

Summary

Fund information

Summary information

Investment area: 2017 Endeavour Fund - Research Programmes

Contracting organisation: Massey University

Year 1 funding requested:

\$799,375.00	\$119,906.25	\$919,281.25
GST excl. amount	GST amount	Total amount

Total funding requested:

\$3,996,875.00	\$599,531.25	\$4,596,406.25
GST excl. amount	GST amount	Total amount

Short title:

Maximising workforce participation for older New Zealanders

Descriptive title:

Maximising workforce participation for older New Zealanders: Opportunities, Challenges and Prospects

Investment mechanism:

Research Programmes

Number of years' funding requested:

5

Fund objective:

- Economic
- Environmental
- Social

Key information

Eligibility

Is the research solely for the benefit of your organisation?

No

Are you a department of the public service as listed in Schedule 1 of the State Sector Act 1988?

No

Will the majority of research be undertaken overseas?

No

If you answered 'Yes' to any of the above questions, please explain why.

Science abstract (280 words)

This research programme will answer a crucial question for an ageing population: How can government, employers and workers maximise older New Zealanders' participation in the workforce?

The research, developed through engagement with government and business stakeholders and our Māori Advisory Group, will contribute innovative and sustainable strategies to extend working lives and enable unemployed or underemployed older New Zealanders to contribute to the workforce.

Methods used include surveys of our population-representative longitudinal cohort (with Māori oversample), business case studies, kaupapa Māori research, and interviews, within five linked research aims.

The first aim focuses on older workers, to identify aspirations, attitudes, motivations, and life course factors that impact on workforce participation across time. The second aim focuses on reconciliation of work and care responsibilities for older workers at individual, organisational, and policy levels. The third aim focuses on older entrepreneurs, by interviewing members of an online network of older entrepreneurs and a group of Kaumātua entrepreneurs. The fourth aim focuses on businesses and employers, to identify barriers to employment and describe best practice for maintaining and enhancing older worker participation.

The fifth research aim is to translate findings from the first four projects into practice. In partnership with stakeholders, we will develop evidence-based tools, workshop materials, and management strategies for implementation by end-users (employers and workers). Our interdisciplinary team has extensive experience leading large projects and draws on the expertise of leading international collaborators and New Zealand government and business stakeholders. This research will contribute directly to policy development and employer practices to enable older people to engage productively in the workforce, contribute to the economy, and realise the benefits of an ageing population.

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Keywords

- Older workers
- Work participation
- Flexible workplaces
- Employment

Glossary

Glossary

Aotearoa	Used as the Māori name for New Zealand
BusinessNZ	New Zealand business umbrella and business advocacy organisation
CEPAR	Centre of Excellence in Population Ageing Research
Fa'a Samoa	Fa'a Samoa in the Samoan language means The Samoan Way, and describes the socio-political and cultural way of life of the people of the Samoan Islands
GDP	Gross domestic product
HART	Health and Ageing Research Team (Massey University)
Hui	Māori term for a social gathering or assembly
HWR	Health, Work and Retirement study
Kaumātua	Māori elder – a person of status within the whānau
Kaupapa Māori research	Research controlled by Māori, for Māori, and of direct benefit to Māori
KiwiSaver	A voluntary, work-based savings initiative for retirement
Māori	Indigenous people of Aotearoa/New Zealand
Mātauranga	Knowledge, wisdom, understanding, skill
MBIE	Ministry of Business, Innovation and Employment
MSD	Ministry of Social Development
Ngāi, Ngāti, Ngā	Māori tribal group e.g. Ngāi Tahu, Ngāti Kahungunu, Ngā Puhi
NHI	National Health Index
NZS	New Zealand Superannuation - a universal state pension paid to New Zealanders aged 65 and over
OECD	Organisation for Economic Co-operation and Development
SME	Small and medium-sized enterprises
Whānau	Extended family, family group

Statements

Executive summary

Executive summary (560 words)

As the proportion of older people in the New Zealand population grows, the need for older people to remain in the work force for longer is highlighted. Maximising workforce participation by older workers will provide a “triple dividend” for New Zealand: it will benefit the economy by reducing social expenditure for early workforce exit while increasing revenue from taxes; it will benefit business by moderating the impact of demographic change on the labour market; and, it will help older workers through improved wealth and wellbeing. While most developed countries are struggling with the issue of supporting longer working lives, New Zealand is poised to lead the world in realising the benefits of an ageing population. However, many workers aged 55+ are currently unemployed or underemployed and others wish to work beyond 65. This research will address the question: How can government, employers, and workers maximise older New Zealanders’ ongoing participation in the workforce?

Research Methods

The proposed research has been developed through engagement with government and business stakeholders and a Māori Advisory Group. To provide a comprehensive solution to the research question we will use a complex research design which includes five specific research aims. The first four research aims involve targeted work packages which will employ a longitudinal population representative cohort, in-depth interviews, kaupapa Māori methods, and case studies, to answer specific questions about the needs and experiences of workers, employers, and entrepreneurs. The fifth research aim will synthesise the new knowledge and transfer it directly to policy makers, employers, and older workers using consultation and a broad range of contemporary communication and educational strategies.

Research Team

The proposed cross-disciplinary team brings a range of relevant experience and expertise in longitudinal, quantitative, qualitative, case study, and kaupapa Māori research, as well as connections with business consultants, and Māori and Pasifika business networks. The team composition has been designed to mitigate risks to the outcomes of the research. The team leaders have a strong record of excellent research and implementation in ageing, and also contribute a network of international collaborators in this research field.

Outcomes

Using these methods, the answers to the initial research question will be transformed into information for policy makers, and tools and resources for workers and employers that will function to maximise workforce participation by older workers. The tools and resources will be developed and disseminated in conjunction with business stakeholders. The methods will contribute innovative, practical, and sustainable strategies to extend working lives and enable unemployed or underemployed older New Zealanders (55+) to contribute to the workforce.

Vision Mātauranga

The research will include the knowledge and needs of Māori. To ensure Māori research leadership, the team includes Māori researchers who bring mātauranga Māori expertise. Key Māori stakeholders ensure benefits are relevant to Māori end-users. Advice regarding the protection and participation of Māori research participants will be provided by our Māori Advisory Group. The projects include an oversample of Māori in the longitudinal cohort, Māori businesses as specific examples in the case studies, and the utilisation of a kaupapa Māori research framework.

This research addresses the societal challenge of an ageing workforce. We propose a comprehensive approach to investigating the needs of both older workers and employers, and the development of tools and resources that increase productive older worker participation. Additional older worker participation will benefit all New Zealanders and make measurable contributions to the economy.

Impact criteria

Benefit/s to New Zealand

Benefit/s to New Zealand (1120 words)

This research will answer the question: How can government, employers, and workers maximise older New Zealanders' ongoing participation in the workforce?

Maximising workforce participation by older workers will provide a "triple dividend"¹ for New Zealand: benefits to the economy by reducing social expenditure associated with early workforce exit while increasing revenue from income tax and GST; benefits to business by moderating the impact of demographic change on the labour market; and, benefits to older workers through improved health, wealth and wellbeing.

Benefits to the economy

Benefits to the economy of increased older worker participation are considerable. In Australia, it has been estimated that a 3% rise in the participation rate of people 55+ would result in a \$33 billion growth in GDP (1.6% of national income)². In New Zealand, the proportion of those 55+ registered as unemployed and seeking work now exceeds that of those aged 18-24³. The estimated annual cost of job seeker benefit support alone for 55-64 year olds is \$329 million.

Currently, the employment rate for the 55-59 age group in New Zealand is 79% dropping to 71% in the 60-64 age group⁴. Increasing the employment rate of those aged over 55+ to match that of Iceland (highest rate in the OECD) would eventually provide New Zealand with a 6.8% increase in GDP⁵⁻⁶.

The employment rate for the 65+ age group is currently 22%⁴. MSD conservatively estimates the value of earnings from paid work for those 65+ in 2011 at \$1 billion, rising to nearly \$6 billion by 2051, with taxation revenue at \$200 million in 2011 rising to \$1.2 billion by 2051⁷, indicating that any increase in participation above current levels will have substantial benefits.

Benefits to business

The direct benefits for business will be of national significance. Labour and skills shortages across multiple sectors is the key labour market challenge of an ageing population in New Zealand⁸⁻⁹. Businesses that recruit and retain older workers will be able to address this challenge.

Through our key stakeholders (including BusinessNZ and Māori Business Networks), end-user businesses will access the evidence-based knowledge and educational resources we provide. These resources will enable businesses of all sizes, and across all sectors, to become more strategic in their approach to harnessing the strengths of an ageing workforce. They will be enabled to address current and future talent shortages and capitalise on the value older workers bring in terms of engagement, stability, innovation and productivity^{10 11-12}. For instance, older workers have higher levels of engagement than other cohorts and engagement is positively related to productivity. An increase in engagement levels of 5% has been shown to increase business revenue by 3%¹³.

Knowledge and resources from our entrepreneurship projects will be channelled through our stakeholders *Te Au Pakihi* (Māori Business Network) and *Partners in Change* to provide emerging senior entrepreneurs with stories of successful entrepreneurship and exemplars of best practice. This will strengthen the role of Māori in the growth and development of Māori enterprise¹⁴⁻¹⁵, and provide guidance for older New Zealanders developing their own businesses.

