



Quantification of the benefits of Living Connected's services

MGNT925 Assessment 3

Final Report

Chris Hally-Burton (2788834)

Date of submission: 12 January 2018

Executive Summary

Senior citizens are at risk of falling on the wrong side of the digital divide due to their relatively low take up of the internet. Research suggests this low take up is due to issues surrounding ability, affordability and accessibility. Living Connected are addressing these issues by providing seniors with introductory and personalised training in online activity. They are seeking funding to maintain the affordability of their services and extend their reach. To assist in obtaining that funding, they are engaging in a marketing campaign, and are looking for quantification of the benefits of their services to use as marketing material. The purpose of this report is to provide that benefit quantification.

A stakeholder analysis identified that the five key stakeholders in Living Connected's services are senior citizens, private enterprise, not-for-profit organisations, the public sector and society in general. Stakeholder interests provided the impetus for a literature review, which indicated that the benefits for senior citizens included social inclusion, improved physical and mental health, mental stimulation, increased independence and financial benefits from being able to transact online. Benefits for business come from the efficiency and productivity improvements associated with online trading. Not-for-profit organisations benefit by enhancing communication channels with potential contributors to their cause. Access to online government and public services benefits both the government in terms of efficiency and productivity advancements, as well as individuals saving time and experiencing increased convenience. Society benefits from seniors being more engaged in civic activity, and from carers' time being freed up to become more productive members of society.

An attempt was made to quantify the above benefits. In many instances, the material generated is broad data affecting the entire population, and more work is required to make it senior-specific.

Highlights of the quantification include:

- \$374 million expansion of My Health Record means that the government has a significant stake in seniors developing the appropriate skills to make use of the service
- 44% of elderly people living in care suffer depressive symptoms, and older men have the highest suicide rate in the country. Living Connected's services have the ability to address contributing factors such as social isolation, loneliness and cognitive decline
- Increased senior independence has the potential to delay the entry of individuals into nursing homes, saving pensioners up to \$692/fortnight and reducing the >9-month waiting period that 1 in 6 Australians accepted into nursing homes have to face

- Online retail can save consumers 13% on average compared to shopping in store
- Growth in online retail is outstripping traditional “bricks and mortar” sales by nearly 7% per annum, but as the demographic with the most disposable income it is vital that senior citizens have the skills and desire to continue fuelling this growth
- Charitable donations from seniors are growing by more than 10% year-on-year. Use of social media is a critical pathway for not-for-profits to communicate with seniors and garner their support
- Online transactions cost the government 1/40 of face-to-face transactions, 1/30 of postal transactions and 1/16 of telephone transactions. The value to the government of giving seniors the ability to transact online is clear
- The economic value of volunteer support by carers over 65 in Victoria was calculated to be \$681 million
- 46% of carers are not in work and are not looking to work, and of those who are working or looking to work, 89% believe they are limited in the time that they can commit. Increased independence of seniors could free up these carers to become more productive members of society

These statistics can be used by Living Connected as part of their upcoming marketing campaign. The testimonials on the Living Connected website are a good source of primary data to quantify the value of social inclusion. It may be worth lobbying the Australian government to fund some research to gather more complete and senior-specific data.

The way that this report categorises benefits according to the stakeholder group that they apply to should serve as a guide for Living Connected as to where they focus their fundraising efforts. It is important that Living Connected look beyond government institutions and promote their services to groups that will obviously benefit from them.

Table of Contents

Executive Summary.....	i
1 Introduction.....	1
2 Literature Review.....	X
2.1 Benefits for senior citizens.....	X
2.1.1 Social inclusion.....	X
2.1.2 Senior physical health.....	X
2.1.3 Senior mental health and stimulation.....	X
2.1.4 Increased independence.....	X
2.1.5 Financial benefits for individuals.....	X
2.2 Benefits for business.....	X
2.3 Benefits for not-for-profit organisations.....	X
2.4 Access to online government and public services.....	X
2.5 Societal benefits.....	X
2.6 Summary of qualitative benefits.....	X
3 Quantification of the benefits.....	X
3.1 Benefits for senior citizens.....	X
3.1.1 Senior physical health.....	X
3.1.2 Senior mental health and stimulation.....	X
3.1.3 Increased independence.....	X
3.1.4 Financial benefits for individuals.....	X
3.2 Benefits for business.....	X
3.3 Benefits for not-for-profit organisations.....	X
3.4 Access to online government and public services	X
3.5 Societal benefits.....	X
4 Recommendations.....	X
5 Conclusion.....	X
6 References.....	X
7 Appendices.....	X

1 Introduction

Modern society is increasingly intertwined with digital technology, to the point where those that lack the access or appropriate skills to engage in online activity are at risk of being left behind. The Digital Divide refers to the economic or social inequality that results from different levels of utilisation of information technology (IT). The terms digital exclusion and digital inclusion are used interchangeably to describe the position of individuals or groups with respect to the digital divide.

The most recent statistics from the Australian Bureau of Statistics (ABS) suggest that only 51% of Australians over 65 years of age use the internet for personal use in a typical week (Hally-Burton p. 1). This makes senior citizens prime candidates for digital exclusion in a world where many goods and services are becoming available either exclusively online or offline at a premium cost. Research indicates that the reasoning behind the low take-up of internet use amongst seniors can be broadly categorised as issues with affordability, accessibility and ability.

