice President and CEO) were of “one mind”, as Alfred put it. Change came from the top-down. Alfred explained: “the leadership were able to spread that down through their colleagues, and then by extension, into the broader management and staff.”

The catalyst in both organizations is an individual who persuaded the leadership about the need to change accessibility conditions. At StadiumCo this is a top-down action initiated by a vice president at the end of the 1980s, whereas at TheatreCo it is a middle-up process, initiated recently by Anita, a manager in the administration and planning department. Strong leadership, together with a strong compliance professional is cited as a success factor in studies of employee diversity initiatives (Matton & Hernandez, 2004). Also from the field of employee diversity, Charlesworth et al. (2005) suggest that while executive support is desirable, what is more important “is senior management commitment and drive—encouraging employee input and feedback—as well as ongoing

monitoring and assessment that makes clear links between [equal employment opportunity] EEO/diversity action and organisational effectiveness” (p.xii). While executive support is evident at both TheatreCo and StadiumCo, the plan elements mentioned by Charlesworth et al. (feedback, monitoring and assessment) were not in place at StadiumCo. In fact, during the previous seven years, StadiumCo has been operating without a DAP, Francesca says:

We’ve for a long time been, operationally, we’ve been very aware of the issues and had an ‘action plan’, a five year action plan that—let me get my dates right—’95 through 2000. And we made lots of changes to the building, and had an allocated budget every year to make improvements. So it was a part of the culture of the organization to look at these issues and address them.

According to Francesca everyone felt they had done a good job in terms of the accessibility of the building and handling visitors with physical disabilities during the last seven years and even further back, even though there had been no DAP.

Shared accountability and responsibility

There is evidence of accessibility being addressed as a shared responsibility throughout both TheatreCo and StadiumCo.

At TheatreCo, Tamara, 31-40, is the accessibility program manager and her boss, Anita 41-50, is the administration and planning manager. Together they act as the APO (Accessibility Program Office).³⁶ Two other people at TheatreCo spoke about their working relationship with the APO: Frank, 51-60, the building manager; and Donna, 31-40, the IT services department manager. Both Frank and Donna say that the APO is considered a part of their team, but the APO is *not* doing actual accessibility work for their departments. In the TheatreCo DAP the responsibility for carrying out accessibility tasks resides with the heads of various departments. When asked exactly *who* is responsible for IT accessibility, Donna, (the IT services department manager) says

³⁶ I use the ‘APO’ terminology to stay consistent with that used in earlier studies.

Ultimately, it's me. But I would use my organizational expert to make sure that we were aware of all the standards and requirements. So that's Tamara. I'm many things, but I'm not an expert in accessibility. And so I'm *dependent* on Tamara as our kind of professional advisor in that space, to make sure that we do the right thing.

Frank, the Building Manager has a similar response when asked about responsibility:

Tamara is someone who is managing a program of a whole—overall there's this responsibility for access—and part of that is to try and improve the physical infrastructure—then that component of it comes back to me. As far as improving access to, say, different types of shows, it would go back to the director of performing arts. But Tamara is the person that coordinates it all and brings it all together. [And on accountability and responding to problems,] well, I think ultimately it would be the board. Ultimately. I think if there's a problem that comes up, Tamara and I would together try and solve it.

TheatreCo APO members Tamara and Anita say that it is essential to have accessibility as an organizational priority *and* something that is done according to a plan *and* with a sense of shared responsibility.

The role of Francesca as an APP (Accessibility Point Person^{36, p.80}) at StadiumCo is quite different to that of the APO at TheatreCo. Whereas responsibility for accessibility is *formally* stated in the DAP at TheatreCo, there is no equivalent to this at StadiumCo. Nonetheless, responsibility for accessibility is something that is shared at all staff levels at StadiumCo. Accessibility is treated like any other shared responsibility, such as safety, quality assurance, or customer service. . Alfred, executive assistant to the CEO, says that this attitude goes back to the rebuild in the early 1990s:

It was a great opportunity to do it very well from scratch because we rebuilt the whole place. But it was a mantra that existed. It is far more definite amongst all the staff here. [...] It wasn't as much going back into the sixties

and seventies, where we'd just get people who come—who weren't as trained up. Trained to sell tickets, but not trained to keep an eye out for disability issues. And now I think all things, health and safety, including disabilities, just ideas on behaviour and all of those things. Everyone's very, very conscious of it now because there's far more resources and time put into training. That's the thing that we've done here. There's a lot more emphasis on training. Not just for full time but also for these casual employees.

Francesca, APP at StadiumCo echoes Alfred's take on shared responsibility:

Within the organization accessibility issues are picked up by a number of groups. There's the Events department and they're responsible for running every major event out in the grounds. Not functions; not people coming in for lunches and dinners, but the mass gatherings of people. Our HR department become involved in terms of training of event staff so they're involved in processes as well. As is the Facilities department in terms of physically doing things to improve the venue.

The organization and culture at StadiumCo is, according to Francesca, committed to keeping staff happy and providing a good service to customers. All four interviewees at StadiumCo spoke of the 'service culture' that is in place, how it drives their decisions, and how the question of 'how to provide the best service for customers' is a prominent feature in their activities. The shared concepts of customer and accessibility services appear to pervade the organization. Each member of staff must know and implement the basics of customer service, and they need to be able to recognize when an issue requires additional expertise. As an example of this, Jean, 41-50, the HR manager at StadiumCo, says that accessibility is handled as a part of everyone's job, unless it becomes a problem that goes beyond their normal capabilities:

[Each staff member] has an awareness of how to deal with special needs. [If there is a problem] it gets escalated through the normal line management process to wherever it needs to go. So, for example, if a patron has a

complaint, ideally what should happen is the customer service person will refer, the supervisor will determine the level of urgency, will either take it straight through to the event day office to be dealt with at that time, or alternately, if it's to be followed up they'll write the necessary report, and it will get through that way. So that's the normal run of things. If you get a formal complaint, so for example we recently had a complaint via the Human Rights Commission, those are the ones that generally land on my desk to investigate on behalf of StadiumCo.

Enabling resources and support mechanisms

In proposing a new kind of DAP for TheatreCo, Anita had suggested a series of steps that could be agreed upon, even if they might be considered small steps. Her view was that the plan should not be 'pie in the sky', as she put it, but one that could realistically be achieved. Essential to this goal is having resources available to support activities such as money, time, and staff availability. At TheatreCo these have been made available, along with a new formalized APO that is itself a resource to others in the organization as they work on their accessibility tasks. As Tamara, accessibility program manager at TheatreCo explains:

Staff in different portfolios put up what they can achieve in the three years [of the DAP] and from there and it's up to them put the resources up to it. So they identified in the plan what they could do. [...] It comes out of that budget for every portfolio. So in order to do [the plan] that was endorsed by the board, they committed to it, they committed that they would have the resources to do it. [...] My role's is more strategic, project management wise. On the day-to-day running [...] it depends on what sort of project, and who that project comes under, what portfolio. It's not centralized through me, but I work with the different departments to maybe guide them or provide advice in terms of access.

Anita (Tamara's manager) is very clear that Tamara's role is not to do the day-to-day work on accessibility, because it needs to be integrated into every department's work-ethic and responsibilities. She says

We tend to be across everything that's happening in the whole organization. [...] Tamara looks after two committees, one is building committee from the secretariat perspective (not from an access perspective), and that was a deliberate move, so that she knows every single building thing that's happening in this organization. [...] It means she's aware of the things [concerning access]. So that's one way. There's lots of other ways—we just keep our ears to the ground. [...] Before Tamara started we would then approach [departments] saying 'Do you need some help? What can we do for you?' And they'll say 'Oh, we've gotta do some consultation'. So then we'd organize [...] outside organizations from the disability sector for them to consult to. So we facilitated. But really wanting them to have final ownership. So we didn't take control. We actually let them be responsible. And that's been our model. Our model is that we do not take control. We let them be responsible for their projects.

Interestingly, Tamara's position as accessibility program manager (APM) is not explicitly listed in the 3 year DAP (2005-2008) that started around nine months before Tamara was hired. Anita says that the APM position was part of her plan even though it was not explicitly listed in the DAP. When the responsibility for each of the items in the DAP was given to the various directors and managers of the various departments at TheatreCo, Anita felt that there would be a need for a dedicated staff member. She therefore worked with others to create the position after the DAP was approved. As Tamara's statement attests, it was Anita who was the driving force behind her being hired: "Anita was really a champion of it."

The hiring of Tamara as APM has freed up Anita to work in a separate and complementary role in order to achieve her aims with the APO. As Anita says:

Tamara does a lot of technical accessibility advice and support and she's fantastic at it and she's the right person. People love her. So having that, like she's the good guy, and I'm the bad guy. I come in when things can't be resolved, when there's a bit of tension, I'll come in and ask 'Oh, what are you trying to achieve as a *business* outcome? Right, so this is what we need

to do...’. I do more of that sort of work, and leave her to the ‘How can I help you?’ and ‘What needs to happen?’

In TheatreCo, therefore, the provision of resources, including time, money, and the APO itself, is a formal planned activity. In StadiumCo it is less planned and more reactive, with an informal APP. Francesca, the APP at StadiumCo says that accessibility is a part of her job, but it is not something that has been formally recognized in the organization: “There is no one dedicated to manage accessibility issues”. Having said that, Francesca says that she is a ‘point-person’ for others to go to for accessibility action: “I’ll tell you our commitment to accessibility probably starts with ‘me’ [and this position].”

The informal nature of Francesca’s APP position at StadiumCo is evident in the earlier comment from Jean, the HR Manager, regarding the question of what would happen if there was a problem in HR that needed to be dealt with at a higher level. Jean did not refer to Francesca at all as a source of assistance or expertise. In contrast, the formalized nature of TheatreCo’s APO would suggest that they would be consulted in HR situations.

Awards and recognition

In most of the public materials and annual reports that are produced by StadiumCo, accessibility is not a topic that gets much coverage, even though StadiumCo has been doing very well on physical accessibility. John, the event operations manager, and the APP’s supervisor, explains why this is so:

Look, it’s not something that we single out. We know we want to get these people in. And it’s just part and parcel of a whole bunch of things. If you’re designing a stage for a concert out there, it’s just another question on a checklist. How do people in a wheelchair, for example, get out there? So it’s part and parcel of everyday event delivery that we know not everyone is capable of moving around. So we don’t sectionalize it out. We don’t have a ‘disability section’ that focuses on it. It’s something that’s across the organization, from our facilities department to our event deliverers that we know is part and parcel.

The ‘matter of fact’ approach taken at StadiumCo (not something that is ‘singled out’ but integrated into processes with checklists) contrasts with TheatreCo’s approach, which is to single out accessibility efforts. The APO at TheatreCo has developed an accessibility awards program for their staff. Anita (head of the APO) describes where the awards program fits into their efforts:

The key is to have a successful project, no matter how big it is. To hold it up high and make people feel fantastic, and have other people see it—how easy it is—and to want to get on board. So every time we have our access awards—once a year we give out awards—we make them—we laminate it, get it signed by the CEO, and Tamara signs it as well. We make a big deal, even if it was tiny.

Anita says that it is important to remember that accessibility is a new concept for many in the organization, and there is still a need to keep people “*solution-minded*” rather than “*problem averse*”. The awards are a key means for the APO to keep the elements of the DAP in peoples’ minds, Anita says:

The fact that they actually could do [accessibility], and they feel satisfaction that they achieved something, we thought was a way to make it successful. [...] Even if it was tiny little thing. We were giving pats on the back for very, very small things. And it was amazing how people rose. You could just see it. How positive they were feeling about what they did. And we were holding them up as an absolutely great ambassador for access.

Proactive versus reactive approaches

TheatreCo are working on their Disability Action Plan (DAP) with the understanding that new plans will be needed when the current one expires. As Tamara describes it,

[Providing access is] a *journey*; I don’t think it’s ever a *destination*. I don’t think you ever get it completely perfect, it’s always something that *goes*.

It could be said that it was StadiumCo and not TheatreCo, that was a leader in terms of access for people with physical disabilities during the 1990s and the first years of the 2000s. However, progress in providing access for people with sensory impairments has been scant at StadiumCo considering the length of time that disability access has been an organizational priority there. TheatreCo has now surpassed StadiumCo in terms of providing access for people with sensory impairments. The TheatreCo staff have achieved this in just the last few years following the implementation of their DAP. Examples where TheatreCo has made progress, but comparable progress has not been made at StadiumCo, include: the websites of the respective businesses; accessibility guides for patrons; the provision of text telephones for the deaf; providing audio description services for blind and partially sighted patrons; providing captioning services for deaf and hard-of-hearing patrons; and providing shuttle bus services for people with physical disabilities to get from the local transit hub to the business.

Through the DAP, the staff at TheatreCo have taken a planned, proactive approach to accessibility problems and expanded their customer base by meeting the needs of a wide audience. In contrast, the approach to accessibility at StadiumCo is more reactive and unplanned.

After seven years without a DAP, Francesca (APP at StadiumCo) has grown concerned about several accessibility problems. She characterizes her perception by saying that she thinks there is a “low awareness” of accessibility issues throughout the organization.” Francesca has begun a new process, one in which she is “just trying to raise the profile of issues so it’s on people’s agendas”. Commensurate with this, Francesca proposed a meeting with the managers of the various departments at StadiumCo. She would be assisted in this meeting by an accessibility consultant. The idea was to create a new ‘working group’ for accessibility at StadiumCo to address the problems that Francesca and the consultant are identifying. Of the plan to have the meeting Francesca says

That’s why I am trying to get this working group together so, so I can spread some of that commitment through the organization, and bring some awareness into the organization. That perhaps is another thing that we can

do. So the commitment's not coming from the top down; but pushing it back up the other way. I've never in the time I've been [here] found any resistance to that. It's not a bother. I think it's just that people aren't aware of [accessibility]. And when the awareness is brought forward then that's accepted and worked through. There's certainly no resistance to improving the facilities, and it's improving the facilities of the stadium for everybody.

Francesca envisioned this meeting as the first meeting of many for a new 'working group'. I sat in on the meeting as a non-participant observer. The people from the respective departments listened to the accessibility concerns that Francesca and the consultant presented. There was a discussion on what could be done by various departments, followed by commitments by the attendees to work to identify and implement solutions.

Fifteen months after the 'working group' meeting I returned to StadiumCo and asked Francesca how the working group is going. She replies

It has stalled. [...] There's not a lot of issues. [...] We're not getting comments from people that things are wrong. So we've taken on a little bit of that 'if it's not broke don't fix it' approach. [...] The group] hasn't had cause to meet again. And each department has taken on their issues themselves, and dealt with them. So there isn't a formal framework around that particular group.

Francesca does not sound disappointed by this fact. The issues had been raised, and the fixes were made. She describes examples from the meeting that had been fixed, and says people have not been coming to her with new accessibility problems in the time since the inaugural (and last) working group meeting. So there does not seem to be a need for a formal structure or reporting mechanisms for this type of group. Later when I interviewed John, Francesca's boss, he makes a statement that seems to sum up this type of thinking:

We've now got 100 per cent of the facility that's easy to access and easy to get around.

There are few complaints received by StadiumCo staff about accessibility, Francesca says:

I must admit the level of complaints that we get is really minimal. And I would say, over the [15] years that I've been here, the written complaints that I've seen about issues would be less than ten. [...] The majority of them have been about wheelchair or accessibility issues. Not too much feedback about sensory disability issues.

This number of complaints around physical access is miniscule, considering the size of the organization and the number of events they hold, each with tens of thousands of patrons. Feedback or complaints on sensory issues is almost non-existent.

While TheatreCo has introduced TTYs (text telephones for the deaf) and talking Automatic Teller Machines (ATMs), (for use by people who are blind or have low vision), StadiumCo has not. Jean (the HR manager at StadiumCo) says:

There is one area that I'm conscious of that we haven't done. We've never ever had a request for it in all the time that I've been here. Which is to provide... is it TTY? Text telephones. Never ever had a request for it. And I so rarely see it on anything. And I'm not sure whether we're actually legally required to do it or not?

Francesca describes how StadiumCo is diligent about responding to any complaints, but complaints are few, and accessibility complaints are extremely rare. Complaints researchers have concluded that the majority of dissatisfied customers do not complain (Barlow & Møller, 2008; Stauss & Seidel, 2004). "Low complaint numbers are not a meaningful indicator of customer satisfaction", say Stauss and Seidel (2004, p.18). When literature on complaints is considered together with the literature on PWDs in society (e.g., Goggin & Newell, 2003, 2005) a question arises as to whether the extremely low number of complaints from PWDs is because they are satisfied with StadiumCo's services, or there are very few PWDs (relative to the number of PWDs in the population as a whole) attending events at StadiumCo in the first place?

Although Francesca says that she is investigating the possibility of proactively finding out the needs of customers with disabilities in upcoming research, this approach follows a period in which the response has largely been reactive. (The exception being that they have proactively worked to create an accessible built environment and a culture of being attentive to the needs of their existing customer base which includes PWDs.) As John, Francesca's boss, the event operations manager) says,

I guess the focus is predominately—and that's just a demand thing—a lot of it is about wheelchair stuff. We do get requests from people with sight impairments or whatever who want to come and just soak up the atmosphere. But we probably don't go out of our way. You can't go and sit in the front row just because you're sight impaired. You can... but if you're in a wheelchair and sight impaired, it's difficult to get down to the front. So how far do you go? These types of facility do cater for the masses, and at the same time we're mindful of equal opportunity and equal access to everyone, but just how far do you go?

During the time between my first round and second round interviews at StadiumCo, a new sports museum section opened as an annex of the business. Per the building regulations, physical building accessibility is implemented well, with the inclusion of wheelchair ramps, lifts with tactile labels, and tactile markers on the ground for people with visual impairments. For the exhibits, there is very little that would help someone with sensory impairments to access the information on the many interactive touchscreen displays. Most of the film and video clips are devoid of captions for the deaf and hard-of-hearing. An audio tour (a gadget that people can carry with them) is provided, but this is not a means for providing accessibility to people with sensory impairments (it provides additional audio information to the information that is already displayed). Interestingly, accessibility of the then-under-development museum was *not* on the agenda of the inaugural—and last—accessibility working group meeting.

Summary: successes of TheatreCo and StadiumCo, and the importance of organizational culture

TheatreCo and StadiumCo have achieved levels of success in their accessibility efforts that differentiate them from the other eight businesses in this study. Both organizations make accessibility a priority on their agenda *and* have made a good deal of progress modifying their products and services to provide accessibility to PWDs.

A single person was the initial catalyst for change at both organizations. Examination of the role of the catalyst for change and the ongoing work of people who are responsible for accessibility in these two organizations reveals the importance of a committed and supportive organizational culture. The way that the response to accessibility is set up throughout the organization can facilitate decision making that enables choices aimed at meeting the needs of customers with disabilities. A similar conclusion has been reached in the field of workforce equity and diversity:

Responsibility, accountability, and leadership are the keys to success in the champion strategy. (Frost, Schaeffer, & Ragona, 1996, p.58)

Aspects of organizational culture common to both organizations have allowed the successful implementation of a good number of solutions. In both organizations there is a shared cultural perspective of striving ‘to be the best’, and being customer-centric in solving business problems. Strong executive and board support for accessibility has been achieved and accessibility is generally seen as a high-priority agenda item. Following from this, responsibility and accountability for accessibility is shared as part of everyone’s job: accessibility tasks are carried out when necessary by the management and staff as a whole, rather than a single person or group dedicated to work on such tasks. Resources are also provided as and when necessary to enable tasks to be carried out (time, money, training, external sources of expertise, etc.).

TheatreCo has achieved a much higher degree of success in terms of meeting the needs of customers who have sensory impairments, and has generally been more proactive than StadiumCo in resolving accessibility problems. With the proactive response at TheatreCo comes formalized staff positions on accessibility, together with agreed-upon plans, oversight and monitoring. They also define their accessibility response in broad terms—proactively seeking to meet the needs of people with physical limitations, visual and hearing limitations, and cognitive limitations.

At StadiumCo, they have been proactive and have striven for ‘world-class’ accommodations, especially in terms of meeting the needs of patrons with physical disabilities in new construction projects. In general day-to-day operations they are diligent about responding to and resolving complaints, but accessibility complaints are few, and they are taking a reactive approach to most accessibility issues. Although they are aware of the limitations that people with limited or no hearing or vision have in experiencing the entertainment at StadiumCo, they are not placing an emphasis on overcoming those limitations. The work on accessibility is done in a silo-like fashion at StadiumCo (i.e., the events staff work diligently to ensure that the checklists for each event covers accessibility issues; but the people working on the museum exhibits were, apparently, oblivious to the needs of patrons with sensory disabilities). There is also a matter-of-fact attitude to accessibility at StadiumCo, in that they see it as part of everyday operations. This contrasts with the approach at TheatreCo, where accessibility activities are the subject of an annual awards ceremony.

The more formal and proactive organizational culture has possibly contributed to the higher degree of success achieved at TheatreCo. The achievements at TheatreCo have come about over a relatively short amount of time, and have been driven by a change in thinking instigated by one person that has impacted corporate/organizational culture as a whole.

In the next chapter, I continue to look at corporate culture and the role of the accessibility staff, by examining another catalyst, this time at CollegeCo, and her attempts to achieve successful outcomes. Her efforts are similar in many ways to

the efforts at TheatreCo, but achievements have only been possible in selected parts of the businesses, and have not resulted in a widespread change in CollegeCo's organizational culture.

Chapter 5.

Striving for organization-wide change

“And, of course, there was a lot of resistance. [People saying] ‘Oh, you don’t understand CollegeCo’, ‘They take 25 years to do these things’, ‘This won’t happen’, ‘I don’t know why you are trying to do it this way—you shouldn’t—that won’t work!’. When in fact it happened remarkably easily in a remarkably short period of time.”

Emily, coordinator of the student accessibility centre at CollegeCo.

This chapter tells a story of a new staff member at CollegeCo and how she is seeking to change the organization from being reactive to proactive on accessibility issues. She has entered an organizational culture where many people hold negative views towards disability, and where established work processes and accessibility-related policies are creating problems for students and staff. While her efforts have been successful in a number of departments, changes to the wider organizational culture in other departments are beyond her remit and yet to happen. Consequently, CollegeCo is an organization where there is a good deal of progress in terms of making services more accessible for students, but the same does not hold true for existing staff in other departments and potential employees who have disabilities.

The champion/change-agent role, and executive support

At CollegeCo, the student accommodation centre (SAC) is the department that students with disabilities are directed to if they need assistance and/or accommodations. Emily (51-60) is a new hire at CollegeCo, having been brought in to run the SAC one year ago.

Emily has 35 years of professional experience dealing with accessibility issues, and much of that has been in educational settings. Soon after Emily's arrival at CollegeCo she became a change agent in the system. Disability had been treated as a low priority item on the organization's agenda. The SAC seemed to be the group that was solely responsible for dealing with accessibility concerns at CollegeCo. Emily worked to change things, to raise the profile and importance of accessibility, and to make it a shared responsibility item throughout the college. Emily took on the task of 'championing' accessibility to elevate its priority within the organization.

Emily can be regarded as a primary catalyst for change at CollegeCo. This chapter describes change activities at CollegeCo with an emphasis on Emily's role, but the executive support afforded to Emily has undoubtedly been a facilitating factor.

Frost, Schaeffer and Ragona (1996) have suggested that to achieve diversity change in organizations, 'champions' are essential. Frost et al. (1996) say that a strategy that encompasses responsibility, accountability, leadership, and champions is best in the business context, and therefore the champion needs to first be situated in a leadership position. Emily's job title is listed with a rather modest-sounding title of 'student accommodations coordinator', and she says that this is because her immediate boss, the head of student services, is ultimately the leader of the group. While Emily is effectively the head of the SAC, the leadership situation is quite complex. Emily is empowered to lead initiatives in part through the support of her immediate boss, and the support of a new CEO who shares similar pro-accessibility views. Executive-level support for change is a useful start in any change process, in that it allows for a shared understanding in the organization on priority (e.g., Buchanan & Badham, 2008; Clegg, Courpasson,

& Phillips, 2006; Kersten, 2005; Kotter, 2007; Tjosvold & Wisse, 2009; Williams-Whitt, 2007).

Emily's experience as a change agent differs from Anita's at TheatreCo. Whereas Anita had been dealing with accessibility from within TheatreCo for 10 years before proposing radical changes, Emily came into the CollegeCo system as an outsider and she immediately set about fixing the most problematic elements of the system. In both TheatreCo and CollegeCo, a key element has been establishing executive level support in order to facilitate the change process. For overcoming resistance to change in employee diversity Thomas & Plaut (2008) place leaders at the focal point of diversity initiatives because of their impact on the organization as a whole:

Organizations by themselves do not choose to discriminate, harass, nor devalue diversity; individuals engage in those behaviours. Therefore, all of the individual-level explanations offered for diversity resistance apply when attempting to understand organizational behaviour, especially that of leaders. Leaders establish the values and in many ways drive the cultures of organizations. (p.16).