Benefits to older workers

The direct benefits to older workers are also considerable. Businesses which use the knowledge and resources from this project will support workforce engagement of those who are unemployed,

underemployed, or wanting to extend their working lives. Business end-users will provide age-friendly management strategies and practices that attract and retain older workers. Participation in employment will result in health, economic and social benefits^{7, 16-18} for workers. For instance, working is associated with greater social inclusion², higher life satisfaction and health¹⁹, and better cognitive functioning compared to retirees²⁰. Working longer is also one way for older New Zealanders to ensure they have adequate retirement income. Additional contributions to KiwiSaver (and other schemes) can boost retirees wealth substantially²¹. For instance, a 55 year old on the median income, contributing a minimum 3% to KiwiSaver, would retire at 65 with an additional \$36,000²²⁻²³ (\$34/week extra income). Many more of those over age 65 will earn additional income (currently, the majority of those over 65 are financially dependent on NZS as their only source of income^{21, 24}).

Investment signals

This research addresses a significant societal challenge for New Zealand. The Report on New Zealand's Positive Ageing Strategy²⁵ notes that "If we're to tackle the challenge of population ageing and grow New Zealand's productivity, we must enable people to stay active as they grow older and to continue contributing to society." (p. 6). The research contributes to the aims of the Ageing Well National Science Challenge (maintaining independence, social engagement, valuing older people, reducing disability, and age friendly environments) which are all highly relevant to the support of older workers. The Director of Ageing Well, Professor Baxter, notes that our research is important and the Challenge Science Leadership Team is "very supportive" of this project.

The project uses innovative conceptualisations of the issues an ageing workforce presents. The research questions (see Method section) are informed by the most recent local and international research and tailored to New Zealand's unique cultural and social context. It will utilise ten years of data from a representative cohort of older New Zealanders (HWR longitudinal study), with additional data waves focused on new questions about the attitudes and motivations of older workers. These data will complement those from in-depth qualitative work with entrepreneurs and businesses to investigate attitudes, practices, and needs.

Findings will be shared with stakeholders, who include multiple public sector end-users, and will contribute to the development of a refreshed New Zealand Ageing Strategy and to policies being developed by MBIE, Treasury, and MSD. Our business and worker advocacy stakeholders will also work with us to develop new interventions from the perspective of worker and employer needs that will contribute to changes in attitudes and practices to benefit New Zealand in the long term.

Vision Mātauranga

The research will include the knowledge and needs of Māori. Key Māori stakeholders, Te Au Pakihi and the Federation of Māori Authorities, ensure benefits are relevant to Māori end-users. To ensure Māori research leadership, the team includes Māori researchers who bring mātauranga Māori expertise. Advice regarding the protection and participation of Māori research participants will be provided by our Māori Advisory Group. The projects include an oversample of Māori in the longitudinal cohort, Māori businesses as specific examples in the case studies, and the utilisation of a kaupapa Māori research framework to identify mechanisms to support successful Māori entrepreneurship.

International Engagement

The research team includes expert international collaborators from Australia, Canada and Europe working in the area of older workers who bring up-to-date knowledge and state of the art research methods into the New Zealand research context. By actively contributing to our peer-reviewed outputs, they enhance the reputation and rigour of our findings internationally.

Implementation pathway/s

Implementation pathway/s (1120 words)

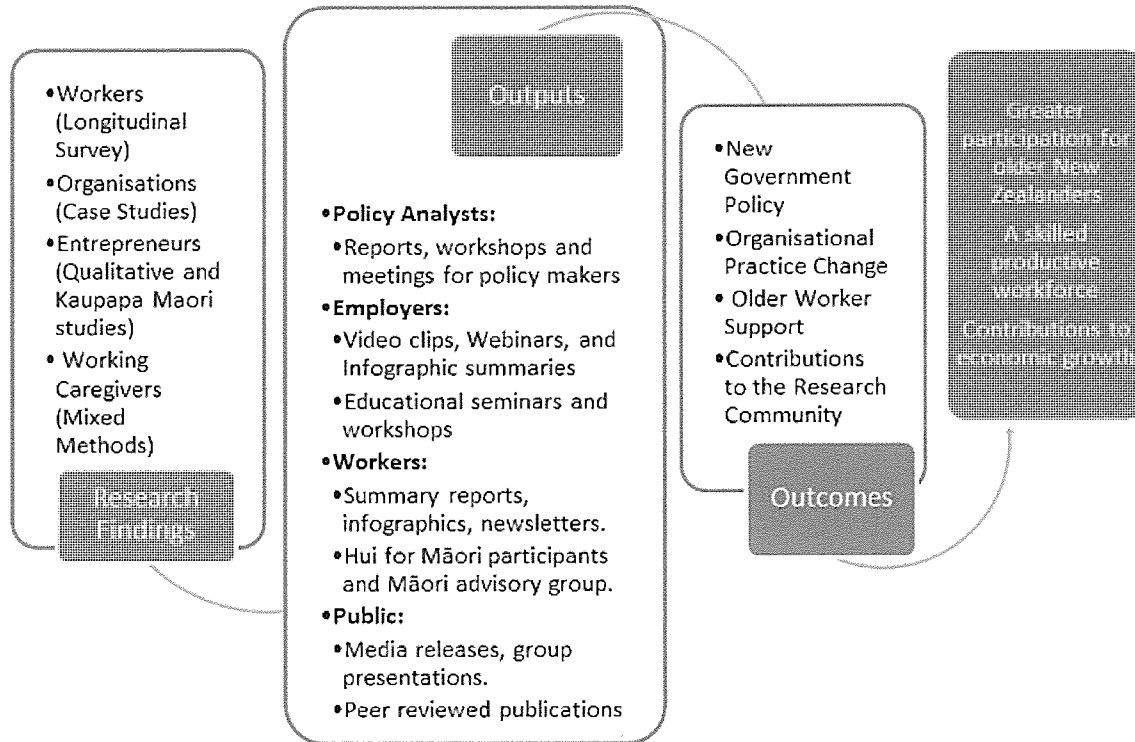


Diagram 1: Implementation Pathways

Older workers are vital for the future of the economy. Participation of all older New Zealanders wishing to contribute to the workforce will be achieved by integrating new government policy and informed knowledge transfer to address the needs of workers and employers. Diagram 1 shows comprehensive implementation pathways for this research programme. In the following sections, we describe how robust research findings from a longitudinal study of older New Zealanders, and in-depth qualitative investigation, will be delivered to government policy analysts, employers, and older workers, and how the findings will be successfully implemented.

Government Policy

We will use the longitudinal research findings, integrated with business case study findings, to address the gap between current government policies and their implementation in work places, identified by recent research in New Zealand²⁵⁻²⁶. Our findings will bring new detailed knowledge of the needs of workers and employers to provide avenues of intervention through legislation and government strategy.

Senior policy analysts and advisors at MSD (the Office of Senior Citizens, Older People's Policy Team) and Department of Health (Healthy Ageing Team), with whom we have consulted in preparing this proposal, will use reports of emergent findings to prepare policy briefings for their respective ministries. For example, the findings will contribute to a refreshed Older People's Policy Strategy in New Zealand.

We will hold regular meetings, and host annual seminars, at which we present findings and discuss their implementation with these key government stakeholders, who have previously attended our fruitful seminars and meetings. We will work with our stakeholder partners to implement new policy settings that

optimise the work environments for full workforce participation.

Employers and Older Workers

Current policy focuses on raising awareness of the value of older people's contributions and reducing discrimination²⁵; however, many businesses are already aware of these needs and require more information and practical guidance to attract and support an ageing workforce²⁷. At present, there is very little advice for employers who are facing these challenges⁴ and very little is known about the actual needs of different groups of older workers, including the specific needs of Māori and other cultural groups, or different occupational groups. We will fill this gap by disseminating new information to employers on ways to practically support the recruitment and retention of older workers.

We will be able to leverage the membership of BusinessNZ and Te Au Pakihi (Māori Business Network) to contact businesses and disseminate the findings directly to employers and entrepreneur networks. Tools such as employer round tables, video clips, webinars, podcasts and infographics will be tailored in conjunction with these stakeholders to be relevant to the needs of each employer or group. For example, Geoff Pearman (organisational workforce consultant) has advised that webinars and YouTube clips are effective with networks of entrepreneurs³. Information about the availability of these tools will be widely disseminated using social media strategies to target relevant groups through Facebook, Twitter, and YouTube.

In addition, we will use the new research knowledge we create to develop meaningful, practical tools and educational resources for use by organisations (e.g., businesses, unions, entrepreneur collectives). These will be designed to be delivered to managers or workers as requested by specific organisations to cover workforce planning, human resource policies and practices, knowledge continuity, health, safety and wellbeing, productivity and engagement and inclusive culture. These resources will be developed with the support and direct input of our umbrella organisation stakeholders with whom we will meet regularly throughout the research process. They will be offered through our website, with links to stakeholder websites, and through stakeholder newsletters.