Living Connected seeks to break down these barriers by providing individualised and group IT training to senior citizens, allowing them to become more digitally active. Given a good proportion of their clients are pensioners, the affordability of their services is a top priority. Living Connected are seeking funding from government, not-for-profit (NFP) and private enterprise to assist with the affordability of their services and broaden their reach. To that end, they have engaged some undergraduate marketing students to generate material that can be used to entice potential contributors. Living Connected are hopeful this marketing campaign will be ready for implementation in early 2018.

The objective of this business research project is to generate a report that indicates the benefits of Living Connected's services, which will then be available as a resource for the marketing campaign. Research into the benefits of digital inclusion, particularly in Australia, is predominantly qualitative in nature. Living Connected are interested in quantifying some of these benefits, as they believe statistics and figures will have a greater impact on potential contributors to their cause. In seeking funding from government, NFP and private enterprise it is important that each of those parties can see the benefits that senior digital inclusion will have on their own outputs. Identifying who benefits

most from their services should also indicate to Living Connected where the focus of their fundraising efforts should be.

This report identifies the key stakeholders in Living Connected's services, analysing their interests and identifying ways in which they might benefit from senior digital inclusion. A literature review is then carried out to understand what prior research suggests are the qualitative benefits of Living Connected's services to the identified stakeholders. The report then attempts to quantify some of the benefits identified in the literature review. At the conclusion of the report there are some recommendations for Living Connected to consider.

Given the limited timeframe of this research, the sources used to quantify the benefits are predominantly secondary data. With appropriate time and resources the use of primary data – perhaps in the form of surveys of Living Connected clients – would strengthen this report. There are also a number of examples of government sponsored studies into the benefits of digital inclusion carried out internationally that would be worth repeating in Australia given the right resources. In some instances this report quantifies the magnitude of the issue being addressed by digital inclusion without being able to link a value directly to the work of Living Connected. Whilst this information is not within the immediate scope of this report it does provide a sound basis for further investigation in the future.

2 Literature Review

A stakeholder analysis (Appendix A) was carried out to identify who held a stake in Living Connected's services, what level of influence they had and what their interests were. Some potential benefits of Living Connected's services were also listed in an attempt to develop key themes for the subsequent literature review. Broadly, the stakeholders to be considered are senior citizens, private enterprise, NFP organisations, the public sector and society in general.

Following on from the stakeholder analysis, a review of the literature was carried out to identify the potential benefits of Living Connected's services. The findings of the literature review are discussed in the following sections.

2.1 Benefits for senior citizens

The immediately obvious and arguably most important stakeholder group are senior citizens. As discussed above, senior citizens are prime candidates for digital exclusion, and hence they are likely to benefit most from Living Connected addressing the digital divide.

2.1.1 Social inclusion

Effective use of digital technology is “implicated increasingly in what it means to be socially, economically, culturally and politically involved in 21st century society” (Walton et al. p. 9.4). Online computer use is central to many activities that are considered representative of social inclusion, such as managing personal finances or being an active member of one’s community. Walton et al. (2013) suggest that the sections of society that are digitally excluded are exposed to disadvantage in the form of inability to access to critical information, lack of social connection and limited exposure to key Australian services in the health, education and financial fields.

Although surveys suggest many senior Australians use the internet predominantly to garner information or communicate with their families, there is research suggesting that “a sense of social inclusion was found to be fostered when older adults spent more time using the internet” (Hill et al. p. 416). The connection that can be made with friends and family often extends to the wider world (Tsai et al. p. 703), which is of particular use for seniors that have previously lived in different communities in Australia or abroad. Use of digital technology allows “older adults to overcome physical barriers such as distance, personal mobility, limitations of time” (Hill et al. p. 419).

2.1.2 Senior physical health

The degree social inclusion experienced by seniors has been found to have an impact on their physical health. “Those who are more socially disconnected, and even those who perceive themselves to be socially isolated, score lower on measures of physical health. Greater social connectedness has even been found to lead to lower blood pressure and decreased risk of cardiovascular disease” (Sundar et al. p. 2288).

There have already been significant advancements in online health care, and it is important that senior citizens are able to take advantage of this technology whilst maintaining the quality of their

care. Such technology allows seniors to “more easily access doctors and health advice over the internet, no matter where they live” (NSPAC p. 8) Senior independence can be maintained by replacing traditional health and wellbeing services with things like online consultations, tele-health services and remote treatment plans (Walton et al. p. 9.5). These services can be beneficial to seniors in both preventing and self-managing chronic diseases like diabetes (Hall et al. p. 202). Management of these diseases can be done “in the home rather than in aged care facilities, reducing costs substantially” (NSPAC p. 8).

There is opportunity for senior health management to significantly improve with the advent of online technologies, with e-health services allowing for improved patient-provider communication, patient education and monitoring of compliance with treatment plans (Hall et al. p. 202). Researchers have suggested that as online networking evolves amongst senior citizens, personal health experiences could be shared through online forums, providing another useful health resource (Tsai et al. p. 696).

