Future of aged care: exploring opportunity and choice for Australia’s aged care industry.

Aged Care Workforce Strategy Taskforce

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Acknowledgments

This resource has been developed by Miles Morgan Australia for the Aged Care Workforce Strategy Taskforce.

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About Miles Morgan Australia

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1 Introduction

We need an industry workforce strategy that reflects future trends around work and life and the evolving expectations of the consumer.¹

There is a fountain of knowledge and data available across the aged care landscape, both globally and nationally — this resource is designed to be an industry companion to this world of change. It offers exploration and evidence to invite industry to re-imagine aged care across Australia.

Staying the same is not an option

Organisations of all scales and approaches need to become more resilient to the challenges facing the aged care industry (and in fact all industries), and more adaptive to the needs and expectations of the community and the workforce.

Some organisations may excel in the commercialisation of service delivery, others may be leaders in terms of service outcomes and experience. However, the true test of the industry’s future leadership will be in gaining the trust and commitment of both its workforce and the Australian community so that older Australians live a more equitable, positive and aspiring life.

Shifts in technology, community and employee expectations

Australian organisations working in aged care are no longer protected – nor hindered - by geographical boundaries. Technological enhancement of remote service delivery, combined with the drive of international markets to expand their reach, means there is both challenge and opportunity ahead.

Furthermore, the life experiences and volume of older Australians coming in contact with the aged care industry, now and in coming years, mean the diversity of expectations and needs is likely to broaden.

The Australian workforce is also experiencing change – some by choice, some due to job scarcity and reduced job security. Despite young people being the most educated generation and older Australians having a wealth of employability skills both younger and older Australians are particularly vulnerable.

A resource designed to facilitate and enhance thinking and planning

This work is intentionally labelled as a resource. It is not intended to be viewed as a report to government, or a study of the industry; rather it is a focused exploration of the environments and trends relevant to the Australian aged care industry.

It is a resource designed to be used by both industry and the wider community to facilitate reflection on current thinking, planning and practice. It is not a literature review, it is not a socio-economic forecast and neither is it a replacement for strategic thinking and evidence-building by community and industry. It is simply one way of interpreting a world of change to help facilitate collective thinking and action.
The resource is built on the premise that to develop an adaptive workforce strategy for the aged care industry, it’s critical that the wider community and industry has access to a contemporary understanding of:

1) What we can learn from the experiences of others, both in Australia and overseas;

2) What are the plausible and challenging impacts of global megatrends on both the future aged care workforce and living for longer in Australia; and

3) What emerging global and local practice can better enable Australia’s aged care leadership to build a sustainable approach to current workforce and service challenges.

The resource itself includes three primary chapters:

**Chapter 2: Trends shaping Australia’s aged care landscape**

- A demand-side exploration of the trending needs, desires and aspirations of consumers and workers as they relate to the aged care industry.

**Chapter 3: Opportunities for re-imagining aged care**

- A supply-side exploration of the diverse ways of leading, operating, caring and working to meet changing consumer and workforce needs.

**Chapter 4: Using scenarios to inspire choices**

- Four scenarios are presented designed around the areas of change impacting the aged care context.

### 1.1 Overview of principal research activities

Our approach is not a product of the predictive sciences, nor is it intended to substitute the consultation of community, literature and other appropriate sources of evidence. It is a companion guide to a world of resources and examples of creative practice and thinking happening in Australia and overseas. It will be a starting place for some and more familiar to others.

#### 1.1.1 Environmental analysis using traditional sources

The environmental analysis principally incorporated strategic management and foresight research approaches (e.g. STEEP²) and involved the identification, examination, and systematic description of environmental factors influencing the aged care industry in Australia. A desktop review of traditional and grey literature³ was conducted to both inform and complement the central social media data mining exercise.
For example, online discussion highlighted the concept of shared value (See Section 3.5), but credible, traditional resources were sought to qualify the content of the online discussions and deepen our understanding of its philosophy and practice.

This analysis paid attention to Australian and international research into megatrends, and aged care approaches and reforms.

### 1.1.2 Online data mining and analysis

Using specialised social media data extraction software, three ‘macro’ searches were conducted encompassing terms associated with future, workforce and aged care. Each of these macro searches resulted in a substantial dataset that was analysed to inform scenario building workshops and ultimately the final resource.

Each search covered the period 1 November 2016 to 31 October 2017, with geo-filters covering Australia, New Zealand and Singapore; the US and Canada; and Great Britain and selected European countries. The data sources covered Twitter, online news websites, blogs, and forums.

Various refinements and quality criteria were applied to the macro datasets to focus analysis on quality data that met the project requirements. Through this analysis, various trends and megatrends were identified, alongside direct and indirect workforce implications for aged care.

### 1.1.3 Aged Care Workforce Strategy Taskforce consultation

A series of teleconferences and in-person discussions were held with Taskforce members to inform the framing and development of the associated research. Focused workshops were also held to refine the scenarios presented in this resource (Perth, February 2018; Canberra, March 2018). This involvement is central to developing a strategic thinking resource of this nature. It enables ‘as we go’ development and validation to ensure industry and community alignment and accessibility. Reflection boxes are included throughout the resource and build upon this engagement approach. They include questions that encourage readers from community and industry to use the resource to propel and enhance their thinking and planning.

The remaining sections of this introductory chapter provide an overview of the resource. Further details of our strategic foresight approach can be found in Appendix 1.

### 1.2 Overview of resource elements

#### 1.2.1 Trends shaping Australia’s aged care

The industry operates in an environment where context and people matter. This study explores the landscape of emerging and projected change. It brings together work by national and international population health analysts, demographers, and social and economic research to capture the diverse picture of Australian living and working.
Topics of focus include:

- Family life and characteristics
- Life expectancy and experience of living and working longer
- Social fragmentation and isolation
- Migration and people movement for work and life

This long view presents industry with important choices regarding its current and future customers, and also its current and future workforce.

Defining trends and qualities relating to consumer power are presented, including:

- Baby Boomer effect
- Digital, health and financial literacy
- Boundary intolerance
- Inter-generational relations

The term consumer is used throughout this report and when used we actively acknowledge the following Taskforce definition: “Consumers are the people accessing or using care, their families, carers, those entities trusted or designated to act on their behalf, and the local community.”

The study explores the narrative surrounding Smart Ageing and living, and the shift from measuring illness to measuring wellness. Workforce perspectives also provide another important layer of understanding of the landscape.

Enhanced expectation of meaningful work is evident across industries. This manifests in a desire for alignment of work and personal values, increased interest in volunteering for work preparation, and generational differences in attitudes to work, career and ideas of professionalism. The ways in which workforce capacity and capability is understood, used and developed, and how labour organisations are working to re-engage people are all changing.

New sentiment towards retirement is emerging too. People are working for longer and adopting different career patterns. Post-retirement volunteering and entrepreneurship is also taking on a different look. With this shift in career and work thinking comes different education and learning desires and ideas of professional development.
1.2.2 Opportunities for re-imagining aged care

The changing face of aged care is the product of history, as well as current trends. Some of the disruptive trends have been around for some time (e.g. ageing in place) and some are more recent (e.g. Smart Ageing). The study focuses on nine trend areas which present opportunities to re-imagine aged care across Australia:

1) **De-institutionalisation of care** which navigates the development of ageing in place and building-free care principles.

2) **Re-imagined communities** which encompasses community-led planning and democracy, and planning for people not infrastructure.

3) **Value-based care and health** which references integrated care and person-centred business models and practice implemented at the individual, organisation and/or system level.

4) **Personalised servicing** which provides perspectives on product, service, delivery and payment modes and how they are used to tailor to specific individual preferences and needs.

5) **Shared-value operating and investing** which examines the emergence of business models with the singular pursuit of social benefit and not commercial gain.

6) **Networked servicing and operating** which examines ways of collaborating and co-working to improve thinking, design, delivery of services and products, independence and resilience; and resolve problems and create common benefit.

7) **Digital-preneurship** which explores the embracing of new digital technologies to enhance business operations, business models, business data and customer engagement.

8) **Data for enabling** which discusses the next generation of data utilisation by organisations and businesses that moves beyond the confines of compliance and reporting towards an empowering and enabling data culture for customers, workforce and stakeholders alike.

9) **Valuing care and workforce** which describes the re-evaluation by community and organisations around “what matters” and explores the emphasis on enabling, encouraging and rewarding care.

1.2.3 Using aged care scenarios to inspire choices

*Scenarios are stories about the future but they’re not predictions – they’re about understanding where we are today and exploring what could happen in the future… stretching our imagination and challenging our perception… bringing into view possibilities that we might not have previously considered or understood*.8

The scenarios in this resource are not predictions but alternative ways of thinking about aged care. The scenarios depict alternative possibilities where different trends dominate, and shape how industries and consumers interact.
Before developing the scenarios, we re-examined the intended value and purpose of this approach for the Aged Care Workforce Strategy.

This provided us with the clarity that the study must provide the industry with a set of scenarios that are both familiar and challenging, plausible and surprising to enhance their exploration of emerging opportunities and choices.

In other words, the scenarios aim to:

- inform industry how change is happening, and how participation in this change is do-able;
- enable industry to develop a common language about themselves to encourage constructive, reflective questioning, and creative leadership;
- enhance opportunity for transformational thinking across the industry and workforce;
- stimulate new ways of thinking about workforce supply and retention; and
- provide a clear line of sight of how industry can matter in the community.

The scenarios are not designed to be viewed as options. The scenarios are also not mutually exclusive – the real future is likely to be a combination of elements from all scenarios, in different ways, for different providers and contexts.

The following four scenarios have been designed to inspire choice for the industry:

### Scenario 1: Community caring

### Scenario 2: Remote caring

### Scenario 3: Digital-preneur caring

### Scenario 4: Self-enabled caring

Designed to meet critical criteria, each scenario is:

- **grounded** in the information sourced by the Future Skills and Training resource and Scanning Phase of this work (i.e. the digital consultation);
- **current and relevant** for Australian community contexts, including urban, regional and remote; and importantly,
- **accessible** to the Australian aged care industry at all levels of scale and service complexity.

The scenarios are presented in Chapter 4 of this resource. However, before reading the scenarios it is important to understand the demand-side (Chapter 2) and supply-side (Chapter 3) data, insights and ideas that informed their development.
2 Trends shaping Australian aged care

This section includes descriptions of the prevalent demand-side trends derived from the review of digital and social media sources, and traditional literature sources. This section also includes a selection of short case studies to provide further illustration of the described trends.

A workforce strategy can no longer be conceived in isolation of its consumer context; hence this chapter looks at the demand-side environment. It brings together current health, demographic and cultural understandings to enable industry to think in practical and creative ways about solutions to tackle challenges and leverage opportunities. Preparing for the future can no longer be a numbers game of labour demand and supply. Both context and people matter.

2.1 Context matters

2.1.1 The age of longevity

“85 is the new 65!” – Australians are said to age well due to improvements in diet, public health and medical technology.

Most older Australians have lived and worked during times of peace and increased security and prosperity. Improved life expectation has been enabled by this stability, a booming information age and innovation in areas such as food production, logistics, commerce, pharmaceuticals and health, spread across the world. Access to healthier lifestyles and better health information and treatment has also increased life expectancies worldwide, but especially in wealthier societies like Australia.

At the time of the Sydney 2000 Olympic Games, only the life expectancy of Japanese people exceeded 80 years of age. Since then, 29 more countries now record life expectancy statistics within this extended range. Life expectancy in Australia is now the 4th highest life expectancy in the world; an average of 82.8 years.

Ideas surrounding “old age” have also changed. Societally constructed life stages – infancy, childhood, adolescence, adulthood and old age – are being re-assessed to account for the fact that people now have many more years ahead of them, well beyond their 60s. Interestingly, most Baby Boomers (those born between 1946 and 1964) in developed countries (61%) now say they feel at least nine years younger than their chronological age.
2.1.2 Older Australians make up a bigger part of the picture

In Australia, the population of those aged 65 and over is projected to grow from 15% to 22% of the total population, between 2016 and 2056\(^{14}\). This trend is in keeping with similarly developed countries around the world. For example, by 2050 it is expected that in Japan, Singapore, Germany and Italy approximately 40% of the population will be aged 60 or older\(^{15}\).

Other countries, such as the US, Canada, Brazil and the UK, will have approximately 30% of people aged 60 and over\(^{16}\). By 2050, it is estimated that the number of people aged over 80 will have doubled in OECD countries, and this share of the population will have risen from 3.9% to 9.1%\(^{17}\).

A 2016 census snapshot of older Australians\(^{18}\)

One-in-six Australians were aged 65 and over, with 56% of these being women and 44% men. Most older Australians live at home with a spouse or partner (64%), 30% live by themselves, and 7% live with family of friends; 70% are homeowners.

Older Aboriginal and Torres Strait Islander people (aged 50 and over) currently make up 15% of Australia’s 740,000 Aboriginal and Torres Islander peoples (112,231).

The majority (66%) of older Australians live in major cities, 32% live in inner regional and outer regional areas, and less than 1% live in remote or very remote areas. It is important to note that some local government areas can have as much as one-third of their population aged 65 or over.

2.1.3 Changing migration, changing families

Immigration is a defining feature of Australia’s economic and social life. Over the past seven decades, around seven million people have migrated to Australia. Assuming immigration continues along its average long-term trajectory, it is projected to add another 13 million people by 2060. With more than one-in-four Australian residents born overseas, and close to half of the population with at least one parent born elsewhere, immigrants and their descendants make an important contribution to Australia’s human capital and social fabric\(^{19}\).

In the post-World War Two era between 1945 and 1970, most new arrivals to Australia were from Europe, including the UK. Migrants to Australia, from Asian countries became more common from the late 1970s onwards\(^{20}\). As a result, approximately one-third of Australia’s ageing population (those 65 years and older) were born overseas\(^{21}\). It is not surprising, then, that as many as one-in-five older people in Australia speak another language other than English\(^{22}\).

It is important to take a micro and macro level look when understanding migrant impact on population and workforce. National or even state level data on migrant diversity do not always tell the complete picture. At a local government and suburb level, whole communities can be dominated by one or two cultural/linguistic groups, but at the state or national level they are relatively small\(^{23}\). This is mainly due to the high volume of residents born in New Zealand or the UK.
While migration policies vary, many countries, including Australia, continue to use migration as an opportunity to access a much larger pool of talent. This results in growing diversity within the labour force. In the past decade, more than half of Australia’s population growth has resulted from migration\textsuperscript{24}.

The Department of Immigration and Border Protection continues to forecast steady positive growth in terms of Net Overseas Migration\textsuperscript{25}. According to a recent report by Australia’s Productivity Commission, more people are arriving than leaving each year, which will lead to an additional 13 million people in Australia by 2060\textsuperscript{26}.

In addition to migration, birth rates are a significant factor influencing Australia’s population. The volume of families having children, and the number children they are having, is decreasing. The proportion of families with children dropped from 54\% of families (1991) to 45\% of families in 2016. Significantly, current trends show that the number of children that families are having is also declining\textsuperscript{27}.

Lone-person households in Australia now make up one-in-four Australian households, compared to one-in-five in 1991. On Census night in 2016, 55\% of the two million people living alone were women. Single parent families are also becoming increasingly common, rising from 13\% (1991) to 16\% in 2016. Women are also the sole parent in 80\% of single parent families\textsuperscript{28}. These changes in family composition will likely impact the number of immediate family members available to participate in care. For example, people living alone may have reduced access to help from family members, while single parents may have reduced capacity to care for others in addition to their own children.