We will rapidly disseminate key findings through attractive and accessible reports and infographics to all our stakeholders and end-users including the Māori Advisory Group. We will also share the findings with our participants through newsletters and links to reports and videos. In line with kaupapa Māori research, hui will be conducted with research participants and whānau to share the findings and invite interest in ongoing dissemination and future research needs.

We will disseminate key findings to the public through the news media (via media releases by Massey University and articles in relevant magazines such as InsiteNZ and Super Seniors newsletter). In the past, media attention has resulted in many requests from interested groups for presentations of findings (see CVs).

Research Community

Sharing research findings with the academic community throughout the project is critical to building a body of knowledge, and maintaining the quality and standard of our research. This research takes a critical approach based on international findings that suggests a new focus on the life course and social situations of workers²⁸ and their current attitudes, motivations, and work ability²⁹ which we will test on actual employment changes over time. Additionally, we will integrate this new knowledge on older workers with the results of in-depth investigation of businesses and entrepreneurs. This novel approach to issues around work participation for older people will make valuable contributions to the peer-reviewed international literature. We will share our data with our international collaborators and contribute to joint presentations and publications in high impact journals. We will liaise with local and international collaborators to develop future research arising from the current project.

Excellence criteria

Science

Science (1120 words)

Science Issue

Ageing societies mean ageing workforces. As the proportion of older people in the New Zealand population grows¹, and that of younger workers decreases rapidly³⁰, the need for more older people to remain in the workforce for longer is highlighted³¹. Older workers contribute to the economy, by addressing labour shortages and facilitating the transfer of skills and knowledge. Contributions to society by older workers also have economic and psychological benefits for the individual. The current challenge is to recognise and realise the opportunities and benefits to all of an ageing population.

Science Question

We will provide new approaches to understanding the attitudes and practices of organisations, employers, and workers to answer the question: How can government, employers, and workers maximise older New Zealanders' ongoing participation in the workforce?

Background

New Zealand public policies, including the removal of compulsory retirement, legislation to discourage age discrimination, and universal superannuation³², contribute to New Zealand having the second highest employment rate of older workers (55-64) in the OECD³³. However, work participation rates still decline after age 55+. Unemployment rates among older workers are growing in New Zealand. In 2011, people aged 18-24 comprised more registered job seekers than those aged 55-64. By 2016, the percentages were reversed with the older group comprising 21.5% of those registered, while the younger group had reduced to just over 20%³. There are three reasons for this underutilised capacity in the older workforce:

First, many older workers are underemployed or forced out of work prematurely by circumstances such as redundancy, disability³⁴, or family care^{1, 35}.

Second, older people seeking employment commonly face barriers including discrimination, despite legislation in New Zealand and other developed countries³⁶⁻³⁸.

Third, for workers wishing to remain in employment past age 65, the factors that disadvantage those re-entering the workforce also deter workers extending their working lives beyond pension eligibility³⁸⁻³⁹.

Thus, despite current policy emphasis on the importance of older workers to the economy, and some legislative and organisational provisions, there remain problems of retention of older people in the workforce which we will consider from both the employer and worker perspective.

Employers: We need to understand the apparent gap between government policies and employer practice. For example, strategies to extend working lives in New Zealand include flexible work arrangements⁴⁰⁻⁴¹, however, despite apparent widespread availability³ few older workers report access to flexible work^{26, 42}. Recent international research also shows that despite policy changes in Scotland or the Netherlands, there have been few changes in employer practices and attitudes towards older workers⁴³⁻⁴⁴. The proposed project will address the policy/practice gap with a focus on understanding the needs and practices of employers.

Workers: From a worker perspective, Cooke⁴⁵ showed how the policy approaches in Canada, Australia, Germany, the Netherlands, the UK, and the US (which are similar to New Zealand), do not consider older workers' lives in terms of life course, health, or family. Thus, current policy changes will not increase labour force participation and will place older workers at greater risk of lower paid work. Taylor

Risks and barriers to implementation

We have devised clear pathways to the implementation of findings which employ skills and expertise in which the multi-disciplinary team has an excellent track record. We will also focus resources on implementation of the findings. We will work directly with employers to implement interventions as we are very keen to make these interventions practical and useful. To mitigate any risks (see Table 1) our research is based on what our key stakeholder organisations want to know. Secondly, Mr Pearman, a key team member, is an experienced workforce development consultant. He is director of a Trans-Tasman consultancy dedicated to creating innovative solutions in the field of age and work. Furthermore, we are rapidly building our team's skills in effective communications using current technology and media. We will have at least one team member working on updating our web page and links and developing our social media strategy, while others maintain ongoing consultations with our stakeholder group (whose members are already forming interconnections and developing a government/business/researcher older worker interest collaboration).

The team will deliver an integrated package of information and intervention that will contribute to effective government policy, changes in business practices to support older workers, and direct support to older workers and entrepreneurs. These changes will result in greater opportunities for workforce participation by older New Zealanders. New Zealand needs these older workers as an important part of a skilled productive workforce, which in turn will provide significant contributions to economic growth.

Post-contract outcomes for New Zealand

Post-contract outcomes for New Zealand (280 words)

During the contract period, the new knowledge will be taken up by policy analysts, business managers, human resource executives, and older workers (as described above). News and social media attention to the information and training available will further ensure that all businesses and workers in New Zealand have access to the resources. Employers and government will understand the challenges and opportunities of an ageing workforce.

Two years post contract new government policies will have been developed to frame interventions and legislation that support the participation of older workers. Business, entrepreneur, and union organisations will have taken the opportunities to engage in workshops and discuss the implications of the resources provided.

After five years, all businesses will have developed practices and workplace strategies (presently lacking in over 80% of businesses) to maximise older worker participation. Enterprise-based strategies will focus on retention and succession, contribution and productivity, health safety and wellbeing, and the creation of age-friendly workplaces. The public of New Zealand will understand the importance of older workers to industry and the economy.

After ten years, the issues of discrimination and lack of support that currently prevent people remaining in or re-entering the workforce after age 55 will be unknown, and older workers will be accepted and valued. Retaining the valuable skills of older workers will have improved productivity and reduced recruitment costs for businesses. The workforce will reflect the actual population structure, and businesses will be enjoying the benefits of the knowledge and creativity of multiple generations. The benefits of participation to individual workers and the important contributions of a significantly greater proportion of older New Zealanders in the workforce will be realised with a long-term increase in GDP.

and colleagues^{28, 46} also suggest that some policies are ageist and divisive. A focus on older workers themselves has been neglected in research and better understanding of workers' needs will result in better public policy. Accordingly, we will focus our research questions on older workers' attitudes, motivations and work ability, while taking into account the importance of life course and social context factors.

Delivery of Research Aims

This project takes a novel approach by integrating new perspectives on older workers, including entrepreneurs, focusing on the unmet needs and successful practices of employers, to provide innovative interventions for businesses and workers. The broad scope of this project requires the use of focused Research Aims (RA, see Method section):

RA1 will focus on workers by utilising our population representative cohort, with an oversample of Māori, which has been surveyed for 10 years. The proposed project will utilise two new biennial survey waves on attitudes, motivations and work ability, while tracking life and work experiences in detail across time.

RA2 will use mixed methods to understand reconciliation of work and care responsibilities at individual and organisational levels.

RA3 will enquire into the support for older entrepreneurs by (1) utilising a network of older entrepreneurs and (2) employing kaupapa Māori research⁴⁷⁻⁵⁰ to investigate Kaumātua entrepreneurs.

RA4 focuses on employers using case studies with a representative set of businesses. Case studies will include data analysis from policy reviews, and interviews with multi-level managers and workers.

RA5 will take the knowledge established in the first 4 RAs to develop, in partnership with our stakeholders, evidence-based tools, workshop materials, and management strategies for implementation by end-users (employers and workers).

Innovative Contribution

The resources produced will make an innovative and effective contribution to maximising older workers workforce participation. Many interventions in the work place to date have focused on older workers' health and safety issues or the provision of special considerations for older people as a homogenous group. Some interventions are aimed at persuading employers about the need to retain and harness older people's skills for the sake of productivity⁵¹. Many employers now understand these needs although the policy/practice gap remains³⁸. Few interventions have worked with businesses and workers together to shift general attitudes and understandings of the capabilities and requirements of older workers and the needs and contributions of employers.

Technical Risks

The risks from four main challenges to the success of this research are: poor quality data, non-participation of businesses in the case study research, failure to implement interventions based on the findings, and failure to disseminate the new knowledge more widely to benefit all New Zealanders. We have summarised these risks and our plans to mitigate them using the team's expertise, stakeholder engagement to support innovative practices, and ongoing development of our communication skills (Table 1).

Domestic and International Context

In New Zealand, the team draws on Māori research leadership and expertise to enable full participation by Māori in this project. Māori leadership is integral to the longitudinal cohort, the case studies which will include Māori businesses, and a kaupapa Māori research perspective. The research will focus on the New Zealand context to provide specific information about the unique cultural context of New Zealand workers and employers, including Māori, Pasifika, non-Māori and immigrant populations, because different countries have quite different rates of employment participation despite similar policy provisions⁵². At

the same time, the research questions reflect international interest in extending working lives in most industrialised countries. Working with leading international collaborators (see Key Relationships section), our contextually based approach will contribute to scientific knowledge regarding the interactions of employer practices with worker needs. Accordingly, this project will make significant contributions to the international scientific community and have real impacts on the New Zealand economy.