2.1.3 Senior mental health and stimulation

Social isolation is as much a mental concern for seniors as it is a physical one. “Socially isolated seniors show an increase in mortality and onset of dementia compared to those who are able to maintain social ties to friends and families” (Erickson p. 1). Often loss of morale and feelings of loneliness stem from physical limitations that come with old age (Erickson). Sundar et al. (2011) indicate that stimulation of interest in activities which improve life satisfaction and reduce feelings of depression can be achieved by developing stronger social ties. Information technology creates opportunity for social networking (Walton et al. p. 9.6), and “online social networking has the potential to compensate for offline deficits in psychological wellbeing” (Sundar et al. p. 2289). In addition to addressing depression stemming from social isolation, empowering seniors by increasing the control of their own medical situation can “promote self-confidence and reduce anxiety” (NSPAC p. 16)

Cognitive stimulation is vital for the elderly as it assists in preventing intellectual decline (NSPAC p. 16). The use of the internet can help to generate cognitive stimulation (Nascimento Ordonez et al. 2013). In a study that considered the effects on internet use on elderly cognitive performance, it was found that seniors “significantly improved...particularly in the language and memory domains” (Nascimento Ordonez et al. p. 216). Further to this, neuroimaging suggested that searching the

internet demonstrated similar brain activation to reading a book, but the internet use actually activated an area of the brain associated with making decisions quickly when faced with complex information. This led to the authors of the study concluding that use of IT could be linked to neuroplasticity (Nascimento et al. p. 216).

2.1.4 Increased independence

Senior citizens seek to maintain their independence for as long as possible. For many, this means staying in their homes rather than moving into assisted living or a nursing home. Increasing senior independence has the potential to delay of “entrance of older people into nursing homes or hospitals, decreasing health care costs” (NSPAC p. 16). Use of information technology has been associated with “increased feelings of independence and personal growth” (Tsai et al. p. 696), and hence “offers the elderly significant potential for remaining independent longer” (Niehaves & Plattfaut p. 709). Activities such as online banking and shopping can prevent loss of independence that had previously come with the physical limitations associated with ageing (NSPAC p. 17).

2.1.5 Financial benefits for individuals

The continual expansion of online retail offers significant household savings relative to more traditional goods and services channels. The benefits of online transactions aren't limited to price, with the fact that “consumers can purchase a wider range of goods and services” (Walton et al. p. 9.6) indicating that choice is another major advantage. Online channels are able to offer these points of difference due to the operational costs usually being far lower than in-store alternatives (Niehaves & Plattfaut). By giving senior citizens online capability, Living Connected are actually enabling seniors to have choices between “alternative IT - and non-IT-based offerings, which in turn means being able to choose the superior offer” (Niehaves & Plattfaut p. 709).

2.2 Benefits for business

Moving operations online has the potential to benefit businesses significantly. A major source of these benefits is “improving efficiencies through greater back office automation and greater use of online information and transactional services” (Walton et al. p. 9.5). Online solutions can enhance productivity by saving time and enabling quality improvements. Revenue is also likely to grow due

to “increased market turnover through greater market access in line with growing online consumption” (Walton et al. p. 9.5).

Aside from online retail, marketers have identified that “the internet can also be increasingly be used as a marketing tool for older generations” (Meiners & Seeberger p. 313). Given that seniors have “double the discretionary spending” (Meiners & Seeberger p. 294) capacity of younger consumers, it makes sense that more should be done to target them with marketing. Meiners and Seeberger (2010) actually suggest that seniors represent the best return for marketing spend in all age brackets.

2.3 Benefits for not-for-profit organisations

Social media provides a new, simple and more effective way to connect not-for profit organisations with their supporters. This helps to obtain the financial and physical support required to keep these organisations operational. Social media also helps to achieve “more effective communication with target supporters and donors...and more effective service delivery, enhancing awareness, participation, reach and impact” (Walton et al. p. 9.5).

2.4 Access to online government and public services

Digital inclusion is vital with respect to giving seniors “the ability...to access government services that are increasingly only online” (Walton et al. p. 9.13). Many government and public services have migrated online, meaning that the internet is an “important means of accessing and interacting with local government, health and welfare services...and other areas of government” (Walton et al. p. 9.4).

From a public sector point of view, increasing online services at the expense of their physical locations results in increased efficiency through lower transaction costs, faster response times, improved choice and convenience and democratic engagement (Walton et al. p. 9.5).

2.5 Societal benefits

Use of the internet provides “greater opportunity for involvement in civic and democratic activity” (Walton et al. p. 9.6). Broadbent and Papadopoulous (p. 57) go so far as to say that the current state of disconnect between individuals has led to a loss of social capital, but the internet has the potential to address the issue. Given the wide-ranging positive effects of digital inclusion, including “economic performance, employment opportunities, quality of life, social participation” (Niehaves & Plattfaut p. 721), it is not surprising that governments have committed significant time, effort and resources to ensuring people are able to engage in online activity.

Digital technology enables senior citizens to “continue to participate in social, cultural and civic activities, ensuring their independence and maintaining their role as a stakeholder in society” (Hill et al. p. 419). Participation in community events and with like-minded interest groups is considered an integral part of productive ageing (NSPAC p. 8).

2.6 Summary of qualitative benefits

Table 1 summarises the benefit categories identified by the literature review. An attempt to quantify these benefits is in the ensuing section of the report.