Williams-Whitt (2007) found that 'managerial attitude' was a key contributor in successfully accommodating employees who were returning to work after becoming disabled. Also in the field of employee diversity, Charlesworth et al. (2005) offer another opinion on leadership, based on their research of Australian companies. They find that executive level support is not a pre-requisite for diversity; "What is needed is senior management commitment and drive—encouraging employee input and feedback—as well as ongoing monitoring and assessment that makes clear links between EEO/diversity action and organisational effectiveness" (Charlesworth et al., 2005, p.xii). Batstone's quote summarizes the crux of the issue of organizational oversight: "Companies do not have to treat discrimination as if it were outside their control, like an earthquake or other natural disaster" (Batstone, 2004, p.61).

Initiating change: turning proactive

Charlesworth et al. (2005) found that having a positive business climate was not a prerequisite for diversity success; although having a people-focused/centred organizational culture appeared to be associated with proactive, planned diversity initiatives which were more successful than unplanned approaches. Emily's approach, supported by executive-level management, was proactive and planned. Her strategy of making accessibility a shared responsibility and a proactive, high priority agenda item paid dividends quite quickly, although she and her team encountered objections and resistance.

'Not the right image'

The SAC is poorly signposted and therefore hard to find on the CollegeCo campus. CollegeCo comprises several disconnected buildings spread over several city blocks. Some buildings are rented and some are owned by the college. There are very old and very new buildings, and lots of variation in architectural style. The SAC feels 'tucked away', located in one of the oldest buildings on campus, the Old Schoolhouse (classified as a 'heritage' building). Because the building is so old, accessibility is very poor. There is a temporary wooden ramp structure to the front door, no automatic door opener for the front entrance, and a number of the staff offices are located on floors that are not wheelchair accessible. Emily's tone emphasises the absurdity of the situation as she talks about the SAC's location and the embarrassment it brings her and her staff:

We are in a heritage building. We are in the Old Schoolhouse!... I mean, just the simple fact that we are in an inaccessible building speaks volumes to me.

The SAC has been located in this building for the last ten years. In her one year since joining the College, she has been pressing her superiors to raise the profile and the priority of the SAC within the organization. Location equates to priority, she says:

We need to be in an accessible space where that we have got visibility. To be hidden away in the Old Schoolhouse, doesn't reek of 'accessibility', doesn't reek of 'high prominence', doesn't reek of CollegeCo looking at 'best location' for us and accepting responsibility. I'm always raising it at every meeting I possibly can. I am hoping to become the squeaky wheel that needs oil, but I think I am becoming a dead bore. But I'm still going at it!

One of Emily's staff, Fiona, 41-50, an accommodations counsellor, has been doing her job at CollegeCo for seven years. She describes slow and scant progress (initially using a sarcastic tone):

We had crappy carpet and crappy walls for seven years and now we've got new furniture and carpet!... A lot of change comes about through complaint. The things get done because... they suddenly start to realize it's going to cost you a lot more if you don't. And it's a real shame it has to go that way. They don't get it until it actually costs them money in court and the bad publicity that goes with it. That actually instigates change.

In this reactive culture, Emily's complaints did pay off. One year later, the SAC moved to a more prominent location. The SAC has been added to the main student area with all of the other student service centres. The change has come despite some attitudinal barriers from her colleagues at CollegeCo, Emily says:

You see, prior to the last couple of years the philosophy around disability services here was segregated. You remember we were in the Old Schoolhouse. So we were a separate building, we were separate from the college. And in fact [in planning to put the SAC in its new location] besides the cafe, I was told from two different areas, that we '*weren't the right image*'. [This was] from colleagues. *They felt that disability shouldn't be [located] here because we 'weren't the right image'*. Meaning that they saw us as a negative, rather than just a service that's alongside everybody else's. I've never come across that in 30 years of working in a university. And I'm thinking 'this is taking me back years!' And what also shocked me was that

people actually said it. They might think it, but most people would stop [themselves]. *They felt very free to say it!*

Even though the move to a more prominent location has been made, Emily's account speaks of an organizational culture that on the one hand is making progress on disability, but on the other hand has some attitudinal challenges to overcome. A low priority has been assigned to accessibility (tucking away the SAC for 10 years) and responsibility for meeting the needs of students with disabilities is not shared by all.

In moving the SAC's location, Emily has been the primary change agent. She has also initiated changes to improve accessibility in both the examinations procedures and the IT services for students at CollegeCo.

Examination procedures

When she arrived at CollegeCo, examinations procedures were problematic. Providing accommodations for students with disabilities generated complaints from academics, and the behaviour of some students exacerbated the problems.

Emily describes how the majority of the complaints come from academics who are suspicious of the need for accommodation:

There were some complaints that had come through the Academic Registrar's Division about special consideration... They had questioned the number of students who are applying for special consideration and thought that there was a local doctor that was involved in giving out special consideration form-letters to students. And a lot of the students were going to this particular inner-city doctor's clinic to get their 'special consideration'. So, there was some suspicion around fraudulent use of special consideration, or overuse of special consideration.

Sarah, 41-50, the senior assistant registrar for CollegeCo describes the problem with certain students:

Some students will ‘shop’—it’s horrible isn’t it?—they’ll shop for the outcome they want. And they might be told by the SAC ‘this and this and this is quite reasonable’ and they [the student] will go ‘I want more.’ So they’ll run off to Counselling, [who] go ‘Oh my goodness, how horrible! Of course we’ll defer all of your examinations.’... So they’ll cherry pick and see what they can get! The ‘best deal’ for their particular ‘affliction’. And that’s causing a bit of a problem.

Emily says that a couple of students have taken their complaints to HREOC at both state and federal levels, and this sort of event has therefore become a concern for many at CollegeCo. She thinks that most of the complaints on the teacher side stem from inappropriate policy together with a general lack of understanding and scepticism about disability:

Here, it’s just, it’s a struggle. People don’t understand, the community doesn’t understand, the teaching profession doesn’t understand, and ...[there is nothing] about learning disabilities in their teaching programs.

Emily’s staff member Fiona describes a part of her job as “educating the educated”: a constant theme of her job is trying to teach other staff to understand policy. Emily describes how a large part of the teaching staff at CollegeCo, when they work through the necessary paperwork and make arrangements for accommodations think

that they would do this as a *gift* for us [The SAC]. They didn’t see it as part of their responsibility... So that’s part of that whole ‘disability stuff’ that it is always somebody else’s job. And if we do it, we do it out of gratefulness and gratitude. It wasn’t embedded in [the educational staff’s] thinking that this was actually part of their responsibility.

The percentage of students at CollegeCo who declare themselves as having a disability is around 4%, according to their own published figures. This includes students with physical, sensory, and cognitive (including learning) disabilities. With that many students with disabilities, the risk of more complaints—of things going to HREOC—is something that CollegeCo as a whole needs to consider,

attests Emily. She took it upon herself to start evangelizing the concept of shared responsibility, saying,

I ran some workshops, and had meetings with some of the key people, especially the exam people. Talking about how they could do it. Discussing the Disability Discrimination Act and what it meant—that it was everybody’s responsibility. It wasn’t just the SAC... So basically, it was more about me getting out there and talking with people, having meetings, and shifting responsibility, and how we could do it better. And getting a clear understanding about what is ‘special consideration’ and what is an ‘alternative arrangement’.

The policy that was initially in place when Emily started working at CollegeCo was named ‘Special Consideration’. The policy covered both students with disabilities who needed accommodation, and students who were experiencing an emergency such as illness or death in their family for which they would require a time extension to sit their tests. This dual policy leads to some conundrums: what happens when someone with a disability also becomes ill—is that two considerations or one? A student with a learning disability might need *extra time* to sit a test, whereas a student who has been bereaved is more likely to need to *reschedule* their test. Emily sums up the situation and the need for change:

There were a number of complaints that were coming in about the process. So when I was teasing it all out and trying to sort out some of the complaints that’s when the whole idea [came] of rewriting the policy, centralizing the exams, and looking at special consideration in a different way for all students not just the students with disabilities.

Emily suggested to colleagues outside the SAC that there should be two policies and not one. One policy should be for disability, with both the academics and the students responsible for doing what they needed to do together to have a successful accommodation (with the SAC providing guidance and support). The other policy should be for unforeseen circumstances like bereavements and illness. Emily proposed the idea to Sarah (the senior assistant registrar), over coffee:

Talking to Sarah [and another person], we were sitting around a small table. And [I was] watching the lights turn on: ‘Oh! Okay, I, I know what you’re talking about!’ And from then they just took it and went!

Despite the cultural problems at CollegeCo (the ‘not the right image’ comments) and despite some “doomsday people” (as Emily described them) the new policy went through the system remarkably quickly. Looking back on the process, the senior assistant registrar (Sarah, 41-50) said

It was a remarkable thing that we managed to get what has been a huge cultural change through as quickly as we did. We expected it to be deferred. What normally happens is that stuff goes up and someone goes ‘What about the blah, blah, blah?’ or ‘Have you got supporting documentation for the blah, blah, blah?’ And so it will be ‘pending approval’ and it will go back, and then somewhere else, and then come back here. It goes on for years sometimes! This one was approved just like that! It happened very, very quickly. And fantastic! We’ve had a very exciting wave of change, of processes that needed to be developed and stuff that needed to happen. And it was great.

Like Sarah, Emily also anticipated slow progress, and was pleasantly surprised when the policy went through quickly, saying

I was trying [with the policymakers] to take it one step at a time thinking ‘let’s go slowly here because it has been so confusing. Let’s just do one [of the two policies first]’. But they actually looked at it and decided ‘let’s not do that, let’s sort the whole thing out’. So, they took the ball and they ran with it... I might have got into that in March... and the policy was passed in December. So it’s only a matter of ten months... from *woe* to *go*.

With a ‘slow moving’ organization with a number of cultural barriers to implementing new procedures around accessibility, the immediate question is why this happened this way? From Emily’s experience with the process, she attributes the speedy implementation to two things: a new DAP in which wider, shared

responsibility was advocated; and a fortuitous availability of resources in the policy offices.

In the new DAP (produced primarily by the student services department and supported by CollegeCo executives), the seed of ‘shared responsibility’ had been planted, with responsibility being assigned to the various heads of department. This assignment of responsibility is similar to that seen in TheatreCo’s DAP. In order for shared responsibility to be accepted, persuasion is needed to help some people understand, Emily says:

So we started the shift [in thinking] and the DAP was also rolling out at the same time. So, there was a whole shifting culture from the SAC being a segregated office that met all the disability issues at the college to me working and being employed to make [CollegeCo] more inclusive. So it was a philosophy of mine that I brought with me when I came to work here... I wanted the college to accept responsibility for the alternative arrangements that were required. I didn’t want it to be a ‘grace-and-favour’ thing. I wanted people to clearly understand that this is CollegeCo’s policy and CollegeCo’s responsibility, not the SAC’s... I don’t think people realized that there was outside legislation, that legally they were mandated to do this³⁷ and that they could be asked why they hadn’t.

Although the concept of shared responsibility on accessibility was new, presenting it in this way, with the support of department heads as per the new DAP, turned out to be a successful strategy. Emily says,

So that was something that was fairly new to them... So, when the reality of the fact that they actually were legally responsible to do it, or the college is legally responsible, not just the SAC then, [we had] smoothed the pathway so that it went to them in an organized way.

³⁷ See Appendix A for the legal framework in Australia (particularly ‘*Access to Education*’).

Although Emily and others were working to change the culture at CollegeCo to one of shared responsibility regarding accessibility, Sarah says that the new policy only happened because her department had the capacity to do it (and not solely because it was important to do). Sarah says:

There wasn't an urgency... There was a capacity to get things done. So while we were getting things done, [the new policy] was one that we would like to get moving... It was very much a 'here and now'. 'I have an impact on this period of time—and it is significant—and it's right now'.

The new policy has swiftly changed the procedures at CollegeCo with regard to conducting exams. Furthermore, it has happened despite some negative attitudes about accessibility remaining in the culture. The change has been facilitated by Emily's role as change agent, the support that she has had from the CEO and executives responsible for student services, and the endorsed plan encapsulated in the DAP. Emily has advocated for shared responsibility. She has gone through a process of tying responsibility to legal imperatives, working on peoples' aversion to complaints reaching HREOC. The priority status of disability has also been elevated through the relocation of the SAC offices. With the necessary groundwork in place, the change in policy was sparked by an 'a-ha!' moment, after Emily's suggestion, over a cup of coffee.

IT accessibility

CollegeCo had been "stung" (Emily's term) by a DDA lawsuit brought by a student who was unable to use the computer systems on campus. Emily had a concern that the upper echelons of the college might consider the amount awarded in the lawsuit trivial compared to their overall IT budget: "The lawsuit was very minor, but I made it major, as a reason to do some change". She argued that the lawsuit could easily happen again if the computer problem that caused it was not fixed. Emily's team became a proactive force driving change in the IT department, conceiving a project to include accessibility software on all campus computers.

Prior to the IT accessibility project, computer accommodation was handled on a reactive case-by-case basis. If a student needed assistive technology (AT) for accessing the college's IT systems, the student would first go to the SAC. The SAC staff would try to work with the IT Services (ITS) department to accommodate the student with the necessary AT software and/or hardware. The onus was on the SAC to oversee and solve the problem that any given student (or staff member) had. A problem with this model of operation is that it does not fit with the 'shared accountability and responsibility' model. In other words, the situation needed to be reversed: if computers are the ITS's responsibility, they should be responsible for the process, using the SAC as a source of support; not the other way around.

The SAC staff proposed to ITS a change to the Standard Operating Environment (SOE, the computer system that works on all standard computers for staff and students at CollegeCo). The SOE should make available a number of AT programs for any person to use. Such a revision to the SOE would, the SAC staff reasoned, have benefits in that students with disabilities would not be 'tied' to one adapted computer, and that fewer students would have to come to the SAC seeking AT accommodations. This argument is supported by related research on the contributing factors to low rates of employment of many PWDs, namely the difficulty of using mainstream technologies (e.g., Potok, 2002; Scherer, 1993; Stapleton & Burkhauser, 2003) and proposals in the literature that technological solutions enabling PWDs to work should be incorporated as an essential part of a business's diversity plan (e.g., Hogan, 2003). To this end, the DAP included a task to "Ensure appropriate adaptive technology and disability software is available at CollegeCo computers in common spaces". The ITS department directors agreed to the project as a part of the development of the DAP, and the executive director of ITS was assigned responsibility for this task.

The actual project work did not start off well. The ITS staff who were at the initial project meetings did not include any of the ITS department's directors. The staff who were at the meetings were technical staff who had a vested interest in keeping the system as simple as possible. Putting AT in the SOE appeared to them

to be antithetical to their goal. Consequently, many objections came from the ITS staff. Emily's staff member, Gerald (31-40, a counsellor at the SAC), was assigned as SAC's representative on the project. The objections from the ITS staff were, according to Gerald,

Voiced by people that weren't really in a position to. It wasn't their decision to make—whether assistive technology should or shouldn't be available... Initially [they] didn't like the idea and really just about every argument you could possibly think of for not having assistive technology was voiced... Like you have technical staff arguing 'Well this shouldn't be available because—we won't have screen reading software on a computer—because if a student is sitting next to someone who is using that software their concentration will be disrupted by the audio output of this software'... The student just has to wear headphones!... There were some technical arguments that were legitimate technical arguments, but there were some... trivial kind of arguments that were more to do with... 'not wanting to make [AT programs] a part of the SOE because it would require a lot of work'. Because to make it part of the SOE there has to be a lot of compatibility testing done. It also means that it's there to stay; it means that this has to be maintained on an ongoing basis. So there was a lot of resistance to having it as part of the SOE.

Some people in ITS suggested an alternative solution, to give any student with a disability a laptop with the AT that they needed on it. Gerald's counter to this was

We didn't like that idea... because it wasn't really kind of making the system inclusive... It's not really solving the problem on an ongoing basis, not really. It would be great for a student to be able to come to CollegeCo, not have to go to SAC, because CollegeCo [SOE] is *accessible*.

Another reason not to follow ITS's suggestion to give laptops to students was that it would probably have a similar initial price tag to the one they proposed, and it would have higher long term maintenance costs (maintaining lots of laptops as opposed to maintaining one centralised software suite). The real reason behind

ITS's suggestion emerged later on. It turned out that 300 old laptops had been donated to ITS, and ITS did not know what to do with them. Emily (somewhat sarcastically) commented that her impression was that ITS would be making "a nice donation to the '*poor disabled students*'" (i.e., giving them something that was free, old, and sub-par).³⁸

After some halting efforts in the beginning, things changed for the better when the director of ITS came to one of the meetings, Gerald says:

There was one ITS person who was saying 'no, no we're not going to do it!' And the director [of ITS] was there at the meeting and said 'actually I can't see why you can't do this'.

Gerald demonstrated how the IT department leader slapped his hand down on the table dramatically, telling his staff forcefully:

'No excuses. We're doing this. We're going to make accessibility happen. It's a high priority. Do it!'

From that moment on, the IT team's demeanour changed radically, Gerald said—it went from excuse after excuse to having engaging discussions of what would be needed to get the job done. Thus the change had happened not as a result of repeated arguments for accessibility being made by Gerald's department, but by the order for responsibility and accountability being directly given by the IT department's leader to his staff. It was, said Gerald, just the good fortune that the leader of the IT department came to one of their meetings that enabled a successful project.

³⁸ Another possible explanation is found in the *Social Comparison Theory* of motivation, which "suggests that attitudes about a particular job are likely to be constructed from both the present job situation and past experiences that are linked to the present job" (Bowditch, Buono, & Stewart, 2008, p.90). Considering the continuing prevalence of the medical model of disability and the 'otherness' aspect of how disability is still widely viewed in Australian society, the ITS staff may have concluded that the laptop donation was a perfectly adequate solution.

The many objections that had been raised by the ITS staff could be explained in part by the literature on cognitive dissonance—that people are more likely to justify their position than take corrective action (Pratkanis & Aronson, 2001; Tavris & Aronson, 2007).

The objections might also be explained in part by the literature on responsibility and decision making. The assignment of responsibility to the ITS technical staff had evidently *not* taken place before the ITS director slammed his hand down on the table. Before this moment the technical staff's responsibility was to keep the SOE as simple as possible, and including AT was something they were unfamiliar with, and hence did not feel in control of. Speaking of this type of situation, Bandura (2001) points out:

People are not especially eager to shoulder the burdens of responsibility. All too often, they surrender control to intermediaries in activities over which they can command direct influence. They do so to free themselves of the performance demands and onerous responsibilities that personal control entails. (p.13)

To that point in time, even though the ITS director had accepted responsibility for the project through its inclusion in the DAP, the verbiage embodied in the DAP (to “promote an environment of shared responsibility”) had not reached the ITS staff. Consequently, the ITS staff had regarded the project requirements coming from a peer-level (Gerald and the SAC), rather than from their superiors. With peer recommendations, team members are much more likely to resist because: “to cooperatively acquiesce to the recommendations of a peer necessarily implies taking a position that is subservient to the peer” (Kersten, 2005, p.194). In addition, there were no PWDs employed in the ITS department, and this situation promoted a silo-like behaviour (Sandler & Blank, 2005) that perpetuates the ‘otherness’ (e.g., Goggin & Newell, 2005) of disability (in short: ‘this is not our responsibility’). A tension thus exists between people who are seen as the ones *initiating* change (in this case the SAC department staff) and those *blocking* change (in this case, ITS department staff):

Initiators are about making new things happen. They have a wealth of fresh ideas. They might be wildly optimistic and have a tendency to rush to action, but their creative energy, and drive can be instrumental when it comes to innovation. In contrast, blockers question the merit or wisdom of new decisions. Instead of merrily going along for the ride, they raise points about the potential harmful consequences that might follow (Brafman & Brafman, 2008, p.159).

Alvesson and Sveningsson (2008) point out that the literature on change is usually biased positively in favour of the people making the change, but in many cases change may not be justified or warranted. Resistance, Alvesson and Sveningsson go on to say, is not always about being simply oppositional, and that change and resistance to it is driven by and affected by a variety of internal and external factors (i.e., the wider corporate and societal cultures in which the business exists). In the beginning, the ITS staff did not perceive the project as a priority and resisted change. Once the director had made his short but dramatic speech, the attitudes of the ITS staff totally changed, Gerald says:

It changed from being ‘No we can’t do this’ to ‘Well actually how [are we] going to do this?’ [and even then to] ‘We’ve got to do it, *let’s do a good job of it*’.

The resulting bulk of the SOE project, as described by Gerald, was not without its difficulties because the ITS staff were dealing with concepts that were new to them. However, in general it went smoothly once the attitudinal change had taken place. It wasn’t that the technical staff were incapable of making the changes, they just did not want to:

Problem-solving skills mean little if a person is not motivated to use them. (B. Zimmerman & Campillo, 2003, p.240).

This IT accessibility story echoes the story of the exam policy, in that a turnaround happened very quickly. The revised examinations policy and the new IT SOE with on-demand AT for all students are examples of significant changes

in the last couple of years in the way CollegeCo operates. Emily has also managed to raise the profile of the SAC, moving it to a more prominent location on campus. However, success has been limited to aspects concerning accessibility involving students; and not for accessibility involving staff.

It was only as the result of happenstance that the Director of ITS was in one of the meetings that caused the change in attitude of his staff, rather than the result of any systematic organization-wide training on accessibility for CollegeCo staff. While responsibility for accessibility has been passed to the executives in charge of the various departments, a concomitant willingness to solve accessibility problems at lower levels seems to exist only in some places at CollegeCo. A shared sense of responsibility is certainly not evident in the organizational culture.

The shared responsibility in the examination procedures and IT projects seems to have come about as a result of Emily's arrival at CollegeCo, executive support, and having the new DAP. However, Emily cannot be everywhere at once. One of the current difficulties in getting the 'shared responsibility' message to the rest of CollegeCo is a *problem of scale*.

Change, and a reactive organizational culture: the problem of scale

Deborah, aged over 60, is the executive responsible for student services at CollegeCo. Talking of the challenges that face CollegeCo in getting 'accessibility' embedded in the organizational culture, Deborah says,

I think it's probably fair to say that the SAC and the DAP are not on the top of everyone's priorities, equally, across the place. There are two reasons for that. One is its human nature, because you tend to focus on what you need to focus on at the time. And the other one is that CollegeCo's a large organization. So you've got not only challenges around communication but there [are] also challenges around scale.

The issue of scale is important in examining the various stories of progress and struggle around disability access at CollegeCo. It is clear that Emily has worked

as a ‘change-agent’ or ‘champion’ for accessibility, but in large organizations the champion model only goes so far (Oshiotse & O’Leary, 2007; Sandler & Blank, 2005). Disability champions cannot be involved in a way that influences all relevant projects. Emily recognizes this, and she speaks of the unfulfilled need to have a consistent organizational approach to disability:

It’s a huge organization [and] each department sees themselves as a separate entity. They tend to have their own way about doing things.

Emily is endeavouring to work with the executives at CollegeCo to establish an environment where responsibility for disability issues resides not just within the SAC. At present, the SAC handles students, and the HR Employee Equal Opportunity Office (EEOO) handles issues of diversity in the CollegeCo workforce. Even so, the SAC remains the *de-facto* centre of all accessibility knowledge and procedures in the college, especially as far as technology accommodation issues are concerned. The SAC is named the ‘*Student Accommodations Centre*’, but it is also the place to which the EEOO refers *staff* who have accessibility problems. Deborah (executive responsible for student services) says that she is becoming bothered by this situation:

I’ve begun to ask why aren’t they together? That’s interesting too, in terms of responsibility. Because it begs the question why is disability not regarded as an equity and diversity issue? Why is it regarded as separate? I think disability for staff is very ‘under done’... I don’t recall seeing anyone at CollegeCo arriving for work in a wheelchair, for example.

One of the main problems to be overcome at CollegeCo is that departments other than student services are yet to become proactive on accessibility. They remain problem-reactive, and responsibility for accessibility is not shared in the same way that it has with student accommodation issues. Stories at two of the other departments, Buildings/Facilities, and HR/EEOO, highlight the problem of scale that exists when people like Emily and the executives who back her strive for organization-wide change.

Buildings/facilities

The SAC staff work with the Buildings/facilities department staff from time to time as problems occur. The initiator of a disability access related task can be either the SAC or the Buildings/facilities department. While the major component in building accessibility is the physical design, the other is how buildings and facilities are used by their occupants. Emily relays two particular stories that illustrate problems with choices made by building occupants that point to a lack of training on accessibility. In these instances various staff set out to solve problems, but only created different accessibility problems in the process. The first story concerns lifts:

There was a lift in Building L you could only access through a pass card. Now, that building was ten floors, had one goods lift, and it had escalators that never worked, and the rest were ramps. I've never seen anything quite like it... it would have been built in the 70s I suppose... The escalators were always broken down. But, I kept saying 'this lift needs to be open to everybody'. They thought I meant all students with disabilities, and I'm saying 'No, no, I mean for everybody'. I can't tell when a member of the community who is a wheelchair user comes on campus. You might have a visitor that's using crutches, how are they going to get to the eighth floor? What's the provision for people who have got heart conditions that they are unaware of, walking up 10 floors of ramping? [So their philosophy was limited only to] PWDs who had a card. Not thinking of the wider community, not thinking of something that could possibly happen.