Table 1. Risk Description						
Risk Description	Potential Impact	Likelihood	Consequence	Risk Profile	Mitigation Strategy	
1	Poor quality data.	Findings will not be robust and of poor utility. Research aims will not be met.	Unlikely	Severe		<ol style="list-style-type: none"> In all four data gathering projects (aims 1-4) the experienced researchers (with experts leading each area of data gathering) will draw on their expertise in each area of qualitative or quantitative research and draw on best practices for data collection. Best practice will include the use of standardised measures, survey and interview techniques, and ethical engagement of participants.
2	Non-participation by businesses in case study research.	A major aim (Research Aim 4) of the study will not be achieved	Possible	Moderate		<ol style="list-style-type: none"> We have developed relationships with umbrella organisations in NZ, and Te Au Pākahi (Māori Business Network) who support the project and will provide connections and encourage participants to their member organisations. We will also be able to draw on the direct business connections of Mika, Siautu Alefaio-Tugia and Geoff Pearman. Experienced business case study researchers (Judith Davey and Keeling) will contribute to data collection and help ensure the success of this research aim.
3	Failure to implement interventions.	The fifth aim of the study will not be achieved and the knowledge will not benefit businesses.	Possible	Moderate		<ol style="list-style-type: none"> We have engaged with the enthusiasm and expressed need for interventions of our stakeholders We will consult with stakeholders regularly across the life of the project and they will work with us to provide advice about the use of particular intervention techniques for particular audiences. We will share our findings with experienced consultants in A Group) to maximise dissemination to business communities We have included such a practitioner on the research team. Pearman is director of a Trans-Tasman organisational and work development consultancy whose experienced members are to creating innovative solutions in the field of age and work. We are developing our own skills in group communication s
4	Failure to disseminate the new knowledge more broadly.	The knowledge developed in the research will not be taken up widely in New Zealand or accessed by older workers and entrepreneurs	Possible	Moderate		<ol style="list-style-type: none"> We are rapidly building our team's skills in effective communication using current technology and media. We will have at least one team member dedicated to updating page and links to stakeholder websites, and developing our social media strategy. Christine Stephens belongs to a research cluster which has the services of a media specialist who will assist with developing appropriate dissemination strategies. The research leaders will draw on their experience in engaging news media, responding to requests for local presentations groups, and writing short articles and blogs for special interest groups. Geoff Pearman, Jason Mika, and Siautu Alefaio-Tugia will share through their established networks.

Team

Team (560 words)

This interdisciplinary team brings a wide range of expertise in varying approaches to conducting research (see figure 1). The Health and Ageing Research Team co-led by Profs. Alpass and Stephens was awarded the Massey University Team Research Medal. Their MBIE contract MAUX0606 received a GOLD rating from MBIE as a result of annual reporting rounds.

Professor Fiona Alpass (Industrial and organisational psychology): Science Leader, team coordination, liaison with international collaborators, data collection, data analysis (multivariate, longitudinal), stakeholder and end-user engagement, publications and report writing, research dissemination.

Professor Christine Stephens (Community psychology): Team coordination, liaison with international collaborators, data collection, data analysis (qualitative, multivariate), stakeholder and end-user engagement, publications and report writing, research dissemination.

Profs. Stephens and Alpass are PIs on the MBIE-funded studies “Ageing, Housing and Health (MAUX1506)”, “Enabling Participation by all Older People (MAUX1403)”, and were PIs on “Independence, Contribution, Connection (MAUX 1205)”, “New Zealand Longitudinal Study of Ageing (MAUX0606)”, “Health, Work and Retirement (HRC 05/311)” and Als on “Living Standards for Elders (MAUX0902)”.

Dr Jason Mika (Māori business and leadership): Kaupapa Māori research, interview data collection, data analysis (qualitative, case studies), publications and report writing, research dissemination. Dr Mika (Ngāi Tūhoe, Whakatōhea, Ngāti Awa and Ngāti Kahungunu) is co-director of Te Au Rangahau, the Māori Business & Leadership Research Centre. He is a former management consultant, business mentor and enterprise facilitator, and lead author of Te Pae Tawhiti: Manawatū-Whanganui Māori Economic Development Strategy.

Dr Siautu Alefaio-Tugia (Fa'aSamoa and psychology): Interview data collection, conduct case studies, data analysis (qualitative, case studies), research dissemination. Dr Alefaio-Tugia has considerable research experience and is well-respected within the wider Pasifika community.

Dr Mary Breheny (Gerontology): Interview data collection, data analysis (qualitative), publications, research dissemination. Dr Breheny has considerable experience managing large-scale research projects and a strong record of successful grant completion. In 2013, she was awarded both the New Zealand Psychological Society Goddard Early Career Award and the Massey University Early Career Medal.

Mr Geoff Pearman (Consultant): Interview data collection, data analysis (qualitative), end-user engagement, developing interventions, research dissemination. Mr Pearman is Director of Partners in Change, workforce and organisational development consultants focusing on age and work. He is an experienced manager, facilitator and consultant recognised for his ability to develop innovative approaches to programme and service delivery.

Dr Joanne Allen (Medicine and public health): Longitudinal data collection, data analysis (longitudinal, multivariate), publications and report writing. Dr Allen is an early career researcher with a strong publication record and effective project management skills.

Mr Brendan Stevenson (Māori health): Longitudinal data collection, Māori Advisory Group coordination, data analysis (longitudinal). Mr Stevenson (Ngā Puhī, Ngāti Porou) has been a PI on a number of successfully completed research contracts.

Dr Andy Towers (Public health): Liaison with international collaborators, data analysis (multivariate), research dissemination. Dr Towers has considerable experience in the management of national-level longitudinal research projects, and the harmonisation of international epidemiological datasets on ageing.

Associate Professor Judith Davey (Policy analyst): interview data collection, conduct case studies, data analysis (qualitative, case studies), research dissemination. Dr Davey is a Senior Associate of the Institute for Governance and Policy Studies at Victoria University.

Dr Sally Keeling (Anthropology): Interview data collection, conduct case studies, data analysis (qualitative, case studies). Dr Keeling is a well-known New Zealand gerontological researcher who has contributed to several large studies on ageing.

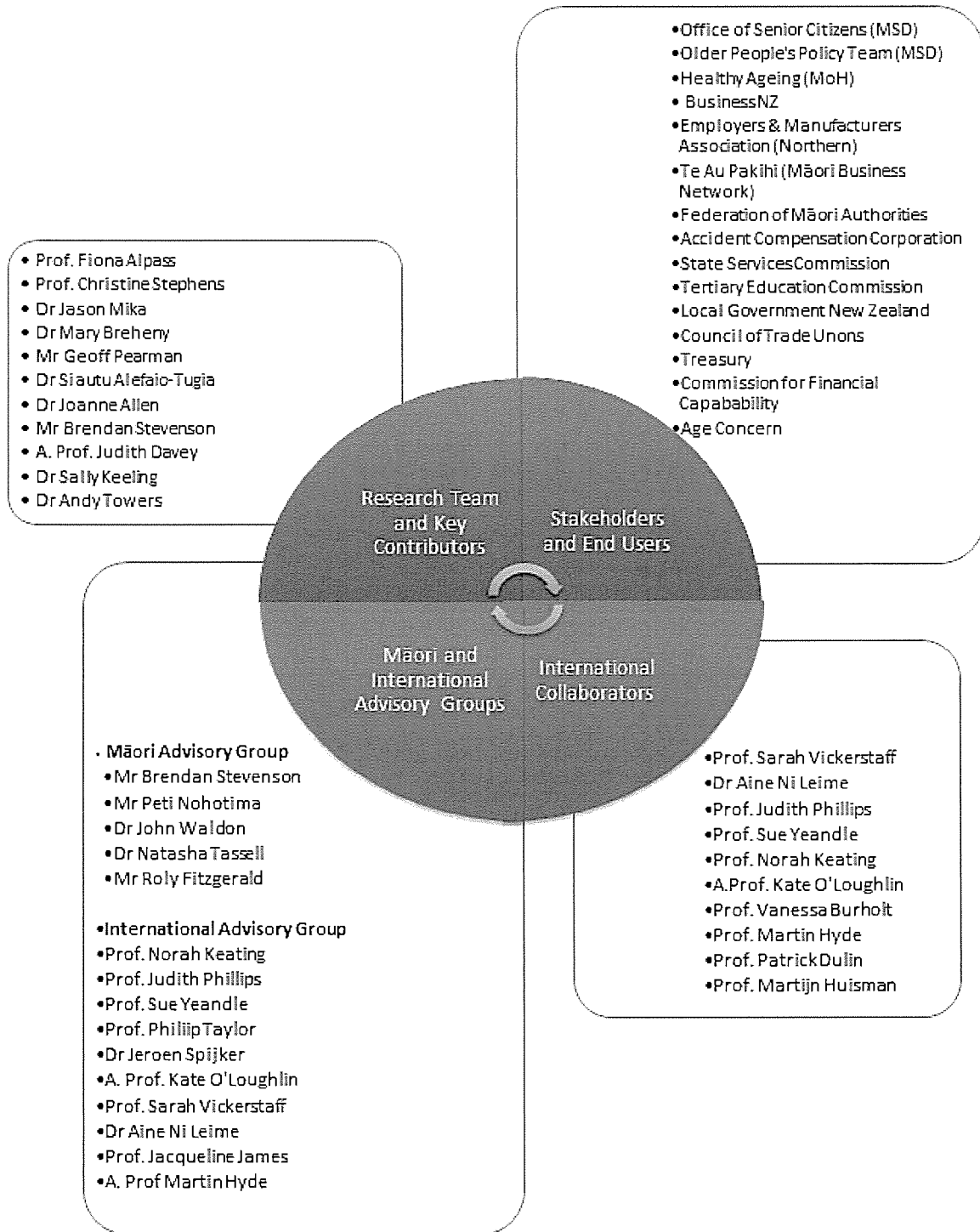


Figure 1: Research Team, Stakeholders, End-users, Advisory Groups and Collaborators