Benefit category	Examples of benefits
Social inclusion	Increased connection with family and friends Increased connection with world and current affairs Compensation for loss of mobility and lifestyle changes associated with ageing Increased connectivity when communicating critical information to the public
Senior physical health	Access to remote treatment, enabling independent living where otherwise impossible Online consultations Seniors living longer Decreased risk of cardiovascular disease and high blood pressure Reduced spending on health care Prevention and self-management of chronic diseases like diabetes and dementia Prevention or delay of older people entering nursing homes

Senior mental health and stimulation	<p>Reduced isolation and subsequent depression</p> <p>Stimulation of interest in daily activities</p> <p>Increased feelings of independence and personal growth</p> <p>Promotion of self-confidence and reduction of anxiety</p> <p>Increased morale and life satisfaction</p>
Increased independence	<p>Generation of cognitive stimulation</p> <p>Improved language and memory performance</p> <p>Changes in cognitive functioning</p> <p>Seniors remaining independent for longer</p> <p>Prevention of intellectual decline</p>
Financial benefits for individuals	<p>Savings from online transactions</p> <p>Increased consumer choice courtesy of both online and offline channels</p>
Benefits for business	<p>Increased efficiency</p> <p>Productivity improvements</p> <p>Expansion of revenue sources</p> <p>Increased marketing reach</p>
Benefits for not-for-profit organisations	<p>Access to seniors via social media helping to improve fundraising efforts</p> <p>More effective communication with supporters</p> <p>More complete delivery of service</p>
Access to online government and public services	<p>Increased active participation in the healthcare system</p> <p>Lower transaction costs</p> <p>Faster response times</p>
Societal benefits	<p>Greater opportunity for involvement in civic, cultural and democratic activity</p> <p>Improved economic performance</p> <p>Participation in community events</p>

Table 1 – Summary of the categorised qualitative benefits of Living Connected’s services

3 Quantification of the benefits

Depending on the extent and type of data available, this section attempts to quantify some of the benefits identified by the literature review. Where possible, the information is specific to Australian senior citizens, but there is also some generic identification of the magnitude of the issues being addressed by digital inclusion. Further work is required to make these statistics specific to Living Connected's services.

3.1 Benefits for senior citizens

3.1.1 Senior physical health

The 2017 Budget committed \$374 million to expansion of the My Health Record (Pearce). Respondents in a trial of the online service indicated that computer literacy and access to computers were two of the main challenges that they faced (Department of Health 2016). Given the significant financial commitment it is certainly in the interests of the government for services like those provided by Living Connected to enhance computer skills so that seniors can make effective use of the My Health Record.

Australians aged 65 and over accounted for 40% of all hospitalisations in 2013-14, totalling 3.9 million (AIHW [b] p. 11). Figure 1 shows the expenditure on patients admitted to hospital in 2003-04 and 2012-13. Cumulative spending on over 65's is significantly higher than for younger age groups, and has increased by more than other age groups relative to the 2003-04 figures. An eHealth system which can be effectively utilised by senior Australians has the potential to produce significant savings on health care spending, particularly in terms of reducing general practitioner visits and hospitalisations. Living Connected's services can play a crucial role in ensuring that seniors have the appropriate IT skills to make eHealth a productive service.

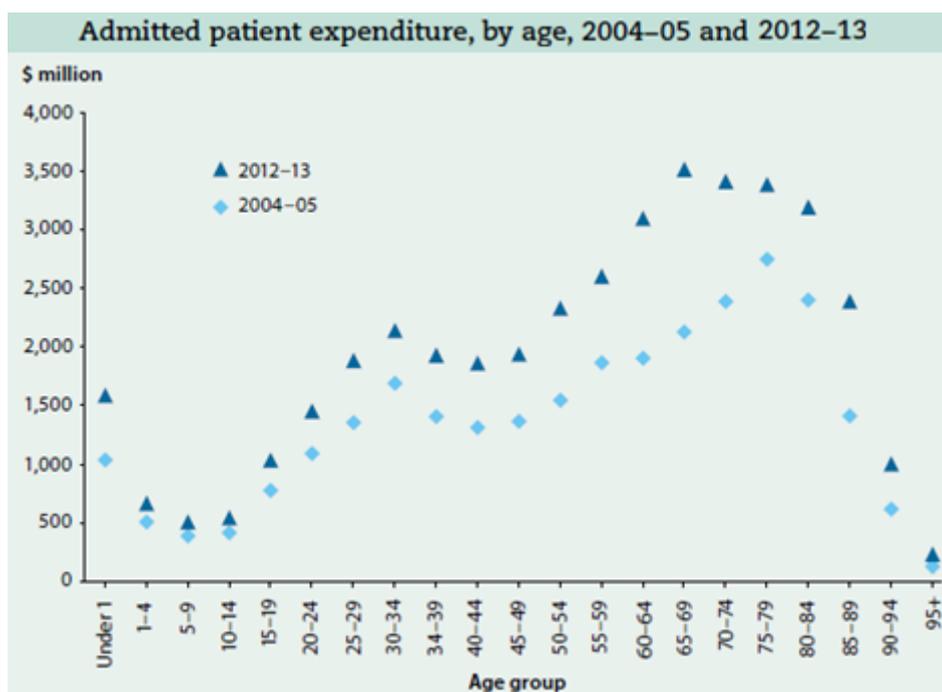


Figure 1 – Expenditure on admitted patients by age group, adjusted for inflation

Source: Adapted from AIHW [a] 2016

3.1.2 Senior mental health and stimulation

Social isolation and loneliness can have a marked impact on the mental health of seniors, with research suggesting that “lacking social connections is as damaging to our health as smoking 15 cigarettes a day” (Campaign to end loneliness). The damage often comes in the form of depression; “44% of elderly people living in institutional care suffer from at least some depressive symptoms, with 16% diagnosed with major depression” (McDougall et al. p. 563). Figure 2 shows the devastating flow-on effects of senior depression, particularly with respect to older males. The suicide rates in older men may also be related to irreconcilable frustrations that accompany cognitive decline. The literature review which preceded this section of the report discussed the potential for online activity to alleviate social isolation, loneliness and cognitive decline. Whilst it is difficult to quantify, it follows that alleviating these contributing factors would assist in bringing down the proportion of senior citizens suffering mental health problems, and hopefully have a positive flow-on effect on morale and life satisfaction.

