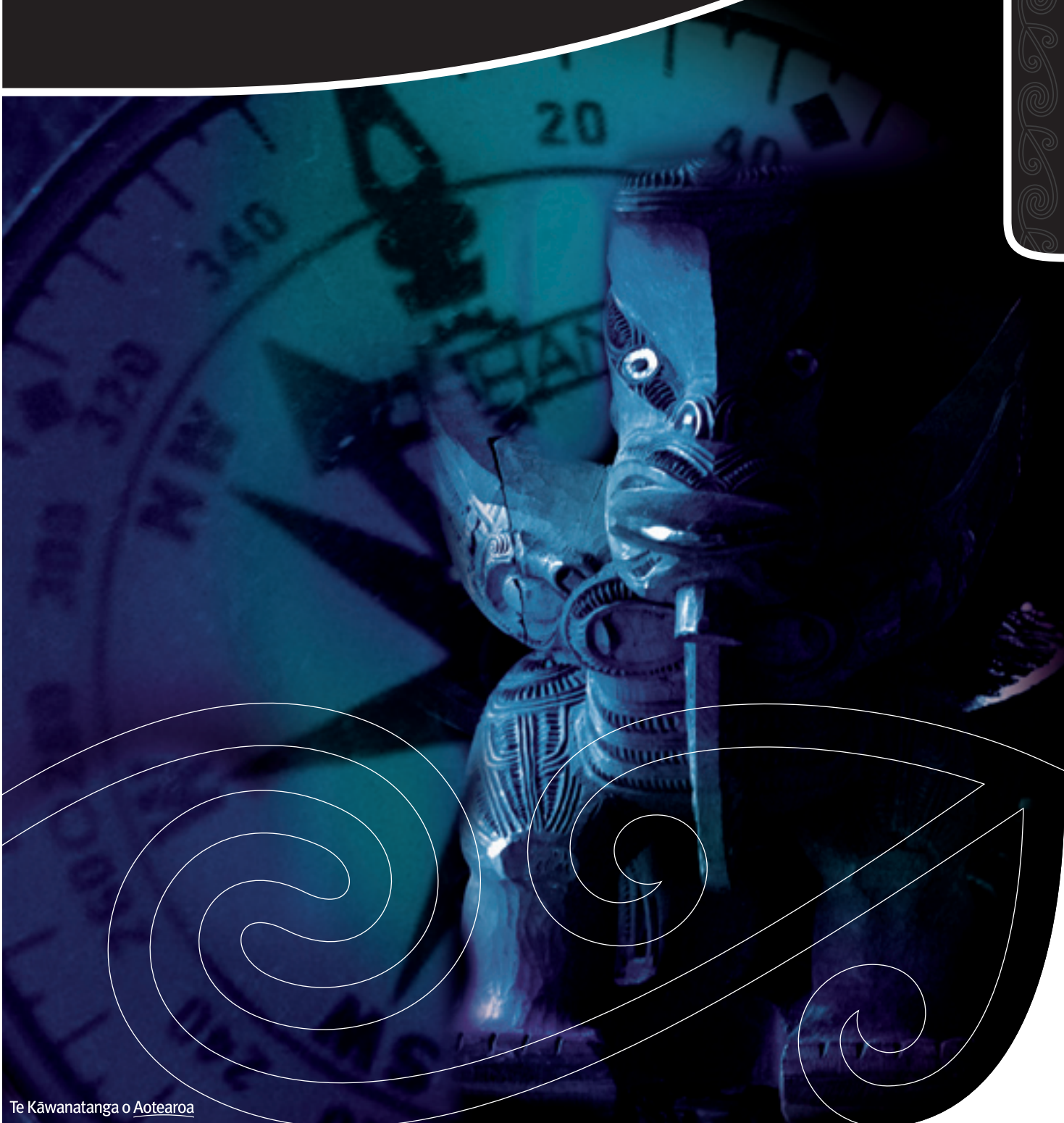




**Te Puni Kōkiri**  
REALISING MĀORI POTENTIAL

**Ngā Kaihanga Hou**  
*For Māori Future Makers*





Ngā Kaihanga Hou  
*For Māori Future Makers*

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## FOREWORD

*Hon Parekura Horomia: Minister of Māori Affairs, Associate Minister of State Services, Associate Minister of Education, Associate Minister of Fisheries, Associate Minister of Social Development and Employment.*

Māori are contributing more and more to the New Zealand and global economy.