Year 1 FTE figures

Name	Organisation	Role	Include CV in print	IS 1
Fiona Alpass	Massey University	Key researcher, Leader, Science leader	✓	0.25
Christine Stephens	Massey University	Key researcher	✓	0.20
Jason Mika	Massey University	Key researcher	✓	0.15
Geoff Pearman	Partners in Change	Key individual, Key researcher	✓	0.15
Siautu Alefaio-Tugia	Massey University	Other	✓	0.00
Mary Breheny	Massey University	Other	✓	0.10
Joanne Allen	Massey University	Other, Post-doctoral researcher	✓	0.00
Sally Keeling	Otago University	Other	✓	0.00
Judith Davey	New Zealand Institute for Research on Ageing	Other	✓	0.00
Andy Towers	Massey University	Other	✓	0.00
Brendan Stevenson	Massey University	Other		0.10
Caroline Tate	Massey University	Contract manager		0.00
Sub total				0.95

Year 2 FTE figures

Name	Organisation	Role	Include CV in print	IS 1
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Caroline Tate	Massey University	Contract manager		0.00
Fiona Alpass	Massey University	Key researcher, Leader, Science leader	✓	0.20
Christine Stephens	Massey University	Key researcher	✓	0.20
Jason Mika	Massey University	Key researcher	✓	0.15
Geoff Pearman	Partners in Change	Key researcher	✓	0.25
Siautu Alefaio-Tugia	Massey University	Other	✓	0.10
Mary Breheny	Massey University	Other	✓	0.10
Joanne Allen	Massey University	Other, Post-doctoral researcher	✓	1.00
Sally Keeling	Otago University	Other	✓	0.04
Judith Davey	New Zealand Institute for Research on Ageing	Other	✓	0.04
Andy Towers	Massey University	Other	✓	0.15
Brendan Stevenson	Massey University	Other		0.10
Sub total				2.33

Year 3 FTE figures

Name	Organisation	Role	Include CV in print	IS 1
Caroline Tate	Massey University	Contract manager		0.00

Fiona Alpass	Massey University	Key researcher, Leader, Science leader	✓	0.20
Christine Stephens	Massey University	Key researcher	✓	0.15
Jason Mika	Massey University	Key researcher	✓	0.15
Geoff Pearman	Partners in Change	Key researcher	✓	0.43
Siautu Alefaio-Tugia	Massey University	Other	✓	0.10
Mary Breheny	Massey University	Other	✓	0.10
Joanne Allen	Massey University	Other, Post-doctoral researcher	✓	1.00
Sally Keeling	Otago University	Other	✓	0.04
Judith Davey	New Zealand Institute for Research on Ageing	Other	✓	0.04
Andy Towers	Massey University	Other	✓	0.00
Brendan Stevenson	Massey University	Other		0.10
			Sub total	2.31

Year 4 FTE figures

Name	Organisation	Role	Include CV in print	IS 1
Caroline Tate	Massey University	Contract manager		0.00
Fiona Alpass	Massey University	Key researcher, Leader, Science leader	✓	0.20

Christine Stephens	Massey University	Key researcher	✓	0.15
Jason Mika	Massey University	Key researcher	✓	0.15
Geoff Pearman	Partners in Change	Key researcher	✓	0.36
Siautu Alefaio-Tugia	Massey University	Other	✓	0.00
Mary Breheny	Massey University	Other	✓	0.10
Joanne Allen	Massey University	Other, Post-doctoral researcher	✓	1.00
Sally Keeling	Otago University	Other	✓	0.00
Judith Davey	New Zealand Institute for Research on Ageing	Other	✓	0.00
Andy Towers	Massey University	Other	✓	0.00
Brendan Stevenson	Massey University	Other		0.10
Sub total				2.06

Year 5 FTE figures

Name	Organisation	Role	Include CV in print	IS 1
Caroline Tate	Massey University	Contract manager		0.00
Fiona Alpass	Massey University	Key researcher, Leader, Science leader	✓	0.25
Christine Stephens	Massey University	Key researcher	✓	0.15
Jason Mika	Massey University	Key researcher	✓	0.15
Geoff Pearman	Partners in Change	Key researcher	✓	0.30

Siautu Alefaio-Tugia	Massey University	Other	✓	0.00
Mary Breheny	Massey University	Other	✓	0.10
Joanne Allen	Massey University	Other, Post-doctoral researcher	✓	1.00
Sally Keeling	Otago University	Other	✓	0.00
Judith Davey	New Zealand Institute for Research on Ageing	Other	✓	0.00
Andy Towers	Massey University	Other	✓	0.00
Brendan Stevenson	Massey University	Other		0.10
			Sub total	2.05

Person:

Fiona <small>First name</small>	Alpass <small>Last name</small>	Massey University <small>Organisation</small>	Key researcher,Leader,Science leader <small>Role(s)</small>
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Email

f.m.alpass@massey.ac.nz

Scopus ID

6603071903

Impact statement		FTE proportion
IS 1	IS	0.25
Total:		0.25

Person:

Christine <small>First name</small>	Stephens <small>Last name</small>	Massey University <small>Organisation</small>	Key researcher <small>Role(s)</small>
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Scopus ID

7202917512

Impact statement		FTE proportion
IS 1	IS	0.20
Total:		0.2

Person:

Jason <small>First name</small>	Mika <small>Last name</small>	Massey University <small>Organisation</small>	Key researcher <small>Role(s)</small>
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Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.15
Total:		0.15

Person:

Geoff <small>First name</small>	Pearman <small>Last name</small>	Partners in Change <small>Organisation</small>	Key individual,Key researcher <small>Role(s)</small>
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Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.15
Total:		0.15

Person:

Siautu	Alefaio-Tugia	Massey University	Other
First name	Last name	Organisation	Role(s)

Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.00
Total:		0

Person:

Mary	Breheeny	Massey University	Other
First name	Last name	Organisation	Role(s)

Scopus ID

6603865940

Impact statement		FTE proportion
IS 1	IS	0.10
Total:		0.1

Person:

Joanne	Allen	Massey University	Other,Post-doctoral researcher
First name	Last name	Organisation	Role(s)

Scopus ID

55432978000

Impact statement		FTE proportion
IS 1	IS	0.00
Total:		0

Person:

Sally	Keeling	Otago University	Other
First name	Last name	Organisation	Role(s)

Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.00
Total:		0

Person:

Judith First name	Davey Last name	New Zealand Institute for Research on Ageing Organisation	Other Role(s)
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Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.00
Total:		0

Person:

Andy First name	Towers Last name	Massey University Organisation	Other Role(s)
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Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.00
Total:		0

Person:

Brendan First name	Stevenson Last name	Massey University Organisation	Other Role(s)
-----------------------	------------------------	-----------------------------------	------------------

Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.10
Total:		0.1

Person:

Caroline First name	Tate Last name	Massey University Organisation	Contract manager Role(s)
------------------------	-------------------	-----------------------------------	-----------------------------

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Phone number:

(06) 356 9099 ext. 83876

Person:

Caroline First name	Tate Last name	Massey University Organisation	Contract manager Role(s)
------------------------	-------------------	-----------------------------------	-----------------------------

Email

C.Tate@massey.ac.nz

Phone number:

(06) 356 9099 ext. 83876

Person:

Fiona First name	Alpass Last name	Massey University Organisation	Key researcher,Leader,Science leader Role(s)
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Email

f.m.alpass@massey.ac.nz

Scopus ID

6603071903

Impact statement		FTE proportion
IS 1	IS	0.20
Total:		0.2

Person:

Christine First name	Stephens Last name	Massey University Organisation	Key researcher Role(s)
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Scopus ID

7202917512

Impact statement		FTE proportion
IS 1	IS	0.20
Total:		0.2

Person:

Jason First name	Mika Last name	Massey University Organisation	Key researcher Role(s)
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Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.15
Total:		0.15

Person:

Geoff First name	Pearman Last name	Partners in Change Organisation	Key researcher Role(s)
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Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.25
Total:		0.25

Person:

Siautu First name	Alefaio-Tugia Last name	Massey University Organisation	Other Role(s)
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Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.10
Total:		0.1

Person:

Mary First name	Breheny Last name	Massey University Organisation	Other Role(s)
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Scopus ID

6603865940

Impact statement		FTE proportion
IS 1	IS	0.10
Total:		0.1

Person:

Joanne First name	Allen Last name	Massey University Organisation	Other, Post-doctoral researcher Role(s)
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Scopus ID

55432978000

Impact statement		FTE proportion
IS 1	IS	1.00
Total:		1

Person:

Sally First name	Keeling Last name	Otago University Organisation	Other Role(s)
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Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.04
Total:		0.04

Person:

Judith First name	Davey Last name	New Zealand Institute for Research on Ageing Organisation	Other Role(s)
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Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.04
Total:		0.04

Person:

Andy First name	Towers Last name	Massey University Organisation	Other Role(s)
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Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.15
Total:		0.15

Person:

Brendan First name	Stevenson Last name	Massey University Organisation	Other Role(s)
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Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.10
Total:		0.1

Person:

Caroline	Tate	Massey University	Contract manager
First name	Last name	Organisation	Role(s)

Email

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Phone number:

(06) 356 9099 ext. 83876

Person:

Fiona	Alpass	Massey University	Key researcher, Leader, Science leader
First name	Last name	Organisation	Role(s)

Email

f.m.alpass@massey.ac.nz

Scopus ID

6603071903

Impact statement		FTE proportion
IS 1	IS	0.20
Total:		0.2

Person:

Christine	Stephens	Massey University	Key researcher
First name	Last name	Organisation	Role(s)

Scopus ID

7202917512

Impact statement		FTE proportion
IS 1	IS	0.15
Total:		0.15

Person:

Jason	Mika	Massey University	Key researcher
First name	Last name	Organisation	Role(s)

Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.15
Total:		0.15

Person:

Geoff	Pearman	Partners in Change	Key researcher
First name	Last name	Organisation	Role(s)

Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.43
Total:		0.43

Person:

Siautu	Alefaio-Tugia	Massey University	Other
First name	Last name	Organisation	Role(s)

Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.10
Total:		0.1

Person:

Mary	Breheny	Massey University	Other
First name	Last name	Organisation	Role(s)

Scopus ID

6603865940

Impact statement		FTE proportion
IS 1	IS	0.10
Total:		0.1

Person:

Joanne	Allen	Massey University	Other, Post-doctoral researcher
First name	Last name	Organisation	Role(s)

Scopus ID

55432978000

Impact statement		FTE proportion
IS 1	IS	1.00
Total:		1

Person:

Sally	Keeling	Otago University	Other
First name	Last name	Organisation	Role(s)

Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.04
Total:		0.04

Person:

Judith	Davey	New Zealand Institute for Research on Ageing	Other
First name	Last name	Organisation	Role(s)

Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.04
Total:		0.04

Person:

Andy	Towers	Massey University	Other
First name	Last name	Organisation	Role(s)

Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.00
Total:		0

Person:

Brendan	Stevenson	Massey University	Other
First name	Last name	Organisation	Role(s)

Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.10
Total:		0.1

Person:

Caroline <small>First name</small>	Tate <small>Last name</small>	Massey University <small>Organisation</small>	Contract manager <small>Role(s)</small>
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Email

C.Tate@massey.ac.nz

Phone number:

(06) 356 9099 ext. 83876

Person:

Fiona <small>First name</small>	Alpass <small>Last name</small>	Massey University <small>Organisation</small>	Key researcher, Leader, Science leader <small>Role(s)</small>
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Email

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Scopus ID

6603071903

Impact statement		FTE proportion
IS 1	IS	0.20
Total:		0.2

Person:

Christine <small>First name</small>	Stephens <small>Last name</small>	Massey University <small>Organisation</small>	Key researcher <small>Role(s)</small>
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Scopus ID

7202917512

Impact statement		FTE proportion
IS 1	IS	0.15
Total:		0.15

Person:

Jason <small>First name</small>	Mika <small>Last name</small>	Massey University <small>Organisation</small>	Key researcher <small>Role(s)</small>
------------------------------------	----------------------------------	--	--

Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.15
Total:		0.15

Person:

Geoff	Pearman	Partners in Change	Key researcher
First name	Last name	Organisation	Role(s)

Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.36
Total:		0.36

Person:

Siautu	Alefaio-Tugia	Massey University	Other
First name	Last name	Organisation	Role(s)

Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.00
Total:		0

Person:

Mary	Breheeny	Massey University	Other
First name	Last name	Organisation	Role(s)

Scopus ID

6603865940

Impact statement		FTE proportion
IS 1	IS	0.10
Total:		0.1

Person:

Joanne	Allen	Massey University	Other, Post-doctoral researcher
First name	Last name	Organisation	Role(s)

Scopus ID

55432978000

Impact statement		FTE proportion
IS 1	IS	1.00
Total:		1

Person:

Sally First name	Keeling Last name	Otago University Organisation	Other Role(s)
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Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.00
Total:		0

Person:

Judith First name	Davey Last name	New Zealand Institute for Research on Ageing Organisation	Other Role(s)
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Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.00
Total:		0

Person:

Andy First name	Towers Last name	Massey University Organisation	Other Role(s)
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Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.00
Total:		0

Person:

Brendan First name	Stevenson Last name	Massey University Organisation	Other Role(s)
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Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.10
Total:		0.1

Person:

Caroline First name	Tate Last name	Massey University Organisation	Contract manager Role(s)
------------------------	-------------------	-----------------------------------	-----------------------------

Email

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Phone number:

(06) 356 9099 ext. 83876

Person:

Fiona First name	Alpass Last name	Massey University Organisation	Key researcher,Leader,Science leader Role(s)
---------------------	---------------------	-----------------------------------	---

Email

f.m.alpass@massey.ac.nz

Scopus ID

6603071903

Impact statement		FTE proportion
IS 1	IS	0.25
Total:		0.25

Person:

Christine First name	Stephens Last name	Massey University Organisation	Key researcher Role(s)
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Scopus ID

7202917512

Impact statement		FTE proportion
IS 1	IS	0.15
Total:		0.15

Person:

Jason First name	Mika Last name	Massey University Organisation	Key researcher Role(s)
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Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.15
Total:		0.15

Person:

Geoff	Pearman	Partners in Change	Key researcher
First name	Last name	Organisation	Role(s)

Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.30
Total:		0.3

Person:

Siautu	Alefaio-Tugia	Massey University	Other
First name	Last name	Organisation	Role(s)

Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.00
Total:		0

Person:

Mary	Breheny	Massey University	Other
First name	Last name	Organisation	Role(s)

Scopus ID

6603865940

Impact statement		FTE proportion
IS 1	IS	0.10
Total:		0.1

Person:

Joanne	Allen	Massey University	Other, Post-doctoral researcher
First name	Last name	Organisation	Role(s)

Scopus ID

55432978000

Impact statement		FTE proportion
IS 1	IS	1.00
Total:		1

Person:

Sally	Keeling	Otago University	Other
First name	Last name	Organisation	Role(s)

Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.00
Total:		0

Person:

Judith	Davey	New Zealand Institute for Research on Ageing	Other
First name	Last name	Organisation	Role(s)

Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.00
Total:		0

Person:

Andy	Towers	Massey University	Other
First name	Last name	Organisation	Role(s)

Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.00
Total:		0

Person:

Brendan	Stevenson	Massey University	Other
First name	Last name	Organisation	Role(s)

Scopus ID

Impact statement		FTE proportion
IS 1	IS	0.10
Total:		0.1

Research plan

Research plan (560 words)

Table 2. Time Line for Research Plan

Research Aims	OCT 2017	APRIL 2018	OCT 2018	APRIL 2019	OCT 2019	APRIL 2020	OCT 2020	APRIL 2021	OCT 2021	APRIL 2022
RA 1 Longitudinal Study	Survey measures	Data Collection Wave 1	Data Analysis	Reports and Feedback to stakeholders	Survey 2 measures	Data Collection Wave 2	Longitudinal Data Analysis	Papers, reports, and integration of findings with other studies. Dissemination of findings.		
RA 2 Reconciling Work and Care	Survey measures	Data collection Wave 1	Interviews (15) 1	Interviews (15) 2	Interviews (15) 3	Interviews (15) 4	Integrated Data analysis	Papers, reports, and integration of findings with other studies. Dissemination of findings.		
RA 3 Supporting Senior Entrepreneurs (1)			Recruitment and hui for Māori Participants	Kaupapa Māori interviews	Data Analysis	Feedback Hui	Papers, reports, and integration of findings with other studies. Dissemination of findings.			
Supporting Senior Entrepreneurs (2)			Recruitment of online network participants	Entrepreneur interviews	Data Analysis	Feedback to participants and report	Papers, reports, and integration of findings with other studies. Dissemination of findings.			
RA 4 Business Needs and Practices	Recruit businesses	Recruit businesses	Conduct Case Studies	Conduct Case Studies and Data Analysis	Data Analysis	Feedback to participants and reports	Papers, reports, and integration of findings with other studies. Dissemination of findings.			
RA 5 Implementation: Transfer to end users		Stakeholder Meetings	Stakeholder Meetings	Stakeholder Meetings and Seminars	Stakeholder Meetings	Stakeholder Seminars (Case Study results)	Stakeholder Seminars (Initial Integrated Results)	A series of focussed meetings with business stakeholders to develop and roll out interventions and workshops. News media and social media dissemination of resources.		