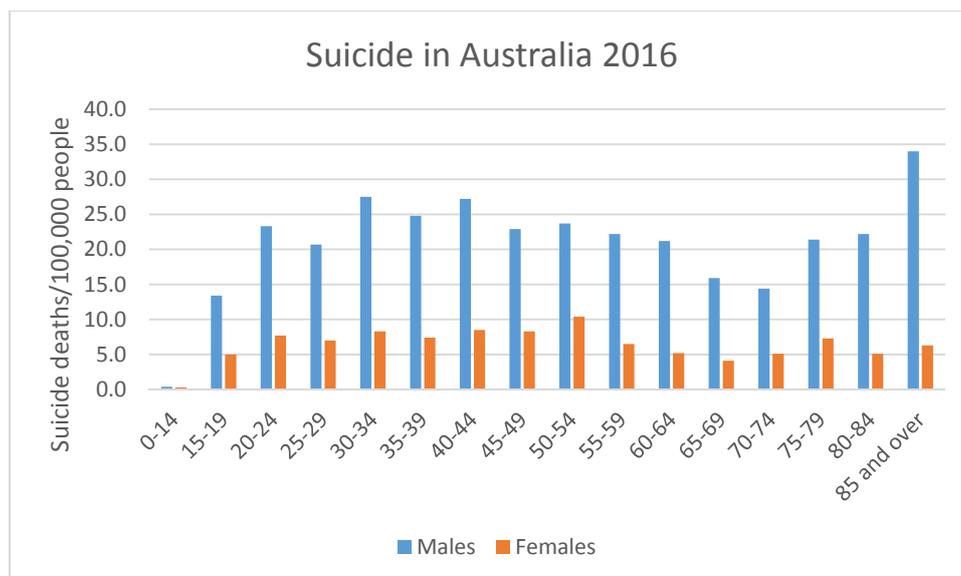


Figure 2 – Suicide deaths (by age group) per 100,000 people in Australia 2016

Source: ABS Causes of Death 2017

3.1.3 Increased independence

The Australian Government has recognised that Australian seniors want to stay in their own homes for longer, with \$955 million being committed over five years to help achieve this (Department of Health 2017). The increased independence that results from digital inclusion helps seniors to achieve this goal. At an individual level, avoiding a full time place in an aged care facility can be worth as much as \$692/fortnight to a pensioner (Aged Care Guide). The aged care industry itself is under constant strain due to inadequate resources. 15.8% of Australians approved for a place in an aged care facility in 2015 were forced to wait more than nine months for a bed (Bita). By enabling senior citizens to maintain their independence for longer, Living Connected’s services have the potential to release the strain on the aged care system.

3.1.4 Financial benefits for individuals

The literature review indicated likely financial benefits to seniors as online consumers. Research suggests that shopping online can save consumers 13% on average compared to shopping in-store (Cebr). A UK study calculated the consumer benefits of online shopping – derived through greater choice and a reduction in search time and cost – were worth approximately £283 per consumer per year (UK Online Centres p. 8). A Price Waterhouse Coopers study in 2009 estimated that digitally excluded households in the UK were missing out on £1 billion per year in savings from paying bills

online and online shopping (Walton et al. p. 9.6). It would be worthwhile generating a similar study in Australia, with a particular focus on households that were digitally excluded because of the age of their inhabitants.

3.2 Benefits for business

Online retail is an area of exponential growth in the Australian economy. Australian online retailers sold \$18 billion in physical goods in 2016, and growth in online spending outstripped traditional bricks and mortar retail by 6.9% during the same period (eCommerce Industry Paper). As with most activities related to the online world older Australians lag behind other age groups, spending less online overall. However, “over 65’s represent the fastest growing age group for online retail spending” (NAB news online). The literature review suggested that online marketing efforts should be focussed on senior Australians, particularly since they have significantly higher disposable income than most other age segments. The value of this focus has been witnessed internationally, with the “US seniors spend over \$7 billion online” (Meiners & Seeberger p. 312) in 2010. It is clear that there are benefits for business in building up senior online capability to the point where they are more willing and able to transact online.

3.3 Benefits for not-for-profit organisations

Research from Blueprint Australia indicates that the magnitude of charitable donations increases with age, and today’s senior citizens are more generous than any of their predecessors (Acorn Stairlifts). Figure 3 shows the rate at which charitable giving grows annually for each age bracket, indicating significantly stronger figures for over 65’s.