The second story concerns toilet facilities:

Another [example is how] the disability-accessible toilets outside the library were locked, and that was because some drug users from off the street [used] that toilet once. So, it meant that anyone with a disability had to ask for the key from the information desk in the library [and wait for someone] to come and open the toilet. The toilet should be accessible like every other toilet, unlocked and accessible... So, quick solutions, reactive solutions seem

to be the way it went rather than looking at what the problem is and how can we solve it without imposing another problem... [but] every now and again... somebody has gone and locked it again thinking they are doing the right thing. So we have to go back and say ‘No, no, no, this door is to stay unlocked’.

The problem, from Emily’s perspective, appears to be that staff are not trained to think through the problem with empathy for the needs of *all* PWDs—not just students, but staff and visitors too. The solutions for both the lift access and the toilet key problems has taken persistence from the SAC rather than the Buildings/facilities department. From Emily’s account it is still the SAC’s task to monitor these types of problem.

In some problem cases, the SAC is not involved, and staff are learning themselves the ‘hard way’ about accessibility. For example, in the School of Engineering, Edward (51-60, director of planning and resources for the school) describes how one Engineering faculty is a wheelchair user and accommodations have been made only on the floor on which the faculty member works (with the installation of accessible toilets); but most of the rest of the current multi-floor engineering building is difficult or impossible to access in a wheelchair. A new engineering building has been approved in the college budget and a meeting was convened to discuss the proposed design. It was hoped that the new building would solve the accessibility problems of the existing building, and the faculty member who uses a wheelchair was invited to the meeting to provide input. To the embarrassment of himself and his department head, the meeting was scheduled in a room that was inaccessible to wheelchairs. Since this incident, Edward says, the head of Engineering has been ‘strongly in support’ of the policy of inclusion. In fact, Edward’s take on accessibility in general is that now “It’s considered of vital importance to have access for PWDs when we design our buildings, or existing buildings. We ensure that PWDs are catered for.”

Because of the low numbers of staff who have disabilities, occasions in which a building accessibility solution are needed rarely occur. Henry (51-60, Executive

Director of Facilities), says that in the eight years that he has been doing this job for CollegeCo,

We've really only had two complaints. One was from a lecturer in social science which was to do with Building C. And that was unfortunate because she was a part-time lecturer, and within the school they hadn't referred her through to the SAC. So we didn't know about the issue. [If] it was difficult to access we could have made arrangements until we upgraded the building. Security [could] give her access to the [service] lift, et cetera. So, generally, there is not something that we can't find a solution to.

For new buildings and renovation, Henry says, accessibility is viewed as a high priority item. However, his facilities department has no choice but to include the features required in the building codes (otherwise construction approval would not be possible to obtain). A number of existing buildings at CollegeCo pre-date accessibility standards and building codes, and as such have some inherent accessibility problems. Henry talks of both the *priority* and of the *struggle* his department has across the organization, as far as accessibility is concerned:

As long as we can make the bulk of the college accessible, I think that's the main thing... Our baseline, or the aim, is eventually to get things to a stage where everything is compliant. But as you would appreciate with all of the building stock that we've got, we have quite a lot of buildings that are difficult. And so this decision making process for us is about progressively doing those things that will make a difference towards accessibility for most people in the general sense.

Training of staff in the maintenance of an accessible facility is apparently ad-hoc rather than methodical, as Emily's account of the problems with lifts and toilet access attests. Accessibility issues for existing buildings are mostly dealt with on a reactive, complaints-based basis. The proactive approaches that have been introduced and adopted elsewhere at CollegeCo are, therefore, not in evidence in this department, and in the training of the staff who take care of the facilities at CollegeCo.

Human Resources/Employee Equal Opportunity Office

Part of the response to accessibility issues in any business concerns the hiring and maintenance of its' employees. In Australia, 53.2% of PWDs participated in the labour force in 2003, as opposed to 80.6% of the non-disabled population (HREOC, 2005). Participation of PWDs in the labour force also declined by 1.7% between 1993 (around the time of the enactment of the DDA) and 2003 (HREOC, 2005). In 2003, PWDs who were employed earned on average 56% less income than nondisabled individuals (HREOC, 2005).

Stapleton and Burkhauser (2003) describe the main problems around diversity in employment of PWDs as a 'policy puzzle', in that many have tried over the years to solve the problems, but solutions remain elusive. The low participation numbers are a clear driving force for research: there are low labour force participation and earnings rates in Australia (HREOC, 2005) and elsewhere (e.g., Erickson & Lee, 2008; OECD, 2003); and there are declining rates of labour force participation in Australia (HREOC, 2005) and elsewhere (e.g., Stapleton & Burkhauser, 2003).

Very few staff at CollegeCo have disabilities. As a result, staff accommodations do not take much of SAC's time and resources. This situation highlights a wider problem at CollegeCo, that disability and staff diversity is not seen as a high priority agenda item. Dana, 41-50, an officer in the Employee Equal Opportunity Office (EEOO), part of the HR department at CollegeCo, describes how she sees 'responsibility' for accessibility as coming from top-down:

There [are] the various department heads who are responsible for their academic staff and so on, they are all responsible... So they are supposed to be building the culture. Imbuing their people with this same concern.

While the DAP has been integral to meeting the goals of Emily at the SAC, the DAP does not have any direct relevance to staff, Dana says,

The DAP relates to students. And that came out of a need that was brought to us by the Federal Department of Education in relation to the DDA and its

application for standards for students in education... No, we don't have [a plan for staff..] My former principal advisor... her attitude was that we don't need one because there are ways of dealing with issues if the person feels that they are being discriminated against... I learnt at her knee, shall we say, and I don't disagree with her.

The text of the CollegeCo DAP is indeed heavily focused on students. There are specific action items to train and raise awareness of academic staff in meeting the needs of *students* with disabilities, but there are no specific action items to increase the diversity of the *workforce* at CollegeCo. The EEOO relies on the existence of an equal opportunity policy, rather than having a planned, proactive approach, Dana says:

It may be that for some people it would be better if we had [a DAP for staff] in place so that we could point to it and say 'this is your responsibility, as a manager, you are required to do this'. At the moment we can't do that. We say 'we expect you to, because we have an equal opportunity policy'.

The result of the responsibility coming from the top-down and having the equal opportunity policy, Dana says, is that:

It comes down to us from above, that issue about 'fairness' and being a college that's an equal opportunity employer... So there's an 'ownership' from the very top of the organization, from the council down, that 'We are this sort of an organization. This is who we aspire to be. And this is how we'll behave.'

Dana says that processes are informal with regard to the policy—that there is a "hope" that managers will be proactive. While there are *no* formal practices to increase the diversity of the workforce concerning PWDs, there *is* a formal practice concerning indigenous populations, Dana says:

Every advertisement we put out says we are an equal opportunity employer... But there's nothing that says we're looking to try to employ more PWDs at this point... At the moment [for indigenous people] it's a

more active process. Only this year, since we recruited an indigenous recruitment coordinator. He is actively out there trying to promote CollegeCo as a target for indigenous staff coming in. [This was set off by] union pressure... I think it's come down as a part of government policy.

It is evident from Dana's description that responsibility for accessibility in any formal sense has not trickled down to the EEOO. A formal proactive approach around disability is possible, as the indigenous-employment initiative shows, but such an approach has not been initiated. Instead, the department remains primarily reactive on disability issues.

Dana says only a small number of problems have been presented to the EEOO during the two years that she has worked there, and in each case a fix has been found. Even so, Dana admits that, regarding such fixes, the reality is that:

We tend to be one of those 'leviathan-like' organizations where it can be slow... But what we would hope is that if the staff member has a particular physical need that [the new staff member] would be able to point us in the direction of an external agency that might be able to provide us with the support we need.

In summary, Dana describes the EEOO staff as being quick to react, with a team of problem-solvers ready to work on any problem that comes their way, but for the necessary solutions when a problem arises, they rely on other departments (like the SAC) or the new staff member themselves.

The practices at the EEOO are consistent with the findings of Charlesworth et al. (2005) who looked at several Australian businesses, saying that diversity is usually HR policy but not HR strategy:

Regardless of the different drivers to action, the major responsibility for EEO/diversity strategies rested with HR departments/personnel, with such strategies generally seen as a key HR function. However, while specific EEO/diversity action

may form part of an HR ‘menu’ this does not necessarily mean that EEO/diversity action is part of a general HR strategy. (p.42)

Although the equal opportunity policy statement is added to each and every job announcement, the numbers of problems coming to the EEOO have been very few. There is a very low representation of PWDs in the CollegeCo workforce, Dana says: “in terms of staff with disabilities who have disclosed, if it was one per cent I’d be surprised”. A lack of problems and/or complaints coming to the EEOO on this matter could explain why a proactive approach has not been seen as necessary. In the case of the accessibility for students, Emily had said that it was a legal complaint that had spurred action initially (although only with her championing the cause by working to elevate executives’ perceptions of the seriousness of the complaint and its ramifications). In related research, it has been shown that a lack of complaints is often interpreted to mean that ‘satisfaction must be high’; but this is a mistake: what usually happens is that people do not complain, they just go elsewhere for service (e.g., Barlow & Møller, 2008; Stauss & Seidel, 2004). A reactive group such as the EEOO, in which complaints are diligently handled is quite different in nature to a proactive group that is trying to expand its customer-base (as was the case in TheatreCo).

CollegeCo has ill-defined policies around disability and workforce diversity. This type of problem is still exhibited at many businesses despite many years of research and recommendations (Ball, Monaco, Schmeling, Schartz, & Blanck, 2005). Resistance to change in HR departments is widely evident, but it has been argued that even so, “Diversity resistance is a relatively unexplored topic within human resources (Thomas & Plaut, 2008, p.11). Carr-Ruffino (1999) talks of the ‘disability comfort gap’ being a factor in the response of HR people to diversity initiatives. Scotch and Schriener (1997) point out in their discussion of the human variation model of disability that “many employees tend to utilize human resource policies that are needlessly inflexible, with screening practices [...] that are insensitive to the individual capabilities of employees and job applicants” (p.157). Boucher (2001a) argues that much of the literature on diversity, and much of the practice, has assumed the medical model of disability.

In cases where there is executive level support for diversity initiatives, but little middle-management and employee ‘buy-in’ because of a lack of ‘sufficient marshalling’ throughout the company, resistance should be expected because people do not fully understand the issues they are resisting (Matton & Hernandez, 2004). Resistance can be at the individual or organization level, and can manifest itself in subtle or overt ways (e.g., providing mixed messages, having it be a ‘non issue’, establishing beliefs that diversity is too time consuming or complex) (Thomas & Plaut, 2008). Where specific tasks around accessibility are not incorporated into the ‘roles and responsibilities’ of HR and other staff, the tasks are likely to remain unattended (Williams-Whitt, 2007).³⁹ These observations from the literature appear to be relevant to the way HR and EEO are handled at CollegeCo.

Similar to Buildings/facilities, the practices in the EEOO are in stark contrast to the proactive approaches that have taken hold elsewhere at CollegeCo. Although successful strategies for accessibility have been introduced in some departments, they are not yet pervasive across the organizational culture. The problem inherent in this situation has since been recognized at the executive level. At the behest of the CEO, Emily’s job has been reclassified and Emily has now begun a project to examine how the successes so far can be translated to other departments. Emily sums up the shift in thinking that she and the new CEO are working on, saying of other departments at CollegeCo: “We’re on their agenda; they’re not on ours”. Even so, Deborah (executive responsible for student services) says that although she is encouraged by the progress made so far, the more proactive approaches exemplified by Emily and the SAC team remain to be spread and accepted throughout the organization.

³⁹ Although I have concentrated on recruitment in this discussion, Williams-Whitt is specifically referring to (directly related) tasks around HR return-to-work procedures for employees who have become disabled during their time as an employee.

Summary: CollegeCo—difficulties in transforming organizational culture

The prevailing culture at CollegeCo has been one of responding to complaints, at least as far as accessibility is concerned. This situation has given rise to the new organization-wide project. This project has been assigned to Emily, underscoring the importance of her role as a ‘change-agent’. The arrival of Emily and other key personnel facilitated fast transition to a new policy for examinations. The pace of change was surprising to those involved, including Emily. Many of the elements seen earlier in TheatreCo’s successful response to accessibility are seen in the examination policy project and the IT SOE accessibility project, such as executive level backing and priority; a planned, proactive approach; and actively fostering a sense of shared responsibility for accessibility tasks.

In the literature on ‘champions’ in the field of diversity initiatives (initiatives that are more associated with workforce issues than customer service issues), elements of Emily’s change-agent approach can be seen.⁴⁰ Interestingly, in the study of CollegeCo, the group responsible for workforce diversity policy (EEOO) was not impacted by the change-agent. There was a view in the EEOO that the DAP did not and should not apply to staff issues. Passive measures of encouraging applications from, and employment of PWDs, accompanied by a “hope” (Dana’s term) that managers will enforce diversity policies, were how the EEOO tackled disability. There remained a reactive culture in this department, a culture which was also in evidence in the Buildings/facilities department.

The main problem is one of scale. In her original position prior to being re-classified, Emily was tied to one department, namely student services. Though she achieved success in changing the culture in a number of cases, her reach is limited. Elevating the importance of change to the organization as a whole

⁴⁰ These issues have been discussed earlier, but notably the call for employing ‘champions’ as a model of operation (Frost et al., 1996); the importance of gaining executive level support (Matton & Hernandez, 2004); the importance of managerial attitude and employee responsibility/involvement (Williams-Whitt, 2007), and the importance of a planned, proactive approach (Charlesworth et al., 2005).

requires endorsement and a priority statement that the CEO is in a position to make. Emily, the CEO, and other executives are now working together to achieve the greater organization-wide changes to improve accessibility for both staff as well their CollegeCo's 'customers' (mainly the student body).

As I noted in *Chapter 2, Knowledge gaps* (see p.36), the link between the diversity of a business's workforce and the accessibility of its products and services has yet to be adequately studied. The only direct study of this is by Sandler and Blank (2005), who studied Microsoft Corporation (MS), one of their goals being to answer the question "How has MS corporate culture affected its employees with disabilities and the development of its software products?" (p.42). They go on to say that, unfortunately, "we only have scratched the surface of that question" (p.63). The quest to discover links between employee diversity and product development were hampered in part by the low number of potential employee participants to talk to: only 0.005% of the MS workforce had identified themselves as having a disability (Sandler & Blank, 2005).⁴¹ Sandler and Blank further explain that a difficulty in this type of research is that,

Microsoft's corporate attitudes and belief systems (culture) did not lend itself to precise quantification and categorization. Other systematic—reliable and valid—measures of disability workforce dimensions and corporate culture are needed" (p.60).

Though diversity initiative advice is available in the form of books (e.g., Batstone, 2003; Carr-Ruffino, 1999), and academic journal articles (e.g., Matton & Hernandez, 2004; Schur et al., 2005; Stone & Colella, 1996), achieving the actual practice in business remains difficult. The 'business case' is often put forward for diversity initiatives (Charlesworth et al., 2005), but these 'business cases' are often only rhetorical, "with little rigorous cost/benefit analysis or measurement of business outcomes undertaken" (p.xii). In the 'disability' subset of diversity initiatives, guidance has been developed for businesses (e.g., Hogan, 2003;

⁴¹ This figure can be compared to the number of PWDs, aged 21-64, who are employed (US population): 12.8% (Erickson & Lee, 2008).

Lengnick-Hall, 2007; Riley II, 2006), but there remains the ‘puzzle’ of employment rates for PWDs declining (Stapleton & Burkhauser, 2003). Past research has tended to concentrate on one of these areas or the other, with little cross-over between the two. Those who did try to make a cross-over analysis (Sandler & Blank, 2005) were hampered by low workforce participation rates (and perhaps this has put them off trying to make this connection again⁴²).

Research from the field of organizational behaviour has suggested that for substantial change to take hold, an approach incorporating cross-organizational factors is required (Alvesson & Sveningsson, 2008; Bowditch et al., 2008; Buchanan & Badham, 2008). My findings at CollegeCo, TheatreCo and StadiumCo show that a number of initiatives to improve product and service accessibility for customers have been achieved, and that some of the success factors at play have been cited in the literature on workforce diversity initiatives. However, what appears needed to be successful is an organization-wide approach (as in evidence at TheatreCo) if all aspects of business operations are to be improved for PWDs. Future work in this area may, therefore, require a cross-over not just in terms of employee diversity initiatives and product/service development, but also cross-over considerations at all levels of seniority in all departments in terms of organizational behaviour. The results of such future research may answer the earlier call for better “measures of disability workforce dimensions and corporate culture” (Sandler & Blank, 2005, p.60).

⁴² In a summary of past research in employee diversity, and a look ahead to the future of research in this field, Blanck et al. (2007) address issues such as the requirement of having AT and universally designed products available to enable PWDs to be a viable part of the workforce, but they do not return to the earlier question (Sandler & Blank, 2005) of whether a successful diversity culture can be linked to more accessible product and service development.

Chapter 6.

Difficulties turning 'organizational priority' into successful action

“[Disability access is] something we here at the VisCom Museum treat very, very seriously. And it’s not just because it’s the ‘flavour of the month’, it’s because of that ‘visitor experience’.”

*Ian, Buildings Manager,
The VisCom Museum.*

“[On the accessibility of the interactive technologies] I knew all the issues that were involved, I knew all the fights I would have to go through [...] and I just went... ‘I can’t do that!’”

*Quentin, New Media Department,
The VisCom Museum.*

Accessibility was stated as a high priority agenda item at TheatreCo, StadiumCo and CollegeCo. In the stories from these three businesses (previous chapters), successful approaches were clearly identifiable—with ‘success’ being defined as a business-response in which people are endeavouring to make their existing or future products/services more accessible. In the other seven businesses in this study (this chapter), a statement of ‘priority’ is also found, but there has not been the same clear indication of successful action seen at the preceding three businesses. In this chapter, I look at each of these seven businesses and examine the reasons why it has been difficult to transform accessibility from an ‘organizational priority’ into successful action.

Only one department's responsibility

At AirlineCo, Lyle, 41-50, is the customer care department manager, and Yasmin, 21-30, is a service improvement manager in Lyle's department. The team of Lyle and Yasmin operate as an APO (to keep the same terminology used elsewhere in this thesis and previous studies).

According to Lyle, AirlineCo recently switched from being primarily operationally-driven ("getting the planes in the right place and at the right time") to being customer-satisfaction-driven ("what the customer needed to fit their specific need"). Meeting the needs of customers with disabilities was part of this new focus, enabling the formation of the APO.

One of the APO's main means for learning these issues and gaining customer input has been to set up a "forum of representatives from the disability lobby groups and membership organizations", run by Yasmin. This forum meets three times each year to consult on accessibility improvements to AirlineCo's services and products. The forum is also employed as a training aid for AirlineCo, "part of our ongoing training for the customer service delivery staff", Yasmin says. This forum is "how we get our insight, really", says Lyle.

Given that the APO is less than three years old and situated within a large organization that is dealing with the cultural change of focusing on the customer, Lyle says that they are, like the rest of the airline industry, only at the early stages of tackling accessibility issues⁴³:

I think there's a long way to go with disability access world-wide and in all service industries for sure. So I would say that AirlineCo is ahead of the curve, but it still has fair amount of work to do. To indoctrinate the culture within the business, or the concept itself of accessible transport across the

⁴³ Backing this statement up, Lyle says that when the government produced accessibility guidance around transportation, they included trains, buses and trams, but neglected to include air travel. This has since been fixed, with the input of AirlineCo.

business... I think we've got some cultural evolution to go, before we are actually more competent in the area.

Both Lyle and Yasmin have relayed their enthusiasm and passion for making AirlineCo as good as they possibly can in terms of accessibility. Lyle says "this is an area that we are quite proud of the changes we've made", and Yasmin says "we are trying so hard to improve the service". There is a sense of high priority conveyed by these statements.

At AirlineCo, the direct contact (face-to-face) customer service elements of the business are improving through new training and awareness programs, Lyle says, but many of the other elements are outside of the APO's control. For example, the design of most aircraft prohibits bringing wheelchairs into the main cabin.⁴⁴ The design of the in-flight entertainment systems has traditionally been outside of their sphere of influence. The airport lounge environments are beyond their control, as the space and the technology in the lounges is rented from third parties. However, the APO is *seeking* to have influence in some of these areas, and trying to resolve some of the issues. Lyle says,

We are increasingly having an input into the products that we buy in or the systems that we buy in. For example, with the [newer] aircraft that we are in the process of purchasing at the moment... we have already input into the spec[ification]—the needs of customers travelling with mobility aid needs. And that is the result primarily of our refocus that I was talking about a moment ago... And responding to that we've learnt, what we need to be asking for, when we buy aircraft, and when we buy entertainment systems and when we buy anything.

In looking at AirlineCo's disability accommodations, Lyle's account of it being a relatively new thing, means that there are a number of legacy problems. The AirlineCo website from which customers can usually book flights is not available

⁴⁴ The inability to bring wheelchairs into an aircraft's main cabin has been accepted as unchangeable in the government's transportation guidelines for the DDA (see *Appendix A*).

for use if the customer needs an accommodation. If the customer needs any kind of assistance at the airport or on the aircraft—for example, because they are unable to see, or because they need to bring their wheelchair and have it placed in the hold—they can *only* book their flight over the telephone. The website also has some issues that would render it difficult to use with screen reading software commonly used by people who are blind. In the area of information and entertainment, captions for people who are deaf or hard of hearing are inconsistently applied. For example, on short-haul flights captions are provided for pre-flight safety briefings, but not for television shows. On longer flights, customers can choose from a range of films and television shows using personal entertainment systems. While some older films and selected television shows delivered via the personal entertainment systems are captioned, almost all of the newer films are not captioned. At the airline’s airport lounges, captions are not displayed on any of the numerous televisions that provide network news for passengers waiting to board.

The responsibility for accessibility issues at AirlineCo resides with the APO, Lyle says:

The way that we work within AirlineCo is we have the responsibility for the airline’s strategy for delivering product service to the customers with a disability. So we determine what our position is going to be as a company, in relation to the market, disability agenda, our legal position, global position on disability access and our own operational restrictions. And we determine a policy, out of, all of that... We chair a steering group across all of AirlineCo which determines these issues across the business. And then we set the policy for AirlineCo to deliver against.

As part of their responsibility to “determine the position” of AirlineCo, the small APO staff (which consists primarily of Lyle and Yasmin) must be knowledgeable about a wide range of accessibility issues. There are a diverse number of operational areas where accessibility problems need to be examined: airport buildings, passenger booking systems, the aircraft, entertainment systems on

aircraft and so on. The onus seems to be on the APO staff to understand the issues and drive for their resolution.

When asked about the possibility of interviewing people in other departments to get their perspective on how accessibility is being implemented at AirlineCo, Lyle says:

They're already telling us that they can't meet up with us on our issues! Let alone a student coming in from outside... They will be saying 'Oh! Well... I'm actually not too sure about this because we are not that happy about what we are doing at the moment. I don't want to talk to anybody about it.'

The responsibility for accessibility appears therefore, to be assigned (narrowly) to the APO. Suggestions for improvements to accessibility come principally from the APO staff, utilising their customer forum, and the APO projects them towards the rest of the organization. The APO tries to foster change as part of its responsibility, rather than the other departments seeking support and guidance from the APO to achieve accessibility goals in projects that they are responsible for.

The APO's role in development is therefore somewhat limited, because the responsibility for *success* does not reside with the individual departments. Lyle's account of one particular design job illustrates this problem:

It falls to us to champion the needs of [the disability] community within our Product Service development... And they will see what they can achieve with what the providers are offering... [The question is] is it financially viable to be able to get that amount of pieces produced et cetera? So we take the customer's feedback, we identify that for our internal stakeholders and Product Service development, and they then enquire to suppliers or to delivery parts of the business like physical environments... It's usually going to be a *compromise* that gets to an improvement against the customer's need.

Lyle emphasised the idea of *compromise* during the interview. In summation, AirlineCo were very keen to meet the needs of customers with disabilities, saw it as a high priority agenda item, but most of the product and service solutions were compromises between what they wanted and what they could achieve. Because responsibility for accessibility is centralized (within the APO), the other departments are by definition *not* responsible. Lyles' statement that people in other departments "can't meet up with us on our issues" means that making changes in product and service accessibility is not a straightforward task at AirlineCo.

It is every department's responsibility (but ours)

The VisCom Museum is a large city-based museum. VisCom focuses on graphic art, media, and communications.