2.1.4 Australia’s health and wellness

Clinical health issues arise over the course of our lives. However, these conditions are more likely to affect some people more severely than others (e.g. those living with socio-economic disadvantage). Chronic disease in Australia is also understood to impact some groups of people more than others. In other words, the burden of disease can vary\textsuperscript{29}:

- People aged 65 and over (87\% have a chronic disease compared to 35\% of people aged 0–44);
- Women (52\% versus 48\% of men);
- People from lower socio-economic status (SES) areas (55\% versus 47\% from the highest SES areas); and
- People living in regional and remote areas rather than major cities (54\% versus 48\%).

In Australia, one in every four people experience comorbidities – in other words, multiple chronic health conditions – some related, some less related. Among older Australians, cardiovascular disease, arthritis, back pain and problems, mental health conditions, and diabetes are common among comorbidities\textsuperscript{30}. Of those who make it to 90 years of age, the majority will have at least one health problem that counts as a disability; many will have multiple ones.

When it comes to disease burden\textsuperscript{31}, the most dominant disease groups among older Australians are cancer, and musculoskeletal, cardiovascular and neurological conditions\textsuperscript{32}. Among these disease groups, the following are some of the leading conditions:

- Coronary heart disease (leading among men and women aged 65–84, and men aged 85+);
- Lung cancer (second-most leading among men and women aged 65–74);
Dementia (leading among women aged 85+, second-most leading among men aged 85+ and women aged 75–84); and

Chronic obstructive pulmonary disease or COPD (second-most leading among men aged 75–84).

The prevalence of dementia in older Australians is also well documented. Of an estimated 354,000 cases of dementia, 93% were found to be among older Australians, and this volume is set to more than double to 900,000 by 2050. Of older Australians living with dementia, about half live in their own home or self-care units within retirement communities, the other half live in residential aged care accommodation. Those living in aged care accommodation are more likely to be 85+ years, a woman, or widowed.

2.1.5 Social fragmentation, urbanisation and isolation

Getting older or living alone is not a direct determinant of poor wellbeing or loneliness. Most older Australians live by themselves, or with their spouse (94%); and there is reportedly minimal difference between the social participation levels of older people who live alone and older people who live with others.

Loneliness is about being dissatisfied by the nature of your social connection and feeling isolated and underwhelmed emotionally and socially. The issue of loneliness is sometimes said to have been exacerbated by the trends of urbanisation and use of technology for communication. For example, the number of close relationships might be diminishing – in the US, the number of Americans “who say they have no close friends has roughly tripled in recent decades”.

Loneliness is now commonly described as a widespread issue impacting young and old alike. The UK government’s recent announcement of a so-called Ministry of Loneliness illustrates this emerging narrative. However, a leading author and academic on the topic, John Cacioppo, has spoken publicly about the risk of highlighting loneliness as an epidemic. He, and others, emphasise that generalisation of the issue may dilute the effectiveness of re-abling those who are understood to suffer most from its experience, e.g. those who are living with chronic health conditions, from displaced or migrant groups, unemployed and living with poverty – all groups found among older Australians.

Loneliness and older people

In terms of chronic loneliness, it is reported by Professor Christina Victor’s 2011 research that levels have remained broadly static since the 1940s, with 6–13% of people over the age of 65 reporting they feel lonely ‘all or most of the time’. Loss is a big part of ageing-related loneliness. Losses at the individual level can include physical loss (e.g. mobility problems, visual and hearing impairments, dementia), the loss of social and family connections, or the loss of a professional identity. This can be compounded by losses at the societal level including reduced recognition in the media and the market, and loss of purpose in life, which all further deepen the feeling of isolation.
2.2 People matter

Every industrial or technological revolution is also a cultural revolution. This is because associated technologies create new ways of organising work and commercial transactions, and developing relationships and education. Life is made up of a series of interactions; and we develop our values and expectations via these exchanges. As the nature of these interactions change (e.g. digital commerce or dating), our values and expectations can change. In much the same way, demographic changes can also impact on our experience of the world, and consequently on our values and culture.

The current industrial revolution, the so-called Fourth Industrial Revolution, is understood to be changing our relationship and our consumption patterns, how we perceive privacy and ownership, how we access and use information, and how we should develop our skills and careers. Global digital connectivity and computing capabilities are evolving at an exponential rate, and gathering, accessing and translating value from consumer data is the “new gold”.

2.2.1 Greater consumer expectations

“With lifestyle and demographic changes and rising incomes, consumers are increasingly seeking new products and services, particularly when it enhances convenience. Technology is driving this demand and creating new jobs and occupations, primarily in the services sector.

Consumers now expect “the basics” to be right every time. Older Australians also expect to maintain a reasonable quality of life. Within the context of aged care, the business challenge is to maintain safety and quality within a market environment where consumers have varying levels of willingness and capacity to pay for it.

Connectivity means consumer trends become instantaneously global as people interact to find the best products and services. In a world where consumers have more knowledge and access to information on choices, quality and prices, businesses have no choice but to put the consumer at the centre of their offerings to be able to remain relevant. Additionally, as populations grow wealthier, consumers demand products of higher added value.

When it comes to health and aged care services, older Australians now have:

- increased average literacy including digital, health and financial literacy;
- wider knowledge of product/service advancement and higher ‘ageing well’ expectations;
- boundary intolerance and expect easy to access, integrated services; and
- preference for personalised services - 65-year-olds are not the same as 85-year-olds, and older people today are not the same as those from 20 years ago.

Baby Boomers have different experience and expectations of the world

Baby Boomers were born and raised in an era of great technological, political and cultural change. They embraced experimentalism, individualism, and social activism. They are the first generation to grow up in an era of mass-communication (TV), which has made them the first consumer generation.
Older people are fast embracing digital technology (just like everyone else). As increasing numbers of the Baby Boomer generation enter the 65+ age bracket, the idea that age is a barrier to aged care technology adoption is becoming increasingly obsolete. For example, in America, 64% of people aged between 50 and 65 have incorporated social media into their lives. The vast majority of this generation have used smartphones and computers at work and for leisure, for many years.

The embracing of digital technology combined with digital systems has seen the world of aged care also enter the Fourth Industrial Revolution. However, in regard to the Australian aged care industry, there is a strong need to consider the local diversity of access and interest among older Australians.

 Principally due to housing market value, Baby Boomers are the wealthiest Australian generation to reach retirement. They make up 25% of the population but hold around 50% of the total wealth. There are, however, those that have not benefitted from past economic growth and asset price inflation to the same extent as others.

In Western Australia, for example, a survey found that superannuation savings of those approaching retirement age (65) were greatly inferior to the amount they expected to be able to retire and finance their desired lifestyle. Another survey, conducted in 2014, found that only 37% of Australian Baby Boomers were comfortable with their level of savings.

The subtle art of design and business

Service and product design are adapting to Baby Boomers’ expectations, but at a slow pace. A report by the McKinsey Global Institute argues that older consumers present some of the few areas of growth in an otherwise slow global economy. With the slowing of emerging countries, like China, and the crises of countries like Brazil – global business is now looking (though slowly) to new sections of the economy to maintain relevance. In its survey of global businesses, “less than 15% of firms have developed a business strategy…and only 31% of firms take into account increased longevity.”

Companies are also mastering the art of discretion – addressing older people, but not too explicitly. Retailers are surreptitiously lowering shelves and putting in carpets to make it harder to slip. Package-goods firms are printing larger typefaces and using more white space. Car firms don’t make a song and dance about the fact that old people with stiff necks and fading vision will benefit disproportionately from self-parking cars.

Living and working through longevity

Ageing well, ideally in place, is the new expected norm. In societies globally, people prefer to age in their homes. In America, 80% of people envisage themselves living in their own home at the age of 80. In the UK, this figure increases to 90% of people expecting to live in their own homes as senior adults. In Australia, people’s expectations to live in their home into retirement is 70% - they do not necessarily expect to live in the same home, but they wish to remain within the community they know and understand.
Old age is no longer a synonym for disease and dependency. An increased lifespan is welcome news to most individuals and society as a whole. Although many people living longer do have long-term conditions, they are showing an increased interest and capacity to manage their conditions.

Health literacy is an important part of the discussion when exploring the impact of chronic disease on individual lives and the wider health system (e.g. experience of ill health, health costs and productivity)\textsuperscript{54}. Diagnoses which may have led to constrained aspirations in the past are now met with increased expectation to not get in the way of life and work.

In terms of social and economic participation post-65, the following is also reported\textsuperscript{55} among older Australian: 1 in 10 are employed, 3 in 10 volunteered their time within the last 12 months, and 6 in 10 have weekly contact with family and friends.

According to experts, “Health literacy comprises the application of a broad set of skills to access, comprehend, evaluate, communicate and act on health information for improved health and wellbeing”\textsuperscript{56}. In other words, by enhancing and/or understanding the health literacy capacity and context of a person living with a chronic condition (or multiple conditions), it is possible to take an adaptive, person-centred and self-care management approach to their treatment.

However, longevity is a mixed experience for older people. Although for many it is a gift, for others the worry and concern of outliving their finances is evident\textsuperscript{57}. Accessing quality aged care services can rely on the perseverance and courage of consumers, advocates and related individuals\textsuperscript{58}, and return on the lifelong contributions made by older Australians via taxes, superannuation and health insurance is not always being felt. Concern for those currently at risk include people\textsuperscript{59}:

- without family or friends to assist them along the decision-making process;
- without financial protection and literacy, and/or access to trusted financial guidance;
- living in remote, regional and/or underserviced locations;
- who served (or spouse served) in the Australian Defence Forces (or allied defence force);
- from linguistic or cultural diverse backgrounds;
- at risk of homelessness or who are homeless; and
- who identify as lesbian, gay, bisexual, transgender or intersex.
Regardless of health condition, people want to live and die well: ‘a “good death” is an important health outcome’\(^60\). Like other parts of life and living, choice in death and dying is now a principal expectation\(^{61}\):

| I want to be cared for and die in a place of my choice;  
| I want involvement in, and control over, decisions about my care;  
| I want access to high quality care given by well-trained staff;  
| I want access to the right services when I need them;  
| I want support for physical, emotional, social and spiritual needs;  
| I want the right people to know my wishes at the right time;  
| I want the people who are important to me to be supported and involved in my care. |

Source: AIHW, 2016

**Smart Ageing**

‘Smart Ageing’ is an interdisciplinary concept and interest area which seeks to challenge the more dominant and traditional view of ageing as loss, deterioration and disease\(^{62}\). Smart Ageing approaches emphasise human development rather than deterioration with age. People working within this context pursue opportunities that enable learning and gaining of skills and knowledge as we get older within society.

Smart Ageing promotes ageing as a positive development in human growth that broadens intellectual maturity which can lead to changes in societal structures\(^{63}\). Smart Ageing\(^{64}\) is also associated with assistive technology and adaptive product development.

*Ford has created a “third-age suit” for car designers to wear to help them understand the needs of older people: the suit thickens the waist, stiffens the joints and makes movement more cumbersome. Thick gloves reduce the sense of touch and yellow-tinted goggles simulate eye cataracts.*\(^{65}\)

Globally speaking, this approach is in keeping with the World Health Organisation’s recent report on ageing and health which proposes that healthy ageing is about maintaining or increasing functional ability, which in turn enables wellbeing\(^{66}\). Australia also discusses this concept with regards to the value of enhanced education and research\(^{67}\), and adoption of global movements including the University of the Third Age\(^{68}\).

Smart Ageing respects older generations’ resistance and resentment of their separation from mainstream society. It advocates for services that integrate with their lives and adapt to their way of living. This involves incorporating design principles so that, regardless of age or preference, living spaces can be utilised by all – and in a way, that is enabling and empowering.
2.2.2 Greater workforce expectations

Within any organisational or sectorial reform, emerging workforce expectations need to be considered. In the aged care industry, the workforce is a potential future consumer of its services which ‘gives them a unique perspective and a vital role, not just in enacting reform, but in shaping its direction’69.

Enhanced expectations and desire for meaningful work

If you realise that you aren’t going to retire, then maybe you don’t have to keep working at a job that’s slowly driving you insane. For many people, retirement is the light at the end of a deep, dark tunnel called a career. So, what if we flipped the paradigm and the end goal wasn’t to stop doing the wrong kind of work, but to start doing the right kind of work? Just imagine how liberating that will feel70.

In the next 10 years, people from Generations Y and Z will account for more than 60% of the workforce71. Members of these generations are generally adaptive, open to opportunities, and responsive to innovation. Interestingly, many members of these generations do not believe the current training and educational system adequately prepares them for work72, and would like to see business take a more active role in training.

For a considerable portion of these generations, success is defined less in terms of dollars earned and more via a sense of wellbeing and purpose, with a seamless transition between the work and life ‘self’. The search for purpose and for lifelong learning opportunities will translate into fluid and changeable careers. They also tend to value workplaces that offer learning opportunities, collaboration, work-life balance and flexibility, however Australia currently ranks in the bottom third among OECD countries for work-life balance73.

For some, flexible and casual work arrangements are a preference, for many others it is a response to circumstance such as limited employment options or caring responsibilities. Regardless, it is a growing reality for the future of Australia’s labour market structure.

New sentiment towards retirement

Many people are also delaying their retirement because of financial constraints, and others are seeking more stimulation. Not content to stay home and sit on the front porch in their rocking chairs, watching the world go by (like a Norman Rockwell painting)74.

The experience and expectation of being aged 65 in 1970s Australia is different to that of a 65-year-old living in urban Australia today. In general, today’s 65-year-olds are healthier, more educated and can expect to live many more years past the formal retirement age. The Australian Institute of Health and Welfare (AIHW) reported that in March 2016, 17% of men and 9% of women aged 65 and over continued to work (up from 12% and 4% in 2006, respectively)75.

Volunteering is a key part of many lives of younger and older Australians; it is a way to sustain community connectedness and exchange knowledge and skills76. Around one-in-three Australians volunteered during 2014 although this is a decline from previous levels reported in 2006 (from 34% to 31%).
On average 30% of older Australians engage in volunteering, but this number decreases as they age, from 35% for those aged 65–74, to 26% for those aged 75–84, to 19% of those aged 85+. In Australia, the rate of volunteering is highest among people who:

- are born in Australia (34%);
- are aged 15–17 (42%);
- live in an outer regional/remote area (39%);
- work part time (38%);
- have a Bachelor Degree or above (41%); and
- are from the highest income households (39%).

**A little more work, a little less impact**

According to one study by US academics, delaying retirement by two to two and a half years per decade between 2010 and 2050 in ‘older’ countries like Germany, Japan and Spain would offset any economic or fiscal impact of ageing. It would also enable the intergenerational exchange of knowledge and skills – so often the recognised risk associated with large-scale or system-driven retirement.

**Volunteering for life and work**

In Canada, volunteering is a staple feature of any aspiring professional’s résumé. There is significant cultural value placed on this part of a candidate’s experience and learning. According to the OECD, more than 40% of people in Canada volunteered during 2014, as did people from New Zealand, Ireland and the US.

**Working lives of older and younger Australians**

The world of work for every generation is increasingly complex: driven by a mix of economic insecurity, job scarcity and a forced re-imagining of work, learning and earning; and retiring. In Australia, this topic is raised by young people themselves and through advocacy channels like The Foundation for Young Australians – first job challenges and disillusioned young people are all part of the picture.