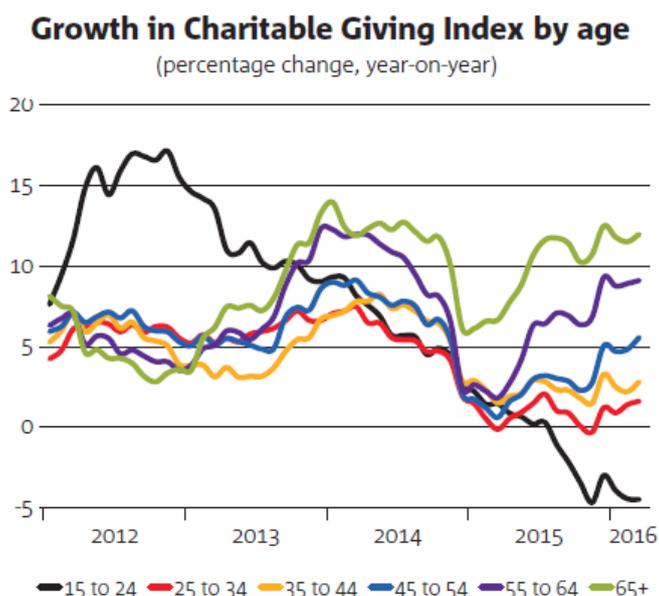


Figure 3 – Growth in charitable giving by age
Source: Adapted from NAB business online 2016

Senior charitable donations are not only financial; senior citizens are also one of the most giving groups in terms of volunteering their time for charitable organisations. It is believed that the improved communication channels that result from digital inclusion mean that seniors are more aware of what is required of them in terms of donations. Social media is the prime example, with 47% of Australians over 65 accessing it; Facebook is the predominant site (Sensis Social Media Report). Using these platforms is doubly advantageous for NFP organisations, as they are a “cost-effective option for non-profit organisations to market themselves without needing an exorbitant amount of funding” (Lake).

3.4 Access to online government and public services

Research by Deloitte Access Economics estimated that 811 million state and federal government transactions would be carried out in 2015, 40% of which would be done via traditional channels such as telephone, post or face-to-face (Bajkowski). It is not known what proportion of these transactions would be carried out by senior citizens, but it can be assumed given the statistics on internet take up that the senior demographic favours the traditional channels. Table 2 shows the cost of government transactions by method. It is important to note that not all government transactions can be conducted online, and this is particularly relevant to seniors with services such as drivers licence renewals which have additional medical requirements associated with ageing.

Transaction method	Government cost per transaction
In person	\$17
By mail	\$12.90
On telephone	\$6.60
Online	\$0.40

Table 2 – Cost of government transactions by method

Source: Bajkowski 2015

The Deloitte research suggested that if the 40% of traditional channel transactions were transferred online over the ensuing 10-year period, productivity and efficiency improvements would be worth \$17.9 billion to the government (Bajkowski).

For senior individuals, transferring to online transactions represents value in terms of time savings, convenience and in some cases reduction of out of pocket expenditure. Service NSW, for example, provide real-time information on their website and through a mobile application that indicates to customers wait times and potential busy periods at their service centres (Grubb). The Deloitte research (Bajkowski) estimated the benefits to citizens to be in the order of \$8.7 billion over the same 10-year timeframe. Further work is required to account for the extent which government and individual savings apply to senior citizen transactions.

3.5 Societal benefits

Deloitte research (Bajkowski) estimates that Australian taxpayers could realise economic benefits of more than \$20.5 billion over the next decade if Australia’s three tiers of government manage get their act together on digital transformation. Clearly this is not all attributable to Living Connected’s services, but it is important that senior citizens are not left behind as governments strive to realise these projected benefits.

The dependence of senior citizens on carers can have a detrimental effect on both the carers and the economy at large. Many carers are unpaid family members or volunteers who are forced to rely on government assistance to cover their living expenses. In 2012, the annual economic value of volunteer support in Victoria provided by carers over 65 was calculated to be \$681 million (Seniors Online). Time constraints when caring for seniors means that 46% of carers are not in work and not looking for work, and of those who are working or looking to work, 89% are limited in terms of what

they can output (Tinder Foundation). By increasing the independence of older Australians, Living Connected's services should allow less reliance of seniors on their carers, freeing up carers to become more productive members of society.

4 Recommendations

The following recommendations are provided for Living Connected based on the literature review and quantification attempts contained in this report:

- A combination of the benefits identified in the literature review and the subsequently quantified benefits should be used as reference material for the 2018 marketing campaign.
- The categorisation of stakeholders should be used as a guide as to where Living Connected might target their fundraising efforts, based on the magnitude and marketability of the benefits identified in each subsection of the report.
 - o It is important that Living Connected do not focus solely on government sources or large corporate organisations when pursuing their funding. Many NFP's and NGO's that address senior specific issues such as living with dementia or providing care for sufferers of arthritis may be able to see a more obvious payback for supporting Living Connected's mission.
 - o That said, the existing relationship with Be Connected, a federal government initiative, should be fostered as there is significant money available as grants for those looking to address the digital divide.
- Many of the benefits of Living Connected's services, particularly social inclusion, are difficult to quantify without primary data. The author recommends that existing testimonials on the Living Connected website be used for this purpose. Alternatively, carrying out a survey of past and present users of Living Connected's services could serve the same purpose.
- Many of the benefits described in the quantification section of this report refer to population-wide data. Further work is required to identify what proportion of these benefits apply specifically to senior citizens.