Tēnā koutou, e te iwi. Tēnei ka mihi ki te hunga kua wheturangitia, nō rātau i para te huarahi hei whainga mō tatau. Koia rā, ko ā rātau mokopuna e hāpai nei i ngā hangarau o te ao rorohiko nei, hei kawae ake i te iwi Māori ki ōna tiketiketanga. Tēnā tatau i ēnei āhuatanga.

Our challenge is to continue unlocking opportunities for the increased participation of Māori in the future economy. To this end; we need to understand the future drivers of influence that will affect Māori participation and investment decisions.

In recent years we have seen tremendous improvement in Māori education, employment and enterprise development. Māori are playing an increasingly crucial part in New Zealand's economy through investments, trade, employment and education.

However, the world economy is changing and is more and more driven by innovation and new technologies. This new economy will be determined by intellectual capital and the ability to translate ideas into new technologies, products and services.

Māori will need to keep changing and adapting to stay relevant in the new innovation economy. Our biggest asset in this new economy will be our people.

We need to understand future opportunities and pressures to ensure that our people have access to the right education, opportunities and investment information to make positive decisions about the future.

Building on our success and understanding our weaknesses will ensure confidence to face this exciting future knowing that we are prepared.

Hopefully this document will be the start of sharing ideas and provoking discussions on where we should focus our efforts, investments and intentions to ensure that Māori can effectively and efficiently participate in the future economy.

*Tēnā anō tātou katoa*

A handwritten signature in black ink, appearing to read 'P. G. Horomia'. The signature is stylized and written in a cursive-like font.

**Hon Parekura Horomia**  
Minister of Māori Affairs



## INTRODUCTION: Leith Comer

The Polynesians cloned themselves, forming new societies from Tonga to the west, to Easter Island in the east, from Hawaii in the north, to New Zealand in the South. To call them the "Vikings of the Sunrise" is to over-praise the Vikings.

– Professor James Belich

The story of Māori is undoubtedly a story of daring and of discovery.

The most reputable of modern historians agree that the ancestors of the Māori peoples as we know them today sailed from East Polynesia sometime around 800 years ago to settle in New Zealand.

But as remarkable as such an ocean journey by canoe seems – and remember the distance they travelled to reach New Zealand is some several thousand kilometres – it would be wrong to assume that their success is something to be put down to luck alone.

Around this time Polynesians were making extraordinary journeys throughout the Central and South Pacific, with many now believing these Māori forebears had sailed as far east as the Americas, from where it is thought they returned with the kumara and other variety of potatoes.

There is an inescapable sense of daring in these voyages. As French novelist Andre Gide once remarked: "One doesn't discover new lands without consenting to lose sight of the shore for a very long time."

But these were purposeful journeys brought about by the convergence of technology (the invention of the outrigger to stabilise dug-out canoes); skills learned and developed in navigation (especially an understanding of the celestial night sky); combined with a sense of self-belief.

Professor James Belich wrote:

"Polynesians and the British are two of the most expansive and reproductive peoples human history has ever seen. Without the help of metal tools or a written language, the former crossed the mighty Pacific like a garden pond, centuries before Europeans made it across the petty Atlantic."

Historian Michael King in the Penguin History of New Zealand focuses on the skill of these voyagers, who had learned to look beyond the present for signs of what lay ahead. He describes this in the following manner:

"As they sailed, navigators would search for signs of land beyond the visible horizon: the presence of birds feeding offshore or migrating... cloud formations which attached themselves to as yet unseen atolls; changes in the patterns of ocean currents or swells. These signs in combination created what have been called 'island screens', which greatly enlarged the navigator's potential target areas. Stars at night and the direction of the sun and ocean swells by day enabled navigators to maintain a running fix on their position and repeat voyages or to pass on sailing directions to subsequent travellers."

So these were the first Māori future-makers.



And they provide a useful parallel for this publication *Ngā Kaihanga Hou / For Māori Future Makers* because as a piece of work it explores the signs beyond our current horizon for what tomorrow might hold for Māori.

For a number of years now Te Puni Kōkiri (Ministry of Māori Development) has developed its Māori Potential Approach. At its essence is Māori succeeding as Māori. As part of this approach, looking to the future to understand what opportunities, and indeed what challenges, might exist, seems the next obvious step.

Such exercises are never easy. The unknowns inevitably outweigh the knowns. But the value of futures exercises like this are increasingly being recognised in the corporate and public policy arenas.

Insights are drawn from extrapolation – linked to known demographic, scientific, political, and attitudinal trends. *Ngā Kaihanga Hou* identifies key drivers that will influence the way Māori participate in the economy leading to the year 2030.