Similar to trends found in other countries, younger Australians (aged 15 to 24) experience a higher unemployment rate than other Australians (12.6% of 15 to 24-year-olds were unemployed in 2016 versus 5.7% for the total labour force). Younger working generations are expected to work beyond the current retirement age of 65. They are also expected to experience employment gaps (planned and unplanned) and likely start employment later than previous generations (i.e. after completing school or university).

The world of work for older Australians has also changed. Older Australians are working for longer – 13% of people aged 65 and over are employed (compared to 5.1% in 1986). This growth is reported to come from part-time employment.

**Intergenerational collaboration**

Despite media and government descriptions of generational clashes, both younger and older people seek work for independence and a sense of connectedness with the world. However, their levels of education attainment, career pathways, working conditions and job security can contrast significantly. For example, one-in-two Generation Z workers will have a university degree, compared to their colleagues born between 1965 and 1979 where half as many have a university degree.
In other words, each of the working generations will come with a wider range of values and ways of learning and to gain from this diversity, workplaces and leadership will need to be adaptive and enabling of intergenerational collaboration.

Foundational learning and education throughout a person’s lifespan is increasingly critical, as opportunities missed in early learning years compound the impact of employment and social challenges later in life\(^9\). There is also opportunity to learn from intergenerational exchange where skills, capital and knowledge of one generation can be complemented by another.

Lessons gained from personal, volunteering or professional experiences, from other industries, and even from other countries can all provide opportunity for valuable skills and knowledge exchange and use within the workplace.

**Provider-led community collaborations**

A recent WHO report highlights Japan’s approach to dementia health and wellbeing\(^{91}\):

“110,000 trainers have been trained, who in turn have trained two million people to support older people with dementia”. Young people are reportedly the third largest group involved in the project, therefore demonstrating potential for positive intergenerational initiatives.

**Future of skills and training**

With advances in technology, changing demands and expectations from consumers and evolving work roles, continuous learning becomes increasingly important for those in the workforce\(^9\). However, CSIRO has identified that technologies that will truly revolutionise workplaces and working lives are those that are invisible – where no specific new technical knowledge is required, and the experience of work is immediately enhanced\(^9\).

Increasingly, an emphasis is placed on advanced or specialised numeracy, literacy and analytical skills and the critical importance of strong foundational knowledge and skills to enable this advancement. Specific technical know-how and experience is often required, but capacity to think and learn collaboratively is increasingly valuable\(^9\). Life or soft skills of teamwork, leadership and creativity are also recognised as essential.

Smart Ageing approaches are likely to be increasingly relevant within education and learning contexts given ongoing training and retraining being required across all industries, including the aged care industry. This can be seen in increased demand and desire for training to be available as separate units, competencies or skillsets, rather than full qualifications\(^9\).

*Free online courses won’t revolutionise education until there is a parallel system of free or low-fee credentials, not controlled by traditional colleges, that leads to jobs*\(^9\)

Digital methods of independent learning rely on strong foundational knowledge, advanced literacy and well developed online navigation skills. Emphasis on these new learning modes requires due diligence across the education and learning eco-system (from parents to schools and beyond) to fill education gaps and prevent disadvantage to learners\(^9\).
Further recommended reading

To learn more about related future of work trends, we recommend you also read related work entitled: *Future skills and training: A practical resource to help identify future skills and training*. *Future skills and training* was developed by Miles Morgan for COAG’s Australian Industry and Skills Committee and similarly challenges decision makers and planners to think creatively about what type of education, training and workforce development approach they want for their industry’s future – being mindful of changing consumer, workforce and community expectations.

The resource expands on skills, training and education developments emerging across Australian workplaces and industries, many of which are very relevant to the aged care industry. It also presents and describes a range of global and national trends and megatrends and introduces the reader to four plausible yet challenging future of skills and training scenarios to consider.

*Future skills and training can be accessed at:*  

Other relevant resources include the following related work:

*The New Work Order* series by the Foundation of Young Australians (FYA) accessible at: https://www.fya.org.au/our-research/;

*Tomorrow’s digitally enabled workforce* by CSIRO/Data 61 accessible at: https://data61.csiro.au/en/Our-Work/Future-Cities/Planning-sustainable-infrastructure/Tomorrows-Digitally-Enabled-Workforce; and


Community capacity to participate in care

*In 2010 and 2030, the US population of those older than 80 is projected to rise 79%, but the number of family caregivers available is expected to increase by just 1%*.98

It is commonly recognised that social and economic challenges can add significant pressure on healthcare systems, individuals and families. The shortage of people to participate in our society’s care needs gives additional weight to this predicament. In the US, they are concerned that the number of family caregivers available is decreasing relative to the growing volume of older people with primary care needs. Given what we understand about the decrease in Australian birth rates and family size, this is likely to be a trend that emerges in Australia99.

The capacity of working caregivers is under strain to engage effectively and safely in the primary care of a family member100. Policies to increase economic participation and access across Australian life has been part of the landscape for many decades (e.g. women are increasingly participating in paid work and are also maintaining their unpaid work and obligations)101. In Australia, 56% of people who are also a primary carer to a family member or friend are employed in paid work, compared to 80% of those who do not participate in primary care102.
It is important to emphasise that care for older Australians is often carried out by other older Australians. In 2012, it was reported that as many as 19% of older people received care from other older people\textsuperscript{103}. Of these older caregivers, 54% of them also had their own care needs due to some level of disability\textsuperscript{104}.

The aged care industry in Australia actively acknowledges its reliance on family, community and informal workforces, which presents increasing challenges for aged care providers and users of aged care services\textsuperscript{105}. It is likely, therefore, that the industry will also be impacted when the Australian community more widely experiences this increased strain.

Large-scale employers recognise the impact of this reality on their workforce, as employees struggle to work sustainably and effectively while they also care for or manage the care of their family members\textsuperscript{106}.

The Society of Human Resource Management (SHRM) suggests that a workplace that supports caregiving employees\textsuperscript{107} should have:

- a non-judgemental work environment where employees can freely talk to supervisors and HR about work balance and caregiving;
- enable flexible working and telecommunication options;
- encourage the development support groups;
- employee health and wellbeing programs; and
- employee assistance and education programs to assist them in developing their capacity to effectively undertake care.

\textbf{Caregiving as a “corporate issue”}

Sherri Snelling\textsuperscript{108} discusses how employers of various sizes and sectors are adopting some or all of SHRM’s workplace qualities in her article Caregiving is a Corporate issue. She highlights the Florida based Suncoast Hospice that encourages open discussion for caregivers and has a Pilgrimage Program which fosters a holistic, spiritual approach for caregivers to manage stress and depression, and restore energy\textsuperscript{109}.

Large corporations like Bank of America also emphasise their responsibility to enhance the lives of working families across their global workforce\textsuperscript{110}. Their US employees have care-related benefits such as six hours of in-person assistance from a professional care manager who provides practical care guidance, and access to the Parents & Caregivers Network that connects employees who have care responsibilities. This is also complemented by an Employee Assistance Program.

In the UK, employee benefits include 20 emergency childcare leave days (paid), unpaid parental leave, shared parental leave, which allows fathers to take parental leave, as well as a Parent and Carers Network.

\textbf{Further recommended reading}\textsuperscript{111}

To learn more about organisations that are developing better practices for enabling caregivers, we recommend the following recent reports:


Section references

1. Pollaers, J. (2017) Speech to the Leading Age Services Australia (LASA) National Work Forum, 22 November. The Aged Care Workforce Strategy Taskforce website (see: https://agedcare.health.gov.au/reform/aged-care-workforce-strategy-taskforce) provides details about the work of the Taskforce and links to speeches made by Professor Pollaers at two summits, one about shaping the strategy (4 December 2017) and one covering the progress made by the Taskforce (30 April 2018). The Taskforce is due to report to the Commonwealth Minister for Aged Care by 30 June 2018.

2. STEEP refers to the commonly used macro environment analysis tool/approach. It stands for Social, Technological, Environmental, Economic, and Political – associated tools include PEST, PESTLE, and STEEPLE.

3. Grey literature (or gráy literature; see spelling differences) are materials and research produced by organisations outside of the traditional commercial or academic publishing and distribution channels. Common grey literature publication types include reports (annual, research, technical, project, etc.), working papers, government documents, white papers, and evaluations.

4. Austria, Belgium, Germany, Spain, Denmark, Finland, UK, Greece, Ireland, France, Italy, Luxembourg, Netherlands, Portugal, Sweden (i.e. EU-15 https://stats.oecd.org/glossary/detail.asp?ID=6805), and Norway given its significant resources sector.

5. See Appendix 1 for more details.

6. Informal carers are instrumental in supporting people to make choices and to access the right services; navigating both the health and aged care systems; providing essential direct care assistance and easing the demand for government-subsidised services. They provide essential information about the person being cared for and are recognised as partners with organisations and their workforces in care.

7. This also refers to families, carers, and those entities trusted or designated to act on the behalf of consumers, and the local community.


See figure 6.18.1, p 7 of AIHW 2016 Australia’s health 2016. Australia’s health series no.15. Cat no. AUS 199. Canberra. AIHW.


98 The proportion of families with children dropped from 54% of families (1991) to 45% of families in 2016. Significantly, current trends show that the number of children families are having is also declining. Source: 2071.0 - Census of Population and Housing: Reflecting Australia - Stories from the Census, 2016.


110 The authors would like to thank Kristi Guillory from Alzheimer’s Impact Movement (AIM) who kindly gave her time to discuss areas of change in workforce policy and dementia living across America. AIM is the advocacy arm of the Alzheimer’s Association in Washington, D.C.
3 Opportunities for re-imagining aged care

This section includes descriptions of the prevalent supply-side trends derived from the review of digital and social media sources, and traditional literature sources. This section also includes a selection of short case studies to provide further illustration of the described trends.

Aged care has long been a product of the interacting worlds of social care and health. As it looks to its future, there are many sources of positive change and disruption to consider. There are many opportunities to enable and enhance the continued independence of older Australians and their communities. It is important to make space for community and industry reflection in order to translate existing and emerging knowledge into ‘value’. Value-orientated innovations can lead to more sustainable practices and better outcomes and experiences for consumers and citizens.

The changing face of aged care is the product of history, as well as current trends. Some of the disruptive trends have been around for some time (e.g. de-institutionalisation and ageing in place), and some are more recent (e.g. Smart Ageing). This study focuses on nine trend areas which present opportunities to re-imagine aged care across Australia.

3.1 De-institutionalisation

De-institutionalisation of care navigates the development of ageing in place and building-free care principles.

“In home-based care is an increasingly attractive market area – globally, it is expected to reach a value of $355 billion by 2020, and to grow by an average of 8% a year”112

Innovative service provision and assistive technologies are increasingly making it possible for older people to continue to lead an independent life, in their own homes or within their communities. The relative cost saving, compared to residential care, and the desire to ‘age in place’ are driving the take-up and expansion of home care113.

“...almost 60% of people aged 70 years or over would prefer to receive formal care at home in the event that they are unable to care for themselves, compared to 28% who would prefer to receive residential care”114

The aged care environment in Australia is ripe for enhanced home care options with 67% of aged care consumers accessing home support or home care, and 23% receiving it via residential care115. Technology developments (locally and globally) enabling advances in wireless sensors and other digital monitoring technologies are assisting home-based solutions that can be easily incorporated to day-to-day living and enable older people to live independently in their own homes for longer.
In Australia for example, Data61 - CSIRO’s digital research network – is exploring and connecting data, technology, industry and evidence to enhance the value of these emerging areas for Australia, including areas related to enabling boundary-less, building-less aged care.

**Digi-cities for living**

In Singapore, ageing in place is a strong preference of older citizens. Understanding this, a partnership was developed between Singapore Management University and Tata Consultancy Services called “iCity Lab”116. iCity Lab is a research facility that focuses on technology development for ‘smart cities’. One of their initiatives included setting up a trial of 50 social housing units as smart homes for their older residents.

Each unit is fitted with sensors that monitor movement within the home, including detection of the opening of the main door. The system detects if the person at home is spending a lot of time in the same area of the unit – “indicating a possible fall” – and can alert a family member or caregiver to come and provide assistance. This information can also be helpful in terms of understanding the person’s activity or mobility levels.

Another iCity Lab initiative includes a trial for a medicine box that has sensors to track whether the person is taking their medications correctly. Deviation can be detected, and care providers are able to monitor this information.

The team at iCity Lab has ambitions to extend sensor technology beyond the homes and enable seamless monitoring – with the view that this would “enable pre-emptive care” and mitigate the escalation of health or care needs.

**Digital enhancing for life**

“Researchers are drawn from a diverse range of disciplines such as nursing, aged care, palliative care, health informatics, sport and exercise science, human computer interaction, pattern recognition and data analysis and software engineering”117.

In 2017, Deakin University launched its second ARC Industrial Transformation Research Hub. The new Hub focuses on Digital Enhanced Living, meaning the research will focus on improving life for older people through digital technologies. They are working on ways to integrate sensing and interaction technologies, with platforms for linking heterogeneous data type and sources, and with artificial intelligence (AI).

The aim is to create solutions that will enable older people to maintain their independence, improve their social connections, and improve their physical and mental wellbeing. They hope that their work will eventually form part of a larger health delivery system and that new service industries for in-home care support will result from technological advances, including care plan and device development and configuration, maintenance and remote monitoring118.

But it’s important to recognise that not all solutions supporting people’s preference to live independently in their own homes are technology-based. Health and aged care providers and systems are embracing the concept of Smart Ageing and creating new services and adapting policies to match the expectations and preferences of those experiencing physical and social limitations related to their ageing. It’s about empowering the person rather than managing them.
Falling is in the past

In the Netherlands, older people are choosing to learn how to fall over, rather than abdicate from their choice to live in their own homes, often alone. Programs that equip people with ways to “avoid falling” and “how to fall correctly” are popular. Health insurers are also covering some of the costs.

In one course, called Vallen Verleden Tijd (which roughly translates as ‘Falling is in the past’), students meet twice a week: “on Tuesdays, they build confidence by walking and re-walking an obstacle course…Thursdays are reserved for the actual falls”. There is also a social aspect to the course, as students create personal bonds with their peers.119

Re-abling homes

In Denmark, a 2015 law has completely reframed the meaning of providing support for older people. The default support service provided by the government to seniors living in their homes is ‘reablement’ rather than traditional help services. According to advocates, “Reablement is a short-term, goal-oriented intervention with the aim of strengthening the person’s functional ability”.

Under this service focus, services are developed and delivered by a multidisciplinary team including “social care workers, physio- and occupational therapists, dieticians, nurses – among others”. Reablement is seen as the first approach and where it is not achievable then, and only then, “Compensatory home help services are offered”120.

To learn more about reablement as a practice in Denmark (as well as New Zealand and the UK), Dr Ricki Smith’s report121 as part of her 2016 fellowship from The Winston Churchill Memorial Trust, documents her firsthand observations.

3.2 Re-imagined communities

Re-imagined communities encompass community-led planning and democracy, and planning for people not infrastructure.

The ageing of the world’s population has created the need to revise the way societies think about ageing. Older people want and should be recognised for their capabilities, availability and willingness to enhance their own wellbeing and to improve their communities. Around the world, a number of projects and innovations are being implemented to make cities and communities more responsive to the needs and aspirations of their older citizens.