The Buildings Department at The VisCom Museum is responsible for accessibility of patrons to the physical space. The manager of the department oversees a working group comprised of people from many different departments, and he says that, in effect, accessibility at The VisCom Museum is *high priority*, and it is *everyone's responsibility*.

The museum has a large number of interactive technologies, and an extensive website. The interactives and the website are mainly the purview of the New Media Department. Of all the elements in the museum, these technologies present the most issues for customers who have visual, hearing, and physical disabilities. However, the staff of the New Media Department take the view that accessibility is *not a priority*, and it is *every other department's responsibility*.

The Buildings Department

Ian, 31-40, is VisCom Museum's buildings manager. For the past eight years he has been dealing with accessibility issues affecting the buildings, and has been department manager for the last three. Ian comes straight to the point on how important accessibility is to the business:

[Disability access is] something we here at the VisCom Museum treat very, very seriously. And it's not just because it's the 'flavour of the month', it's because of that visitor experience. Everyone has the right to that perfect visitor experience and it would be very unfortunate if a visitor experience for a person in a wheelchair, if they can't get around the museum... The organization is very, very highly focused on making sure that the visitor experience is something that you're willing to come back to again, and again, and again, and again... We have so many different people we have to cater for.

The high priority that Ian (and the organization, in his view) places on accessibility impacts the creation of any new exhibit space. The buildings department gets intimately involved in the process, Ian says:

We have another look and do all our measurements and make sure everything is measured out well... We just have to make the flow as easy as possible for people to view those spaces... So it's something that gets ticked off in many different levels from [the lower levels to] the senior manager.

Ian uses terms like "dots over their i's and crosses over their t's" in describing his department's approach to accessibility. For example, they have to keep on top of the way moveable furniture is placed on a day to day basis, primarily to ensure that accessible routes are maintained. Attention to detail around accessibility, is embedded as part of the regular processes at The VisCom Museum, Ian says:

We have a project manager who works in the next office to where I am and he's working closely with our commercial arm and some architects on getting the best design and the best access for everyone through that area. So there's a lot of tick-offs he's got. He's got disability access, he's got fire, to make sure that that's right. He's got security to make sure that we've had a security risk assessment done. So we're ticking off all of the boxes as we're going along. So we're very thorough on how we go and do our projects.

Ian says that in his experience, building code standards for accessibility are not enough in the museum environment, because visitors who use wheelchairs are often accompanied:

We always go on the wider side of those measurements. Because [it] mightn't be big enough because you've got a wheelchair and a person. We also have to make sure that the exhibits aren't damaged, so if I'm with you in a wheelchair, I might brush that item. So we extend that measurement.

Although Ian often mentions wheelchair users, he also says that meeting the needs of patrons with visual impairments is high on his agenda. Making sure that high contrast nosing treads are not worn out on the staircases, and making sure circulation areas are lit well enough for people with visual impairments, are part of the regular “audit” process.

In Ian's explanation of accessibility at The VisCom Museum, it is easy to see that he does not view himself and his department as the sole arbiters of accessibility in the organization. Examples of this are (1) the Disability Access Committee, and (2), the use of outside expertise. Ian says

I'm the chairman of the Disability Access Committee... front-of-house staff... buildings Services Supervisors, curators, designers... We discuss about ways of improving getting people around... Do we have enough wheelchairs? We have 10 or 12 wheelchairs here. Making sure those wheelchairs are serviced correctly;... Making sure that there's enough room for people to get through tables in the café. [We also get] different consultants in all the time—they give you different ideas... We call in [accessibility] consultants a lot to make sure that they tick off what we're doing is correct. And that's probably done on a bi-yearly basis.

Ian sums up how accessibility is handled at The VisCom Museum by saying that, far from relying on complaints as a gauge of success, accessibility generates more customer *compliments* than complaints. He says,

It's just amazing some of the letters you get, especially from people in wheelchairs or who need aids to get around... It's quite appreciative. When you get these letters... the attendants feel so chuffed when they see them... It keeps coming back to that visitor experience. That's an easy word to say, but if a disabled person hasn't got the access, they're not gonna have the visitor experience that they deserve.

The New Media Department

Damon, 41-50, is the new media department manager at The VisCom Museum. Quentin, 41-50, is a research associate. Although Quentin no longer works at the museum, he previously worked temporarily for Damon during a revamp of the museum that included the museums' multimedia offerings. Damon and Quentin worked together with the rest of the team to improve the business's website, and to procure and set up a large number of new interactive technology exhibit elements.

Accessibility is not a high priority agenda item in the new media department. "It has to be accessible, but it's not a priority. Our priority is the content, is the story", Damon says. Quentin adds to Damon's statement: "Think of the difference between a priority and a baseline". Finally, Damon says, "It has to be there, but it's not a priority. Our priority is not to make it accessible."

From the descriptions given by Damon and Quentin, accessibility is something that is primarily the purview of people in other departments. Quentin says that he has just come back to the museum for this interview, and he happened to run into a former colleague who is in the process of setting up a new exhibit. Quentin says,

[I talked with] one of the people whose primary role's for overseeing exhibitions here. I said 'How will that work for our friends in wheelchairs and prams?' And the tech guy said 'That's no problem, we've got that covered.' So those sorts of things are in the minds of the people in the museum... He would know that there's a set of guidelines about what's too high, what's too low. And he would know that the screens fit in within those [guidelines].

Damon and Quentin describe an extensive network of ‘gate keepers’ in many departments who have to sign off many things as part of the process of developing a new exhibit: “There’s about 8 million gate keepers for anything at the museum!”, Quentin says. The process seems to involve “Everyone”, Damon adds:

A lot of legal aspects in terms of copyright, royalty, owners, image you can touch or not. What image you use. How it’s going to be displayed... Every image which is there has been, always—there’s been a negotiation. What image needs [to] be there, how, what text, or whatever. So it’s an enormous process.

Even though there are a large number of gate keepers and the process is ‘enormous’, Damon says that accessibility is absent from this process. There is no accessibility ‘check-box’. In fact, Damon says, there is no person responsible for accessibility when it comes to the exhibits and/or the interactives:

There is no ‘mister-’ or ‘madam-accessibility’.

Even though accessibility has not been formally integrated into the New Media department’s processes, there have been some activities that included considerations for customers with disabilities. The first was the procurement of the new interactive technologies, and the second was the recent re-vamp of The VisCom Museum website.

Quentin describes what is *not* in the final installed interactives, as far as accessibility is concerned:

There’s video in there—so there’s no text alternative. The images all have an alternative in that there is a caption for each image, but the captions are incredibly dense. So you need to be able to understand the caption. There’s no audio output [for people who are blind or low vision..]. If there’s audio [for a video or a sound clip], there’s no text alternative.

But this runs contrary to his original intention and specification, he says:

When we put the tender together, I went ‘is this possible?’ And I had a look and at the time—the Smithsonian had just done their [interactives at] the Gallery of American Art... which was all accessible. So I knew it could be done, and we wrote it into the specifications, the tender specifications.

The responses to the initial tender received from vendors were noncommittal. Quentin, paraphrases the tender respondents: “All of them responded to the issue by saying ‘We are aware of issues of accessibility’”. To explain what went on between the time accessibility was put into the specifications, the tendering process, and the actual delivered products, Quentin says:

They said when they responded to the tender that they’re aware of accessibility issues... They said—I’m quite happy to think that they said—‘alright’ without any intentions of actually following through... So you’ve got the tender response, then there’s the scoping study, where it turns out we’ve not got enough money to do what we want to do [on accessibility]. And as the process goes along essentially it feels like the museum is fighting always to hold a line. And the tenderers are always trying to—you know: ‘Let’s make it smaller, let’s make it smaller, let’s do it easier, let’s do it easier’... [And,] to be honest, when we built [the interactives] I just went ‘That’s too hard!’... I knew all the issues that were involved, I knew all the fights I would have to go through, and I knew internally there would be fights I’d need to fight about that. And I just went ‘I can’t do that!’

For the re-vamp of the museum website, Quentin says that he had taken an interest in web accessibility before he joined the VisCom Museum, and although he was not formally working on accessibility for the museum in his contract, he did sit next to Graham, the person who was developing the museum’s website. As Quentin says,

Every time we did something [on accessibility], because I had some stake in this area, I’d have a look at it and I’d go [to Graham] ‘What about this? What about that?’.

This process was facilitated purely through proximity, Quentin says: “He sat beside me. You know, his desk was beside my desk and...”. Despite the informal nature of the process, their website had fared well in a recent review of the accessibility of government websites. Quentin attributes this to the fact that they were primarily using basic web technologies of text and images. Damon concludes that this is “a good win”, although he says that New Media Department have recently begun to put more dynamic content on the site, involving scripts, movies, podcasts and the like. The new content might not be so accessible. Damon makes a very informal guess about how accessible the website would be now:

We move on a bit now because we’re going more down ‘rich content’—We still got 95 per cent of the website which is, for our point of view, would be okay from an accessibility point of view.

There are very different descriptions of the priority and responsibility for accessibility between The VisCom Museum’s buildings department and new media department, with diligent, formalized processes at the former, and ‘not in any checklist’, informal process at the latter. The sense of priority and responsibility is not shared by the current heads of the two departments, Ian and Damon. The accessibility work that Quentin endeavoured to do in his time at The VisCom Museum was primarily driven by his own interest in the topic, rather than any formal requirement. Ian too described how his motivation to succeed with accessibility was driven into him partly as a result of having a temporary disability (breaking his leg), partly as a result of seeing his parents acquire disabilities through ageing, and partly by his former boss (the previous head of the buildings department).

Neither Ian nor Damon mentioned any directives about the importance of accessibility coming from the executive level. Furthermore, Ian did not mention the staff of the new media department as being involved in the disability access committee meetings. Damon’s earlier statement, “There is no ‘mister-’ or ‘madam-accessibility’”, combined with the fact that neither he nor Quentin mentioned the accessibility committee, would appear to suggest that the new

media department staff are either unaware of the committee, or they choose not to participate in it. In summary, at The VisCom Museum, views on accessibility are seemingly not *shared* views.

An uncoordinated approach

The Museum of Industry is also a large organization with hundreds of employees. It is situated in a modern building with multiple floors and gallery spaces.

Noreen, 51-60, is a design manager at the Museum of Industry, overseeing the design of the exhibit spaces. For any new or re-vamped exhibit, Noreen says that there are a number of tasks and steps she has to go through to ensure compliance with building accessibility codes:

The Building Code of Australia is a major component of our work... those are the primary things that we use... There is quite a lot of legal liability if you deviate from what's known as 'the standard'.

Certain aspects of the exhibit spaces require a lot of diligence and attention to detail, as far as accessibility is concerned, Noreen says. For example, lighting is a tricky issue that she regularly tackles which impacts people with visual disabilities:

Some exhibitions you can't even have a flash light for a camera... [Controlling lighting is] actually the hardest thing. It's [one of the] most complicated things of all really, getting that right.

Noreen is responsible for the lighting (as it is part of the 'exhibit space'), and her department is responsible for exhibit signage. In the process of developing lighting arrangements for the exhibits, there is guidance available, but using it is dissimilar to looking up dimensions in the building code. Noreen describes the process,

The things like the legibility, the contrast of the background, and things that are—I don't think they are a New Zealand Standards or Australian Standards—but they are American standards. You should have about 70%

contrast between the type face and the background... I don't think that it's actually a part of the Australian Standards, you might check that. I think it's American. We all use the American rule of thumb.

For the physical environment, Noreen can closely follow what is contained in the building code; but for signage, she is juggling terms like “quite stringent” and “rule of thumb”. There is no legal requirement in Australia, she says, to follow any rules that concern access for people with sensory impairments.

There are dynamic displays on large flat-screen televisions that have recently been introduced to the museum, but Noreen is only partly aware of how these are implemented, because they are a different department, separate from the exhibits. She is unaware of whether accessibility for people with visual impairments was a factor considered in the design of the content for those displays. There are also a lot of interactive (touch screen) technologies employed in the exhibits themselves, but since she deals with the exhibit space and not the exhibits, Noreen says,

Here is the thing... I actually don't do the interactives. Someone else does those and I am not sure what process they go through with that. [..In my department] we try to consider the heights of [interactive] things for people who are in wheelchairs, basically.

Noreen was also unaware of whether the museum's website was accessible, or if anyone had worked to try to make it accessible, and unaware of how PWDs are accommodated on guided tours, because tours are also “run by another department”. One of the evident problems, therefore, is that there is no coordinated effort around accessibility at The Museum of Industry.

While Noreen did not have any negative comments about the need to accommodate PWDs, at the same time she did not offer any comments that would lead one to think that accessibility was a priority agenda item for the business as a whole. There was not discussion of any person fitting an APP or APO type of role. There does not seem to be, from Noreen's comments, any form of planned, proactive organization-wide approach to accessibility. Instead, a silo-like

approach to accessibility appears to be in place, and as a result little sharing of ideas, priorities, and coordinated objectives.

A detailed, unachievable plan

The Museum of Culture is a small organization with less than 10 full time employees. The museum is located in ‘heritage’ buildings that pre-date wheelchair accessibility building code regulations. Renovation projects (past and ongoing) are improving wheelchair access for the public spaces of the museum, but not the administrative office spaces. The offices are only reachable via a set of stairs.

Felicity (aged over 60, the director of the museum) speaks of the “duty of care” that her staff has to have in mind when dealing with customers with disabilities. For example, a good deal of their business comprises school visits which include, Felicity says, “loads and loads of groups of kids who have got severe disabilities”. A system of bookings has been established whereby the staff of the visiting school would notify museum staff of the needs of any students with a disability. As Felicity says, “It is the school’s duty to tell us, and it’s their duty of care. And it’s our duty of care to know that they’re coming, and to be able to deal with it.” The system is so rigorous and well established that “a school will *never* turn up with a couple of kids who’ve got disabilities without telling us”, Felicity says.

Although the “duty of care” for accommodating disability is evident in the way the school groups are handled, there is no formal process for including accessibility in the development of exhibits. There is a thorough peer review process in the development of new exhibits (everyone in the organization “has their two penny-worth”, Felicity says), but accessibility is not a systematic consideration in this process.

Despite the problems of accessibility with the ‘heritage’ aspects of the buildings and that the vast majority of the exhibits are inaccessible to people with visual impairments, complaints from the public are rare. Even though the museum has tens of thousands of visitors each year, Felicity says that in her 23 years at the

Museum of Culture, she has only seen “perhaps six” complaints, all about wheelchair access.

Wanting to be as accommodating as possible, and therefore wanting to find out what it would take to make their buildings accessible, Felicity recently pushed to get an accessibility audit done. She had had a chance meeting with a building accessibility consultant, after which, she says:

I went back to Arts [the government department] and I said ‘Do you have a little bit of money to pay her? A few thousand dollars, to come and do a proper survey for us?’ And so that’s when [the consultant] did that.

The evaluation and report on the accessibility issues at the Museum of Culture was done in a thorough fashion, according to Felicity. A plan resulted and some of the smaller things that required little or no money got done. However, for the bigger items, Felicity says that the report/plan is “pretty bloody depressing”:

Some of the bigger stuff like ramps—and she even designed some ramps to get in and out of this building, and in and out of that [building]— it just isn’t gonna happen... We know that people can’t get in and out of these buildings easily... [If] you go back to Arts—and you probably need a couple of hundred thousand to do the kind of work that would give you access to all these buildings—we aren’t gonna get that... And it was depressing because you look at it and think ‘Well that isn’t going to happen’.

The Museum of Culture is, therefore, in the curious situation of having a detailed plan for accessibility but no resources to enable them to implement the plan. The major impediment to making accessibility improvements is that there are higher priorities to deal with. The first higher priority at the museum is basic survival. As a government-funded institution and department, Felicity says,

We have a government who—we have a *treasury department*—who doesn’t rate the arts. And though we are under ‘Heritage and Arts’ we’re actually formally under the ‘Arts Department’. And the Arts Department in a government which has other priorities [and] is least well funded at the

moment. [..We] can go in time and time again for something that's a major problem and it won't be addressed if it's gonna cost money.

As chief executive of a statutory authority within the government (as the Museum of Culture is), Charlotte (51-60, chief executive of the museum) has to be vigilant and attentive just to stay in business, she says:

It's not that [we have] ever been assaulted directly but every now and again some people will pussy-foot around the [issue] saying 'We're tidying up statutory authorities. *Why should you be one?*'.

The second higher priority is *safety*. One of the problems of residing in old 'heritage' buildings, Felicity, says, is that

The minute the department does have a bit of money, then they look to see what the priority is. Now [safety] was a priority for me—because the balcony is coming off the wall. So some of the building problems you don't even get as far as the disability access, because something's falling down. We've got to fix it.

In the government sector, money to 'stay afloat' as a cultural institution is by no means guaranteed, Charlotte says. In terms of finding money to develop new exhibits she describes the situation as "ludicrous":

We have no recurrent funding for exhibitions in [the state]. None of the cultural institutions do and that's a ludicrous situation to be in... And we haven't been able to collectively get that up, the funding. So getting money for exhibitions in [the state] means finding someone else who's prepared to pay for the exhibitions that we do. Which is ludicrous! And it's very difficult. And all the exhibitions that [we do] are funded by either grants, external grants, or by corporate sponsors. All of them. And that's hard work, believe me! It's constant. It also means that the exhibition funds are inadequate. Because corporations don't hand out \$300,000 for you to do an exhibition that stays up for 6 months. They might give you \$20,000 or \$30,000, but that's pretty much it.

Getting money to work on projects is difficult if not impossible, at least until the next change of government administration. Charlotte sums up the problem by saying that to get funds from the government in order to work on the detailed accessibility plan:

It's a matter of making the case, and then what the competing priorities are. And how flush the government is, and whether it's an election year or not. And whether they see it as being a vote-winner or not.

Even if there was a windfall in the budget that could be applied to fix the accessibility issues at The Museum of Culture, higher priority items would beat out accessibility, Felicity says:

Well, interestingly enough if that [money] was given to me in our present state in the museum, I probably would spend it on [accessibility fixes] because there aren't so many other issues. Because we've bit-by-bit made this site quite good. Charlotte [the chief executive and decision maker] wouldn't be happy with that. Charlotte would probably want to build on [an additional] building... because she's quite interested in a museum of [our city] and she would want it to add to this one. So, she's my boss so I don't actually have the control of that. So if we got a big sum of money and I said 'I want to do blah blah blah'—if it was that big I suspect she'd want to do something else!... In fact, in terms of disability access it would be better to get small sums of money coming in over a period of time rather than a big whack of money, to be honest.

In summary, regardless of the interest and 'duty of care' towards disability, the staff have higher priorities to consider, and this makes accessibility improvements seem prohibitively expensive. As Charlotte says,

I think that the level that we've been operating at here has been so basic in terms of just getting the facilities [right], and getting the exhibitions refurbished in the first place, that I don't believe anyone's tried to make that sort of argument in terms of disability.

As a result, dealing with accessibility concerns becomes a ‘juggling act’, Felicity says:

You’ve got that tension again between access for visitors and what you have to do as a state institution conserving a collection. You have a duty of care. So you’ve got kind of two duties of care, but they kind of contradict each other sometimes. It’s really quite tricky.

Even though there is the ‘juggling act’ and accessibility problems with the exhibits, the museum has received few complaints. However, Felicity did not talk of this low number of complaints as a justification for not working on accessibility. Her desire is to be proactive, as evidenced by her concern in getting the accessibility assessment and plan done. However, the limits on resources largely prohibit action on that plan.

The need for comprehensive organization-level guidance on accessibility—The museums example

In the preceding three museum stories there has been a clear statement of priority, but action in terms of product and service accessibility has been problematic. In the case of The VisCom Museum, the new media department viewed accessibility as primarily the responsibility of other departments. In the Museum of Industry there was no clear coordinated approach. In the Museum of Culture, a detailed accessibility plan had been created but there was no financial means to achieve change on that scale.

State-funded museums hold a special place in society in that they ‘belong’ to their customers (the people of the state). As keepers of historical artefacts for the benefit of the larger populace, museums have been the subject of a good deal of sociological research, and this has included research on accessibility. In many developed countries, there have been problems in convincing museum entities to be more accommodating to patrons with disabilities. For example, there is an assessment that many museums “autonomously pursue agendas that are fiercely resistant to social change and concerns, [and this is] reflected in their allocation and use of resources” (Sandell, 2002, p.xvii). Sandell tells of how an international

conference “was organized in response to increasing calls from museum professionals for opportunities to explore the relevance of social inclusion to the sector” (p.xviii). At the conference, researchers made a call for proactive action to remedy what they saw as prevalent in practice, things like seeing disability as a low priority agenda item (Delin, 2002), and that many in the museum react defensively on accessibility issues, perceiving the problems of accessibility as insurmountable (O'Neill, 2002).

The pace of progress in museum access has been slow despite the availability of technical guidance on exhibit accessibility.⁴⁵ The technical guidance focuses on exhibit accessibility and the built environment (buildings and facilities). Some organizational priority aspects are mentioned as a small part of some technical guidance resources, but in general organizational aspects are not systematically covered by these types of resource. One exception to this is a pair of guides from the US NEA (National Endowment for the Arts). The first guide is on technical aspects of designing for accessibility (NEA, 2003), and the second companion guide is on planning for accessibility (NEA, 2004). Both guides are aimed at cultural administrators. The planning guide includes recommendations for organization-wide aspects to be addressed. For example, the guide includes the following:

- Having the accessibility coordinator be a resource/consultant to the board;
- Planning for access to be incorporated in all organizational decisions;
- Making accessibility part of everyone’s responsibility; and
- Striving to go beyond the legal minimum requirements.

The Disability Discrimination Act and the building codes cover access to premises, but there are no specific rules around product accessibility in Australia.

⁴⁵ In the US, partly as a result of the ADA and other laws, there has been a steady stream of such guidance for museums (AAM, 1992; Aber, 2000; Kenney, 1980; Lord & Lord, 2002; NEA, 2003), guidance that has kept up with the progress of exhibit display technology and the progress of technology for disability access (from AT in the 1980s to UD in the 1990s and beyond).

There are also no specific rules or guidelines that relate to museum exhibit accessibility in Australia. The afore-mentioned guidance from the US is (de facto) the most pertinent guidance that Australian museum staff have to refer to. The US Smithsonian Institution's technical guidelines on exhibit accessibility (Aber, 2000) were cited by some of the interviewees in this study. Despite being freely available on the web, the NEA planning guidance (NEA, 2004) was *not* mentioned by any of the museum participants in this study.

In the case of museums, there is then plenty of technical guidance on exhibit accessibility, and there is also some guidance on organization-wide aspects of accessibility. The latter form of guidance is quite limited, in that it only comes from one source (the NEA in the US), and it is not provided in an easily digestible format.⁴⁶

At TheatreCo, StadiumCo, and CollegeCo, addressing various organizational aspects has been a critical part of the successful business response to accessibility. There appears to be a need to build on the advice contained in the NEA planning guide, and provide comprehensive, easy to read guidance that incorporates the organizational success factors seen in this study and elsewhere.⁴⁷ Organization-wide advice should be seen as an essential companion to technical advice on product accessibility, as was the case with the NEA guidance.

‘They’re not our customers’—when the medical model of disability prevails

The prior cases in this chapter were about businesses where there was a clear message of ‘priority’ from the management and/or executive levels. The remaining three cases (TelephonyCo, CellularCo and BankCo) concern businesses

⁴⁶ While the Smithsonian guidance is short and concise at around 10 pages, the NEA guidance is 251 pages long, and its presentation format suggests a collection of PowerPoint-style bullets, rather than a methodically designed guidebook. It was very difficult to locate the organization-wide guidance contained in this large guide.

⁴⁷ For example, the literature on change agents in diversity initiatives, and the literature on organizational behaviour (see earlier discussions in *Chapter 5*).

where there is no clear message of priority at these levels. This assessment is based on comments made by the interviewees, rather than any corporate information provided to the public by these businesses.

The stories at the two telephony manufacturers, TelephonyCo and CellularCo were remarkably similar, so both are addressed together in this subsection.

At TelephonyCo, Xavier, 51-60, a regulation and policy specialist, and Harvey, aged over 60, is the regional engineering manager⁴⁸. Xavier has been dealing with accessibility issues for eleven years. He has been at the company for ten years, and works with Harvey on accessibility issues that affect TelephonyCo in the Asia region. At CellularCo, Dave, 51-60, is a regulatory affairs director. Dave says that his job is split between ‘electromagnetic interference’ (60%) and ‘product stewardship’ (40%). The product stewardship includes disability access, and ‘green design’.

Dave, at CellularCo says that accessibility is not something that they really concern themselves with. The law in Australia, after all, says that the most they have to do is provide a tactile marker on the number ‘5’ key, and provide a list of accessibility features if there are any.⁴⁹ Far more important is just to ‘stay ahead of the competition’, he says. The message is the same at TelephonyCo (that there is not a lot that they have to do concerning accessibility). Both organizations are compliance-focused when it comes to accessibility; but they do not view it as a high priority agenda item. In fact, they do not even see PWDs as a part of their customer base.