- Research identified a few international studies (listed below) that contain readily available quantifiable data on digital inclusion. It is beyond the scope and resources of an MBA student to replicate these studies during a 6-week project. Living Connected should lobby the Australian government to carry out similar, senior specific, research if they wish to get more extensive data on the value of their services.
 - o Bradshaw, H 2011, *Digital Inclusion: economic and social benefits for individuals and wider society*. Social research report No. 26/2011 produced for the Welsh Government <http://gov.wales/docs/caecd/research/111215-digital-inclusion-economic-social-benefits-en.pdf>
 - o Jaeger, B 2012, *New Frontiers in the Digital Divide: Revisiting Policy for Digital Inclusion*, Department of Society and Globalisation, Roskilde University, Denmark
 - o UK Online Centres 2008, *Economic benefits of digital inclusion: building the evidence* https://www.goodthingsfoundation.org/sites/default/files/research-publications/economic_benefits_of_digital_inclusion_building_the_evidence.pdf

5 Conclusion

This report identified the key stakeholder groups potentially affected by Living Connected's services. A review of the literature was then carried out to understand what the qualitative benefits of Living Connected's services were with respect to these stakeholders. An attempt was then made to quantify some of the identified benefits using secondary data, with the results often broad and requiring more work to become senior specific. Nevertheless, this report provides quantified benefits that Living Connected can use as reference material for their 2018 marketing campaign. The contents of this report can also be used as a guide as to where Living Connected's energies should be directed in seeking out funding. This report recommends that Living Connected lobby the government to sponsor some research if they are interested in more in-depth, senior-specific quantification.

6 References

Acorn Stairlifts 2015, *Australians get more generous as they get older*, accessed online 31/12/17

<http://www.acornstairlifts.com.au/blog/post/168/Retirement/Australians-Get-More-Generous-As-They-Get-Older>

Aged Care Guide 2017, *Nursing Home Costs*, accessed online 31/12/17

<https://www.agedcareguide.com.au/information/nursing-home-costs>

Australian Bureau of Statistics (ABS) 2017, *Causes of Death, Australia, 2016*, accessed online via abs.gov.au on 31/12/17

Australian Institute of Health and Welfare (AIHW[a]) 2016, *Australia's Health 2016*, Chapter 2.2: How Much Does Australia Spend on Health Care, accessed online 31/12/17

<https://www.aihw.gov.au/getmedia/3be568f2-d938-4575-bf1f-8742bad4d2ce/ah16-2-2-how-much-does-australia-spend-on-health-care.pdf.aspx>

Australian Institute of Health and Welfare (AIHW[b]) 2016, *Australia's Health 2016*, Chapter 6-17: Health Care Use by Older Australians, accessed online 31/12/17

<https://www.aihw.gov.au/getmedia/0b26353f-94fb-4349-b950-7948ace76960/ah16-6-17-health-care-use-older-australians.pdf.aspx>

Bajkowski, J 2015, *Digital Transformation of government worth \$20.5bn for Australia: Deloitte*, accessed online 31/12/17

<https://www.governmentnews.com.au/2015/07/digital-transformation-of-government-worth-20-5bn-for-australia-deloitte/>

Bitá, N 2015, *Elderly waiting longer for places in high-care nursing homes*, accessed online 31/12/17

<http://www.theaustralian.com.au/national-affairs/elderly-waiting-longer-for-places-in-highcare-nursing-homes/news-story/78f987c11c4f420bc44c2fa43bfea96b>

Broadbent, R & Papadopoulos, T 2013, *Impact and benefits of digital inclusion for social housing residents*, *Journal of the Community Development Society*, vol. 44, no. 1, pp. 55-67

Campaign to end loneliness, *Threat to Health*, accessed online 31/12/17

<https://www.campaigntoendloneliness.org/threat-to-health/>

Centre for Economics and Business Research (Cebr) 2015, *The economic impact of Basic Digital Skills and inclusion in the UK*, accessed online 31/12/17

<https://www.goodthingsfoundation.org/research-publications/economic-impact-basic-digital-skills-and-inclusion-uk>

Department of Health 2016, *Evaluation of the Participation Trials for the My Health Record*, accessed online 31/12/17

<http://www.health.gov.au/internet/main/publishing.nsf/content/ehealth-evaluation-trials>

Department of Health 2017, *Staying at home*, accessed online 31/12/17

<https://agedcare.health.gov.au/older-people-their-families-and-carers/staying-at-home>

eCommerce Industry Paper 2017, *Inside Australian Online Shopping*, accessed online 31/12/17

<https://acquire.startrack.com.au/pdf/Inside%20Australian%20Online%20Shopping%202017.pdf>

Erickson, L 2011, *Social media, social capital, and seniors: The impact of Facebook on bonding and bridging social capital of individuals over 65*, AMCIS 2011 Proceedings.

Grubb, B 2015, *Long queues no more as NSW government launches Service NSW 'beat the queue' feature*, accessed online 31/12/17

<http://www.smh.com.au/digital-life/digital-life-news/long-queues-no-more-as-nsw-government-launches-service-nsw-beat-the-queue-feature-20150504-ggu4xf.html>

Hall, A, Bernhardt, J, Dodd, V & Vollrath, M 2015, *The Digital Health Divide: Evaluating Online Health Information Access and Use Among Older Adults*, Health, Education & Behaviour, vol. 42 (2), pp. 202-209

Hally-Burton, C 2017, *Quantitative analysis of the social and economic benefits of Living Connected's services*, MGNT925, submitted 11 December 2017, University of Wollongong

Hill, R, Betts, L & Gardner, S 2015, *Older adults' experiences and perceptions of digital technology: (Dis)empowerment, wellbeing and inclusion*, Computers in Human Behaviour, vol. 48, pp. 415-423

Lake, L 2017, *Social Media Marketing Benefits for Nonprofit Organizations*, accessed online 31/12/17