Community-led or whole-of-community initiatives from around the world

In Canada, the concept of ‘pocket neighbourhoods’ – a pattern of housing that fosters a strong sense of community among nearby neighbours, while preserving their need for privacy, is gaining traction in cities such as Toronto122. In Barcelona, Spain, its Elderly Advisory Council is directing the city to install outdoor escalators to improve mobility and access for all city residents123.

In Chiayi City, Taiwan, the city authority is implementing a healthy groceries concept – “neighbourhood centres for older people offering a lunch club, healthcare talks and check-ups, plus workshops and group activities”124.

In the US, New York City is implementing a variety of measures in consultation with older residents. For example, benches with sectioned arm rests and space for shopping have been installed around the city, so that elderly people can more easily rise to a standing position and lift their carrier/shopping bags.
Advertiser sponsorship is being used to install transparent bus shelters to enable people to feel more secure while waiting for transport. Corner shops can apply for an ‘age-friendly’ designation whereupon they are supplied with folding seats to be used by their elderly customers. The only condition is that they agree to offer seniors regular glasses of water. Store owners have enjoyed a boost in sales as a result. New York City has also created lists of colleges offering lifelong learning opportunities for older students and age-friendly swimming pools (with ramp access) as a means of increasing social opportunities for seniors.\textsuperscript{125}

The response to meeting older people’s needs has been realised not only through innovative and inclusive planning of spaces, but also by innovative community-based solutions. Social networks and community awareness initiatives that support increased social and economic participation amongst older populations and encourage intergenerational collaboration are flourishing.

**Open collaboration and connection**

Japan has developed a reputation for implementing positive ageing policies and practices. As the “world’s fastest ageing population” – it is enabling “grassroots initiatives” to help make a difference including developing “dementia-friendly” communities and settings. Different models have flourished, but those that are “local, based on voluntary support and are unencumbered by restrictive bureaucracy” are being set apart as effective and valued.

One model is the ‘open house’ provision. Open houses are either a volunteer’s own house, or a low cost rented house. In 2014, the ‘Suzu-no-ya’ open house was established for local residents with dementia and their carers. These local residents are able to access all-day care including lunch and tea while their carers are able to access informal advice and peer support.

Neighbourhood-watch style networking is another type of initiative, led by volunteers in partnership with the police, local businesses and charities. The networks look out for ‘wanderers’, people with dementia who become lost and confused. They initiate simple conversations with the person to determine if they need help to get back home\textsuperscript{126}. Officially endorsed, wanderer alert drills are practised regularly.

The Japanese government is also implementing a national plan to train the general community in dementia awareness. Classes are less than two hours long and are customised to address concerns from each group of attendees. The intention is to help postal workers, pharmacists and others to interact and care for people with dementia. The goal was to train eight million people by 2017.\textsuperscript{127}

**Welcoming communities**

The residents of Geel, a small town in Belgium, welcome people living with mental health disorders, including those at the more severe end of the scale, into their homes and care for them. It is a tradition that started over 700 years ago. The people they host are called guests or boarders, not patients. Before being matched with a host household, the guest’s needs are evaluated and treated by medical professionals in the Geel Hospital, which manages the program.

One of the reasons the model seems to have sustained (in different modes) for centuries is that residents of Geel have learned to live with the behaviours of the boarders, constantly coming up with creative ways to help balance enablement and care management needs.\textsuperscript{128}
3.3 Value-based care and health

Value-based care and health can include integrated care and person-centred business models, and practices are implemented at the individual, organisation and/or system level.

There is a worldwide trend of achieving more value for the customer with less resources and lower costs to the community. This is shaped by the need to compete for more astute and demanding consumers, whilst overcoming resources scarcity in areas including skilled workforce and environmental resources. ‘User choice’ policies that transfer the purchasing power of outsourced public services from government to consumers (e.g. education, health, disability, and now aged care) are one example.

A second example of this trend is the introduction of contestability policies by government, with the aim of promoting the adoption of a commercial mindset for the public delivery of a range of services from utilities to human services. Another associated trend is payment for results rather than for single products, procedures or activities. Within health and aged care, this means being focused on improving value for end users – where valued outcomes are defined by end users and their families – relative to the cost of achieving those outcomes.

This value-based care idea is gaining traction with health providers, government and the insurance industry in the US and in Europe. The concept of value-based care originated from Michael Porter (Harvard University) and Elizabeth Teisberg’s (Dell Medical School, University of Texas) book Redefining Health Care[129]. Since then, industry leaders and academic researchers around the world have developed the tools to support its implementation, including new ways of:

- **organising**: interdisciplinary care teams organised around the patient rather than having them separated in specialist/professional silos and integrated care across locations;

- **measuring and monitoring**: outcomes and quality that matters for end users rather than compliance; and

- **funding care**: funding models that directly reward improving the value of care, such as ‘bundled payment’[130].

**Enhancing healing potential**

In healthcare, value-based means delivering more than clinical results. In Germany, the five-year survival rates for cancer patients who have had their prostate removed is around 95%. Surviving, however, does not mean regaining the same quality of life they had before the surgery.

The Martini-Klinik, in Hamburg, is pioneering the adoption of a value-based approach. The centre has achieved much better results – significantly reducing prevalent post-surgery complaints and therefore ensuring better quality of post-cancer living. Their recipe is employing multidisciplinary teams to provide integrated care (i.e. patients receive all the care they need at a ‘cancer centre’ rather than being shifted from department to department).

Measuring outcomes that matter to both patients and clinicians, and systematically analysing outcomes data to drive continuous treatment improvement are linked to the centre’s positive results.
This approach has also ensured a high patient satisfaction rate of 98%. Having built international recognition in value-based healthcare for cancer treatment, Martini-Klinik attracts increasing numbers of patients from all over Europe\textsuperscript{131}.

**Buying outcomes, not services**

In the US, care delivery is moving from fee-for-service to value-based reimbursement systems. Deloitte indicate that 27% of health providers have completed pilot programs or are at some stage of rollout\textsuperscript{132} although adoption is described as slow and barriers are evident in engaging medical professionals in value-based payment models.

One example of value-based care in action is Cleveland Clinic which is implementing an Integrated Care Model, “designed to improve the patient experience of care (including quality and satisfaction), improve population health, and reduce the cost of healthcare”. Supporting this, real-time data is collected, analysed and shared with caregivers and the public. This serves to drive constant performance improvement “in quality, safety, utilisation, cost, appropriateness of care, and patient and caregiver experience”\textsuperscript{133}.

Another US example is the Comprehensive Care for Joint Replacement model (CRJ), started by the Centers for Medicare and Medicaid Services (CMS). CMS realised that billions were being spent on these procedures, with varying results among patients and healthcare providers. The CRJ model aims to hold providers accountable not only for the quality of care they provide for hip and knee replacements, but also for patient recovery up to 90 days after hospital discharge\textsuperscript{134}.

### 3.4 Personalised servicing

**Personalised servicing provides perspectives on product, service, delivery and payment modes and how these are tailored to individual preferences and needs.**

Business can no longer expect to attract and retain consumers by relying on their brand alone. Online platforms for communication, self-expression, information and commercial transactions have changed the consumer world. Customers have access to more information and choice than ever before. They have online visibility and therefore can influence the decisions of fellow customers. Consumers also influence the ways in which business offer services and products.

Successful businesses are unlocking the value of data analytics to optimise their profit margin potential and market relevance. Tailored services and products and personalised customer engagement are used to increase customer satisfaction.

This tailored, personalised approach is also gaining traction in the aged care industry. As increasing numbers of health and aged care providers move to a value-based model, the focus will shift away from providing acute episodic interventions. Increased attention will be placed on enabling people to achieve vitality and wellbeing in an ongoing, whole of life provider-customer relationship. This will increase the focus on human-centred design and user experience thinking\textsuperscript{135}.

**Experience enhancement**

A 2016 US survey found that “44% of healthcare organizations reported having a chief experience officer (CXO)”, and a 2017 worldwide survey found that “58% of hospitals and health systems now have CXOs, up from 22% in 2013”\textsuperscript{136}. 
CXOs are responsible for enhancing process improvement with experience mapping and design, ensuring that empathy and human connection are embedded in new improved processes. To do this, CXOs rely on operational and health, wellbeing and satisfaction measurement and analytics, and engagement of people across the system (frontline staff, providers, patients and families) around the end goal of improving users’ outcomes and system experiences.\(^{137}\)

**Low-tech solutions can change the world**

Rotterdam Eye Hospital, in the Netherlands, has a design-thinking team. The team identified that reducing patients’ fear was key to the success of eye operations. By studying patients’ characteristics and existing processes, the team has come up with relatively simple modifications that have proven to significantly improve the patient experience.

Projects include “building a more intuitive website, replacing harsh fluorescent lighting and cold linoleum floors with softer lighting and wood parquet, and giving children and paediatric ophthalmologists matching T-shirts”\(^{138}\). The team has also identified the most common patients’ behavioural profiles and designed tailored verbal and non-verbal communication strategies.\(^{139}\)

**My home, my way**

The Green House Project in the US has created a care home model that gives residents much greater levels of autonomy and freedom than more traditional residential care homes. The project runs 204 homes across 29 states, each designed to blend into the neighbourhood and to be practically indistinguishable from other homes in the community.

Residents have decision-making control over their care, ranging from social activities to furnishing their rooms with their own belongings. Meals are designed and scheduled according to the individual preferences of each resident. In terms of running the homes, traditional organisational hierarchies have been banished. Care workers and residents are encouraged to communicate regularly so that problems can be addressed and resolved together, ‘regardless of [the person’s] physical condition’. This serves to empower residents and enhance their sense of independence and creates a sense of community with care workers.\(^{140}\)

**Linked trends – value-based and personalised servicing**

A large part of value-based care is measuring what matters for the end user and using this knowledge to design a consumer experience that will deal with the patient’s concerns and experience of their condition in a holistic and integrated way. In the US, Patient-Centered Medical Homes are starting to apply an Integrated Practise Unit (IPU) model to primary care. Traditionally, “primary care practice applies a common organisational structure to the management of a wide range of patients”\(^{141}\), with very heterogeneous needs. In this situation, value improvement is difficult to achieve, and outcomes measurement is a challenge. The IPU model involves “multidisciplinary teams organised to serve groups of patients with similar primary and preventive care needs”. These teams can specialise their services and ensure they are “tailored to patients’ overall circumstances”. This facilitates more optimal outcomes measurement and improvement of services.

Geisinger Health System, in Pennsylvania, is one example of this model being implemented. There, the team care for “patients with chronic conditions such as diabetes and heart disease” and include “physicians and other clinicians but also pharmacists”. The interdisciplinary teams have “achieved fewer strokes, amputations, emergency department visits, and hospitalisations”\(^{142}\).
3.5 Shared-value operating and investing

*Shared-value operating and investing examines the emergence of business models with the singular pursuit of social benefit, and not commercial gain.*

Businesses around the globe continue to increase the focus of their value proposition on solving social or environmental issues. This is the result of a number of factors. Governments globally are experiencing a decline of trust in the ability and capacity to tackle existing social issues. Customers have an increased awareness and higher expectations from companies they interact with, and investors seek to identify business models that provide an opportunity to generate profits whilst generating social good.

In Australia, a 2018 survey that asked people to pick the ‘most broken’ institution found that people distrust government (56%) more than business (42%). Illustrating growing consumers’ expectations, the majority of respondents (63%) believe that CEOs should take the lead on change rather than waiting for government to impose it. There is a trust that companies can take actions to improve local social and economic conditions and increase profit. Conversely, 49% of people think that companies that focus only on profits are bound to fail. Responding to these expectations, corporations are involving themselves in resolving social problems while creating and operating complex supply chains to serve large and diverse customer populations.

**Social benefit at scale**

In 2009, General Electric launched ‘Healthymagination’, an initiative that explores new technologies and partnerships (e.g. governments in developing nations) to deliver better and more accessible healthcare. Healthymagination has so far launched dozens of new healthcare products that have improved people’s lives.

For example, the initiative created a $500 device that has allowed Indian physicians to give cardiology scans for the cost of a bottle of water, and a $200 incubator (Embrace) used to save the lives of premature babies born in developing nations. General Electric is addressing social benefits while generating profits – its healthcare portfolio generated $18.3 billion in revenues and $2.8 billion in profits in 2012.

**B Business**

In January 2018, three of the biggest names in American business – Amazon (technology), Berkshire Hathaway (insurance) and JPMorgan Chase (finance) – announced a new venture to provide better, cheaper healthcare for their employees in the US. Some speculate they might be forming what would likely become the world’s “largest B Corporation”, a company legally obligated to serve society, not just shareholders.

Jamie Dimon (CEO of JPMorgan Chase) believes that the “effort could eventually be expanded to benefit all Americans.” The collective will focus on applying technology to “simplify care” and believe “combined access to data about how consumers make choices, along with an understanding of the intricacies of health insurance” can lead to improved efficiencies and enhanced access. Warren Buffett (CEO of Berkshire Hathaway) stated, “The ballooning costs of healthcare act as a hungry tapeworm on the American economy. Our group does not come to this problem with answers. But we also do not accept it as inevitable”. Jeff Bezos, Amazon’s founder and CEO, said, “Hard as it might be, reducing healthcare’s burden on the economy while improving outcomes for employees and their families would be worth the effort.”
Realising health connections through data

Alphabet (the parent company of Google) has created a healthcare firm, Cityblock Health, to improve healthcare accessibility and outcomes for low-income populations in US cities. Launched in October 2017, Cityblock will analyse data to identify where care is most needed and deliver care to people in their homes. It plans to hire 55 people by the third quarter 2018, including data scientists, software engineers and a lead doctor, as well as a team to interact directly with patients.  

Some companies create shared value by focusing on addressing social or environmental issues in order to reduce operational costs. For example, Nestlé has reportedly increased its profit margins while decreasing environmental impact (e.g., water consumption reduced per dollar from “4.5 litres to 1.5 litres over 10 years”. Shared value is now at the centre of its business mission.  

Companies also create shared value when they work to improve the local business environment. This can be achieved by ‘building the capabilities of suppliers and civil institutions or working to replace obsolete regulatory frameworks’. One example is, in Cote d’Ivoire, cacao growers experienced difficulties with low cocoa yields and started growing other crops. The impact on the market was a decrease in cocoa supply and an increase in the price. Confectionary giant Mars (and other buyers of cocoa) worked with cocoa farmers to find a solution – they “worked with farmers to improve plant stock, horticultural skills and farming practice. This improved the commercial environmental for Mars and its collaborators, and improved farming practices for the economy as a whole.”  

Person-first posties

In Germany and Japan, companies from a range of industries are realising the promising market of lifestyle support services for older people – a market worth A$7 billion in Japan. Deutsche Post and Japan Post’s mail deliverers are helping to keep an eye on older citizens who live alone.  

In Germany, ‘Personal Post’ is a subscription service designed for seniors. On mail delivery rounds, post officers ring subscribers’ doorbells and chat to them five days a week. If they detect a problem, the post officers notify health and social services.  

In 2016, Japan Post formed a joint venture with several private-sector companies to expand the services available to Japan’s ageing population. Postal officers drop in for a 30-minute visit to seniors, once a month. Any changes to health or living conditions are reported, with permission, to family and healthcare services.  