‘Not our market’, ‘Not our customers’

TelephonyCo has had “very few customer requests” on accessibility. Xavier says that in all of their markets, only 12 requests came in the previous year, all from the US market (none from Australia). If there are so few requests, they ask, “then

⁴⁸ This interview was not recorded, so verbatim comments are not provided for TelephonyCo.

⁴⁹ See *Appendix A, Telecommunications*.

why do it?”. Xavier says that there is “no push” to make their phones accessible, so they do not invest time or money in it.

One of Xavier and Harvey’s suggestions is that *other organizations* could make accessible phones. They hypothesize that a good way to do this might be to hold a competition “like the ITU (International Telecommunication Union) has done for a low-cost market” (i.e., in developing nations). They thought that a phone with very limited functionality (“think of a phone for kids”) would be suitable for PWDs.

The idea of the ‘low cost market’ product being suitable for PWDs was also on the mind of Dave, at CellularCo:

[Phones with] large keys—we’re already doing in some cheaper phones to sell into the third world market. And they are not feature-rich. They are just voice-call. Something like 30% of the world’s population has never made a telephone call let alone a mobile call... So they’re low-end phones. I showed a couple to a blind and hearing impaired person in Australia and they said ‘Oh, great! Could we get a couple of these to try?’... The average [disabled] person is just thankful if you can do anything for them.

The perception is that limited-feature phones, like those for ‘third world markets’ are more suited to the ‘disabled market’. Since the Australian market is not considered the ‘third world’, Dave at CellularCo, and Xavier and Harvey at TelephonyCo, all reasoned that these types of phone would not, and should not, be something that they would provide as part of their mainstream offerings in Australia.

‘Cost, and market perceptions’

Dave says that at CellularCo, negative cost perceptions are the main barrier to developing more accessible phones:

I’ve got to tell you, the most pressing thing on these product groups is finding another [ground-breaking] phone. Finding another cell phone that’s gonna sell them 50 million units. That’s gonna get the share price back up

from mid \$20's to \$30. And unless you can show a real business case you just will not get the attention... Unless you can go into one of those product meetings and lay market size figures on the table, you're not gonna have anything... And they will take due notice of all the product stewardship issues that they have. But ultimately when it comes to decide what product to be made... it will be on [market size].

'Regulations and guidelines are a barrier'

During the interview, the following assertions about regulations and guidelines are made by Xavier and Harvey at TelephonyCo:

- Guidelines are “wishy washy” and “vague”. Anything TelephonyCo follows will be at least a standard. And then you would need to be mandated to follow the standard;
- If there was an Australia mandate on accessibility, it would not drive anything as far as TelephonyCo is concerned—based on the idea that the Australian market is not big enough to drive the design of a global product. It would require ETSI (European Telecommunications Standards Institute) or US FCC (Federal Communications Commission) legislation to make changes to TelephonyCo products;⁵⁰
- When business customers in Australia purchase a phone system the purchasing decisions are all based on functions. The physical form of the phone (or accessibility, for that matter) is “not really an issue”; and
- Only safety technical requirements for the Australian market get worked on by their office: “that’s the only stuff we have to worry about as far as regulations go”, they say.

The way that ‘priority’ around accessibility is manifested in CellularCo, is in ensuring that the limited number of applicable rules and regulations are accounted for. Dave describes the product development process:

⁵⁰ Incidentally, they say that the FCC regulations that are in place, and the guidelines for following those regulations (USAB, 1998), do not apply to them, even though they sell in the US market.

Lots of things go into product design. And disability is certainly one of the things that gets figured in very early on in the process. It's not something that happens later. We have 17 or 18 'gates', we call them. Where things—a lot of information's fed in—and things get ticked off. [...] There is a lot of input/feedback [on accessibility].

Dave goes on to say that the 'tick-offs' and 'input/feedback' in this process concern regulations, as opposed to meeting the needs of PWDs in their mainstream product designs. CellularCo would, he says, "jump up and down" to avoid regulations wherever possible. Having said that, CellularCo would follow regulations if they are mandated (they would do what they have to do to avoid fines, or, worse, be prevented from selling into any given market).

The prevalent medical model of disability

The inclusion of disability access in the product development process only as a means to check that regulatory barriers will not be an issue. The corporate viewpoint, as expressed by the interviewees at TelephonyCo and CellularCo, appears, therefore, to follow the medical model of disability. In this model, the underlying view is that PWDs have problems accessing technology because of their disability, not because of the way the product is designed (the philosophy underlying the social model of disability). While it is not possible to ascertain whether the comments of these interviewees are representative of the corporate culture, the interviewees have had a long time to absorb the corporate culture at their respective organizations. Harvey and Xavier have a combined 25 years of experience at TelephonyCo, and Dave has 10 years at CellularCo.

The product stewardship tasks that the interviewees at TelephonyCo and CellularCo carried out as part of their jobs are more concerned with avoiding regulatory oversight of their product development processes, than they are about meeting the needs of consumers who have disabilities.

The business responses at TelephonyCo and CellularCo of 'not our customers', 'not our market' and 'accessibility regulations are a barrier to our development' are reminiscent of the objections raised by the respondents of the UD surveys sent

to IT manufacturers in the late 1990s and early 2000s (*Chapter 2*). In the present study, these types of objections were raised *only* by the interviewees at these two businesses. These two businesses are also the only two IT MNCs (multi-national corporations) in the study, with the remaining eight being more service oriented.

As Prahalad (2005) has said, MNCs typically apply mistaken ‘dominant logic’ in their consideration of the poorer sectors of society. In the cases of TelephonyCo and CellularCo, it would seem that the ‘dominant logic’ is *not* predicated on the social model of disability. These organizations do not, it appears, consider that there are too many negative consequences for inaction on product accessibility (they only have to comply with one or two quite trivial design requirements; they do not need to comply with any regulations mandating that their products are usable by people who are blind). It is interesting to note that in these two organizations, where the perception is that the consequences of inaction are few, that the greatest number of objections to doing anything for PWDs are heard.

Languishing as the last item on the agenda

Zachary, 21-30, is the user interface accessibility manager (UIAM) at BankCo. He has been with the business for four years as a ‘recent graduate’ rotating through various positions. He has been in this current position, which is located in the User Interface Group (UIG), for the last two years. BankCo also has a Diversity Council, on which Zachary sits, and there is Diversity Manager for the business.

Accessibility and the organizational agenda

Zachary says that at BankCo, accessibility could easily be “something that we forgot about”. Zachary’s view is that the Diversity Manager sees disability access as being low on the agenda:

It does reflect in the language that is used whenever there is communications [within BankCo] about diversity... Diversity is explained by breaking it down to different groups of people [and] I have always noticed that gender is always put at the start, and disability is either last or not included or is second to last.

The fact that disability is “last” is important because diversity is being handled one cohort at a time. First it will be gender, then another cohort, then another, until disability is finally reached, Zachary explains. The executive and management leadership approach is discriminatory, in Zachary’s view:

The organization talks about wanting to have a diverse employee base to reflect the diverse customer base. And the priority is to focus on gender diversity at this stage, and disability is not something that seems as something that needs to be focused on... People have told me that up-front and honestly—that as if it’s not something to be ashamed of... I find it discriminatory.

As Zachary describes it, accessibility is in a general state of disarray throughout the organization. BankCo has poor levels of accessibility for customers with sensory and physical disabilities, and this is evident, Zachary says, in the technology they employ in branches, and the online services (website, and online banking). In addition, there is no active disability access plan (DAP) at BankCo. There is no current or potential ‘ownership’ in the organization, even within the Diversity Council, for such a DAP, Zachary says:

We’ve got [a DAP] that was released in 2002. It was reviewed by the Human Rights Commission and by our Group Compliance area. And the significant deficiencies were identified in this... And so a review was approved by our Diversity Council, of the plan. And a new plan was scheduled to be released to the public in September 2005. It’s now March 2007 and the plan is far from ready to be released... No one wants to have ownership of the plan. It’s been going back and forth between different areas. No one wants to take responsibility for it. And when it’s talked about, people are feeling frustrated.

As a result of the stalled DAP, Zachary says, accessibility is falling off the agenda:

The problem about [the lack of DAP] ownership was going to be brought to the attention of our Operational Risk Executive Committee. Whoever runs

that committee decided that they didn't want it to be on the [meeting] agenda, and they removed it from the agenda. So at the Diversity Council meeting this news was told to us. The Diversity Manager who shared the news with us, she explained what has happened, and that we need to find a solution to this. So I think 'give her credit in actually raising the issue at the Diversity Council and letting us know that we need to find a solution'. But I didn't see—I didn't witness other people at that meeting expressing concern around it... So I said to everyone at the meeting 'We've actually in our Corporate Social Responsibility Report, we have made a public commitment to have this plan [the DAP] and we haven't met that goal.' And I asked to the Council: 'What are we doing to manage the public's expectations around this?' And nobody answered, except one person sort of mumbled quietly 'We're not'. And then [the meeting] moved on to next agenda item.

Even the DAP that was written in 2002 and expired in 2005 was not a *plan* in any real sense, Zachary says: "I've been told that if anything in that plan has actually been achieved it's not because it was in the plan. It's because it was just *good luck*. It was just a co-incidence." The points in the prior DAP were not proactively pursued, and there was no systematic review. The fact that a new DAP is two years in the making and has no 'owner' supports Zachary's claim that disability is effectively 'last' on the agenda.

One way to reinforce leadership in diversity is to place it on the agendas of high-level meetings, making the diversity commitment more strongly visible (Matton & Hernandez, 2004). Zachary's supposition is that the current emphasis on gender equity is simply because of the male-dominance in the bank, and that the bank's executives have concluded that male dominance is not sustainable in Australian culture. Gender equity, or a lack thereof, is something that the male dominated leadership of BankCo will have had direct experience of. Disability may be more removed from their experience, because few PWDs are in leadership positions in business, and those that are will often go to great lengths to hide their disability from the public face portrayed by their organization (Boucher, 2001a). The

Diversity Manager and the executives at BankCo have placed disability low on the agenda, and perhaps this is a consequence of having little direct experience of the problems encountered by PWDs as customers or as staff of the business.

Becoming a ‘champion’ or ‘leader’ of something that you have little direct experience of (in this case disability access) is problematic (Batstone, 2004; Frost et al., 1996). Frost et al. present the problem this way: most people in ‘diversity champion’ positions are at the executive level, and 95% of people at this level are white men, therefore they are inexperienced for the task. Organizational leaders with only a basic working knowledge of the wide range of diversity issues will only achieve modest successes in diversity initiatives (Wasserman, Gallegos, & Ferdman, 2008).

Regarding the discriminatory practice of always placing disability last or next to last on the agenda, Zachary has said that people in leadership positions at BankCo “have told me that up-front and honestly—that as if it’s not something to be ashamed of.” Making accessibility a ‘priority’ in BankCo’s public Corporate Social Responsibility Report, and then not giving the subject executive backing is a recipe for failure. A consistent messages from the top is vital, Kersten (2005) says:

When an executive violates the value that she (a) declares to be those of “the organization,” (b) claims to be an adherent of, and (c) uses to judge the attitudes, decisions, and behaviors of her employees, she makes it clear that the values have different meanings for different people, and this inconsistency introduces an unsettling uncertainty into the organization. (p.55)

Customers with disabilities are viewed as ‘difficult’

There is no person assigned to handle or process accessibility requests within BankCo’s customer service department, Zachary says: “They don’t. There is no processes. There is no mechanism there.” This is not limited to the customer service department, he says, this is the situation “everywhere”. To illustrate this, Zachary provides an example from his own experience as a BankCo customer.

Zachary has low vision, and so reading fine print is difficult for him. He received in the mail something that said ‘Important notice of changes to your credit card terms and conditions’ (for one of his own accounts at BankCo). He could not read it, and so set himself the task of finding out what could be done about it, he says,

So I rang [customer service] and they said ‘Oh! we don’t know anything about this!’. And I was put on hold for about 5 minutes while they speak to the manager... Well you know, after they got talk to their manager and came back to me said ‘Oh look, we’re sorry but we don’t have that facility’. And I said ‘Really? How do you expect me to be able to get access to this information?’ And he said, ‘Look, if you want to, you can make a complaint about it’.

Taking the problem and experiment further, Zachary says,

I went through the BankCo website and put my complaint in writing. I had a call from someone the next week... What they ended up doing was they found a copy of the PDF version and they... selected all the text in it, copied it, and pasted it into a word file and then sent to me. And I received it and looked at it and I thought ‘this is shocking’. Because they haven’t even checked to see that what they’ve pasted actually makes sense. Because with PDFs the way that the text is structured in the document is not—visually its structured okay—but the order in which it’s been encoded into the file can be different to how it appears. So when it pasted it into the word document paragraphs were sort of jumbled around and paragraph marks were appearing in the middle of sentences... I said to them that this is not good. They hesitated to actually spend some time on fixing it.

At BankCo, Zachary first worked in the customer service department before moving to the UIG. He says that he can understand why the people in customer service did not want to fix his problem with the fine print in his credit card notice:

I’ve been in that position before when I am in the customer service role. I have got a customer who needs this... and I have got my Manager who wants me to be doing these number of calls every hour, in a certain length of

time. I am not allowed to spend time in between calls to do ‘work’... I am asking them something that’s a difficult question—I am *being difficult*.

A continual struggle

The lack of a proactive DAP, the low level of priority that is assigned (from top management down) to accessibility, and the limitations of his own rank in the organization (being a recent graduate) means that Zachary’s work is a continual struggle, he says,

I feel like I have to work extremely hard just to get a half hour slot with someone to talk about [accessibility]. I’ve been experiencing being ignored as well because it’s not an organization priority. And therefore it’s something that ‘We don’t have time to talk about’... It’s even difficult for me to even justify the existence of my role in the organization.

Even within the UIG group, Zachary’s job responsibilities were initially covertly introduced by his group manager. Zachary had joined the UIG as part of his graduate rotation to work on usability. His manager, seeing that Zachary had a visual disability, began to assign him accessibility tasks. However, upper management were not concerned with accessibility; only usability. As a result, Zachary says,

My manager basically had to shelter me from upper management. From [them] going ‘Well, what’s Zachary doing?’ So we had to be careful. It’s not the way that I like to work but that’s how [my manager said] he preferred to handle it: ‘Let’s sort of keep it secretive and we’ll come out with a bang!’

After a while, Zachary decided it was up to him to become the champion of disability access, making a conscious effort to make his work more open:

I preferred to have open communication, so I started talking about what I’m doing at a high level. And everyone—so all the management—seeing, thinking that I am doing this as on top of my role as a ‘User Interface Designer’. But the fact [was I was] actually spending full time on this.

In the absence of an organization-wide push on disability issues, Zachary has taken it on himself to endeavour to become a change agent. He has had some success in his efforts so far, creating an organizational support group for people interested in accessibility issues. In the UIG at least, his accessibility awareness-raising efforts have been paying off, he says:

[Accessibility's] more integral now than it has ever been in the past. What makes me really excited is when I hear other people around me without me even needing to say anything. Talking about accessibility, and letting each other know when they've identified something that could potentially be inaccessible or have some sort of limitations around accessibility.

While the small UIG group has benefitted from Zachary's awareness-raising efforts, this is the limit of Zachary's influence. The lack of a BankCo department and/or process around accommodating staff with disabilities is evident from Zachary's own experiences as a person with low vision:

I've been getting headaches just about every—well at least twice a week—migraines. From eyestrain. Which is meaning that I am having sick days. And my Manager is aware, but for some reason it doesn't click: 'If you give me a little bit larger screen then it will probably help me in being able to turn up to work more and be more productive.'... I wasn't sure where to go for support... I was getting mucked around a lot with 'reasonable adjustments' and things that I felt were pretty basic... [I've] been waiting to get a new computer screen, a wide large screen [for the last six months], and I'm still getting mucked around about it.

On its own this story might be chalked up to a paperwork problem, but looking at it in context—Zachary, is the '*user interface accessibility manager*' for the whole of BankCo—and he cannot get a straightforward technology accommodation.

Summary: priority and action

This chapter has been concerned with difficulties that business organizations have faced converting the 'priority' of accessibility into tangible actions to make their

products and services more accessible. Friedman (2005) examined the ways in which businesses did or did not cope with transitioning their organizations to meet the demand of a new globalized economy:

I kept hearing the same phrase from different business executives. It was strange; they all used it, as if they had all been talking to each other. The phrase was, “Just in the last couple of years...” Time and again, entrepreneurs and innovators from all different types of business, large and small, told me that “just in the last couple of years” they had been able to do things they had never dreamed possible before, or that they were being forced to do things they had never dreamed necessary before (p.339).

The transitions that Friedman examined resulted in a book in which he offers a list of sorts, of success factors for the transition actions that businesses will need to implement to thrive in the new economy. Friedman’s main message is that businesses do not need to move mountains, but they do need to be clever, adaptable and creative in order to compete. Friedman interviewed people in business while researching his book, and he says that in a lot of cases interviewees relayed to him how they had initially complained and made excuses about how difficult it would be to change their organizations; but that once they had made the realization that they had to change, they figured they had better just get on with it, and begin the adaptation process.

In a similar way, the staff at TheatreCo did not have to ‘move mountains’ in order to initiate substantial organizational changes that greatly improved the accessibility of their services to customers. It was with a few carefully chosen strategic measures that change was brought about. Large companies can take advantage of their size, spreading the costs of making their facilities, products and services accessible. By spreading the responsibility and the allocation of resources (in terms of budget and the skills available from the APO), TheatreCo has seemingly become very successful at making their services accessible. Taking advantage of economies of scale is possible when it comes to accessibility, and it

appears to be greatly facilitated by having a *shared* sense of responsibility, priority, tasks, resources and so forth, pervading the organization.

The research question for this study is aimed at identifying factors for successful action in product and service development. The stories in this chapter, and the preceding two chapters, provide a means of identifying some potential success factors, based on what has apparently worked well, and what has not worked well.

It appears to be difficult to move from priority to success without certain factors being in place. The experience at the last three organizations covered in this chapter (TelephonyCo, CellularCo and BankCo) would suggest that things like a commitment to the ideas in the social model of disability (we need to change our products to accommodate accessibility) and a clear managerial and executive level message of priority are essential factors for making a start in the process. People need to be *motivated* to problem-solve (B. Zimmerman & Campillo, 2003). When accessibility is neither a priority nor a responsibility of the organization, or the individual, a motivational impetus will likely be absent.

To be more accessible is in essence a problem solving task in the design of products and services. The early stages of any problem formulation relies heavily on disposition and social context (Pretz, Naples, & Sternberg, 2003). Terms like responsibility, accountability, and consequence come into play when assigning tasks, asking who is going to do it, and understanding their social context. An essential element of any decision making process, therefore, is to lay the groundwork that enables a development team to make good decisions (Beach & Connolly, 2005). If the necessary groundwork is in place, the tasks of providing the necessary resources to achieve accessibility goals is eased, as is demonstrated in the case of TheatreCo (and to an extent, StadiumCo and parts of CollegeCo).

There is more to be done than just laying the groundwork, however. In the first four cases in this chapter (AirlineCo, and the three museums), problems are apparent with the implementation of accessibility plans. For example, problems can occur when different departments hold different views, or where there is no coordination between departments. In the small museum, The Museum of Culture,

the plan of action that they commissioned was unachievable within their operating/budgetary constraints.

A common refrain heard in a number of the organizations in this study is that ‘there are few complaints about accessibility’. Stauss and Seidel (2004) caution that an absence or low numbers of complaints should not be viewed as an indicator of customer satisfaction. Research on complaints in mainstream consumer culture states that the vast majority of people do not complain, they just go elsewhere (Barlow & Møller, 2008; Stauss & Seidel, 2004). Zachary, the only interviewee in this study who talked about his experience as a person who lives with a disability, talked about how he does not really have the option to ‘go elsewhere’, because so much mainstream technology is inaccessible. Even so, he rarely complains because, he says:

I don’t want [complaints] to consume my entire life. So I guess I’ll pursue a complaint like that only if it’s absolutely necessary for me... People [with disabilities] probably can’t be bothered making complaints because they have tried before and they found it too stressful.

Ian, the buildings manager at The VisCom Museum spoke of receiving compliments rather than complaints on accessibility. His department’s approach was proactive, looking for potential problems before they became actual problems. Emily, the ‘change-agent’ at CollegeCo had also purposefully taken a proactive stance as a response to the lawsuit that had been brought against the business. The proactive measures resulted in advances in the accessibility of the computer systems for students and staff, and improvements to the policies and procedures around examinations.

Like Friedman’s identified need—for advice targeted toward people in business who ‘just need to get on with it’ in the new globalized economy—it is apparent that many in business desire to move from accessibility being a statement of ‘priority’ to tangible action. There is a need, therefore, in the accessibility field to advise or guide businesses who decide that they ‘just need to get on with it’.

In this chapter I used the example of museums to show that pieces of advice on transforming organizational culture are available (NEA, 2004), but not in an ‘easily digestible’ form, and furthermore this advice was not mentioned by any of the participants from the three museums or the other cultural centre, TheatreCo. In the previous chapter I also discussed the problem that diversity literature and guidance for business is geared around workforce issues, that UD literature is geared mostly around development issues, and that there is little cross-over between the two in the various fields of study. There is an evident need to build on the guidance and research from both fields, in order to provide this needed ‘cross-over’.

My contribution with this thesis is identifying the need for guidance to people in business on how to turn priority into successful action regarding the accessibility of their products and services. Identifying success factors is not the same as providing prescriptive guidance, however. The outcome of this thesis is a list of things business organizations may want to consider as they seek to change their operating procedures and personnel responsibilities. As some researchers warn, however, simply taking such lists at face value as ‘recipes for change’ is unwise without sufficient practical experience (Buchanan & Badham, 2008). Guidance should be packaged/tailored to meet the needs of ‘change agents’ of accessibility in organizations. The needs of people working in-situ in accessibility roles ought to be systematically studied with respect to the factors identified in this thesis, and relevant existing guidance (e.g., BSI, 2005; Keates, 2007; NEA, 2004).

To this end, I propose, in the next chapter: (a) a set of success factors, based on the results of this study; and (b) recommendations for further research and development towards better resources to help support people charged with accessibility-related tasks in mainstream businesses.

Chapter 7.

Conclusions: Organizational success factors for addressing the needs of customers with disabilities

“Better products don’t take longer to create, nor do they cost more to build. The irony is that they don’t have to be difficult, but are so only because our process of making them is old-fashioned and needs fixing. Only long-standing traditions rooted in misconceptions keep us from having better products today.”

*The inmates are running the asylum: why high tech products drive us crazy and how to restore the sanity,
Alan Cooper (1999, p.xvi).*

In this final chapter, I present organizational success factors that can be applied in mainstream businesses as a means for both laying the groundwork and implementing a plan of action. The success factors have been identified from the results presented in the preceding chapters. Each of the business stories presented in the preceding chapters has contributed to the development of these success factors, either by their exemplification or by their absence. The factors provide a theoretical framework on which researchers might, in the future, build analytical and diagnostic tools for examining accessibility and universal design practices in mainstream businesses. The theoretical framework might also be useful in future efforts to develop prescriptive guidance for practitioners in business.

Laying the groundwork as a prerequisite for successful action

In this study, I have set out to answer one research question:

What organizational factors are involved in successfully addressing the needs of customers with disabilities in the design, development and delivery of products and services?

In the process of examining the business responses to accessibility in ten different organizations, three main themes have been explored: (1) the importance of embedding accessibility in organizational culture (*Chapter 4*); (2) the perspective of accessibility ‘champions’ or ‘change-agents’ (*Chapter 5*); and (3) difficulties in transitioning from only having a corporate statement of ‘priority’ for accessibility to implementing purposeful actions for improving product and service accessibility (*Chapter 6*). These themes have been explored with reference to, and consideration of, past research from diverse fields of study such as organizational behaviour, decision making, business management, customer relations management, equity and diversity, assistive technology, universal design, and human factors. The contribution that I claim in this thesis is that by (a) bringing together knowledge from diverse fields, and (b) applying it to mainstream business operations, it has been possible to (c) examine the everyday issues that people in business face when they encounter disability questions relating to product and service accessibility. From this study seven organizational success factors have emerged, providing an answer to the research question.

The approach taken in the research methodology of this study has been first, to use interview methods as the primary means to generate data on what people do in mainstream businesses; and second, to apply a grounded theory approach to data analysis in order to discover themes and factors of importance for successful action. The seven organizational success factors are listed below. Each of these factors can be considered at the inception, as a means of laying the groundwork for accessibility to be embedded in the organizational culture; and as a mechanism to implement and conduct a plan of action.