It considers the impact of the new technologies: nanotechnology, biotechnology and neurotechnology. It asks what influence a redistribution of world economic power will bring with the re-emergence of China and India especially. And it explores issues around the sustainability of our environment – global warming, our reliance on fossil fuels, water degradation, and fisheries depletion.

But unlike our earlier voyaging ancestors, we are much better placed today to cope with massive change. Historians speculate that the voyages of our Polynesian forbears were born of necessity – natural resources possibly having been plundered to the point of collapse, and internal division and conflict wracking community life.

By contrast Māori are today anticipating the future from a place of comparative strength. Māori unemployment is at its lowest in decades; entrepreneurship among Māori is witnessing a marked rise; there has been an explosion in Māori participation in tertiary education; and the Māori language and culture is more visible, and crucially, appears more valued as an integral part of our national identity than at any time previously.

Factor in a significant and growing asset base (\$16.5 billion by latest estimate), and the demographic strength of the Māori population that has a very large cohort of young people, and Māori are well positioned to launch into the future. For arriving at this point today is surely just a means to an end, but not the end in itself.

*Ngā Kaihanga Hou* suggests a course so that Māori prosperity grows still further. This course challenges Māori to leverage their businesses into growth and strategic industries; to nurture innovation; to further improve the qualification base; and to promote high levels of entrepreneurship.

Other work of Te Puni Kōkiri shows that being Māori in the global market place in the 21st Century isn't just cool – it contains a comparative economic advantage. I believe this "Māori edge" concept as we have called it, will take on a growing significance, and suggests that Māori, secure in their culture, have traditions, skills, and values that resonate with those looking to purchase New Zealand goods and services.

*Ngā Kaihanga Hou* is part of a new journey of discovery. For Māori to reach out into the unknown, to survive tempests and arrive positively at their destination, they will have to embrace new technologies, develop new skills and couple this to a positive sense of self-belief.

And above all, Māori will again have to show considerable daring. But the signs are all good.



**Leith Comer**  
Chief Executive Officer  
Te Puni Kōkiri

The following two stories are set in the future... maybe 20 or 30 years from now.

They describe two alternative futures from the perspective of a Kuia reflecting back on her life and her mokopuna. The stories are a clear expression of the two different scenarios that might materialise in the future, depending on our actions today

## AOTEAROA – FUTURE MAKER

I'm tired... but a good tired, and I spose I can't complain too much since my mokopuna threw me that big party last month to celebrate my 70th birthday. To ratou porangi hoki!

How the world has changed since I was a little girl. My brothers and sisters and I left school with nothing, although our smart cousins, the Hamioras, got through college, bright cookies they were.

But now look at my mokopuna, Rangi runs a network of virtual Marae's from his home in Coromandel, connecting Māori from all over the world. Just like his father, always trying to come up with new things. How on earth Tane came up with turning harakeke into bio-fuel is beyond me and yet there he is, running the biggest business in Waikato. Mind you there aren't many places still using bio-fuel any more. Tane better figure out soon how to get into the hydrogen fuel business or he'll be out of business.

As for Mara, she doesn't even need to leave the house much any more, because she works from home. I stayed at her place last week and she was writing a speech for the Prime Minister. She didn't even get out of her pyjamas! Pai kare.

How Aotearoa has changed! I remember when we used to call it New Zealand (chuckle). E tipu e rea, I say to my mokopuna. Take the best of both worlds, to prepare for the future.

Both worlds? My mokopuna came home yesterday and said "E kui, Nihao ma." In my day you were lucky to learn English or Māori, but nowadays kids are running around at our hui, switching between three or four languages. I don't know what they're saying sometimes.

I s'pose spending the last school holidays with Uncle Hemi's family in Shanghai was a good chance for KahuRangi to practise her Mandarin. I don't know why Hemi has to live in China to build fancy yachts for rich people, when there's a perfectly good super luxury yacht industry in Whangarei. Lucky those councils stopped arguing and eventually developed the Northern SARRS transport system (the Sea, Air, Road, Rail system). My family don't even believe me when I talk about Auckland's rush-hour from 3-7pm and the traffic gridlock. They're just memories now.

I miss my moko, taku mokai. I remember when KahuRangi got her Master's of Māori and Innovation from Te Whare Wananga o Te Arawa. Her degree's hanging in pride of place on my wall, just above Maui's Oscar.

He's still the same y'know, even though he's a big-wig movie producer in India now. He called into see me when he was back for his last MI board meeting. He's always said that Māori Innovation fund gave him his big break and he's never forgotten that.

I hope young Kyle comes home soon but he says there's still too much to do in Tibet. He's making such good money over there, two AuNZ dollars to the Yuan .