Human centred design (HCD) and daily life technology

IBM developed senior-friendly tablets, so older people can order items from local stores and supermarkets, which are then delivered by the postal officers. Daily health and treatment records can be entered into the tablet and the data used to offer healthy living advice. The tablets may encourage interaction among the network of senior users, and provides entertainment through radio, games and karaoke applications. The device is also able to alert security companies to sudden changes in the person’s health and indicate when assistance is needed.
Networked servicing and operating examines ways of co-working to improve thinking and design, delivery of services and products, independence and resilience, resolve problems and create common benefit.

Increasing connectivity and the emergence of digital technologies across all industries are allowing companies and individuals to create and commercialise products and services through business-to-business and people-to-people supply chains. For example, construction and manufacturing industries are producing more tangible consumables. These industries are taking advantage of advancements in digital manufacturing technologies to enable on-demand production.

Wiki-building

WikiHouse is an open-source construction system that allows anyone to design, share designs and build a house. With access to a computer numerical control (CNC) machine, anyone can digitally fabricate the parts, which are then easily assembled with minimal skills, like a Lego or IKEA kit. WikiHouse aims to allow professionals and companies to cooperate in creating innovative, affordable, customised and sustainable housing systems.

It also aims to equip individuals to perform tasks that were previously only accomplished by expert companies, thereby changing the nature of the construction supply chain. Currently, there are several WikiHouse projects being tested worldwide. In Australia, WikiHouse has partnered with Southport High School, an independent public school in Queensland, to provide CNC workshops.\(^{(155)}\)

Within an integrated care context, this networked approach can take the form of a business-to-business or a business-to-consumer model. Regardless of the service model, its focus is to optimise chronic health management by linking medical treatment to support services, such as education and counselling, for positive behavioural change.

Linking businesses and professionals to people with needs

“Essential Care is a business-to-business care coordination and delivery application that enables care providers to create remotely integrated environments”. It deploys integrated patient medical profile, telemedicine capabilities, and an intelligent call centre to enable coordination and collaboration amongst professionals and services around a patient or customer\(^{(156)}\). Accessible services include: skilled nursing home, assisted living, independent living, home health, hospice, palliative, hospital, ACO, pharmacists, specialists, and other care providers and settings.

Technology hubs are popping up in cities globally. Hackathon events, where computer programmers and people involved in software development work together to create a functional product in a short space of time, are also gaining popularity. The aim of the hubs/events are to spark new, unusual partnerships and innovative ideas. The increased centrality of digital connectivity and data analytics for numerous business (and government) solutions has opened opportunities for collaboration between the information and communication technology sector. Many industry sectors now try to draw on the expertise of data scientists, developers and designers to find solutions for their specific issues.
Linking ideas and funding

The World Bank Group has launched TechEmerge in India and Brazil to match healthcare providers in these countries to technology innovators globally. The program aims to improve healthcare and patient outcomes. Innovators are selected through a competitive open application process. TechEmerge offers guidance and funds the jointly developed pilot programs which aim to improve care and reduce costs.\(^{157}\)

Linked trends – networked servicing and shared-value operating

In March 2018, Uber launched Uber Health in the US as a way to partner with healthcare organisations to provide reliable, comfortable transportation for patients. The service hopes to eliminate a major social issue: every year, 3.6 million Americans miss doctor appointments due to a lack of reliable transportation. Those facing the greatest barriers to transportation are vulnerable populations, including people with high levels of chronic disease.

The service originated from the initiative of a health provider, MedStar, which approached Uber seeking a cheaper and more reliable alternative to regular taxis. Over 100 healthcare organisations in the US currently use the app. This includes hospitals, clinics, rehab centres, senior care facilities and home care centres. Health providers have reported cost savings with reduced no-shows and improved workflows, and patients have one thing less to worry about.\(^{158}\)

3.7 Digital-preneurship

_Digital-preneurship explores the embracing of new digital technologies to enhance business models, operations, data and customer engagement._

From a workforce perspective, digital connectivity makes it increasingly easier to operate in an autonomous way. People can coordinate and directly connect with consumers through digital platforms. This is a disruption to more traditional ways of organising the workforce where employers hire workers and create workflows in an attempt to balance supply and demand in a cost-effective way. On-demand digital platforms do this balancing work by matching consumers to personnel with the help of data analytics. These platforms also provide a direct link between them, reducing overhead costs and making services more directly accessible.

Companies in Australia (e.g. Ubercare\(^{159}\) and Better Caring\(^{160}\) and elsewhere (e.g. Honor, founded by a former Google employee\(^{161}\)) are adapting the Uber model to offer on-demand care services. Through this model, carers can be booked round the clock, via an app, on a pay-as-you-go basis for whatever time is required. There are no limits to what these platforms can offer, from nurses to help with house chores, to simple companionship.

On-demand care also offers an opportunity for those interested in flexible or casual work and contributes toward enabling older people to age in place. There is also the expectation that those working through these approaches would be better remunerated, as a consequence of reduced overhead costs (See end of Section 2.2.2 for related discussions and recommended resources related to remote working, digital workplaces and the future of work, skills and training).
Digital Entrepreneurship can be defined as embracing “new ventures and the transformation of existing business by creating and using novel digital technologies... Digital Enterprises are characterised by a high intensity of utilisation of new digital technologies (particularly social, mobile, analytics and cloud solutions) to improve business operations, invent new (digital) business models, sharpen business intelligence, and engage with customers and stakeholders through new (digital) channels.”

Got a spare bed?

Another inspiring digital model is the one popularised by Airbnb, where people can sell access to resources they own; in this case, accommodation in their homes. In the UK, CareRooms is trying to link hosts – anyone willing to rent a spare room – to people seeking a home setting in which to recuperate after being released from hospital.

Medical monitoring and care is provided by professionals (from partner health providers) via telehealth equipment installed by CareRooms. Hosts can earn up to £50 per day for providing a room, heating up three microwave meals each day and supplying drinks to their recuperating guest. The initiative is expected to not only free beds in the public health system but also to improve patients’ recovery. According to Dr Thirkettle, co-founder and chief medical officer of CareRooms, “there is good evidence about the effects of long-term hospitalisation on people – they may lose muscle strength and mass, and it impairs their cognition.” The company hopes to initiate piloting later in 2018.

3.8 Data for enabling

Data for enabling is the next generation of data utilisation by organisations and businesses. It moves beyond the paradigm of compliance and reporting towards an empowering data enabled culture for customers, workforce and stakeholders alike.

Applications within mobile devices, sensors, telehealth devices, wearables, and social media and websites collect a huge amount of data. If wisely used, this data can provide tremendous opportunities for understanding individuals, at a personal level. This might include the issues they face and their causes, what engages and motivates them, and what strategies could help them to lead more interesting and healthier lives.

Within healthcare, a system by which people could easily access their health data – ideally linked from the multiple health and care providers, applications and devices collecting it – would give people greater knowledge and understanding of their own health. This would offer them an increased potential to participate in their own healthcare.

My health file

In Sweden, all residents older than 15 will have access to all their government funded health and dental care information by 2020. Its system is called Journalen and is being used across the country’s health and care network. The electronic health files within the Journalen system are now accessible to residents via an electronic ID or their “Swedish personal identity number”.

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Future of aged care Miles Morgan Australia
The Journalen includes “notes from all healthcare professionals, a list of prescribed medications, test results, warnings, diagnosis, maternity care records, referrals, and vaccinations as well as a log of everyone who has accessed the record”. People are able to add comments to note if, for example, they believe information logged about themselves is incorrect. Studies have shown that patients with such access have a better understanding of their illnesses, and that their treatment is more successful. Trials in the US and Canada have also demonstrated that when people have access to their own medical data, they are happier and care costs are reduced.

In January 2018, Apple announced ‘Health Records’, a feature embedded in its Health app to be introduced in the US with the next big software update for the iPhone. The feature would allow users to view, manage and share their medical records, by bringing together medical data from participating hospitals and clinics, as well as from the iPhone itself.

‘Digiceuticals’ or ‘digital therapeutics’ for managing chronic health conditions are rapidly emerging in the healthcare industry. These apps are a sign that technology, data analytics and customer appetite are coming together to create a world where people are more in charge of understanding and managing their own health.

Digiceuticals have been tested for efficacy and approved by regulatory agencies (e.g. Food and Drug Administration (FDA) in the US). They are prescribed by a general practitioner or specialist doctor. Most digiceuticals gather data by asking patients for information or through the use of sensors and provide real-time guidance. The promise is not only to improve health through continuous monitoring and personalised interventions, but to create greater access through more affordable technologies. This may see the reduction of government burden relating to the management of chronic disease.

**Digital health applications and games are on the up**

The FDA has approved a growing number of digital health applications (apps) to treat everything from diabetes to substance abuse. In 2017, the FDA employed “new digital health experts” and “launched a digital health software pre-certification program to streamline the regulatory process”.

The start-up Pear Therapeutics has a “pipeline of treatments at various stages of development”, with a product development model similar to that of a pharmaceutical business. They are trying to develop apps to enable treatment of psychological-related conditions including: “opioid addiction, schizophrenia, anxiety, insomnia, post-traumatic stress disorder (PTSD), depression and chronic pain”.

Their “reSET app” focuses its attention on the treatment of conditions involving the “misuse of alcohol, cocaine and other stimulants”. The app works with its users to enable their recognition of daily triggers and cravings. This information is then available for them to discuss with their health or care professional. The reSET app was approved by the FDA for commercialisation and was launched in 2018.

Some digiceuticals are developed to enhance the efficacy of regular pharmaceutical medicines. For example Propeller Health, in partnership with GSK, has developed an information-powered approach to respiratory management. Propeller created sensors that clip onto specific inhalers and the digital analytics provide personalised insights to help monitor and manage drug usage and improve user’s health.

There is hope that hospitals and healthcare providers will be able to utilise this digital data. The data collected can be used to optimise, redesign or create new clinical processes, management systems and infrastructure.
This in turn will enable the healthcare industry to achieve more efficient patient care (e.g. by improving diagnostics and reducing medical errors), whilst improving experience and reducing costs.

### Disease monitoring AI

Alphabet, via its subsidiary Verily, is working on a study to track health data of 10,000 people, through surveys and wearables. The four-year study aims to develop an algorithm (artificial intelligence) that is able to predict when a person is going to develop a disease. The study is being undertaken in partnership with Duke University and Stanford University.

Alphabet claims to now be able to “predict possible deaths of hospitalised patients two days earlier than current methods”\(^{172}\). During 2017, for example, Verily formed a partnership with a hospital near Manchester in the UK (the NHS Heywood, Middleton and Rochdale Clinical Commissioning Group) to detect indications of long-term diseases (e.g. diabetes) by analysing “pseudonymised patient records”\(^{173}\). When indications were found, doctors were alerted.

Alphabet, via its subsidiary Deep Mind, has also partnered with the Royal Free Hospital in London to test an AI that is able to stream and analyse live health data. The app’s data identifies patients at risk of sudden or fatal loss of kidney function and alerts medical staff\(^{174}\).

A more widespread use of the combination of sensors and AI also holds the promise of moving the point of care from hospitals into people’s homes. In the US, a 2014 report anticipated that 22 million households will use virtual care solutions in 2018. This is a vast increase from the 2013 figures, which were less than a million households. This number reflects an increase in the use of telehealth and in the number of visits per household using AI technologies\(^{175}\). Smartphones and wearables are becoming a point of care, with technology companies becoming providers of healthcare. Big data and AI are changing the face of the healthcare industry.

### Bio-measuring algorithms

In late 2017, Apple announced it would join up with Stanford University to develop algorithms to spot irregular patterns in heartbeat data gathered by its watch. It is also researching ways to measure blood glucose through its watch. The company currently holds patents that would allow it to turn its phones into full medical devices. Using sensors around the camera and its touchscreen, the phone would let users measure their blood pressure, body fat and heart function. Other filed patents envisage using both its phone and smartwatches to collect electrocardiograms to monitor heart health, and doing biometric monitoring through its wireless headphones\(^{176}\).

### Further recommended reading

To learn more about the world of digitisation within aged care, we recommend the following resources:

3.9 Valuing care and workforce

Valuing care and workforce describes the re-evaluation by community and organisations around the idea of ‘what matters’. It explores the emphasis on enabling, encouraging and rewarding care.

As Australia’s population ages and the nature of its population growth changes, businesses and organisations will need to be able to attract and retain a diverse workforce, formed by different generations and cultural backgrounds.

Particularly relevant to the aged care industry, businesses that thrive in utilising their older employees will be able to develop better products and services for their consumers and market them more effectively. This means that human resources practice will need to be adaptive to more diverse considerations. This includes their recruiting process through to professional development policies.

For example, mature workers are more likely to be attracted to ads emphasising experience, knowledge and expertise, rather than energy, fast pace and fresh thinking. Younger cohorts, by comparison, are likely to seek career development opportunities. Additionally, younger people are increasingly concerned about work-life balance and generating a positive impact through their work. To be able to attract and retain a mixture of younger and older caregivers, companies that manage to position themselves as life-friendly will have a competitive advantage.

When new technologies start to become more commonplace within organisations, they will need to make a bigger effort to provide ongoing education to ensure continuous productivity. Training should be offered to all age cohorts – remembering that learners will have diverse base knowledge and expertise. If delivered effectively, it should engage all employees and pay attention to older employees who tend to be more loyal to their employers.
Older employees know older consumers

Kansas City, in the US, has a large number of call centre businesses as a part of its economy. One such company, ARO Incorporated, a business process outsourcer, had issues with high staff turnover (25%). There is big competition for employees in Kansas City – with “around 90 call centres” all looking for great people.

In order to create competitive advantage, ARO worked with their technology to enable more remote, teleworking potential. This was with the firm intention of attracting Baby Boomers – “who were attracted to the flexibility”. They found that younger employees were interested at first but “missed having an office community and largely dropped out”.

The mature employees stayed longer and also proved to be a better match for the company’s customer demographics, who also tended to be older. For example, ARO does underwriting work for insurance companies, some of which involves asking questions about the customers’ health. They found the work is performed more effectively by employees who have faced some of the same health concerns experienced by their customers.180

Self-directed retirement

Other companies are catering for older people’s desire for flexibility in the workforce by reducing hours in the years leading up to retirement. Varian, a US-based leading provider of radiotherapy systems, has implemented a Retiree Casual program. This program is designed for employees aged 55 and over. Participants include those employees who have worked with the company for at least five years and plan to retire in the next three years. It enables employees to “negotiate a reduced work schedule” that typically is “four days per week the first year and three days a week thereafter”. The arrangement helps to retain employees past their retirement age and has also helped personnel management in general.

Monsanto has a similar program, the Resource Re-Entry Center. Employees who leave the company have the opportunity to return to a part-time position. Older people who have retired but want part-time work are employed in job sharing, temporary positions and cyclical spikes. This arrangement works well for both the company and the employees, who prefer more flexible working hours.

Staff retention seems to be a problem in many countries within the health and aged care industries – and reasons for poor retention can vary. In the UK, for example, a poll by Wilmington Healthcare of more than 2,000 nurses, GPs and hospital doctors found that 64% blamed staff retention problems on continuous changes in NHS workforce planning that had occurred since 2000.181 In the Netherlands, a group of nurses has taken the initiative to implement employee-empowering approaches to solve similar issues.