Success factor #1—Adopting the social model of disability

When businesses implement diversity initiatives, an important part of the message is the benefits that diversity can bring, especially considering the make up of society as a whole (the diverse society that comprises potential customers). Disability is unique in the diversity arena in that to accommodate PWDs as customers and employees, there are not just attitudinal barriers to overcome, there will also inevitably need to be changes to the design of product interfaces. (For example, if a mainstream product requires vision in order for a customer to use it, then an interface design upgrade is required to enable its use by people who are blind). The first step towards successful action by any business is, therefore, to adopt and embrace the social model of disability—that is, to regard PWDs as a part of the customer-base—and to recognize and promote within their ranks the underlying concept of the social model. The message to the rank-and-file of the organization must be that the way to accommodate this cohort of consumers is to improve the designs of products and services so that they can be used with different types of sensory and physical end-user capabilities.

If, on the other hand, the business organization lets the medical model of disability persist (as it still does in many sectors of society), staff will feel free to assert views such as ‘PWDs are not our customers’ when they are asked to consider accessibility modifications to their products. This view explains the comments made by some members of staff at CollegeCo, that placing the student accommodations centre (SAC) among the main student services would not convey ‘the right image’. This view also seemed to underlie the reasoning of the participants at the two multi-national corporations (MNCs) in this study, TelephonyCo and CellularCo. As a result, there was no plan of action to actually improve products for disability access at these two businesses. Instead, actions were centred on what was perceived to be a greater need, ensuring that regulations on accessibility did not have any affect on their usual business practices.

Success factor #2—Establishing executive-level backing

At TheatreCo, the accessibility program office (APO) manager had obtained agreement from the board and the executives that accessibility would be a key performance indicator (KPI) whenever department managers had their reviews. The executives had agreed that whenever project managers present projects that impacts customers as a whole, they would ask the project manager what has been included to accommodate customers with disabilities. In such scenarios, noncommittal answers or ‘blank’ stares would be met with a ‘go back and do it again’ admonition from the executives.

While the case of TheatreCo has executive level backing being sought from the managerial level upwards, the case of StadiumCo shows a case where executive level backing came from the executives themselves. Whether the recognition of the need for executive backing comes from top-down or bottom-up, it is clear that once it is established, the message to the employees about the importance of accessibility must be conveyed from the highest levels.

This success factor is closely tied to the next success factor—establishing accessibility as a priority—because without executive-level backing, an item will not be widely regarded as a priority.

Success factor #3—Establishing accessibility as a priority on the agenda

Establishing accessibility as a priority agenda item for the organization is an executive level task. As research in organizational behaviour has shown, a ‘priority’ that apparently comes from peer level—for example, an APO suggesting to a product design team that accessibility is a priority—is likely to be met with resistance.

BankCo has provided an example where accessibility has been presented publicly as a priority in the Corporate Social Responsibility Report. However, BankCo’s Diversity Council is following a step-wise approach to diversity that places gender equity first on the agenda, a number of other diversity cohorts next, and

finally, disability last. The result of this is that the organization's Disability Action Plan (DAP) is languishing without an 'owner'. The action items in the previous DAP were achieved only by coincidence, rather than as a part of any purposeful activity, according to what was told to the new user interface accessibility manager.

Success factor #4—Taking a planned, proactive approach

Three broad approaches to product and service accessibility are seen in the organizations studied: proactive; reactive; and averse. Some organizations have purposefully adopted one of these three approaches, and hence that approach pervades their corporate culture. In other organizations, the approach does not seem to be purposeful—it has merely evolved in different directions as the result of the choices and efforts of various individuals. In such cases a mix of two or more different approaches can be seen. For example, at CollegeCo, the SAC is *proactive*; the employee equal opportunity office (EEOO) is *reactive*, and the IT services (ITS) department was originally *averse* to accessibility improvements but later changed as a result of the proactive work of the SAC staff.

Where there is a proactive approach, there exists across the corporate culture a desire to become more accessible in order to attract more customers and/or better meet the needs of current customers with disabilities.

Where there is a reactive approach, people are usually diligent about responding to issues when they arise, such as handling customer complaints, or dealing with employee accommodation needs. In reactive corporate cultures, low numbers of complaints or issues are often mistaken as an indicator of success. However, researchers have pointed out that this is usually not the case: people just take their business elsewhere rather than make the effort to complain. A lack of complaints is usually more of an indicator that the business is not trying hard enough to expand its customer base. Disability access appears to be no exception to this observation from the literature.

In averse corporate cultures, people are free to raise multiple objections to spending any of their resources (time, money, effort) improving the accessibility

of their products. At TelephonyCo and CellularCo it is apparent that the interviewees perceived few consequences for not working on accessibility. It was in these two (of 10 total) cases that the most number of objections to working on accessibility were heard.

Success factor #5—Making accessibility a shared task

If the *responsibility* for accessibility is assigned only narrowly—on the shoulders of the APO staff, for example—it stands to reason that others in the organization (people who make changes to the way product interfaces are designed) are *not going to be held accountable* when products are seen to have accessibility problems.

In the more successful approaches seen in this study (TheatreCo and StadiumCo in particular, and parts of CollegeCo and The VisCom Museum), the tasks to actually *do* the accessibility work is given to the people working on products or services to be used by customers.

In the unique case of TheatreCo, *not attending* to the needs of customers with disabilities in any project will result in superiors putting a red mark against that KPI in a manager's review.

At AirlineCo accessibility is the responsibility and task of the APO. As a result the two person APO team at AirlineCo are working hard on accessibility, but having a difficult time affecting change. People in other departments, the people who make the changes to the products and services, are often telling the APO that they do not have time to meet with them.

Success factor #6—Providing enabling resources

To begin to incorporate the needs of customers with disabilities, where previously those needs have been omitted or ignored, will inevitably require the provision of new resources and/or the reallocation of existing resources.

Some staff may come to their positions with intrinsic motivation to work on accessibility (for example, from having a disability themselves, or having a close

friend or relative with a disability). For most staff, motivation may be extrinsic, from things like executive backing, support, and assignment of priority and responsibilities. Such *intangible* resources as staff motivation and the creativity necessary to solve problems can be supplied by laying the necessary groundwork for action (i.e., the above success factors). However, staff working on any problem *without tangible* resources such as money, tools, training, and guidance, are going to face daunting challenges. Without tangible resources to enable them to do the necessary work on accessibility, an accessibility program will be very likely to falter.

Success factor #7—Providing sources of accessibility expertise

Depending on the skills of the available personnel in the organization, a source of accessibility expertise to provide initial and ongoing consultation may have to be found externally (e.g., an accessibility consultant) and then perhaps later an internal source of expertise may be established. Regardless of whether the accessibility expertise is internal, external, or carried out by contractors, and regardless of whether the expertise is established as a result of planning or ‘evolution’ over time, five distinct categories of expertise can be identified:

Accessibility Point Of Contact (APOC): Typically this is someone who handles inquiries and the business’s obligations to follow rules; but they are not involved with any efforts to improve the accessibility of the products or services offered by the business. (Note that the APOC category is listed here for completeness, but it should not be considered as part of a ‘successful’ strategy);

Accessibility Point Person in a Task-Role (APP-TR): This is someone who does most of the accessibility work at the organization, like evaluating and fixing/remediating problems. They may also spend their time ‘evangelizing’ the concept, trying to convince others to work on it too;

Accessibility Point Person in a Support-Role (APP-SR): This is someone whose job it is to be a supporting resource to help orient staff initially, and then help when staff encounter problems beyond their skills and training. This role

only works when people throughout the organization consider accessibility a part of their overall responsibilities (i.e., responsibility is a shared task, much like maintaining product quality, providing good customer service, and being aware of safety issues);

Accessibility Program Office in a Task Role (APO-TR), and APO in a support role (APO-SR): These categories are similar to the APP, but the term is descriptive of an office environment with two or more staff.

The tasks of the APP or APO will depend on how the other organization-wide success factors are established/implemented. The fewer the success factors, the harder the APP or APO's job tasks are likely to be. In this study, the people working in *support-roles* appeared to be having the most success. Conversely, people working in *task-roles* are having little impact on products and services. Without any form of cross-organizational approach when setting up and maintaining the accessibility role (APOC, APP, or APO), the role, it appears, is more likely to *devolve* than thrive. In such cases any initial enthusiasm that individuals share for accessibility are likely to dissipate when it transpires that the accessibility staff are not having any influence on the final products. For the business, paying people to work in this manner as the APOC, APP, APO is either (a) only a public relations exercise; (b) a waste of resources; or both.

Organizational success factors for accessibility— summary and theory

The most successful strategy employed in the ten businesses in this study was that of TheatreCo. All seven of the above success factors are in evidence at TheatreCo. Other businesses were achieving successful outcomes, but not across the whole business. The success factors provide an answer to the Research Question in this study, but they should be regarded more as a list of things to consider when setting up and maintaining an accessibility strategy; rather than any kind of 'doctor's prescription'.

That is not to claim that what works at TheatreCo will work everywhere, in all cases, and in all situations. Nor is it to say that implementing only one or two of

the success factors will yield immediate positive results. Looking at the list as individual facilitators or a means to remove ‘barriers’ in one department only, is a start. But, it is evidently not going to yield the kinds of organization-wide changes that are associated with the most successful practice that has been seen.

The success factors thus provide us with a theoretical framework on which to build. They provide useful analytic questions that can be posed in seeking explanations for things that previously seemed difficult to explain. I started this thesis with two examples: (1) the museum with the Braille on the walls as a bold message of inclusion, but no technology for providing nonvisual access to exhibits; and (2) the tram system that was spending millions on infrastructure in terms of new types of ‘super stops’ for wheelchair users, but had also opted not to use portable ramps—ramps that are supplied as a standard part of the newer trams—in the suburbs of the city where super stops are few and far between. In both examples, some of the actions of businesspersons seem to suggest a willingness to embrace and accommodate disability. It is evident that there is executive level backing, and accessibility had to be a high priority for some of these achievements to come about. However, other actions seem to suggest a disregard for the needs of customers with disabilities. A proactive approach, with accessibility being a shared task for all staff who can impact the design and delivery of products and services for the public, is not in evidence for all parts of the system.

The difficulty appears to be in making the transition from ‘priority’ to ‘action’. The choices made by the staff working in these two businesses—the choices on which course of action to pursue—has impacted the *everyday lives* of PWDs. It is my hope that the success factors that I have identified in this study serve as a useful tool for examining the *everyday lives* of people in the actual businesses. It is these people who are charged with the task of making accessibility improvements for the benefit of all of their customers.

Recommendations for further research

If the success factors herein are considered and adopted by people in business, then future research and development based on practical experiences might provide revised and updated success factors. An analytical/diagnostic framework based on the success factors would be a useful tool for examining organizational behaviour as it affects product and service development. Following this, prescriptive guidance might be an appropriate resource to develop. Such guidance should be based on the identified needs of people in both service-oriented businesses and technology manufacturers.⁵¹

There are important considerations for diagnosing how businesses are performing with respect to accessibility, but these things were beyond the scope of my study. The considerations I have noted are: (1) the need for formal evaluation methods on how well businesses are addressing accessibility issues; (2) the need to incorporate the opinions and viewpoints of customers (existing and potential) who have disabilities. In addition, in future studies it should be regarded as *necessary* to gather opinions and viewpoints from staff at multiple levels and from multiple departments. Only then can one build an adequate picture of what a business is doing to make their products and services more accessible. Simply asking the person(s) who ‘deal with accessibility issues’ will likely yield an incomplete and inadequate picture of the organizational culture with respect to disability.

It would be interesting for future studies to examine whether different outcomes are seen in the accessibility of products and services when the motivations of people *championing* accessibility are intrinsic (stemming from personal experience), or extrinsic (stemming from management directives). For example, is success more likely to arise when a champion has personal experience with disability, or when a champion has no personal experience to speak of, or does it make no noticeable difference? A comparison study could examine whether an

⁵¹ Although I am not providing prescriptive guidance as a result of my study, I do offer a list of recommendations for people interested in taking an organizational perspective to business practice, based on the results of this study. See *Appendix D*.

intrinsically or extrinsically motivated champion is more likely to achieve success at changing organizational culture where success factors, such as those outlined above *are in place*, versus situations where such factors *are absent*.

Researchers have in the past looked at the puzzle of the lack of apparent up-swell of activity from mainstream industry in terms of universal design (UD). The problem has been approached primarily from a design and a technology perspective, rather than an organizational behaviour perspective. My hope is that this continuing puzzle will be tackled by research which encompasses the design and technology aspects, while recognizing the importance that organizational culture plays in generating successful outcomes. While disability access has not been a discernable theme in popular organizational behaviour texts thus far, issues relating to the provision of accessible products and services may serve as an interesting challenge to this field. This challenging area of study may be ready (primed) for inclusion in future organizational behaviour research agendas.

This thesis has included businesses primarily from the service sector. It has also included mostly large organizations, plus one very small one with less than ten full time employees (The Museum of Culture). Determining the applicability of (and repeatability of) the findings in the ICT manufacturing sector, and organizations of different sizes, would be a useful research goal.

Finally, by necessity, this study focused on business responses to issues that affected the products and services offered by businesses. A closely related issue is how well a business handles diversity and equal opportunity within its workforce. A question for the field is how to best help and support change activities in a business that claims disability-related 'success' in workforce diversity, but that unintentionally overlooks the need to improve the accessibility of their products. Answering this question was beyond the scope of this thesis, and as other researchers have discovered, it is a tough question to answer with UD practices still a rarity rather than the norm. Answering this question, however, would be an extremely useful exercise for anyone interested in improving the everyday lives of people with disabilities.

References

- AAM. (1992). *The accessible museum: model programs of accessibility for disabled and older people*. Washington, DC: The American Association of Museums.
- Aber, H. (2000). Guidelines for universal design of exhibits. June 15, 2000. Retrieved August 25, 2008, from <http://accessible.si.edu/gfude.htm>
- ACIF. (2001). *AS/ACIF S040:2001 Requirements for customer equipment for use with the standard telephone service - features for special needs* (No. AS/ACIF S040:2001). Sydney, Australia: Australian Communications Industry Forum.
- ACIF. (2005). *Industry Code ACIF C625:2005 Information on accessibility features for telephone equipment* Sydney, Australia: Australian Communications Industry Forum.
- ACMA. (2002). *Explanatory statement: Telecommunications Act 1997, Telecommunications disability standard (requirements for customer equipment for use with the standard telephone service—features for special needs of persons with disabilities—AS/ACIF S040)*. Canberra, Australia: Australian Communications and Media Authority.
- AFB. (2008). Review: LG VX8350 from Verizon. January 2008. from <http://afb.org/Section.asp?SectionID=4&TopicID=327&DocumentID=3775>
- Alvesson, M. (2002). *Understanding organizational culture*. Thousand Oaks, CA: Sage Publications Ltd.
- Alvesson, M., & Sveningsson, S. (2008). *Changing organizational culture: cultural change work in progress*. New York, NY: Routledge.
- Americans with Disabilities Act of 1990. (1990). Publ. L. No. 101-336 (1990).
- Australian Government. (1997). Telecommunications Act 1997 (Rule no. 40, 1997. Amendments up to Act No. 16 of 2009 ed., pp. 616): Australian Government.
- Australian Government. (2004a). Disability standards for accessible public transport guidelines 2004 (No.3): Australian Government.

- Australian Government. (2004b). *Review of the Disability Discrimination Act 1992 - Productivity Commission Inquiry Report Volume 1: Chapters* (No. 30). Canberra, Australia: Australian Government Productivity Commission.
- Australian Government. (2004c). *Review of the Disability Discrimination Act 1992 - Productivity Commission Inquiry Report Volume 2: Appendices* (No. 30). Canberra, Australia: Australian Government Productivity Commission.
- Australian Government. (2005a). *Disability standards for accessible public transport 2002 (Amendments up to 2004 (No. 2) ed.)*: Australian Government.
- Australian Government. (2005b). *Disability standards for education 2005*: Australian Government.
- Australian Government. (2006). *Disability Discrimination Act 1992 (Rule no. 135, 1992. Amendments up to Act No. 86 of 2005 and SLI 2006 No. 50 ed., pp. 86)*.
- Australian Government. (2009a). *Access for People with a Disability*. 23 June 2009. Australian Government: Australian Building Codes Board. from <http://www.abcb.gov.au/go/whatweredoing/workprogram/projectsae/access/access-for-people-with-a-disability>
- Australian Government. (2009b). *Disability discrimination and other human rights legislation amendment bill 2009: A bill for an act to amend the Disability Discrimination Act 1992 and other laws relating to human rights, and for related purposes (Vol. 70)*: The Parliament of the Commonwealth of Australia: House of Representatives.
- Australian Government. (n.d.). *The Productivity Commission's review of the Disability Discrimination Act 1992: Government response* Canberra, Australia: Australian Government.
- Ball, P., Monaco, G., Schmeling, J., Schartz, H., & Blanck, P. (2005). Disability as diversity in fortune 100 companies. *Behavioral Sciences and the Law*, 23(1), 97-121.

- Bandura, A. (2001). Social cognitive theory: an agentic perspective. *Annual Review of Psychology*, 52, 1-26.
- Barber, M. D. (2006). The Milestone 311: The Epitome of Accessibility. *Braille Monitor*, 49(6).
- Barlow, J., & Møller, C. (2008). *A complaint is a gift: recovering customer loyalty when things go wrong* (2nd ed.). San Francisco, CA: Berrett-Koehler.
- Batstone, D. (2003). *Saving the corporate soul—& (who knows?) maybe your own: eight principles for creating and preserving integrity without selling out*. San Francisco, CA: Jossey-Bass.
- Batstone, D. (2004). Equality and diversity. *Journal of Organizational Excellence*, 23(3), 61-71.
- Beach, L. R., & Connolly, T. (2005). *The psychology of decision making: people in organizations* (2nd ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Bias, R. G., & Mayhew, D. J. (Eds.). (1994). *Cost-justifying usability*. San Diego, CA: Academic Press.
- Bickenbach, J., Chatterji, S., Badley, E. M., & Ustun, T. B. (1999). Models of disablement, universalism and the international classification of impairments, disabilities and handicaps. *Social science and medicine*, 48, 1173-1187.
- Blanck, P., Adya, M., Myhill, W. N., Samant, D., & Chen, P. C. (2007). Employment of People with Disabilities: Twenty-Five Years Back and Ahead. *Law and inequality: A journal of theory and practice*, 25(2), 323-353.
- Boucher, C. (2001a). The experience of managers with disabilities: A splendid deception. In C. Boucher & R. Holian (Eds.), *Emerging forms of representing qualitative data* (pp. 93-103). Melbourne, Australia: RMIT University Press.
- Boucher, C. (2001b). Some comments pertaining to validity and rigour when preparing and experiencing alternative representations. In C. Boucher & R. Holian (Eds.), *Emerging forms of representing qualitative data* (pp. 193-200). Melbourne, Australia: RMIT University Press.

- Bowditch, J. L., Buono, A. F., & Stewart, M. M. (2008). *A primer on organizational behavior* (7th ed.). Hoboken, NJ: John Wiley & Sons, Inc.
- Boyce, W., McColl, M. A., Tremblay, M., Bickenbach, J., Crichton, A., Andrews, S., et al. (2001). *A seat at the table: persons with disabilities and policy making*. Montreal, Quebec: McGill-Queen's University Press.
- Brafman, O., & Brafman, R. (2008). *Sway: The irresistible pull of irrational behavior*. New York, NY: Doubleday.
- BSI. (2005). *BS 7000-6:2005. Design Management systems - Part 6: Managing inclusive design - guide*: British Standards Institute.
- Buchanan, D. A., & Badham, R. J. (2008). *Power, politics, and organizational change: winning the turf game* (2nd ed.). Thousand Oaks, CA: Sage Publications Ltd.
- Burns, C. M., Vicente, K. J., Christoffersen, K., & Pawlak, W. S. (1997). Towards viable, useful and usable human factors design guidance. *Applied Ergonomics*, 28(5/6), 311-322.
- Carr-Ruffino, N. (1999). *Diversity success strategies*. Boston, MA: Butterworth-Heinemann.
- Casey, S. M. (1998). *Set phasers on stun and other true tales of design, technology, and human error* (2nd ed.). Santa Barbara, CA: Agean.
- Casey, S. M. (2006). *The atomic chef and other true tales of design, technology, and human error*. Santa Barbara, CA: Agean.
- Cassim, J., & Dong, H. (2003). Critical users in design innovation. In J. Clarkson, R. Coleman, S. Keates & C. Lebbon (Eds.), *Inclusive Design: Design for the whole population* (pp. 533-553). London: Springer.
- Charlesworth, S., Hall, P., & Probert, B. (2005). *Drivers and contexts of equal employment opportunity and diversity action in Australian organisations*. Melbourne, Australia: RMIT Publishing (Available from <http://www.informit.com.au/>).
- Charmaz, K. (2000). Grounded theory: objectivist and constructivist methods. In N. K. Denzin & Y. S. Lincoln (Eds.), *The handbook of qualitative research* (pp. 509-535). Thousand Oaks, CA, USA: Sage Publications.

- Charmaz, K. (2005). Grounded theory in the 21st Century: applications for advancing social justice studies. In N. K. Denzin (Ed.), *The SAGE handbook of qualitative research* (3rd ed., pp. 507-535). Thousand Oaks, CA: Sage Publications.
- Charmaz, K., & Mitchell, R. G. (2001). Grounded theory in ethnography. In P. Atkinson, A. Coffey, S. Delamont, J. Lofland & L. Lofland (Eds.), *Handbook of ethnography*. Thousand Oaks, CA: Sage Publications.
- Clarkson, J., Coleman, R., Keates, S., & Lebbon, C. (Eds.). (2003). *Inclusive design: design for the whole population*. London: Springer.
- Clegg, S. R., Courpasson, D., & Phillips, N. (2006). *Power and organizations*. Thousand Oaks, CA: Sage Publications Ltd.
- Coleman, R. (2003). Setting a standard. In J. Clarkson, R. Coleman, S. Keates & C. Lebbon (Eds.), *Inclusive design: Design for the whole population* (pp. 589-595). London, England: Springer.
- Collis, J., & Hussey, R. (2003). *Business research: a practical guide for undergraduate and postgraduate students* (2nd ed.). Basingstoke, England: Palgrave MacMillan.
- Commonwealth of Australia. (1999). *National statement on ethical conduct in research involving humans*. Retrieved from <http://www.nhmrc.gov.au/publications/synopses/e35syn.htm>.
- Cooper, A. (1999). *The inmates are running the asylum: why high tech products drive us crazy and how to restore the sanity*. Indianapolis, IN: SAMS.
- Corbin, J., & Strauss, A. (2008). *Basics of qualitative research: techniques and procedures for developing grounded theory* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Creswell, J. W. (1998). *Qualitative inquiry and research design: choosing among five traditions*. Thousand Oaks, CA: Sage publications.
- Delin, A. (2002). Buried in the footnotes: the absence of disabled people in the collective imagery of our past. In R. Sandell (Ed.), *Museums, society, inequality*. London: Routledge.
- Denzin, N. K., & Lincoln, Y. S. (Eds.). (2000). *The handbook of qualitative research* (2nd ed.). Thousand Oaks, CA, USA: Sage Publications.

- Dervin, B. (1998). Sense-making theory and practice: an overview of user interests knowledge seeking and use. *Journal of Knowledge Management*, 2(2), 36-46.
- Dong, H. (2005). *Barriers to inclusive design in the UK*. Unpublished Condensed version of the thesis, University of Cambridge, Cambridge, UK.
- Dong, H., Keates, S., & Clarkson, J. (2004). *Inclusive design in industry: barriers, drivers and the business case*. Paper presented at the User-centered interaction paradigms for universal access in the information society. 8th ERCIM International Workshop on User Interfaces for All. Revised Selected Papers, June 2004, Vienna, Austria.
- Dong, H., Keates, S., Clarkson, J., & Cassim, J. (2002). *Implementing inclusive design: the discrepancy between theory and practice*. Paper presented at the Universal Access. Theoretical Perspectives, Practice, and Experience. 7th ERCIM International Workshop on User Interfaces for All. Revised Papers, 24-25 Oct. 2002, Paris, France.
- Easterby-Smith, M., Thorpe, R., & Jackson, P. R. (2008). *Management research* (3rd ed.). Thousand Oaks, CA: Sage Publications Ltd.
- Erickson, W., & Lee, C. (2008). *2007 Disability status report: United States*. Ithaca, NY: Cornell University rehabilitation research and training center on disability demographics and statistics.
- Forrester Research Inc. (2004). *The wide range of abilities and its impact on computer technology*. Cambridge, MA: Microsoft Corporation.
- Friedman, T. L. (2005). *The world is flat : a brief history of the globalized world in the twenty-first century*. London, England: Penguin Group.
- Frost, D. D., Schaeffer, W. D., & Ragona, J. (1996). Champions of diversity: A culture change process. In E. Y. Cross & M. B. White (Eds.), *The diversity factor: Capturing the competitive advantage of a changing workforce* (pp. 266). Chicago, IL: Irwin.
- Galvin, R. (2003). The function of language in the creation and liberation of disabled identities. *Australian Journal of Communication*, 30(3), 83-100.
- Gladwell, M. (2005). *Blink: the power of thinking without thinking*. London, England: Penguin.