<https://www.thebalance.com/nonprofit-marketing-social-media-2295346>

McDougall, F, Matthews, F, Kvaal, K, Dewey, M & Brayne, C 2007, *Prevalence and symptomatology of depression in older people living in institutions in England and Wales*, Age and Ageing, vol. 36, pp. 562-568

Meiners, N & Seeberger, B 2010, *Marketing to Senior Citizens: Challenges and Opportunities*, The Journal of Social, Political and Economic Studies, vol. 35, no. 3, pp. 293-328

Nascimento Ordonez, T, Sanches Yassuda, M & Cachioi, M 2011, *Elderly online: Effects of a digital inclusion program in cognitive performance*, Archives of Gerontology and Geriatrics, vol. 53, pp. 216-219

National Seniors Productive Ageing Centre (NSPAC) 2011, *Older Australians and the Internet: Bridging the Digital Divide*, Australian Department of Health and Ageing

NAB business online 2016, *NAB Charitable Giving Index*, accessed online 31/12/17

<https://business.nab.com.au/wp-content/uploads/2016/04/NAB-Charitable-Giving-Report-Feb2016.pdf>

NAB news online 2014, *Online retail sales increase to \$15.25 billion, with older Australians leading growth*, accessed online 31/12/17

<http://news.nab.com.au/online-retail-sales-increase-to-15-25-billion-with-older-australians-leading-growth-2/>

Niehaves, B & Plattfaut, R 2014, *Internet adoption by the elderly: employing IS technology acceptance theories for understanding the age-related digital divide*, European Journal of Information Systems, vol. 23, pp. 708-726

Pearce, R 2017, *Budget 2017: Government prepares for My Health Record expansion*, accessed online 31/12/17

<https://www.computerworld.com.au/article/618973/budget-2017-government-prepares-my-health-record-expansion/>

Seniors Online 2016, *Ageing is everyone's business*, accessed online 31/12/17

www.seniorsonline.vic.gov.au

Sensis Social Media Report 2017, accessed online 31/12/17

www.sensis.com.au/socialmediareport

Sundar, S, Oeldorf-Hirsch, A, Nussbaum, J & Behr, R 2011, *Retirees on Facebook: Can online social networking enhance their health and wellness?*, Proceedings of the International Conference on Human Factors in Computing Systems, Vancouver Canada, pp. 2287-2292

Tinder Foundation 2015, *The Health and Wellbeing of Unpaid Carers: Where Can Digital Skills and Community Support Add Value?*, accessed online 31/12/17

<https://www.goodthingsfoundation.org/research-publications/health-and-wellbeing-unpaid-carers>

Tsai, H, Shillair, R, Cotten, S, Winstead, V & Yost, E 2015, *Getting Grandma Online: Are Tablets the Answer for Increasing Digital Inclusion for Older Adults in the U.S.?*, Educational Gerontology, vol. 41, pp. 695-709

UK Online Centres 2008, *Economic benefits of digital inclusion: building the evidence*, accessed online 25/12/17

https://www.goodthingsfoundation.org/sites/default/files/research-publications/economic_benefits_of_digital_inclusion_building_the_evidence.pdf

Walton, P, Kop, T, Spriggs, D & Fitzgerald, B 2013, *A digital inclusion; Empowering all Australians*, Australian Journal of Telecommunications and the Digital Economy, vol. 1, no. 1, pp. 9.1-9.17

7 Appendices

Appendix A – Stakeholder Analysis

Stakeholder	Influence	Required understanding	Interests	Potential benefits of Living Connected services
Senior citizens	High	High	<p>Avoid exclusion from activities that are moving towards digital offerings</p> <p>Better understanding of technology</p> <p>Affordable learning services</p> <p>Ease of use</p> <p>Effective health management</p>	<p>Digital inclusion</p> <p>Education tailored to the needs of individuals</p> <p>Subsidised services, access to hardware for those who cannot afford their own</p> <p>Training provided at a pace that suits the ability of the individual</p> <p>Ability to utilise eHealth services makes it easier for individuals to remain in control, get treated remotely and potentially be healthier for longer</p> <p>Access to online retail discounts due to ability to shop</p>

			Retail value	around more
			Social engagement	Social networking can reduce loneliness which leads to depression
Public sector and not-for-profits	High	Medium	Reduce strain on physical service centres	Basic service requests can be handled by seniors themselves online
			Better accessibility to aged care facilities for those that require it	Shorter wait periods for aged care facilities due to decreased demand from increased senior independence
			Reduce spending on public health	Improved health of seniors due to utilisation of eHealth services resulting in a reduction in demand for public health facilities
			Reduce welfare payments for full time carers	Decreased dependence on care from family members makes carers more productive members of society
			Better communication channels	Social media provides a platform for connection with supporters, improving communication, access to fundraising efforts etc.
Private enterprise	Medium	Medium	Increased revenue	An increase in online senior citizens translates to increased opportunity to expand market share of

			Productivity and efficiency	<p>online consumption</p> <p>Reduction of fixed costs such as rent and wages, replaced by greater automation and use of online transactional services. Online solutions can represent quality improvements and time savings for the business.</p>
General public	Low	Low	<p>Ability to interact more effectively with senior citizens</p> <p>Increased societal contribution from those responsible for the care of senior citizens</p>	<p>Increased contribution of senior citizens to society, in the form of things like increased volunteer activity</p> <p>More spare time and employment prospects for carers</p>