Workforce redefining the work

Buurtzorg, meaning ‘neighbourhood care’ is a Nederlandian not-for-profit that offers home care to older people. Buurtzorg was founded in 2006 by a small team of professional nurses. The team was not satisfied with the quality of their nursing relationships with people they looked after – their nursing and care service was being compromised by an increasingly complex healthcare system.

In response, they established Buurtzorg, a patient-centred, nurse-led model to provide home-based holistic care. The goal is to help clients to achieve self-support and independence. Community-based nurses have a central role in the model and are empowered to come up with solutions to handle specific circumstances for the client.
Within each new neighbourhood where a Buurtzorg is implemented, the team of nurses spend time introducing themselves to the local community and getting to know GPs, therapists and other professionals. They build up their caseload through word of mouth and referrals. Teams are self-managed, formed by people that are entrepreneurial in spirit, and motivated to continually improve services and the organisation as a whole.

The single-nurse service does have a higher cost per hour compared to the traditional task-based approach. This is because a single nurse provides the whole range of care from clinical, to cleaning and making sure there’s food in the fridge, to sitting and talking to the person they are visiting. However, independent studies have found that the single-nurse model requires fewer hours to deliver and produces better outcomes for clients. With high employee satisfaction and client satisfaction rates, Buurtzorg has scaled from one to 850 teams in the Netherlands in just 10 years, and it is now active in 24 countries.182
Section references


Future of aged care


Human-centred design is a design and management framework that incorporates the end-user human perspective, in terms of their needs, desires and limitations, in all steps of the problem-solving process involved in creating or improving services or products. The intention is to improve human well-being and user satisfaction, whilst improving business sustainability and competitiveness.


Tech EMerge Health is a product of a World Bank sister corporation called IFC (International Finance Corporation). More details about the initiative are found at: http://techemergebrazil.org/


More information about Better Caring is available at: https://bettercaring.com.au/?utm_medium=cpc&utm_source=google&utm_campaign=661349488&utm_content=248438597954&utm_term=better%20caring&gclid=EAaA1QobChMllDarou2Q2gICVcUqCh1yhQspEAAYA5AAEgLJx_D_BwE


More information about Better Caring is available at: https://bettercaring.com.au/?utm_medium=cpc&utm_source=google&utm_campaign=661349488&utm_content=248438597954&utm_term=better%20caring&gclid=EAaA1QobChMllDarou2Q2gICVcUqCh1yhQspEAAYA5AAEgLJx_D_BwE


More information about Better Caring is available at: https://bettercaring.com.au/?utm_medium=cpc&utm_source=google&utm_campaign=661349488&utm_content=248438597954&utm_term=better%20caring&gclid=EAaA1QobChMllDarou2Q2gICVcUqCh1yhQspEAAYA5AAEgLJx_D_BwE


More information about Better Caring is available at: https://bettercaring.com.au/?utm_medium=cpc&utm_source=google&utm_campaign=661349488&utm_content=248438597954&utm_term=better%20caring&gclid=EAaA1QobChMllDarou2Q2gICVcUqCh1yhQspEAAYA5AAEgLJx_D_BwE

This also refers to families, carers, those entities trusted or designated to act on the behalf of older Australians, and the local community. As mentioned earlier in this resource, informal carers are instrumental in supporting people to make choices and to access the right services; navigating both the health and aged care systems; providing essential direct care assistance and easing the demand for government-subsidised services. They provide essential information about the person being cared for and are recognised as partners with organisations and their workforces in care.


4 Using aged care scenarios to inspire choices

Each scenario has been abstracted from the review of prevalent trends derived from digital and social media sources, and traditional literature sources. Under each scenario, a description of its principal underlying trends is presented and implications for the aged care industry are explored and discussed.

Scenarios are stories about the future but they’re not predictions – they’re about understanding where we are today and exploring what could happen in the future… stretching our imagination and challenging our perception… bringing into view possibilities that we might not have previously considered or understood.

Staying the same is not sustainable, but the scenarios are not designed to be viewed as options. Rather, they are intended to facilitate reflection on current thinking, planning and practice across the aged care industry. Designed to meet critical criteria, each scenario must be:

- **grounded** in the information sourced for the Future Skills and Training resource commissioned by the Australian Industry and Skills Committee and the Framing and Trend scanning phases of this work;
- **current and relevant** for Australian community contexts, including urban, regional and remote; and importantly,
- **accessible** to the Australian aged care industry at all levels of scale and service complexity.

The scenarios are not mutually exclusive – the real future is likely to be a combination of elements from all scenarios, in different ways, for different organisations and contexts. The following four scenarios have been designed to inspire choice for the industry:
4.1.1 Summary of the scenarios

Remember, the scenarios and the related scenario reflection questions presented in this resource are an opportunity to actively reflect on the implications and opportunities for the aged care industry to improve the quality of living of older Australians, whatever their means, needs, expectations or location. We encourage sharing this resource with leaders, colleagues, and clients and perhaps working collectively to develop a refined approach or understanding that makes sense for your organisation or community.

Scenario 1: Community caring

Care and wellbeing is at the centre of everything. All practice, policy and strategy within and outside the aged care industry is built from this value standpoint. People increasingly cooperate and collaborate to pursue and achieve common goals to enable the wellbeing of all their community members. This model can be achieved at a micro level (e.g. single street, extended family or community, or organisation), suburb, town or city level, or even at a whole of society or economy level.

Scenario 2: Remote caring

Remote delivery of routine care, via virtual healthcare providers, is the dominant model in the aged care industry. This model allows constant access to care by users and enables more care to be delivered by each worker. Data collected through sensors, cameras and other telehealth technologies is a valuable resource. Providers use the data to continuously improve processes for their workers and outcomes for their clients, leading them to become ‘learning organisations’.

Scenario 3: Digital-preneur caring

Digital entrepreneurs are a large part of the aged care industry. People like them because they are fuss-free, reliable and can offer them what they want, when they want it. Consumers and workers like digital entrepreneurs because they allow for more time to care, and in some cases lower costs for the consumer and higher earnings for the worker/provider. The digital part of this scenario refers only to the replacement of business processes including those involving workers and consumers, for example: service selection, payment and evaluation; scheduling and payroll; and other back-end organisational/business operations.

Scenario 4: Self-enabled caring

The health and aged care emphasis has shifted from providers to patients, from doctors to data. Technology allows older people to seamlessly monitor and manage their own health. There is trust in sharing data between consumers and organisations, amongst organisations, and between organisations and governments. Collected data is used to create solutions to society’s health issues and empower people to live longer and healthier lives, not to increase profits.

The remaining section of this chapter presents the four scenario stories, provides practical vignettes to illustrate some of the concepts, and describes development needs and priorities associated with the scenario with attention paid to leadership, recruitment and retention, and workforce value development.
4.2 **Scenario 1: Community caring**

Care and wellbeing is at the centre of everything. All practice, policy and strategy within and outside the aged care industry is built from this value standpoint. People increasingly cooperate and collaborate to pursue and achieve common goals to enable the wellbeing of all their community members. This model is achieved at a micro level (e.g. single street, extended family or community, or organisation), suburb, town or city level, and even at a whole of society or economy level.

Ageing in place is recognised as a priority by everyone. Resilient and connected communities work together to engage government, industry and academia to meet their diverse needs in a way which is adaptive to their values and circumstance.

4.2.1 **Collective mobility and the currency of kindness and giving**

Organisations and individuals navigate these needs directly with their clients and their communities. From health and care workers to urban planners and bus drivers, respecting and responding appropriately to diversity in ageing is firmly part of the mindset of business, community and government. And older people take a leading role in determining the priorities.

There is a wider acknowledgement that we are all care participants – both recipients and givers. Civic participation, including volunteering, is elevated among societal priorities and values. Lifelong learning is understood as a process that includes community and family participation, schooling, in addition to work-based experience. Volunteering and community participation are the primary currency for ensuring professional mobility.

4.2.2 **A resource not a burden, community and connectedness are King**

The association of ageing with burden is strongly resented and rejected. Community and individual strength are seen as being a resource that has the potential for erosion without due attention and inclusion – they do not need to be saved by others – they need the right conditions to flourish.
Older generations can be capable, resourceful, self-reliant as well as conservative, parochial and inward looking. Stoicism can make them vulnerable as they age and their health deteriorates and their social support networks become sparse. ‘Ageing in place’ can be a challenge in peri-urban areas\textsuperscript{185} - p21

Common philosophies influencing business and civic life involve practical commitments to self-determinism, collectivism, counter-ageism and social and economic development. Creating an aged care system driven by these values is realised through the networking and co-working of individuals and organisations, and even communities, to achieve common goals for the benefit of the community with all people, including older adults, being viewed as a valuable contributor.

The community recognises the need to enable all its members to meaningfully participate in the services being sought from within or outside the community. It is a counter approach against corrosive trends such as social isolation, community vulnerability, socio-economic decline and resource scarcity.

Community and industry are increasingly entwined, with community taking the principal leadership and stewardship role. Industry takes the role of serving and adapting to the diverse needs and expectations, whether they be health- or care-related (or otherwise). They utilise community resources in the first instance, and then propose how gaps between resources and aspirations could be bridged, and their collective goals realised.

4.2.3 Learning from small and local

This new ‘industry’ model embraces ways of caring, working and living more commonly associated with remote or regional communities. The intent behind the model is to realise community-led models of caring and living. By consequence, this desire to meet community needs is realised through networked servicing and operating. This model realises the potential for the community to govern, lead, deliver and/or coordinate its own care. It also elevates the importance of its local workforce (i.e. community and family members, businesses, organisations, professional workers and volunteers).

Creating an aged care system driven by these values is realised through the networking and co-working of individuals and organisations, and even communities, to achieve common goals for the benefit of the community with all people, including older adults, being viewed as a valuable contributor. The community actively recognises the need to enable all its members to meaningfully participate in the services being sought from within or outside the community.

4.2.4 Adaptive leadership and expansive, diverse workforce

Leadership qualities are a consideration for the community, the industry and the organisations within this diverse care network. Leadership styles adopted by business and not-for-profit organisations involved (i.e. industry) are expected to adapt to the community environment within which they operate.

One leadership approach likely to be effective in this context is Adaptive Leadership\textsuperscript{186}. This leadership practice focuses on situations without known solutions. It also appreciates non-hierarchical structures and accepts that leadership is a quality distributed across a variety of system participants, not simply those most powerful or senior.
Leadership frames\textsuperscript{187} which also perform well in this context are Political and Symbolic. In other words, community leaders inspire others with their vision, and enable people by creating opportunity to connect and bring resources and support together for their common goal. They also demonstrate strong negotiation skills ensuring value is derived from their efforts.

### 4.2.5 Enabling a community of volunteering

Volunteering plays a significant part, and therefore management and leadership qualities conducive to this space are critical. A mentoring style of guidance, leadership and knowledge exchange is valued. Industry members that thrive in this community-orientated context demonstrate a capacity and interest in listening; translating needs, knowledge and practice; being flexible; and reasonable risk taking. They also display a willingness and openness to adaptive practice.

The workforce (leadership, community, volunteers, industry) enable and enhance socio-economic and community participation and contribution. The nature of roles and professions alter depending on its level, e.g. micro level (e.g. single street, extended family or community, or organisation), suburb, town or city level, or at a whole of society or economy level. The greater the reach, the more profound the impact of the division and allocation of formal labour.

As more organisations and volunteers (outside of the industry) engage in a community’s care needs, roles within the aged care industry include those such as:

- Service and community coordinators;
- Community and cultural connectors;
- Community mentors and educators; and
- Practice designers and evaluators.

They take a human-centred, interdisciplinary approach to their work, and no one profession or discipline is King.

### 4.2.6 Industry as a facilitator of co-development, co-working and collaboration

The industry workforce includes government, regulation, health and social care sectors, business and professionals, and ensure their respective community has its desired access to the products, knowledge and expertise to meet their needs. Teamwork and collaboration is fundamental for this context. The style and approach are influenced by the community’s culture and ways of working. Effective listening relies on empathy and social and cultural awareness. Resourcefulness and adaptive practice are part of the everyday working environment. There is value in exercising process agility, front-facing roles and processes remain adaptive.

**AgeWell**

The AgeWell peer-to-peer model of care is taken from the mothers2mothers (m2m) model, an education and support program for women and mothers living with HIV. This effective community-based model of care is now being applied to the challenges faced by returning military personnel (VetWell) and former National Football League (NFL) players (Players2Players).
The World Health Organisation showcased the AgeWell model at its 2016 global forum on innovation for ageing populations: “The AgeWell model is another example of how care coordinators can act as “health and social brokers”. AgeWells are people who act as links to both health and social services. If a client needs a social worker, AgeWell will connect them to a social worker. If a client needs a referral to a doctor, AgeWell can facilitate this. AgeWell can also help health professionals understand a client’s home and social situation”[^188].

### 4.2.7 Value and risk is community-led

Working in this style of service delivery is not for everyone. There is a need for workers and leaders to be not merely respectful of, but accepting of, difference. This is necessary for true collaborative thinking and designing, which is another central component to working and operating in this context.

Collective and local level acknowledgement and celebration of achievements are common place. Contributors see and feel the value of their work. People that work well are confident in their expertise to the point they can adapt their practice to the locality of the work. Valued learning and education approaches that ready the workforce for this way of working include:

- embedding of lifelong volunteering, including through schooling and post-school study
- community-embedded classroom learning opportunities (life and living excursions)
- transitional year opportunities during secondary schooling
- employer-enabled volunteering and caring
- governance and regulation in collective (impact) models of practice
- mandatory community-based practicums for post-graduate tertiary programs, optional for traineeships, apprenticeships and undergraduate programs.

As there is wider value placed on the importance of care and wellbeing, workforce is also viewed as part of the community; their wellbeing and resilience is also important. The view that drives this value is the central belief that a community and workforce that is cared for and cares for itself, enhances its own socio-economic performance. This is achieved by enabling civic contribution and participation in a manner which is safe, sustainable and equitable.

**Intergenerational self-help**

HelpAge International’s Intergenerational Self-Help Club (ISHC) concept has been implemented across various developing locations. Intergenerational Self-Help Clubs (ISHCs) are organisations aimed at recognising older people’s ability to contribute to society through providing knowledge and resources to both seniors and younger adults.

In Vietnam, for example, it has grown from 60 clubs in 2005 to 850 ISHCs in June 2015. Its concept is built on the idea that community development builds from everyone’s potential being realised – and that an inclusive, community-led approach can achieve this in a sustainable and meaningful way.

It works to reactivate its community to enable it to lead a more effective and empowered relationship with its municipal and industry partners. HelpAge self-help groups provide as many services as they can; in certain situations, they also act as a bridge to government, social, welfare and other public services[^189].
Importantly, 45% of members are aged under 60 years, hence the use of the term ‘intergenerational’. ISHCs are used as a way of supporting older people to lead dignified, healthy and secure lives. The Clubs are a community-based space where older (and younger) people can access health check-ups, get help to start a business or generate an income, find out information on their rights, and build social networks. Clubs organise training on self-care and first aid for both members and the wider community, and provide outreach homecare support services, such as the bed-bound and disabled, to those who need it. More generally known as Older People’s Associations (OPAs), this solution of working across a range of domains and having older people as leaders and volunteers is becoming a trend in East and Southeast Asia.