- Glaser, B. G. (1999). The future of grounded theory. *Qualitative Health Research*, 9(6), 836-845.
- Glaser, B. G., & Strauss, A. (1967). *The discovery of grounded theory*. Chicago, IL: Adline.
- Goggin, G., & Newell, C. (2003). *Digital disability: the social construction of disability in new media*. Lanham, MD: Rowman & Littlefield Publishers, Inc.
- Goggin, G., & Newell, C. (2005). *Disability in Australia: exposing a social apartheid*. Sydney: University of South Wales Press Ltd.
- Hackos, J. T., & Redish, J. C. (1998). *User and Task Analysis for Interface Design*: John Wiley & Sons.
- Hogan, G. (2003). *The inclusive corporation: a disability handbook for business professionals*. Athens, OH: Swallow Press/Ohio University Press.
- Holstein, J. A., & Gubrium, J. F. (1995). *The active interview* (Vol. 37). Thousand Oaks, CA: Sage Publications.
- HREOC. (2005). *National inquiry into employment and disability, Issues paper #1: Employment and disability - the statistics*. Sydney, Australia: Australian Human Rights & Equal Opportunity Commission.
- HREOC. (2007). *The Overlooked Consumers – 20% of the Australian Population with Disabilities and Older People*. Sydney, Australia: Australian Human Rights & Equal Opportunity Commission.
- HREOC. (2008,). Frequently asked questions – disability standards on Access to Premises standards. 23 December 2008. Australian Human Rights and Equal Opportunity Commission. from http://www.hreoc.gov.au/disability_rights/faq/Access/standards.html
- HREOC. (n.d.-a). D.D.A. guide: buying goods and using services. Australian Human Rights & Equal Opportunity Commission. from http://www.hreoc.gov.au/disability_rights/dda_guide/buying/buying.html
- HREOC. (n.d.-b). D.D.A. guide: earning a living. Australian Human Rights & Equal Opportunity Commission. from http://www.hreoc.gov.au/disability_rights/dda_guide/earning/earning.html

- HREOC. (n.d.-c). Employment and the Disability Discrimination Act. Australian Human Rights & Equal Opportunity Commission. from http://www.hreoc.gov.au/disability_rights/faq/Employment/employment_faq_1.html
- HREOC. (n.d.-d). Frequently asked questions: goods, services and facilities. Australian Human Rights & Equal Opportunity Commission. from http://www.hreoc.gov.au/disability_rights/faq/Goods_etc/goods_etc.html
- HREOC. (n.d.-e). Information for complainants: complaints lodged under the Disability Discrimination Act, Racial Discrimination Act, Sex Discrimination Act and Age Discrimination Act. Australian Human Rights & Equal Opportunity Commission. from http://www.hreoc.gov.au/complaints_information/complainants.html
- Jaeger, P. T. (2008). User-centered policy evaluations of Section 508 of the Rehabilitation Act: Evaluating e-government websites for accessibility. *Journal of Disability Policy Studies, 19*(1), 24-33.
- Jaeger, P. T., & Bowman, C. A. (2005). *Understanding disability: inclusion, access, diversity, and civil rights*. Westport, CT: Praeger.
- Keates, S. (2004). *Developing BS7000 Part 6 - Guide to managing inclusive design*. Paper presented at the User-centered interaction paradigms for universal access in the information society. 8th ERCIM International Workshop on User Interfaces for All. Revised Selected Papers, June 2004, Vienna, Austria.
- Keates, S. (2007). *Design for accessibility: a business guide to countering design exclusion*. Mahwah, NJ: LEA.
- Keates, S., & Clarkson, J. (2003a). Countering design exclusion. In J. Clarkson, R. Coleman, S. Keates & C. Lebbon (Eds.), *Inclusive design: Design for the whole population*. (pp. 438-453). New York: Springer.
- Keates, S., & Clarkson, J. (2003b). Design exclusion. In J. Clarkson, R. Coleman, S. Keates & C. Lebbon (Eds.), *Inclusive design: Design for the whole population*. (pp. 88-102). New York: Springer.
- Keates, S., & Clarkson, J. (2004). *Countering design exclusion: an introduction to inclusive design*. London: Springer.

- Keates, S., Lebbon, C., & Clarkson, J. (2000). *Investigating industry attitudes to Universal Design*. Paper presented at the Rehabilitation Engineering and assistive technology Society of North America (RESNA), Annual Conference, Orlando, FL, USA.
- Kenney, A. P. (1980). *Access to the past: Museum programs and handicapped visitors*. Nashville, TN: American Association for State and Local History.
- Kersten, E. L. (2005). *The art of demotivation* (Manager's ed.). Austin, TX: despair ink.
- Kotter, J. P. (2007). Leading change: why transformation efforts fail. *Harvard Business Review*(January 2007), 96-103.
- Kruger, J., & Dunning, D. (1999). Unskilled and unaware of it: how difficulties in recognizing one's own incompetence lead to inflated self-assessments. *Journal of Personality and Social Psychology*, 77(6), 1121-1134.
- Langley, A. (1999). Strategies for theorizing from process data. *Academy of Management Review*, 24(4), 691-710.
- Law, C. M. (2006). *The technology in your cell phone wasn't invented for you*. Paper presented at the Communications Policy & Research Forum, 25-26 September, 2006, Sydney, Australia.
- Law, C. M., Jacko, J. A., & Edwards, P. (2005). *Programmer-focused website accessibility evaluations*. Paper presented at the ASSETS 2005 (The 7th International ACM SIGACCESS Conference on Computers and Accessibility), October 9-12, 2005, Baltimore, MD.
- Law, C. M., & Vanderheiden, G. (2000). *The development of a Simple, Low Cost Set of Universal Access Features for Electronic Devices*. Paper presented at the ACM CUU 2000 (The Association of Computer Machinery Conference on Universal Usability), November 16-17, 2000, Washington, DC.
- Law, C. M., Yi, J. S., Choi, Y. S., & Jacko, J. A. (2006). *Are disability-access guidelines designed for designers? Do they need to be?* Paper presented at the OZCHI, Annual conference of the Australian Computer-Human Interaction Special Interest Group, 20-24 November, 2006, Sydney, Australia.

- Law, C. M., Yi, J. S., Choi, Y. S., & Jacko, J. A. (2007). Unresolved problems in accessibility and universal design guidelines. *Ergonomics in Design*, 15(3), 7-11.
- Law, C. M., Yi, J. S., Choi, Y. S., & Jacko, J. A. (2008a). A systematic examination of universal design resources: part 1, heuristic evaluation. *Universal Access in the Information Society*, 7(1-2), 31-54.
- Law, C. M., Yi, J. S., Choi, Y. S., & Jacko, J. A. (2008b). A systematic examination of universal design resources: part 2, analysis of the development process. *Universal Access in the Information Society*, 7(1-2), 55-77.
- Lawson, B. (2006). *How Designers Think: The design process demystified* (4th ed.). Burlington, MA: Architectural Press.
- Lebbon, C., & Coleman, J. (2003). A designer-centred approach. In P. J. Clarkson, R. Coleman, S. Keates & C. Lebbon (Eds.), *Inclusive design: Design for the whole population* (pp. 500-518): Springer.
- Lengnick-Hall, M. (Ed.). (2007). *Hidden talent: how companies hire, retain, and benefit from people with disabilities*. Westport, CT: Praeger.
- Leonardi, M., Bickenbach, J., Ustun, T. B., Kostanjsek, N., & Chatterji, S. (2006). The definition of disability: what is in a name? *The Lancet*, 368(9543), 1219-1221.
- Locke, K. (2001). *Grounded theory in management research*. London, England: Sage Publications.
- Lord, B., & Lord, G. D. (Eds.). (2002). *The manual of museum exhibitions*. Walnut Creek, CA: Altamira Press.
- Matton, J. N., & Hernandez, C. M. (2004). A new study identifies the "Makes and Breaks" of diversity initiatives. *Journal of Organizational Excellence*, Autumn 2004, 47-58.
- McClelland, R., Smith, S., & Shorten, B. (2008). *Australia ratifies UN Disabilities Convention (Joint news release)*. Retrieved from http://www.attorneygeneral.gov.au/www/ministers/robertmc.nsf/Page/MediaReleases_2008_ThirdQuarter_18July2008-AustraliaRatifiesUNDisabilitiesConvention.

- Miles, R. E., & Snow, C. C. (2003). *Organizational strategy, structure, and process* (Classic ed.). Stanford, CA: Stanford University Press.
- Mishler, E. G. (1986). *Research interviewing*. Cambridge, MA: Harvard University Press.
- Moore, M., Beazley, S., & Maelzer, J. (1998). *Researching disability issues*. Bristol, PA: Open University Press.
- Moss, T. (2006). WCAG 2.0: The new W3C accessibility guidelines evaluated. September 2006. from <http://www.webcredible.co.uk/user-friendly-resources/web-accessibility/wcag-guidelines-20.shtml>
- NCD. (1998). *Access to Multimedia Technology by People with Sensory Disabilities*. Washington, DC: National Council on Disability.
- NCD. (2004). *Design for Inclusion: Creating a New Marketplace*. Washington, DC: National Council on Disability.
- NCD. (2006). *Over the horizon: potential impact of emerging trends in information and communication technology on disability policy and practice*. Washington, DC: National Council on Disability.
- NEA. (2003). *Design for Accessibility: A Cultural Administrator's Handbook*. Washington, DC: National Endowment for the Arts.
- NEA. (2004). *Accessibility Planning and Resource Guide for Cultural Administrators*. Washington, DC: National Endowment for the Arts.
- Nicolle, C., & Abascal, J. (2001). *Inclusive Design Guidelines for Human-Computer Interaction*: Taylor & Francis.
- Norman, D. A. (1990). *The design of everyday things* (1st Doubleday/Currency ed.): Doubleday.
- O'Neill, M. (2002). The good enough visitor. In R. Sandell (Ed.), *Museums, society, inequality*. London: Routledge.
- OECD. (2003). *Transforming disability into ability: Policies to promote work and income security for disabled people*. Paris, France: Organization for Economic Co-operation and Development.
- Oshiotse, A., & O'Leary, R. (2007). Corning Creates an Inclusive Culture to Drive Technology Innovation and Performance. *Global business and organizational excellence*, 26(3), 7-21.

- Ostroff, E. (2001). Universal design: the new paradigm. In W. Preiser & E. Ostroff (Eds.), *Universal design handbook*: McGraw-Hill.
- Potok, A. (2002). *A Matter of Dignity: Changing the World of the Disabled*. New York, NY: Bantam.
- Prahalad, C. K. (2005). *The fortune at the bottom of the pyramid: eradicating poverty through profits* (Second Indian Reprint, 2005 ed.). Delhi, India: Pearson Education, Inc.
- Pratkanis, A., & Aronson, E. (2001). *Age of Propaganda: The everyday use and abuse of persuasion* (Revised ed.). New York, NY: W.H. Freedman & Co.
- Preiser, W., & Ostroff, E. (2001). *Universal Design Handbook*: McGraw-Hill Professional.
- Pretz, J. E., Naples, A. J., & Sternberg, R. J. (2003). Recognizing, defining, and representing problems. In J. E. Davidson & R. J. Sternberg (Eds.), *The psychology of problem solving* (pp. 3-30). New York, NY: Cambridge University Press.
- Pullin, G. (2009). *Design meets disability*. Cambridge, MA: MIT Press.
- Riley II, C. A. (2006). *Disability and business: best practices and strategies for inclusion*. Lebanon, NH: University Press of New England.
- RRTC. (2003). Disability Statistics : An Online Resource for U.S. Disability Statistics. The Cornell Rehabilitation Research and Training Center for Economic Research on Employment Policy for People with Disabilities. Retrieved Feb 03, 2003, from <http://www.ilr.cornell.edu/ped/disabilitystatistics/>
- Sandell, R. (Ed.). (2002). *Museums, society, inequality*. London: Routledge.
- Sandler, L. A., & Blank, P. (2005). The quest to make accessibility a corporate article of faith at Microsoft: case study of corporate culture and human resource dimensions. *Behavioral Sciences and the Law*, 23(1), 39-64.
- Saunders, M., Lewis, P., & Thornhill, A. (2003). *Research methods for business students* (3rd ed.). Harlow, England: Prentice Hall.
- Scherer, M. J. (1993). *Living in the state of stuck*. Cambridge, MA: Brookline Books.

- Schur, L., Kruse, D., & Blanck, P. (2005). Corporate Culture and the Employment of Persons with Disabilities. *Behavioral Sciences and the Law*, 23(1), 3-20.
- Scotch, R. K., & Schriener, K. (1997). Disability as Human Variation: Implications for Policy. *Annals of the American Academy of Political and Social Science*, 549, 148-159.
- Singh, S. (1996). Money, marriage and the computer. *Marriage & Family Review*, 24(3/4), 369-398.
- Singh, S., & Richards, L. (2003). Missing data: finding 'central' themes in qualitative research. *Qualitative Research Journal*, 3(1), 5-17.
- Stapleton, D. C., & Burkhauser, R. V. (2003). *The Decline in Employment of People With Disabilities: A Policy Puzzle*. W. E. Upjohn Institute.
- State of Victoria. (2008). *The Victorian transport plan*. Melbourne, Victoria: State of Victoria.
- Stauss, B., & Seidel, W. (2004). *Complaint management: the heart of CRM*. Mason, OH: Thomson.
- Stephanidis, C. (2001). *User interfaces for all: concepts, methods and tools*. Mahwah, NJ: Lawrence Erlbaum Associates Inc.
- Stephanidis, C., & Salvendy, G. (1998). Toward an Information Society for All: An International R&D Agenda. *International Journal of Human-Computer Interaction*, 10(2), 107-134.
- Stephanidis, C., & Salvendy, G. (1999). Toward an Information Society for All: HCI challenges and R&D recommendations. *International Journal of Human-Computer Interaction*, 11(1), 1-28.
- Stewart, T., & Travis, D. (2003). Guidelines, Standards, and Style Guides. In J. A. Jacko & A. Sears (Eds.), *The Human-Computer Interaction Handbook: Fundamentals, Evolving Technologies and Emerging Applications*: Lawrence Erlbaum Associates.
- Stienstra, D. (2006). The critical space between access, inclusion and standards in information technologies. *Information, Communication & Society*, 9(3), 335-354.

- Stone, D. L., & Colella, A. (1996). A model of factors affecting the treatment of disabled individuals in organizations. *The Academy of Management Review*, 21(2), 352-401.
- Strauss, A., & Corbin, J. (1998a). *Basics of qualitative research: techniques and procedures for developing grounded theory* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Strauss, A., & Corbin, J. (1998b). Grounded theory methodology: an overview. In N. K. Denzin & Y. S. Lincoln (Eds.), *Strategies of qualitative inquiry* (pp. 158-183). Thousand Oaks, CA: Sage Publications.
- Tavris, C., & Aronson, E. (2007). *Mistakes were made (but not by me): why we justify foolish beliefs, bad decisions, and hurtful acts*. Orlando, FL: Harcourt, Inc.
- The Allen Consulting Group. (2007). *Review of the disability standards for accessible public transport: draft report*. The Allen Consulting Group Pty Ltd.
- Thomas, K. M., & Plaut, V. M. (2008). The many faces of diversity resistance in the workplace. In K. M. Thomas (Ed.), *Diversity resistance in organizations* (pp. 332). New York, NY: LEA.
- Tjosvold, D., & Wisse, B. (Eds.). (2009). *Power and independence in organizations*. New York, NY: Cambridge University Press.
- Topalian, A. (2005). New British Standard on managing inclusive design. *Accessibility and computing*, (82), 3-5.
- Trace Center. (2003). Announcement: The Retirement of Co-Net and the Trace Resourcebook. from <http://trace.wisc.edu/tcel/>
- Trenner, L., & Bawa, J. (Eds.). (1998). *The politics of usability*. London: Springer-Verlag.
- Ulrich, D. (1997). *Human resource champions: the next agenda for adding value and delivering results*. Boston, MA: Harvard Business School Press.
- United Nations. (1948). *Universal declaration of human rights* (No. 217). New York, NY: United Nations.

- United Nations. (1975). *Declaration on the Rights of Disabled Persons* (Declaration No. 3447). New York, NY: The Office of the United Nations High Commissioner for Human Rights.
- United Nations. (2006). *Convention on the Rights of Persons with Disabilities*. New York, NY: United Nations.
- USAB. (1991). *ADA Accessibility Guidelines for buildings and facilities (ADAAG)*. Washington, DC: United States Access Board.
- USAB. (1998). *Telecommunication Act accessibility guidelines*. Washington, DC: United States Access Board.
- USAB. (2000). *Electronic and Information Technology Accessibility Standards (Section 508)*. Washington, DC: United States Access Board.
- USDC. (2003). *Technology assessment of the U.S. assistive technology industry*: U.S. Department of Commerce, Bureau of Industry and Security, Office of Strategic Industries and Economic Security Strategic Analysis Division.
- USDOJ. (n.d.). *Accessible stadiums*. Washington, DC: U.S. Department of Justice Civil Rights Division.
- van Dusseldorp, M., Paul, G., & Ballon, P. (1998). *Design for All and ICT Business Practice: Addressing the Barriers, Examples of Best Practice*. Delft, Netherlands: TNO STB.
- Vanderheiden, G. (1990). Thirty-something million: should they be exceptions? *Human Factors*, 32(4), 383-396.
- Vanderheiden, G., & Law, C. M. (2000). *Cross-disability access to widely varying electronic product types using a simple interface set*. Paper presented at the IEA/HFES'2000 (International Ergonomics Association triennial congress / Human Factors & Ergonomics Society annual meeting), San Diego, CA.
- Vanderheiden, G., Law, C. M., & Kelso, D. (1999). *EZ Access Interface Techniques for Anytime Anywhere Anyone Interfaces. May 17 - 20*. Paper presented at the CHI'99 (Computer-Human Interaction), Pittsburgh, PA.
- Vanderheiden, G., & Tobias, J. (1998). *Barriers, incentives and facilitators for adoption of universal design practices by consumer product*

- manufacturers*. Paper presented at the Human Factors & Ergonomics Society 42nd Annual Meeting, Chicago, IL.
- Vanderheiden, G., & Tobias, J. (2000). *Universal design of consumer products: Current industry practice and perceptions. July 30-August 4*. Paper presented at the XIVth Triennial Congress of the International Ergonomics Association and 44th Annual Meeting of the Human Factors and Ergonomics Association, San Diego, CA.
- Vanderheiden, G., & Vanderheiden, K. (1992). *Guidelines for the design of consumer products to increase their accessibility to people with disabilities or who are aging* (No. Working Draft 1.7 -- 1992). Madison, WI: Trace Center.
- Wasserman, I. C., Gallegos, P. V., & Ferdman, B. M. (2008). Dancing with resistance: leadership challenges in fostering a culture of inclusion. In K. M. Thomas (Ed.), *Diversity resistance in organizations* (pp. 332). New York, NY: LEA.
- Williams-Whitt, K. (2007). Impediments to Disability Accommodation. *Relations industrielles / Industrial Relations*, 62(3), 405-432.
- Yarra Trams. (n.d.). *DDA action plan 2007 – 2010*. Melbourne, Victoria: Yarra Trams.
- Zimmerman, B., & Campillo, M. (2003). Motivating self-regulated problem solvers. In J. E. Davidson & R. J. Sternberg (Eds.), *The psychology of problem solving* (pp. 233-262). New York, NY: Cambridge University Press.
- Zimmerman, G., & Vanderheiden, G. (2007). Accessible design and testing in the application development process: considerations for an integrated approach. *Universal Access in the Information Society*, 7(1-2), 117-128.

Appendix A. Regulatory framework **summary**

In this thesis I have set out to study the ways in which people in business respond to issues of accessibility. A part of the business response is affected by the regulatory framework that the government puts in place. Because the legislation is mentioned in a number of interviews, and because some readers might be unfamiliar with the Australian regulatory framework, I provide the following summary. This is not an extensive review or critique of the legislation from an academic perspective. Instead, I have tried to summarise the legislation from the perspective of people in business.

A number of domains are covered in the following summary:

The research in this study focuses on the accessibility of *products and services* available to the general public.

Many of the participating organizations provide their services in buildings open to the public, and so are also subject to the rules governing *access to premises*.

There are rules pertaining to *telecommunications* that are relevant to TelephonyCo and CellularCo.

Additionally, there are Australian standards on *public transportation* and *education* that relate to AirlineCo and CollegeCo respectively.

Employee diversity was not a focus of the study, but it was mentioned by a number of interviewees, and all of the participating organizations are employers. Therefore, at the end of the summary I have included a section on *employment*.

Before covering each of these areas, it is first necessary to describe the main legislation, the *Disability Discrimination Act (DDA)* (Australian Government, 2006) and the government agency that oversees the Act, the *Human Rights and Equal Opportunity Commission (HREOC)*.

The Disability Discrimination Act (DDA)

The DDA was enacted by the Australian Government in 1992 and has been amended a number of times.⁵² Section 3 of the Act (Australian Government, 2006) describes the Act's objectives as threefold. First, eliminating, as far as possible, discrimination on several grounds, including work, accommodation (residential housing or business premises), education, access to premises (by the public), clubs and sport, and the provision of goods, facilities, services, and land. Second, providing for equal consideration of PWDs under the law. Third, promoting recognition and acceptance of PWDs and reinforcing that they have the same rights as others.

While not stated explicitly in the Act, the concept underlying the DDA is one of "providing a fair go for Australians with disabilities" (Australian Government, 2004b, p.xxvii). This concept is important because it was brought up by a number of participants as part of the overall Australian culture. 'Fair go' is a common phrase applied to many aspects of life, and a phrase that people regularly apply to the DDA.

The Act makes it *unlawful* to discriminate in the areas listed above unless it imposes an *unjustifiable hardship* on the service provider. The issue of *unjustifiable hardship* was added to the Act in amendments following a review of the DDA by the government's productivity commission in 2004 (Australian Government, 2004b, 2004c). The government largely accepted the recommendations made in the review (Australian Government, n.d.). An *unjustifiable hardship* is defined somewhat loosely (in section 11 of the DDA) as 'consideration' of the nature of the benefit to the complainant (or the nature of

⁵² The current amendments at the time of writing are up to 2009 (Australian Government, 2009b). These amendments include reference to the Australian Government's ratification of the UN Convention on the Rights of People with Disabilities (CRPD) (United Nations, 2006), on July 18th, 2008. However, from the perspective of the people in this study, only the DDA amendments up to 2006 (Australian Government, 2006) are applicable since the data was collected during 2007 and 2008. Therefore, the text of this summary refers to the 2006 version only.

their suffering), and the financial circumstances of the business responding to the complaint.

The Act also covers Disability Action Plans (DAPs). Interestingly, in section 60 it says that a service provider “may” employ a DAP, and then in section 61 it lists a number of provisions that “must” be included in DAPs. Furthermore, the DAP “may” be provided to HREOC (section 64). If created, DAPs “must” include several provisions, including: devising policies and programs to achieve the objectives of the DDA, communication of these policies to staff, reviewing and identifying discriminatory practices, setting goals and targets, providing the means to carry out the DAP, and planning to appoint someone to implement these provisions.

In terms of the consequences of not complying with the DDA, fines and short prison sentences are only provided for in cases of victimization, incitement of others to perform unlawful acts, or advertising something that indicates an intent to do something unlawful (sections 42-44). A private right of action is possible in cases of work discrimination, or cases of harassment. Per section 125, a private right of action is *not* possible in other cases (i.e., access to premises, the provision of goods and services etc.).⁵³

The Act also provides that the responsible Minister “may” formulate standards in relation to the provisions of the Act (section 31). The standards then become an extension of the act, in that it is unlawful to contravene them (section 32). A number of standards were created or are in production, and are described below.

The Human Rights and Equal Opportunity Commission (HREOC)

HREOC^{5 (p.10)} has a disability rights commissioner whose position was created as part of the DDA. The commissioner’s staff describe on the HREOC website⁵⁴ their statutory responsibilities. These responsibilities include education and public

⁵³ It is implied, although not explicitly stated, that such cases will be handled via government action. In practice, arbitration is the first step via HREOC between the complainant and the service provider.

⁵⁴ [HREOC: www.hreoc.gov.au](http://www.hreoc.gov.au)

awareness, dealing with discrimination and human rights complaints, enforcing compliance, and developing policy and legislation. HREOC works to resolve complaints, holds public inquiries as needed, develops education programs, provides independent legal advice (to assist courts in cases that relate to human rights), provides advice to the government, and conducts research.⁵⁵

In terms of handling complaints that relate to the DDA, HREOC's process (HREOC, n.d.-e) is to investigate the complaint (if it relates to the law), and then to seek a response from the service provider. The next step is to hold a 'conciliation conference' (arbitration) to try to broker an agreement between the parties. If this fails, the next step is for the complainant to take the matter to court, and this must be done within 28 days of the conciliation conference.