This research will provide answers to the question: How can government, employers, and workers maximise older New Zealanders' ongoing participation in the workforce? To provide a comprehensive solution we will use a complex research design which includes 5 specific research aims (RAs, as outlined in the Method). The time line for these RAs is outlined in Table 2. The first four research aims involve targeted work packages which will employ appropriate methods of data collection to answer specific questions and the fifth research aim will synthesise the knowledge and transfer it directly to end-users.

RA1, RA2, and RA3 will employ a representative longitudinal study of older New Zealanders to answer comparative questions about the population of older workers including Māori, Pacific Island and immigrant groups. The longitudinal study, which has followed the cohort for ten years, will answer questions about the effects of critical variables over time.

RA2, RA3, and RA4 will employ in-depth qualitative enquiry. RA2 will use a longitudinal interview study of working care-givers over time. RA3 will use interview and Kaupapa Māori methods to investigate the needs of older entrepreneurs.

RA4 will focus on the needs and practices of employers in business settings. We will use in-depth case study methods to enquire into the ways in which policies and practices work to support older workers.

RA5 will focus transferring the knowledge from the first four RAs to all end-users: employers, older workers and entrepreneurs. As described in the Method, the findings will be used to develop policy seminars, educational resources, popular publications, practical guides and workshops. All tools and resources will be available through a dedicated research project website with links to stakeholder sites.

Thus, the answers to the initial research question will be transformed into information for policy makers, and tools for workers and employers that will work to maximise workforce participation by older workers. This will make New Zealand a world leader in older worker participation and provide a "triple dividend"¹ for the whole nation: it will benefit the economy by reducing social expenditure associated with early workforce exit while increasing revenue from income tax and GST; it will benefit business by moderating the impact of demographic change on the labour market; and, it will help older workers through improved health, wealth and wellbeing.

Four main technical risks to this research plan have been summarised in Table 1 (see Excellence). The risk of poor quality data will be mitigated by an experienced team of researchers with relevant expertise and knowledge of best practice. The risk of non-participation by businesses in case study research will be

mitigated by our relationships with umbrella organisations and the direct business connections of Jason Mika, Siautu Alefaio-Tugia and Geoff Pearman. Experienced business case study researchers (Judith Davey and Sally Keeling) will ensure success. The risk of failure to implement interventions will be mitigated by regular consultation with stakeholders across the life of the project and engagement with workforce development consultants in and outside the research team. The risk of failure to disseminate the new knowledge more broadly will be mitigated by our rapidly developing skills in effective communications including use of a media specialist. The research team will draw on their experience in engaging with special interest groups and members will share findings through Māori, Pasifika and other business networks.

Methods

Methods (1,680 words)

RA1 - Attitudes and Motivations of Older Workers Across Time

Research Questions:

1. What are the attitudes, motivations, and work ability of New Zealanders aged 55-84?
2. How are these related to life course employment, health, and work experiences?
3. Which factors predict employment changes or maintenance over two years?

Methods:

Participants: The HWR population representative cohort of older New Zealanders³⁴ comprises ten years of data from a sample aged 55-70 (in 2006), oversampled for Māori (41%). The cohort is refreshed biennially to represent the population aged 55+.

The sample to be surveyed in 2018 and 2020 (N=11,283) will comprise the existing HWR cohort (N=4,250) aged 59 to 84 years (in 2020) and a refresh cohort aged 55 to 58 (N=7,033) with Māori oversampling maintained. Based on previous response and attrition rates we expect final samples of N=5,935 (2018) and N=5,754 (2020).

Procedures: Postal (with online option) surveys of the HWR sample in 2018 and 2020. Four contact points will maximise response and participation. The cohort has approved links to NHI data bases for inclusion of objective health variables (e.g., cancer, hospital use) and mortality⁵³.

Measures:

(1) The Questionnaire will include valid and reliable standardised measures:

- a. *Demographics:* Work participation status⁵⁴, spouse's employment status, caregiving responsibilities, Economic living standards⁵⁵, deprivation⁵⁶. Personal details, modelled on the 2013 NZ census. Māori and ethnic identity⁵⁷⁻⁵⁸.
- b. *Work:* Work ability⁵⁹, stereotype threat⁶⁰, perceived ageism and discrimination at work⁶¹⁻⁶², flexible work arrangements and practices⁵⁴, work-home culture⁶³, work-related stress⁶⁴, job satisfaction⁶⁵, organizational commitment⁶⁶, work engagement⁶⁷, meaning of work⁶⁸, job-seeking strategy⁶⁹, intention to resign⁷⁰, retirement intentions⁷¹, availability and suitability of training⁷², use of technology.
- c. *Wellbeing:* SF12 inventory of health⁷³, health related behaviours (smoking, exercise, diet and

alcohol use), diagnosed health conditions, mobility, activities of daily living (ADL)⁷⁴, quality of life (CASP 12)⁷⁵, satisfaction with life (WHO-QoL)⁷⁶, depression (CESD-10)⁷⁷, NHI mortality and morbidity⁵³.

(2) HWR Life History Interviews undertaken in 2017 will provide data on *life course factors* including employment, education, health, and partner history.

Analysis:

Descriptive and inferential statistics to examine differences across levels of work status and work ability based on age group, living standards, income, gender, ethnicity, partner status, household composition, geographical location, occupation, and caregiver status.

Cross-lagged analyses will be employed to model longitudinal relationships among the variables of interest from 2018 to 2020. Longitudinal modelling (over HWR nine measurement waves) will examine work ability changes over time and trends in attitudes, motivations, and employment status.

Logistic regression models to analyse associations between individual characteristics and risk factors with work ability and work status at baseline and work status two years later.

RA2 - Reconciling Work and Care

Research Questions:

1. What tensions arise between work and the provision of care by older workers?
2. What are the tensions between older workers and their employers due to caring responsibilities?
3. What strategies are used to reconcile these conflicts?
4. What policies, strategies, and practices do employers use to support older workers with caring responsibilities?
5. What factors (family, organisational, cultural, legal) affect these strategies and their impact on work status over time?

Methods:

Participants: Older workers who also provide care (N=400) will be drawn from the HWR cohort⁵⁴.

Procedures:

1. Modules on work and care will be included in the HWR 2018 and 2020 surveys (see RA1).
2. A longitudinal qualitative study with 15 working carers from the HWR cohort will provide an in-depth investigation of the impact of caring on work-life balance, productivity, career opportunities, and finances at baseline. Follow-up interviews will be undertaken every 6 months for 2 years, focusing on the experiences of reconciling work and care responsibilities over time.
3. Employer surveys, interviews and focus groups (see RA4) will include investigation of employer attitudes to and experiences of the impact of care responsibilities on the workplace and on older worker productivity.

Measures:

The survey modules will include:

- a. *Care-related factors:* type, intensity, timing and duration of care provided by working caregivers,

established measures of care history, care networks, care recipient characteristics⁷⁸, work-family conflict⁷⁹, and strategies to manage conflicts;

b. *Work-related factors*: Flexible work arrangements⁸⁰, organisational work-family support⁸¹ (see RA1 for additional work-related factors).

Analysis:

Statistics to describe the tensions and strategies used to reconcile work and care.

Multiple regression models to analyse relationships between work- and care-related factors and work status.

Latent growth curve analysis and growth mixture modelling (over 10 years) to identify homogeneous groups of workers that differ according to the level of work- and care-related factors and to model work status trajectories.

Qualitative data will be recorded, transcribed and coded using ATLAS-Ti, for analysis. Themes and patterns will be identified using constant comparative analysis.

RA3 - Supporting Senior Entrepreneurs

Research Questions:

1. What are the pathways people aged 55+ take to later life entrepreneurship?
2. What are the prevalence, types, and survival rates of businesses established by people aged 55+?
3. What are the challenges they experience and mechanisms required to support older entrepreneurs?

Methods:

1. The HWR sample⁵⁴ includes N=139 self-employed Māori participants (in 2016). From this group we will invite a cross-section of 15 to participate in a qualitative study of Māori entrepreneurship. We will use kaupapa Māori research^{47 48 49 50} to undertake face-to-face interviews.
2. Utilising an existing network of senior entrepreneurs in Dunedin and a snowballing technique we will interview a sample of 15 senior entrepreneurs.
3. Items included in the HWR surveys (RA1) to assess the prevalence and needs of entrepreneurs.

Analysis:

1. Interviews will be recorded, transcribed and analysed using ATLAS-Ti for coding and thematic analysis around the research questions.
2. Survey data will be analysed as described in RA1.

RA4 - Employer Needs and Practices

Research Questions:

1. What are employers' attitudes towards older workers?
2. What do employers need to work with an ageing workforce and to support older workers?
3. What successful practices and strategies are used to recruit, retrain, retain, and support older workers?