### 4.2.8 Creating transformational change through joining data, people and technology

At a local level, community capacity is enhanced through strategic learning and investment. Some locations are better placed to adopt this care model due to their already existing community connectedness and civil structure. Others require deeper facilitation and mentoring, which responds to the community’s areas of both strength and weakness.

Community-based, place-orientated models of care are king, replication and scale are not the goal – the focus is on inspiring effective practice. Practice-based learning and refinement is necessary once practice effectiveness is understood and achieved. The disciplines and professions driving concepts of care and care services include:

- Political Science, including direct democracy models;
- Business Administration, including social enterprise, value-based models;
- Health and Social Care, including community-adaptive models of care; and
- Design, Engineering and Applied Science, including urban design and planning, and participatory design models.

### Scenario reflection

How relevant would the current aged care industry or your organisation be within a scenario where a greater part of the community and wider industry are engaged?

What role would you or your organisation be able to take in this alternative story of aged care?

Who in society would become vulnerable (or increasingly vulnerable) in these scenarios?

What training and development needs would your workforce or leadership have?
4.3 Scenario 2: Remote caring

Remote delivery of routine care, via virtual organisations, is the dominant delivery model within the aged care industry. This model allows round-the-clock access to care and enables the workforce to deliver more care to more individuals – technology enables increased automation of routine administration and reduce need for travel. Data collected through sensors, cameras and other telehealth technologies is a critical asset under this model. Organisations use the data to continuously improve processes for their workforce and outcomes for their clients, enabling them to become ‘learning organisations’.

The industry has a reputation for being outcome focused and data enhanced. It can provide tangible enablement for older people if their health or wellbeing shows signs of decline.

Virtual healthcare systems enable organisations to deliver personalised assessment and care for their clients, and facilitate information sharing options where preferred. Empowered with environmental and physiological sensors, cameras and AI, organisations collect information that feeds decision-assisting analytics.

People are willing to provide access to monitoring devices in exchange for the opportunity to age in place, even if it means giving up some levels of privacy or independence.

This monitoring and analysis enhances professional-delivered care assistance. Nursing, health and care professionals work collaboratively with robots to provide services to older people. This enables a virtual workforce approach to care. Robots programmed to understand speech and facial expressions act as a coach and companion – they converse, read, tell jokes and suggest activities that are of interest to their client. They also act as a personal assistant monitoring the individual’s health by asking clinical questions and coaching them in healthier behaviours.

Organisations use the power of data analytics to continuously improve processes and outcomes in caring for older people. The ‘machine caring’ model increases the capacity of teams of professionals to deliver care to people, regardless of their geographical location, whilst also increasing commercial viability.
4.3.1 **Embrace of technology across community and industry**

*In the Netherlands, five health insurers now reimburse users for Sensara’s sensors and the company is in talks with others, including the health ministry. Other insurers are experimenting with reimbursements on wearables*.\(^{192}\)

Industry, government and community leaders endorse the widespread adoption of technology and analytics. This is motivated by a commitment to prevent older adults needing to attend hospitals or have longer stays within residential care, both of which are expensive, but also not desired by most older people. Their willingness to adopt and pay for technology encourages the increased development of new products and services by designers and inventors and motivates individuals and organisations to invest in them.

**Robotic companions**

Assistant robot options vary from the least to the most technologically sophisticated. GiraffPlus is an integrated system that combines a network of sensors collecting physiological and environmental data with a tele-presence robot that favours social interaction. The data is fed to the carers and medical staff who virtually visit users regularly, and are warned in a case of emergency, such as a bad fall or elevated blood pressure. The robot, named “Mr Robin” by one of its users, Nonna Lea, also keeps her connected to her family.

This product-service was piloted in Italy, Sweden and Spain in 2014, funded by the EU, and there are currently different enterprises offering similar options to the market. About 4,700 assistance robots were sold globally in 2015, and Frost & Sullivan (a consultancy) predicted, in 2016, that the global market would grow by around 36% per year until 2021\(^{193}\).

4.3.2 **Accountability by consumer**

Accountability across the industry is driven by consumer-determined quality. Regulatory resources are directed to facilitate this approach. Technology partners enable the development and use of consumer-orientated algorithms in addition to proprietary and/or public clinical data to:

- identify and prioritise areas of intervention;
- provide real-time analytics;
- review staff performance;
- spot gaps in regulatory compliance; and
- easily create accessible and relevant reports.

**Distance caring, training and mentoring**

Banner Health is a health provider serving seven states in the western US, which has heavily invested in telehealth. Nurses monitor on average 40 to 45 patients every day, across three to six facilities in the region. Each workstation at the virtual telehealth command centre has three large monitors, with six split screens connected with patients’ monitors, and two computers linked to the Philips eICU software called eCareManager, as well as the patients’ electronic medical records, capturing detailed notes about the patients’ conditions. The cameras have extremely high definition, allowing nurses to even read the numbers on an IV bag. Patient and nurses feel as though they are in the same room\(^{194}\).
They provide care to patients and support to on-the-ground nurses when they need it most, especially at remote community hospitals that don’t have specialised ICUs. The Banner Health virtual telehealth command centre allows virtual nurses to monitor high acuity patients remotely, so the local care teams can keep the patient in their community hospital, rather than having to transport them four or five hours away to access higher acuity care.

4.3.3 Virtual systems of working and learning

The combination of virtual systems, data analytics, robotics and human expertise enable workers to multiply, by several fold, the number of people they assist. This workforce can be located anywhere in the country, or even overseas. Additionally, consumers in remote or regional communities can more readily access specialists. Virtual caring and health enables professionals to extend their careers. It also creates opportunity for people who see the physical demands of care and health roles as a barrier.

**Hospitals with no patients**

It is estimated that around 22 million households will use virtual care solutions in the US in 2018, up from less than a million in 2013, with average visits among these households increasing from two to six per year, including both acute care and preventive follow-up services, accessed from home, retail kiosks or work.\(^{195}\)

Mercy’s Virtual Care Center is the world’s first facility dedicated entirely to care outside its own walls. Its Virtual Care Center houses 330 Mercy co-workers – but no patients. With its meeting spaces equipped with multiple floor-to-ceiling whiteboards on tracks and giant computer monitors, the building also invites collaboration and new ideas for getting affordable care to patients when and where they need it.\(^{196}\)

Virtual nursing, care and health professionals are trained in customer service, communication, and digital collaboration and intervention skills. Much of their work is delivered via computer-based systems. Care is also coordinated by using digitally-held data. Highly specialised professionals typically operate remotely to disperse their knowledge and expertise across wider populations. Professionals with more generalist knowledge and skills undertake person-facing and coordinating roles within the workforce.

Micro credentials are a common pathway for some specialists – practise exposure through their work is another way. Remote specialists also enable digital mentoring opportunities for generalists to upskill. For example, this knowledge may be acquired through experience in acute care and deepened by continuous learning through collaboration with other health personnel and further training.

**Combining AI and data analytics**

Care Angel combines AI and data analytics to enable regular monitoring and management of users with chronic conditions, physical disabilities, behavioural health challenges, or simply ageing at home. Its AI uses voice (i.e. landline or mobile phones) to conversationally collect patients’ vitals and wellbeing measures, which are then used to track trends and identify risk in real-time, and alert medical staff when intervention is required, while keeping carers and loved ones informed of the user’s conditions to help reinforce care adherence (e.g. it might notify, “Dad didn’t sleep well, and he is in pain”).

The user and the family can also choose to share the information with “care circles” which might include transportation, food and medicine suppliers.
Healthcare facilities are adopting the service to enable virtual nurses and medical staff to provide population health management, remote patient monitoring, chronic care management to achieve medication adherence, improve behavioural health and reduce re-admissions.

Experienced virtual professionals support less experienced/qualified workers to execute tasks under supervision. Further training is also attained not only through universities or vocational education and training providers, but also within organisations where virtual reality training enables workers to access simulations of complex tasks. They can continue to practice tasks that would ordinarily be less common and/or expensive until they reach the required level of proficiency.

**Virtual practice**

UbiSim is a startup business dedicated to virtual reality training for nurses and nursing professionals. Its model is based on the use of a virtual reality tool for the practice of procedural nursing education, with modules developed in close collaboration with the students and teachers. Their first developed scenario was blood transfusion, and virtual reality training has been found to be more accessible and allows students to practice becoming an expert in the procedure.

Training stations are currently operating at two sites in France, with multiple partnerships with other institutes being finalised. Their priority is for the solution to be effective and fun - to best meet the needs and expectations of students and health professionals.197

### 4.3.4 Interwoven resources and networked expertise

Organisations use technology partners to analyse their workflows, achieve seamless integration of remote caring, and continuously improve the consumer and worker experience. This translates into less time being spent by the workforce on non-caring activities. These partners also provide continuous support and guidance to workers through intelligence generated by AI devices and tools, intuitive knowledge databases, digital workspaces, standardised processes and 24/7 helpdesks.

This model of practice enables opportunities for lower skilled or less experienced workers to access the workforce, whilst being supervised remotely by experienced and highly-skilled professionals, including technology partners. Telehealth approaches present an opportunity to leverage another range of knowledge, experience and working preferences.

**Digital care planning and sharing**

The KareInn app is a “paperless care plan [that] goes beyond digitizing mandatory care standards; it puts residents at the heart and reminds people why they got into care in the first place”198. It is deceptively simple to use and requires no costly infrastructure and minimal training to get cross functional care teams up and running in no time. Anyone involved in the care cycle can use KareInn to plan care, record real-time resident activity, generate meaningful insights, and effectively coordinate high-quality care.

KareInn enables carers to spend less time on paperwork, giving them on average an hour more time with residents per carer, per shift and gives home managers better visibility into what is happening day to day.199
4.3.5 Bringing together technical creativity and knowledge human needs

Collaboration between start-ups, health organisations, universities, and governments enable the effective funding and piloting of technological innovations. Research centres, in partnership with health organisations, lead the development of telehealth solutions, which are then replicated and enhanced by businesses and organisations. Data technology companies lead the development and commercialisation of data analytics solutions, in partnership with health providers.

Technology inspired family experience

Victor Wang is the founder of Care Coach/Gerijoy, a digital companion for older people who require remote care or monitoring to enable them to live independently. The digital companion is a pet dog and is available to the older person via a tablet device. Interestingly, the product brings together the logic of pet therapy alongside the benefit of the avatar dog functioning as a non-intrusive connection to real people who are employed as care managers and monitors for the older person. The network of people employed usually operate from their own homes overseas and can alert people more locally if a need arises.

Like many other emerging aged care micro-businesses and product developers, the inspiration for this design came from a very personal place. Victor Wang was born in Taiwan but migrated to Canada with his family – leaving his grandmother in Taiwan. The family witnessed firsthand the deterioration of his grandmother due to loneliness and depression, and the knock-on effect this had on Victor’s mother. This inspired him, while completing his PhD at MIT, to develop the prototype model of care coach.

Victor Wang is reflective of people from diverse research and technical fields who are increasingly driven to create solutions to improve life experiences and independence as we get older. He brought together this person-first thinking with his technical robotics, programming and design skills.

Scenario reflection

How relevant would the current aged care industry or your organisation be within a scenario where most services are delivered remotely?

What role would you or your organisation be able to take in this alternative story of aged care?

Who in society would become vulnerable (or increasingly vulnerable) in these scenarios?

What training and development needs would your workforce or leadership have?
4.4 **Scenario 3: Digital-preneur caring**

Digital entrepreneurs are a large part of the aged care industry. People like them because they are fuss-free, reliable and can offer them what they want, when they want it. Consumers and workers like digital entrepreneurs because they allow for more time to care, and in some cases lower costs for the consumer and higher earnings for the workforce.

Older people lead their own paths and pick and choose their services relatively independently. The governance and critique of the service is also driven at the individual user level.

This varies from organisations delivering services via an integrated, in-house network of service provider employees to, more commonly, delivery via a network of independently operating organisations and professionals.

The most prominent digital entrepreneurship model is the Uber-ising of services for older people; in other words, how they select and pay for the services they need becomes fully digitalised. They pick what they want, from whom they want, and when they want it. These service agent organisations are completely digital, powered by cloud computing and other digital logistical tools. The services themselves may look and feel very conventional but the way the service is procured or accessed is enabled by *social, mobile, analytics, cloud and cyber-solutions*.

The enterprise of living and ageing attracts designers, creators and inventors from a wider variety of fields and practices. Digitalising the business of care delivery takes on many new modes and involves organisations that vary in scale from the micro to the large. Some are local, others are global.

**4.4.1 Digital disruption for human enablement**

Economic downturn and resource scarcity, imagination and digital capacity spurs the generation and pursuit of digitally-propelled enterprise. Micro-businesses compete with lower overheads (e.g. due to remote and casual working approaches) and use digital innovations (e.g. service delivery and/or business operation) to overcome previous barriers to entry. The industry has moved from the *more with less*, to a *better with less* model.

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The current focus on digital disruption, innovation and “doing more with less” provides another angle from which to tackle ageist stereotypes and behaviour. People understand that digital technology can disrupt whole industries. Now our task is to communicate that digital technology can also disrupt the way in which we approach later life.
This industry philosophy is built upon practical commitments to self-determinism and independence, individualism, quality of living; and digital consumerism. In this aged care system, conditions are perfect for a flourishing and diverse digital aged care service market.

### Digital system centred on connecting

Developed by two sisters in New South Wales, Careseekers enables users to book/purchase a range of services that include or support personal care, getting out and about, domestic assistance, cooking, social support and companionship, meal preparation and/or help with morning and evening routines.

Like many digital-preneurs in the aged care space, the developers of Careseekers were inspired by the personal experience of caring for a family member. “I was a human rights and disability discrimination lawyer and [my sister and business partner] Lauren worked in marketing, so we prioritised partnering with tech people who were able to communicate with us very clearly and appreciated our lack of tech knowledge.”

4.4.2 Keeping pace with creativity and digitalising

In this aged care system, conditions are perfect for a flourishing and diverse digital aged care service market. The expansion and adoption of digital consumerism across the services sector is evident globally and locally. Digitised consumer retail, travel and tourism, food services, and banking are part of everyday life for almost everyone. More demanding consumer expectations drive service demand for what digital-preneurship has to offer — even if there are mixed feelings at a policy or sector level.

Digital enterprises are more typically led and enabled by those from younger generations. This means leadership more commonly comprise of people from Generation X or Generation Y cohorts — when compared to more traditional enterprises. The range of effort, values and interest is diverse among these enterprises. Some are noted for their disregard of regulation and market impact, while others are celebrated for their mission-led approach to social change.

4.4.3 Leading by enabling digital market expansion

Leadership concerns itself with selling and gaining buy-in for its digital model of service. They are required to be charismatic and engaging collaborators, listeners, and translators to effectively gain licence to operate across new policy, practice and industry contexts.

An entrepreneurial mindset is critical in this scenario to drive user-centric innovation and enhance commitment to positive consumer experience, every day. Adaptive leadership qualities are also to be valued, but as application and adoption matures, leadership qualities more common to Structural and Human Resource frames are more relevant (see Appendix 2). This mindset is coupled with an aptitude and skill for Political leadership — necessary to build and maintain critical levels of trust surrounding cybersecurity and data protection.

Leaders effectively negotiate their social and regulatory licence to operate. They can comfortably move between highly complex technological decision-making and dense, human data discussions. They also guide and mentor their teams to enable accessible discussion and design — otherwise innovation commercialisation is delayed.
Leaders who nurture a culture of user connection and empathy whilst investing effort in digital system and process functionality are most effective. They adopt technology and process innovation from other industries and sectors so an eye for innovation translation, adaption and implementation is a major asset. They also possess a higher tolerance for uncertainty and risk.