The following pertains to the specific domains in my doctoral study. This information has been gleaned from HREOC's website, the DDA, and other sources.

Access to premises

A standard for access to premises, to comply with the DDA, has been in development since the year 2000, but it is currently stalled (Australian Government, 2009a; HREOC, 2008). The need for a standard has stemmed from complaints brought to HREOC that demonstrate inconsistencies between discrimination law (the DDA) and building law (the Building Code of Australia (BCA)) (HREOC, 2008). The Australian Building Codes Board (ABCB) which oversees the BCA points out one of the major problems (Australian Government, 2009a): the BCA is *compliance-based* (if you do not comply with the code, your new building or major renovation is not going to be approved for construction), whereas the DDA is *complaints-based* (if you think you are being discriminated against, you can complain, although you have no private right of action). While the legislators try to resolve the inconsistencies between the proposed DDA

⁵⁵ Specifically on disability, the functions of HREOC with respect to the law are given in section 67 of the DDA. These functions are similar to the generic functions that apply to HREOC as a whole.

standards and the BCA, there is no standard that any business has to comply with regarding the operation of their premises. (Businesses and the builders they hire still have to comply with the BCA when building or renovating premises).

Access to premises as related to the provision of products and services

Even though the development of DDA standards on access to premises is in ‘limbo’, there is a provision in the DDA that PWDs cannot be discriminated against in the provision of products and services (which are normally located in premises). Thus there is an inter-relatedness to the two provisions, and businesses are required to make their premises accessible, or provide access by another means (e.g., by going to the customer’s premises with their products and services) (HREOC, n.d.-d).

Access to products and services

HREOC introduces the main points around products and services:

The DDA prohibits discrimination in the terms or conditions on which goods are provided, or in the manner in which goods are provided. This does not create a requirement for the goods themselves to be equally accessible and useable. (HREOC, n.d.-d, no page numbers)

There are, therefore, no standards for any business to follow—with regards to the DDA—to guide businesses on the development of accessible products and services. A 2007 report commissioned by HREOC and published on their website describes the net result of this situation as one of having 20 per cent of the population as “overlooked consumers” (HREOC, 2007). The report calls for an exploration of the possibility of extending the legislation to cover the accessibility of products and services (recommendation #3). The report also states that:

Since 1992 guidelines have been available explaining the issues and approaches needed to make consumer electronics accessible to people with disabilities, but 15 years on, the state of play has almost stood still, and in many cases has further deteriorated. (HREOC, 2007, no page numbers).

The guidelines referred to in the HREOC report are from the US, a ‘working draft’ of guidelines concerning the design of consumer products (Vanderheiden & Vanderheiden, 1992). The main criticism on the HREOC report seems to be the length of time—between the DDA, which was introduced in 1992, the same year as the US guidelines, and the date of the report (2007)—in which little to no progress on standards or guidelines had been made in Australia.

Even though not required to be accessible, HREOC does describe the creation of accessible products and services as “good business sense” and advocates for a universal design as the best way to achieve this (Australian Government, 2004c; HREOC, n.d.-d).

A short guide to the DDA for consumers (HREOC, n.d.-a) states that regarding products and services, providers cannot refuse to provide them to PWDs, provide them on less favourable terms to PWDs, or provide them in an unfair manner. The same guide lists the domains that the DDA applies to (e.g., shops, restaurants, banks, public transport). Absent from the guide’s list are telecommunications, which are covered by a different set of regulations.

Telecommunications

The DDA provides an exemption for payphones and public payphones (sections 33 and 50) (Australian Government, 2006). A different piece of legislation, the *Telecommunications Act 1997* (Australian Government, 1997) dictates that the Australian Communications and Media Authority (ACMA) “may” make standards relating to the accessibility of customer premises equipment (CPE). The ACMA gave the responsibility of making the standards to another agency, ACIF—the Australian Communications Industry Forum (ACMA, 2002). The standards that have subsequently come from ACIF make only three requirements of CPE manufacturers. The requirements are (1) to have a ‘pip’ as a tactile identifier on the number ‘5’ key of a telephone handset (ACIF, 2001), (2) to have a hearing-aid coupling induction loop (ACIF, 2001) although cellular phones and cordless phones are exempted from this requirement (ACIF, 2001; ACMA, 2002), and (3) that providers give information to customers about the accessibility

features of their CPE (ACIF, 2005). There are no requirements beyond these to *actually make* other features of telephones in Australia accessible to PWDs.

In 2004 a review of the DDA by the Productivity Commission (Australian Government, 2004b, 2004c), the government could only provide a narrative commentary on the issues of telecommunications accessibility and the provision of other types of products and services. Effectively the review urges manufacturers to do better, to incorporate UD approaches, to consider the business benefits etc., but that is the extent of the review's influence.

Access to air transportation

Transportation standards to comply with the DDA were implemented in 2002 (Australian Government, 2005a), and a set of guidelines were produced in 2004 to aid in their implementation (Australian Government, 2004a). The standard and guidelines are comprehensive, covering most aspects of travel, including airline travel. The standards should be followed for the purchase of new vehicles, but it is generally understood that greater accessibility will come only through the purchase of new vehicles (Australian Government, 2004a). For this reason, there is a timeframe allowed of 20 years for existing public transport elements, with the expectation that "substantial access" will be achieved in 10 to 15 years (Australian Government, 2004a, section 33.2).

The standard provides a number of examples that relate directly to aircraft. For example, in new and existing aircraft, carriers can transport wheelchairs in the holds of aircraft, and they must not charge additional baggage fees for the wheelchair.

In a review of the standards (The Allen Consulting Group, 2007), it was stated that although there has been a good deal of progress in the airline industry, there are still problems that need to be addressed:

The assessment concludes that people with disability are generally able to access air travel, excluding routes that operate small aircraft that are exempt from the Transport Standards [but] experience has been that recent restrictions on the

conditions of travel, for example travelling with a carer, limiting access to available space in the body of the plane and in the hold, have constrained access to air travel for people with disability. (The Allen Consulting Group, 2007, p.62)

Access to Education

The DDA makes it unlawful (section 22) to discriminate against PWDs in the admissions process, the development of the curriculum, or the delivering of the curriculum, except where doing so would create an ‘unjustifiable hardship’ on the institution (Australian Government, 2006). Even though the DDA defines education institutions as ‘service providers’ (in section 59, regarding the production of DAPs), education is not treated in the same way as the provision of products and services (Australian Government, 2006; HREOC, n.d.-a). Furthermore, while the law does not require affirmative action in the process of admitting PWDs into education, affirmative action itself is not a crime:

This Part does not render it unlawful to do an act that is reasonably intended to:

- (a) ensure that persons who have a disability have equal opportunities with other persons in circumstances in relation to which a provision is made by this Act; or
- (b) afford persons who have a disability or a particular disability, goods or access to facilities, services or opportunities to meet their special needs in relation to: (i) employment, education, accommodation, clubs or sport... (Australian Government, 2006, section 45)

The DDA standards for access to education (Australian Government, 2005b) cover the areas mentioned in the DDA (admissions, curriculum etc.), and also covers the role of student support services and their interactions with students. In addition to the ‘undue hardship’ rules that pertain to the whole of the DDA, the standards introduce the concept of ‘unreasonable adjustments’ (Australian Government, 2005b, section 3.4). The needs of other students, of staff, and of maintaining the integrity of courses and programs can be taken into account when considering whether an adjustment is reasonable or unreasonable.

Access to Employment

A short guide from HREOC (HREOC, n.d.-b) describes how the DDA protects against discrimination in recruitment processes, terms and conditions of employment, promotion and transfer, dismissal or demotion. Similar to the issues around access to education, the DDA prohibits discrimination in employment where PWDs are qualified for a position (Australian Government, 2006, section 15). It is also similar to education in that affirmative action is not required but it is also not unlawful (section 45). There are no standards implemented for employment, although some were proposed in the mid 1990s (HREOC, n.d.-c). Rather than implement standards, the HREOC's disability rights commissioner has chosen to rely on the DDA and relevant court decisions concerning employment discrimination (HREOC, n.d.-c). The court cases are available because of the private right of action in terms of employment discrimination.

Appendix B. Interview guide

In cases where the discussion stalled or if the conversation was going off-topic in the course of the open-ended interviews, this guide was used as a backup. The guide provided prompt ideas to corral the conversation back to the main topics of interest relating to the study research questions. This guide was only used during the round 1 interviews.

The following prompt headings and sub-headings were included on the interview guide:

Your organization

- Structure of with respect to accessibility
- Policies / Mission with respect to accessibility

Your job

- Job description
- Responsibilities
- Role
- Job security

Handling requests for accessibility (relating to products and services)

- From external sources
- From internal sources
- Who is involved

Resources you use

- The web
- Books
- Guidelines
- Trade journals
- Other people
- Meetings

Procedures

- Diagnosis of problems
- Selecting actions to take
- Implementation of solutions
- Feedback mechanisms

Persuasion and authority (relating to accessibility decisions)

- Customers coming to you
- Business to business
- You going to others in your organization
- Others in your organization coming to you
- Who has the most influence
- Relationships between parties

Project histories

- Timeframe
- Was it standard practice, or a deviation from standard practice
- Views on the quality of the outcome
- Lessons learned
- Looking back with hindsight, what would you have done differently

Other factors

- Money, finances
- Corporate image
- Competitive advantage
- Physical resources
- Human resources
- Time
- Facilitators

End of interview

- Any questions that I did not ask, but you wish I had
- Possibilities of interviewing others in your organization
- Possible to come back and do a more in depth study (talk to many more people, investigate projects in detail etc.)
- Colleagues at other organizations who might be willing to participate in this study

Appendix C. Participant details

Total number of participants and interviews

Table 2 provides a summary of the number of participants and number of interviews conducted at each business.

Table 2 - Number of participating businesses, interviews, and interviewees.

Organizations of this type (n)	Organization Name	Round 1 participants	Round 1 interviews	Round 2 participants (repeat), new	Round 2 interviews
ICT manufacturers (2)	CellularCo	1	1	-	-
	TelephonyCo	2	1	-	-
Museums (3)	Museum of Culture	4	2	-	-
	Museum of Industry	1	1	-	-
	VisCom Museum	3	2	-	-
Service-oriented businesses (5)	AirlineCo	2	1	-	-
	BankCo	1	1	-	-
	CollegeCo	4	4	(1), 4	5
	StadiumCo	1	1	(1), 3	4
	TheatreCo	1	1	(1), 3	4
		20	15	(3),10	13
Totals: participants, interviews				30	28

Business and interviewee details

The following is a brief overview of each of the 10 business, listed in business name order. Biographic sketches are given for each of the 30 participants, listed in the order in which they were interviewed. Biographic details are taken from the interview transcripts as well as demographic data that was collected for each participant. Table 3 (p.205) provides tabulated demographic information for each participant in name order.

AirlineCo is a large airline that employs thousands of people and transports thousands of people daily. They operate nationally and internationally. I interviewed people at the corporate/head-office level at AirlineCo.

- **Lyle** (Male, aged 41-50) is the Customer Care Department Manager at AirlineCo. He has been in this position for two years, and has been with the company for four.
- **Yasmin** (Female, aged 21-30) is a Service Improvement Manager in the Customer Care Department and reports to Lyle. Yasmin has been with the company for three years and has been in her current position, in which she has been dealing with accessibility issues, for two years.

Note: Lyle and Yasmin were interviewed together.

BankCo is a multinational bank with headquarters in Australia. It employs thousands of people in a number of different countries, and handles both business and personal banking. BankCo has branches throughout Australia. My interview was at the corporate-level (rather than the branch level) of the bank.

- **Zachary** (Male, aged 21-30) was promoted to be the user interface accessibility manager for accessibility at the bank two years ago, after being with the company for two years. As a person with a disability he has been dealing with accessibility issues most of his life, but in a professional capacity for eight years.

CellularCo is also a multinational corporation headquartered outside of Australia. CellularCo makes cellular phones for sale to consumers and business, primarily

via Australian service providers (i.e., they did not have consumer stores in Australia). The interviewee was at a corporate level for regulatory affairs.

- **Dave** (Male, aged 51-60) is a Regulatory Affairs Director for CellularCo's Australian operations. He has 10 years in this position, dealing with accessibility issues throughout that time.

CollegeCo is a tertiary level, degree granting educational institution in one of Australia's large cities.

- **Henry** (Male, aged 51-60) is the Executive Director of Facilities at the College. He has been in this position for eight years, and has over 30 years of experience in dealing with accessibility issues relating to buildings and facilities.
- **Emily** (Female, aged 51-60) is the Student Accommodations Coordinator at CollegeCo. She coordinates disability access issues across a number of departments within her institution. She heads up the department responsible for student accommodations. Although she has only been with the organization for a year, she has 35 years of professional experience dealing with accessibility issues.
- **Fiona** (Female, 41-50) is a Student Accommodations Counsellor, and has been working in this role for 13 years. She has an additional five years of accessibility experience from previous jobs.
- **Gerald** (Male, aged 31-40) is also Student Accommodations Counsellor. He has been doing this job for less time than Fiona (only for two and a half years). He has 10 years of working with disability access issues.
- **Edward** (Male, aged 51-60) is the Director of Planning and Resources (School of Engineering) at CollegeCo. As such he oversees the buildings and facilities for his school, and liaises with Henry (executive director of facilities for the College). Edward has been in this position for one year and has 10 years of dealing with accessibility issues relating to buildings.
- **Sarah** (Female, aged 41-50) is a Senior Assistant Registrar at CollegeCo. She has been working in this position for two years and has been at the

organization for five. She has been working on accessibility issues for the five years she has been with the organization.

- **Dana** (Female, aged 41-50) is an Employee Equal Opportunity Officer with the Workplace Fairness and Diversity Unit at CollegeCo. She has been doing this job for two years and has been with the organization for 13 years. She has been also been working on accessibility issues for the last five years.
- **Deborah** (Female, aged over 60) is the Executive responsible for student services at CollegeCo. She took this position upon joining the organization three and a half years ago. In her professional life she has been involved with handling accessibility issues for 42 years.

The Museum of Culture is a small museum with a staff of less than ten full time employees. The museum is city-based, and occupies some older buildings (built before the days of accessibility considerations in design). Despite the small size of the museum, many tens of thousands of people visit the Museum of Culture each year (both general public and organized school trips).

- **Charlotte** (Female, aged 51-60) is the Chief Executive of the Museum of Culture. She deals with the high-level accessibility issues that span the organization and has done so for the six years that she has been in this position. She has twenty years of experience dealing with accessibility.
- **Felicity** (Female, aged over 60) is the Director at the Museum, reporting to Charlotte. She has been the director of the museum for twenty years, and has been handling accessibility issues throughout that period.
- **Faye** (Female, aged 41-50) is a Designer at the museum, reporting to Felicity. She has been working in this position and dealing with accessibility issues as they have arisen for the last ten years.
- **Paula** (Female, aged 31-40) is the Operations Manager for the museum, also reporting to Felicity. Paula has been working in this position for four years, and has nine years of experience handling accessibility issues.

Note: Felicity, Faye and Paula were interviewed together.

The Museum of Industry is a large city museum. It has hundreds of employees. The museum is situated in a large building with multiple floors, a large number of gallery spaces, many hands-on exhibits and interactive touch screen technologies that complement the exhibits.

- **Noreen** (Female, aged 51-60) is a Design Manager at the museum. She has been in the job for 10 years, and has had experience dealing with accessibility in a professional capacity for 20 years.

StadiumCo is a large city stadium complex that can accommodate tens of thousands of spectators in its main stadium. StadiumCo also has sports and recreation facilities (for club sports and individual recreation).

- **Francesca** (Female, aged 31-40) is an Event Planning Manager and has been with the organization for 15 years. She has been dealing with accessibility issues since she joined the organization.
- **Jean** (Female, aged 41-50) is the Human Resources Manager at StadiumCo. She has been in this position for nine years, and has 19 years of dealing with accessibility issues in a professional capacity.
- **Alfred** (Male, aged 51-60) is the Executive Assistant to the CEO of StadiumCo. He has been in this position for 18 years, and has been dealing with accessibility issues throughout his time at the organization.
- **John** (Male, aged 51-60) is the Event Operations Manager at StadiumCo. He has been in this position and with the organization for seven years, and has 20 years of dealing with accessibility issues. John is Francesca's supervisor.

TelephonyCo is a multinational corporation that is headquartered outside of Australia. TelephonyCo services business customers with wire-line phones with private branch exchange (PBX) systems. I met with people at the Asia-Pacific region level, which has its main offices in Australia.

- **Harvey** (Male, aged over 60) is a Regional Engineering Manager for TelephonyCo's Asia region. He has been in this position for 15 years and has been dealing with accessibility issues for the last five years.

- **Xavier** (Male, aged 51-60) is a Regulation and Policy Specialist at TelephonyCo. He has been dealing with accessibility issues for 11 years. He has been at the company for 10 years, and works with Harvey on accessibility issues that affect TelephonyCo in the Asia region.

Notes: Harvey and Xavier were interviewed together. This interview was not audio recorded.

TheatreCo is a city theatre arts complex that shows large-scale performances (e.g., theatre, opera, symphony, popular music) in halls that can hold thousands of patrons. TheatreCo also shows medium and small scale performances in smaller halls that can accommodate hundreds of customers.

- **Tamara** (Female, aged 31-40) is the Accessibility Program Manager at TheatreCo. She was recruited into this position and joined the organization six months earlier. She has eight years of experience dealing with accessibility issues.
- **Anita** (Female, aged 41-50) is the Administration and Planning Manager at TheatreCo. She has been in this position for four years and has ten years total dealing with accessibility issues. Anita is Tamara's supervisor.
- **Donna** (Female, aged 31-40) is the IT Services Department Manager at TheatreCo. She has been in the position for two years, dealing with accessibility issues throughout that time.
- **Frank** (Male, aged 51-60) has been the Building Manager for TheatreCo for a couple of months. He has been with the organization for five years, and has 15 years of experience dealing with accessibility issues.

The VisCom Museum (Visual Communications) is a large city-based museum. VisCom focuses on graphic art, media, and communications. The museum has some hands-on activities, and a large number of touch screen interactives (to complement the exhibits) have recently been introduced.

- **Ian** (Male, aged 31-40) is the Buildings Manager (buildings and exhibits) at the museum. He has been in this job for three years, and has been with the

organization for 23 years. For the past eight years he has been dealing with accessibility issues that affect the museum.

- **Damon** (Male, aged 41-50) is the New Media Department Manager at the VisCom Museum, and has been dealing with accessibility for the two years since he started in this position. He has a further four years of experience dealing with accessibility issues in his work.
- **Quentin** (Male, aged 41-50) is a Research Associate who used to work for Damon, and was doing work that included accessibility issues regarding multimedia for the VisCom museum for two and a half years. Damon has a total of 12 years dealing with accessibility issues in his professional life.

Note: Damon and Quentin were interviewed together.

Interviewee demographic details

Table 3 - Demographic information collected from participants.

Name	Business	Job Title	Gender	Age	Yrs in job	Yrs acc'y at Org.	Yrs at Org.	Yrs acc'y exper.	Highest Education
Alfred	StadiumCo	Exec. asst. to the CEO	M	51-60	18	18	31	18	HSC
Anita	TheatreCo	Administration and planning mgr.	F	41-50	4	10	20	10	Adv. Diploma
Charlotte	Mus. of Culture	Chief Exec.	F	51-60	6	10	10	20	MA
Damon	VisCom Museum	New Media dept. mgr.	M	41-50	2	2	5	6	Bachelors
Dana	CollegeCo	Employee equal opportunity officer	F	41-50	2	5	13	5	Diploma
Dave	CellularCo	Regulatory affairs director	M	51-60	10	6	10	10	PhD
Deborah	CollegeCo	Executive responsible for student services	F	>60	3.5	3.5	3.5	42	PhD
Donna	TheatreCo	IT services dept. mgr.	F	31-40	2	2	5	2	Masters
Edward	CollegeCo	Dir. of planning and resources (School of Eng.)	M	51-60	1	10	16	10	PhD
Emily	CollegeCo	Student accommodations coordinator	F	51-60	1	-	1	35	Bachelors

Name	Business	Job Title	Gender	Age	Yrs in job	Yrs acc'y at Org.	Yrs at Org.	Yrs acc'y exper.	Highest Education
Faye	Mus. of Culture	Designer	F	41-50	10	10	12	10	Bachelors
Felicity	Mus. of Culture	Director	F	>60	20	23	23	20	High School
Fiona	CollegeCo	Student accommodations counsellor	F	41-50	13	-	7	18	Postgrad Dip.
Francesca	StadiumCo	Event planning mgr.	F	31-40	4	15	15	15	Masters
Frank	TheatreCo	Building mgr.	M	51-60	0.2	5	5	15	Masters
Gerald	CollegeCo	Student accommodations counsellor	M	31-40	2.5	-	4.5	10	Postgrad Dip.
Harvey	Telephony Co	Regional engineering mgr.	M	>60	15	5	15	5	Bachelors
Henry	CollegeCo	Exec. dir. of facilities	M	51-60	8	-	8	30 +	BA
Ian	VisCom Museum	Buildings mgr.	M	31-40	3	8	23	8	Year 11
Jean	StadiumCo	Human resources mgr.	F	41-50	9	9	9	19	Postgrad Dip.
John	StadiumCo	Event operations mgr.	M	51-60	7	7	7	20	BA

Name	Business	Job Title	Gender	Age	Yrs in job	Yrs acc'y at Org.	Yrs at Org.	Yrs acc'y exper.	Highest Education
Lyle	AirlineCo	Customer care dept. mgr.	M	41-50	2	3	4	4	Diploma
Noreen	Mus. of Industry	Design mgr.	F	51-60	10	16	16	20	Masters
Paula	Mus. of Culture	Operations mgr.	F	31-40	4	9	9	9	College
Quentin	VisCom Museum	Research associate	M	41-50	2.5	2.5	2.5	12	BA
Sarah	CollegeCo	Senior asst. registrar	F	41-50	2	5	20	5	Postgrad Dip.
Tamara	TheatreCo	Accessibility program mgr.	F	31-40	0.5	0.5	0.5	8	Bachelors
Xavier	Telephony Co	Regulation and policy specialist	M	51-60	5	-	10	11	PhD
Yasmin	AirlineCo	Service Improvement mgr.	F	21-30	2	2	3	2	BA
Zachary	BankCo	User interface accessibility mgr.	M	21-30	2	4	4	8	B.Eng

Appendix D. Taking an organizational perspective and approach to accessible product and service development—*Recommendations*

For businesses:

Consider the following organization-wide success factors when implementing a plan and conducting activities aimed at improving the accessibility of your products and services:

- Success factor #1—Adopt the social model of disability as a means to promote the concept that people with disabilities are part of your customer-base;
- Success factor #2—Establish executive-level backing for accessibility;
- Success factor #3—Establish accessibility as a priority on the agenda;
- Success factor #4—Take a planned, proactive approach;
- Success factor #5—Make accessibility a shared task (i.e., one that is worked on by people throughout the organization);
- Success factor #6—Provide enabling resources to those working to solve accessibility problems; and
- Success factor #7—Provide sources of accessibility expertise as needed.

On the last factor, the source of accessibility expertise could either be external, internal, or a mixture of both. If internal accessibility positions are established (and, depending on the size of your organization and the number of problems to be overcome, accessibility offices created), then these staff will ideally be working in support roles. In their support roles they will be helping people elsewhere in the organization, those people who are charged with the accessibility tasks relating to products and/or services, when those people encounter problems that are beyond their current accessibility skills.

For accessibility consultants working with businesses:

It is important to recognize that while solving isolated problems (e.g., the design of a single website, interface, or document) provides the customer with an accessible element of their business, the reason(s) why the element was inaccessible *may* have more to do with corporate culture than anything else. To help customers make more of their systems accessible, a corporate-wide analysis based on success factors presented herein—and other factors relevant to the particular organization and its products—could prove useful for you and for the business you are helping.

For standards and guidelines groups:

In guidance to industry on how to make products and services more accessible:

- Consider and address different audience needs depending on whether they are working in a task-role or in a support-role; and
- Design and test the guidance primarily around the needs of people working in accessibility support roles (success factor #7). The people working in these roles are the most likely to pass on the guidance to the rest of the organization.

For disability advocacy organizations:

Keep promoting the social model of disability as the model that should be adopted by, and imbued in, corporate cultures. Also recognize that many businesses adopt a reactive approach to complaints about accessibility of their products and services. The best form of encouragement in these situations may be that once any current complaints have been addressed, becoming proactive on accessibility can be a means to avoid complaints in the future, and to expand the potential customer-base.

For policymakers:

Consider proposing cross-organizational success factors, commensurate with those found in this study, as elements to be considered in corporate Disability Action Plans.