Methods:

Participants: Business organisations will be invited to participate in the research through our stakeholders, BusinessNZ, and the Manawatu Māori Business Network. Businesses will be identified through discussions with our stakeholders, contacts with experts, and by approaching companies which are known for innovative human resource management approaches. We will recruit six businesses, including two Māori and 1 Pasifika business, covering a range of economic activity, and size of the business.

Procedures and Measures: To conduct the case studies we will utilise:

- a. Documents that record current policies and strategies in the business.
- b. Semi-structured interviews.

In each organisation we will:

- a. seek the support and consent of the CEO,
- b. access relevant documents,
- c. conduct an unstructured interview with one higher level manager about policies and practices ,
- d. conduct semi-structured interviews (with common interview guidelines) with HR, and OHS officers, middle and higher managers, union representatives, and workers.

Examples of innovative and successful practices will be described in detail which may require additional interviews with a sub-set of participants.

Each organisation will be provided with the opportunity to review and amend the final case study before cross-study analysis.

Analysis:

Documents, transcripts of interviews, and field notes will be imported into ATLAS-Ti for data storage and coding. Data will be analysed using framework analysis⁸² to answer research questions 1 and 2 . The same framework will then be used to conduct a cross case analysis to identify key themes common to the set of cases

To answer question 3, the detailed descriptions of successful strategies and practices within individual cases will be used to produce a narrative of each successful case. The set will then be analysed to describe common features.

RA5 - Implementation:Transfer to end-users

We will seek active input from our stakeholders through discussions at virtual and face-to-face meetings over the life of the project. Through an ongoing iterative process of new knowledge creation, knowledge synthesis and exchanges with our stakeholder group, we will develop evidence based tools and interventions:

1. Freely available educational resources and self-assessment tools for older workers to identify age-friendly employers, facilitate their career mobility, and manage their own career development.
2. Popular publications that provide success stories and explore the subtleties and complexities of remaining in work as we age.
3. Freely available resources for mature entrepreneurs that provide examples of non-traditional entrepreneurship and tools to engage with government agencies.
4. Educational resources and tools for SME's to support age-friendly management strategies: (1) user-friendly fact sheets and infographics summarizing key messages; (2) age-friendly employer assessment tool; (2) YouTube video series featuring roundtable discussions of key findings; (3) webinars to discuss research finding in real-time with end users in multiple geographical locations; and (4) a series of podcasts on key messages available automatically to end-users.
5. Workshop materials for employers with a focus on strategies for preparing for an ageing workforce, and training, development and active career planning for older workers: (1) guidance toolkits for employers focusing on the business benefits of retaining and employing older workers, and on what works in terms of support and healthy workplaces; (2) good practice guides for implementing flexible work arrangements; (3) mid-life career review strategies to support career options and future planning; and (4) practical guides on developing a culture of continuous learning and re-skilling. Workshops will be facilitated by experienced contractors and materials will be designed to be delivered to managers or workers as required by specific organisations.

6. All tools and resources will be available through a dedicated research project website. This website will start a national conversation targeting both employers and individuals to communicate an evidence-based economic and business case for recruiting, retaining and maintaining older workers in the labour force.

Resources

Resources (560 words)

None.

Contracting Work programme

Sequence	Short title	Type	Start date	End date	Realisation date
1	Maximising workforce participation for older New Zealanders	Impact statement	01/10/2017	30/09/2022	
1.1	Attitudes and Motivations of Older Workers Across Time	Research aim	01/10/2017	30/09/2022	
1.1.1	Items developed for 2018 survey	Critical step	01/10/2017	15/04/2018	
1.1.2	Ethical and Māori Advisory Group approval for procedures and questionnaire has been gained	Critical step	28/02/2018	15/04/2018	
1.1.3	Survey items are piloted	Critical step	15/04/2018	31/05/2018	
1.1.4	Postal and on-line survey is launched	Critical step	01/06/2018	30/07/2018	
1.1.5	Data cleaned and analysis underway	Critical step	01/08/2018	31/01/2019	
1.1.6	Reports, conference papers, and publications are underway	Critical step	01/02/2019	31/05/2019	
1.1.7	Develop items for 2020 survey	Critical step	01/06/2019	15/04/2020	
1.1.8	Ethical and Māori Advisory Group approval for survey questionnaire has been gained	Critical step	28/02/2020	15/04/2020	
1.1.9	Survey items have been piloted	Critical step	15/04/2020	31/05/2020	
1.1.10	Postal and on-line survey is launched	Critical step	01/06/2020	30/07/2020	
1.1.11	Data is cleaned and analysis is underway	Critical step	01/08/2020	31/01/2021	
1.1.12	Reports, conference presentations, resources for dissemination and peer reviewed papers are underway	Critical step	01/02/2021	31/10/2021	

1.2	Reconciling Work and Care	Research aim	01/10/2017	30/09/2022	
1.2.1	Establish sample of older workers who also provide care in the HWR cohort	Critical step	01/10/2017	31/12/2018	
1.2.2	Develop survey items for 2018 survey	Critical step	01/10/2017	15/04/2018	
1.2.3	Develop questions for inclusion in case study research (RA4)	Critical step	01/10/2017	30/04/2018	
1.2.4	Gain ethical approval for qualitative study	Critical step	31/03/2018	31/05/2018	
1.2.5	Recruit 15 working carers for longitudinal qualitative sample	Critical step	31/05/2018	30/09/2018	
1.2.6	Complete four sets of interviews with working carers	Critical step	01/10/2018	31/05/2020	
1.2.7	Develop survey items for 2020 survey	Critical step	01/06/2019	15/04/2020	
1.2.8	Analysis of longitudinal qualitative study completed	Critical step	01/10/2020	30/12/2020	
1.2.9	Analysis of longitudinal survey data completed	Critical step	01/10/2020	30/12/2020	
1.2.10	Reports, publications, and resources for dissemination are underway	Critical step	01/02/2021	31/10/2021	
1.3	Supporting Senior Entrepreneurs	Research aim	01/10/2017	30/09/2022	
1.3.1	Items developed for inclusion in the 2018 HWR survey (RA1) to assess the prevalence and needs of entrepreneurs	Critical step	01/10/2017	15/04/2018	
1.3.2	Ethical and Māori Advisory Group approval gained for procedures for kaupapa Māori and general entrepreneur interview studies	Critical step	01/10/2018	31/12/2018	
1.3.3	Māori participants (15) recruited from HWR cohort	Critical step	01/01/2019	31/03/2019	
1.3.4	Entrepreneur participants recruited for interview study	Critical step	01/01/2019	31/03/2019	
1.3.5	Kaupapa Māori interviews completed	Critical step	01/04/2019	30/09/2019	
1.3.6	General Entrepreneur interviews completed	Critical step	01/04/2019	30/09/2019	

1.3.7	Kaupapa Māori and general entrepreneur interview data transcribed and analysed	Critical step	01/10/2019	31/03/2020	
1.3.8	Analysis of survey data completed	Critical step	01/01/2019	31/03/2020	
1.3.9	Reports completed and preparation of resources underway	Critical step	31/03/2020	30/04/2021	
1.4	Employer Needs and Practices	Research aim	01/10/2017	30/09/2022	
1.4.1	Establish relationships and agreement to participate with a set of organisations	Critical step	01/10/2017	30/04/2018	
1.4.2	Plan case study procedures and develop interview questions	Critical step	01/05/2018	01/10/2018	
1.4.3	Gain ethical and Māori Advisory Group approval for case study research	Critical step	01/05/2018	01/10/2018	
1.4.4	Collect case study materials	Critical step	01/10/2018	31/10/2019	
1.4.5	Case study analysis completed	Critical step	31/10/2019	30/04/2020	
1.4.6	Feedback to business participants completed	Critical step	01/05/2020	31/10/2020	
1.4.7	Reports and preparation of resources completed and papers underway.	Critical step	01/05/2020	31/10/2021	
1.5	Implementation: Transfer to end-users	Research aim	01/10/2017	30/09/2022	
1.5.1	Regular meetings with stakeholders are established	Critical step	01/10/2017	01/10/2021	
1.5.2	Seminars for stakeholders	Critical step	30/04/2019	30/09/2022	
1.5.3	Development of educational resources, self-assessment tools and popular publications for older workers	Critical step	31/10/2020	30/04/2022	
1.5.4	Dissemination of resources to older workers	Critical step	31/10/2020	30/09/2022	
1.5.5	Development of resources for older entrepreneurs	Critical step	31/10/2020	30/04/2022	
1.5.6	Dissemination of resources for older entrepreneurs.	Critical step	31/10/2020	30/09/2022	

1.5.7	Development of educational tools and resources for small to medium businesses	Critical step	31/10/2020	30/04/2022	
1.5.8	Dissemination of resources to SMEs	Critical step	31/10/2020	30/09/2022	
1.5.9	Development of workshop materials for employers	Critical step	31/10/2020	30/04/2022	
1.5.10	Dissemination of workshops through stakeholder networks by contractors	Critical step	31/10/2020	30/09/2022	
1.5.11	Establishment of dedicated project web-site with links to stakeholder and end-user websites	Critical step	31/10/2020	30/09/2022	
1.5.12	Peer reviewed publications underway.	Critical step	31/10/2020	30/09/2022	