### GenWise

GenWise was established by two GP brothers out of South Australia. GenWise creates digital links between those living in aged care settings and a pool of age-wise GPs. They built GenWise once they had themselves developed a “more structured and efficient model of care for General Practitioners (GPs) caring for patients in residential aged care”.

“GenWise isn’t rocket science – it is just good old-fashioned medicine driven by the belief that every older Australian deserves choice and timely access to quality medical care.”

It acts as a cloud-based clinic. Their mission talks of raising the profile of age-care practice and medicine among the GP community and encouraging the engagement of GPs with their local aged care setting, wherever they are across Australia.

GenWise was also the recipient of the Telstra Micro Business Award in 2017.

#### 4.4.4 Digitalising workforces and career paths

Digitally-comfortable professionals describe those who are most attracted to this new model of care and operating. User-led practice, design, communication and education approaches are desirable to the digital business model and therefore the following roles and skills are in great demand:

- User-experience (UX)/Chief Marketing Officers (CMOs) (including employee, provider and end-user journeys);
- Policy, regulation, legal and compliance advisors;
- Digital recruitment and screening designers; and
- Digital community managers and coordinators.

Across the workforce, people come from increasingly digitalised lives through their home, work and school lives. Human-centred practice and user-centric models are built on the premise of empathy, so it is important that learning experiences are designed to maintain and encourage this approach. Opportunities to socialise the workforce for in-person service delivery are increasingly embedded into education and training pathways.

#### 4.4.5 Diverse working and workforce engagement

Workforce sources are diverse and expansive. The industry seeks people with experience in digitally-savvy and consumer-centric industries, sectors and professions, including process-agile and design-driven organisations. Once within the aged care industry, organisations create opportunity for this workforce to co-learn and collaborate with those from clinical and care backgrounds.

Immersive opportunities are also created for service designers and developers, so they can feel the direct value of their work and further inform their work. Experimental work cultures are also adopted by some organisations to engage innovators, creators and designers to take appropriate risks.
Many of the digital enterprises indirectly recruit the services of care professionals. They readily attract:

- freelancers, self-employed and independent contractors;
- primary care workers from existing organisations;
- retirees, those who are underemployed and students; and
- informal carers: friends and family already caring for someone.

To attract and retain this pool of resources, the enterprise pays attention to workers’ needs and interests, as well as the needs and expectations of end users. They reward workers in a way that is more attractive than more traditional enterprises – this includes higher pay, more flexible working and/or other reduced cost of working. Ways to mitigate the costs posed by tasks that are highly repetitive or cognitively/emotionally taxing also interest these digital organisations.

**4.4.6 Enterprising the disciplines**

Social impact enterprise and design is an expanding part of the research and development pipeline as universities, large businesses, government and philanthropic organisations recognise the critical nature of social licence and socio-economic wellbeing. Disciplines coming together to inform this model of care and operating include:

- Digital engineering and computer science to enable the develop of infrastructure;
- Data and applied sciences including health informatics;
- Education and learning to inform knowledge sharing and innovation practices;
- Business administration to explore value and revenue models;
- Health and social care practitioners;
- Humanities, design, sociology, and psychology to improve consumer/employee empathy and system logic; and
- User, community and advocacy groups.

**Scenario reflection**

How relevant would the current aged care industry or your organisation be within a scenario where most services are provided by digital businesses and enterprises?

What role would you or your organisation be able to take in this alternative story of aged care?

Who in society would become vulnerable (or increasingly vulnerable) in these scenarios?

What training and development needs would your workforce or leadership have?
4.5 Scenario 4: Self-enabled caring

The health and aged care emphasis has shifted from providers to patients, from doctors to data. Self-driven technology allows older people to seamlessly monitor and manage their own health. There is trust in sharing data between consumers and organisations, amongst organisations, and between organisations and governments. Collected data is used to create solutions to society’s health issues and empower people to live longer and healthier lives.

There is a strong focus on preventative care, with technology being leveraged to allow people to age in a healthy and self-determined way. People are empowered by a range of technologies:

- Smart homes where appliances are equipped with internet of things (IoT);
- Digiceuticals and AI preventative care available from their phones; and
- Assistive technologies integrated to their bodies.

Consumers share their data (gathered by their smartphones, wearables and implantables) with the companies commercialising this intelligence. This sharing is motivated by the desire not only to access services, but also improve algorithms and reduce inefficiencies for all users.

Consumers share their health data with their health and aged care provider of choice, in the eventuality that when they need to access these services, the provider has a comprehensive and up-to-date client medical history. Health experts act more as independent agents or consultants who help consumers navigate the healthcare system and technology options, rather than as an agent for hospitals or health providers. Health and care professionals only interact with consumers in a hands-on way when unexpected, acute need events occur.

Services and products provided by all industries adopt ageless design principles – they aim to deliver the best experience to everyone. Data is the dominant technology and resource in healthcare. Every solution is rigorously tested, but there is a more direct transition from research to commercialisation.

People value being able to take ownership and be responsible for their own personal health and caring needs. They seek options that empower them with knowledge and self-control to lead an independent, sociable and active life, whether aged 40 or 90.
Health and aged care is dispersed in a cross-industry manner. Health and care professionals provide acute care when things go wrong, otherwise, health conditions are taken care off in a preventative way, using smart home adaptations, assistive technologies and digiceuticals developed by tech companies in partnership with health specialists.

Providers of active ageing solutions increasingly come from different industries. For example, user experience (UX) and information system specialists age-enable digital spaces for older consumers such as personalised fitness, travel, cultural and entertainment services.

### 4.5.1 Transformative, visionary, and financially backed

Global business and finance, international leaders, and technology and health pioneers collaborate to enable technology to reach a transformational level of change – where apps, wearables, and gadgets are no longer a promise for easy solutions but actually transform the way people live and age.

Collaboration at this scale requires vision and appetite for risk. Government and privacy advocates pursue effective oversight of apps, products and services that present risks to patients’ security and health. Organisations collecting, storing and using people’s health data face rigorous penalties upon the discovery of a breach.

Most technology companies know that to survive they must ensure their data-sharing methods are legal, ethical and secure – this includes securing confidence of government, regulators, community, and their workforce and customers. This has required the development of proper, accessible consent practices, and transparent information on why and how they collect and share data with their partners.

#### Transformative change of all sizes

Alphabet (a conglomerate incorporating Google and its subsidiaries) is heavily investing in health solutions. Its subsidiary, Verily is working on a study to track health data of 10,000 people, through surveys and wearables, over four years with the goal of developing an algorithm that is able to predict when a person is going to develop a disease. The study is being undertaken in partnership with Duke University and Stanford University. Its AI is already able to predict possible deaths of hospitalised patients two days earlier than current methods, allowing more time for preventative intervention.

Alphabet is also working on a project, Cityblock Health, to improve healthcare accessibility and outcome for low-income populations in the US. Cityblock will analyse identify to spot where care is needed. It plans to hire 55 people over the next six months, including data scientists, software engineers and a lead doctor, as well as a team to interact directly with patients.

Liftware (a tech company now owned by Alphabet’s Verily) has designed a selection of stabilising and levelling cutlery to help people with hand tremor or limited hand and arm mobility to retain dignity and independence while eating.

### 4.5.2 Digital health ecosystem and pharma-technology

Clinical health and care professionals, highly skilled and specialised, treat people when they have an acute health episode that requires intervention – they can also prescribe implantable technologies.
Health consultants and brokers with knowledge of the preventative digital health landscape, help people to identify and access the best solutions for their needs.

These are a mix of independent agents and people employed by health providers, government and/or tech companies. However, with higher levels of education and digital and health literacy, consumers are largely able to navigate the system of solutions independently – especially as designs become more adaptive to people.

4.5.3 Adaptive and diverse skills mix to navigate a new world of living and working

Retailers of IoT (Internet of Things) appliances, wearables and digiceuticals have technical staff with highly developed information technology and interpersonal skills to provide adaptive customer support – AI is also part of the retail environment. Data scientists, developers, designers, health specialists and business experts in different fields, collaborate to continuously improve solutions and accessibility. Highly relevant skills are data interpretation and analysis and user experience design, and cognitive and social skills like creative thinking, problem identification and solving skills, and adaptive interpersonal skills are also important.

**Exo-enabling**

Honda has recently received approval from the European Commission to commercialise its walking assistance device. The approval follows almost 20 years of work to get the exoskeleton-style device ready for widespread use. The device helps people who suffer from conditions that affect mobility, by feeding data from hip angle sensors into an in-built computer, which then activates motors to increase the wearer’s stride and aid their timing.

There are several other companies operating in the field, each with a different take on developing exoskeletons to aid mobility. SRI, an independent, not-for-profit research centre, hopes to launch the Aura Exosuit mid-2018. The exosuit is an undergarment made of technical fabrics that incorporates both sensors to track the posture and movement of the body, and motorised muscle bands that follow and operate along the body’s major muscle groups. When the wearer prepares to move, smart sensors power motors that apply forces tailored to assist a particular motion.

With an emphasis on preventative health, those working in hospital or clinical settings work with increasingly acute, specialised cases. This presents some with an opportunity to pursue challenging work, compensated by higher wages, though reliant on extensive education, training and ongoing credentialing. A degree in nursing or medicine is not always a pathway taken to practise as a nurse or a doctor – an interest in contributing to health and wellbeing now attracts people from a wide variety of backgrounds to work in health research and health start-ups. Anyone with highly developed analytics and problem-solving skills is an asset to the sector. Retention strategies focus on enabling continuous learning, cross-company collaborating, and non-hierarchical leading and working.

**Thinking data systems**

IBM Watson is already deployed by a number of hospitals to provide better diagnostics and personalised treatment. Now, this is done via a your personal smartphone. Data collected through apps, wearables, and other sensors and analysed by algorithms will allow your smartphone to predict that you’ll likely get a cold and recommend diet and supplements to prevent that from happening. If it does happen, your phone will recommend the most appropriate medicine from the cheapest chemist and get it delivered to you.
4.5.4 Clinical study of digital interventions and innovation

Research collaboration and competition between technology organisations, healthcare providers, insurers and funders, academic institutions, and pharmaceutical manufacturers is encouraged and actively pursued. These organisations collaborate to collect, aggregate, link and analyse data to develop products and solutions with the goal of enhancing health outcomes for all.

Digital health products are evaluated using clinical study methodologies in much the same way as pharmaceutical trials. Innovation and start-up hubs assist designers, developers and companies to develop products and services and find partnerships and funding to launch innovative solutions.

Enabling software and hardware

Akili Interactive Labs is conducting randomised control trials to advance a pipeline of programs across neurology and psychiatry for treating attention deficit/hyperactivity disorder (ADHD), depression, autism spectrum disorder and multiple sclerosis/ inflammation. Akili has developed, for example, video games designed to directly treat cognitive dysfunction associated with a range of medical conditions.

Active Protective has developed a smart belt, to prevent hip fractures during falls by detecting imminent fall and deploying an airbag protection around the hip. It is currently being piloted and has shown the potential to reduce the impact of a fall by 90%. The developers hope to launch it commercially sometime in 2018.

A technology called acoustic monitoring is able to help people sleep better at night. It has been in use in the Netherlands for over 25 years but only now started to be implemented elsewhere. An aged care provider in the UK, WCS Care, has recently adopted the technology, achieving reduced falls and costs, and happier residents.

Scenario reflection

How relevant would the current aged care industry or your organisation be within a scenario where most services needs are prevented by engagement of digital application and tools?

What role would you or your organisation be able to take in this alternative story of aged care?

Who in society would become vulnerable (or increasingly vulnerable) in these scenarios?

What training and development needs would your workforce or leadership have?
Entrepreneur of the Week: Victor Wang, care.coach

March 2018 at: https://www.alpict.com/ubisim

Meet Mr. Robin, grandma’s robot buddy

March 2018 at: http://robohub.org/robots


Leadership frames come from the work of Lee Bolman and Terry Deal – this framework has been evolved since the 1980s and has been considered by a diverse range of industry contexts. Their most recent publication is: Bolman, L.G., & Deal, T.E. (2017). Reframing organizations/Artistry, choice, and leadership. John Wiley & Sons.


For further details about KareInn, see: http://www.kareinn.com

For further details about KareInn, see: http://www.kareinn.com. Also see their application at: http://www.kareinn.com/our-app/


For more details about Careseekers, see: https://www.careseekers.com.au/images/cs_video.mp4

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APPENDIX 1: Strategic foresight approach
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This work for the Aged Care Workforce Strategy Taskforce involves the following components of Miles Morgan’s adapted strategic foresight approach: Framing, Trend scanning and Scenario building. Visioning and Acting are recommended follow-up strategy phases to this, but both are best driven by industry as part of a collective commitment to development and growth.

Framing: engaging traditional sources to consult digital conversations

**Identification of keywords and search terms**

An initial scan of academic and grey literature related to ageing and aged care is critical in defining our preliminary search parameters. This enables the development of a diverse set of search terms relating to the service of older people whether it be care, health or otherwise. Within global aged care conversations, different phrases and terms are often used to describe the same or similar people and things. **Use of specialist software to mine and extract quality digital sources**

An Australian data mining company undertakes the data mining based on a data brief. This enables their expert application of data quality filters to be applied to exclude irrelevant data such as bot activity, duplications and data from sources with lower digital currency. They are also able to randomly select and provide batches of data for our team to critically analyse.

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Using qualitative analysis software (NVivo) to explore mined data

A contemporary grounded theory approach is undertaken, meaning a preliminary coding frame is developed and additional data-driven codes added as the analysts explore the data. This process provides us with a map of aged care related ideas, innovations and models that had gained traction within the digital discussion space during the study period (1 November 2016 to 31 October 2017). We analyse digital conversations, but also analyse associated text documents and reports (e.g. if a ‘tweet’ includes a link to an external report). Data analysis is paused once new themes or concepts fail to emerge. Concepts and themes gathered during this phase are then selected for further investigation from more traditional sources.

Trend scanning: Examination of trends and their potential impact and reach

Using a workshop style of deliberation, our team discusses the data they analyse. Trends are first categorised using a STEEP-like approach. Next, the more dominant or aged care specific trends are identified. From this refined pool of trends, the team categorises each as a demand-side or a supply-side specific trend. For the purposes of this project, the demand-side concepts are labelled trends (Chapter 2), and supply-side concepts are labelled opportunities (Chapter 3).

Scenario building: Development of alternative stories about Australia’s aged care industry

First, demand-side trends are assumed across all the scenarios. Next, the nine opportunity areas are explored to identify a set of four combinations that are then used to create a set of four plausible yet challenging scenarios.

A scenario is first developed by one team, critiqued by another, and then presented for group discussion with representatives of the Taskforce team. This enables the scenario to gain relevance and validity. Ultimately, each scenario or story of aged care is designed to resonate with and inspire individuals and organisations from across the community and industry to rethink its problems and take a creative approach to possible solutions.

Figure 7 on the next page presents the development logic of this resource.

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STEPP refers to the commonly used macro environment analysis tool/approach. It stands for Social, Technological, Environmental, Economic, and Political — associated tools include PEST, PESTLE, and STEEPLE.
Figure 7: Overview of resource development logic and purpose