I better get my skates on otherwise I'll miss the twins' kapa haka performance at the pa. Since the iwi set up that multi-million dollar tourism complex the twins have been so busy. Performing, guiding, catering, cleaning – just like when I was growing up on the marae. Manaaki tangata, I keep saying to the twins. That's why the Watanabe's keep coming back, they told me so when I saw them last holiday, with their new moko. They could go anywhere in the world but they keep coming back to us. Manaaki tangata.

I hope my mokos come home soon, they seem to be everywhere else but here. Still nā rātou tēnei, nā rātou tēnei ao. They promised me that they'll all come back for my 75th. I hope so, they're still just babies but they know where they're from, they know this is home.

Yep I'm tired, but life is good. I am truly blessed.



## NEW ZEALAND – FUTURE TAKER

I'm tired... I just got home from work. Who'd have thought I'd still be working at 70, even if it's only part-time. Retirement, huh, there's no such thing. Te porangi hoki!

I look at my kids and my mokopuna and wonder "Can we break the cycle?" I wanted a better life for them but the kids won't stay at school. I don't blame them though, school hasn't changed since I was there. The kids are lucky to get English, let alone maths. And it's pretty poor that the kids still have to do te reo by correspondence. With all the Māori kids at the school, you would have thought te reo Māori would have been compulsory by now. My poor mokos, they leave school with nothing, and then go on to nothing and poor pay, no job security. It's just a vicious cycle!

Still at least Rangi has a good job in Auckland. He gets good money working at the Ministry of Ethnic Affairs. He should though, cos he's the only one writing policies for Māori. Rangi says he has to compare notes with his PI colleague, who's writing the PI stuff. He says there's a bigger team writing policy for the Asian population, than Māori and PI.

Mind you, there's always Hemi, who I can rely on. He might not make a lot of money as a builder's mate, but when he comes down from Whangarei, he fixes things around the house. Ka pai tera moko. He's always been a good boy.

As for his mother, I don't know what she's doing. Always chops and changes her job. She better be careful or her and her six kids will have to move in with me again. I love my mokos but they can be a bit much in such a little house. That good for nothing father of theirs is still in that gang, and always getting in trouble with the cops. Koretake!

I hope the washing machine is working. I have to wash my uniform. It got messy when those tourists from the last bus started playing up. Those young ones had too much to drink, and talk about rowdy, during the haka performance. Mind you, that's what happens when the owners don't live here. They're only interested in Māori things because it's what tourists expect to see. It's all about money, bugger any cultural significance. If only we could run it ourselves, then we could run things properly and keep the profits. Oh well, better chuck my uniform in the wash.

(Cough, cough). I really should give up smoking. I've been saying that for years. Still it's my only vice, if I didn't do this I'd be perfect (laugh). Mind you, it was a shock when I went to Hine's tangi at Te Oranga o Te Whanau marae at the hospital. We're the same age and she got on the hauora buzz ten years ago. Went walking every day, gave up smoking, no butter any more and she's still "toes up" before me. And I never even made it to my nephew's tangi up north last month. I know I talked to my brother on the phone, but there's nothing like being there. But if you ain't got the money to go, you ain't got the money to go. Pouri, pouri.

Maybe we should move to Australia. A lot of our whanaunga have been there for years. But they hardly ever come home, they don't know their marae or their iwi. They're not even interested in te reo. No point Nan, they say. English and Chinese are the language of business, they say. You know, I think they're more Aussie than Māori now.

Still the money's good over there, five Kiwi to the Aussie dollar. Hm, and at least we get away from all the fighting over the Treaty claims. Man, that's been going on for years, we're fighting with the government, fighting with each other. After almost two hundred years we're still fighting for tino rangatiratanga. I wonder what our tipuna would think if they could see us now. And we were all so hopeful at the turn of the Century.

Anyway, better get the tea on. Tonight's Housie night, so the mokos will be coming over to me. I hope their mum makes a million. Oh that reminds me, must get my lotto ticket. It's the only way I'm going to become a millionaire. Better say my karakia tonight too, to win (laugh).

Yep I'm tired. Still at least I've got a job, we've got a roof over our heads, I can pay the bills. And I have my whanau. Life is good!



PURPOSE OF THE REPORT

## PURPOSE OF THE REPORT

Te Puni Kōkiri realised through the Māori Potential Approach<sup>1</sup> that it is crucial to create an understanding of the future opportunities and threats for Māori. A dedicated Futures Research Team<sup>2</sup> was established in June 2006 to focus on developing an understanding about positioning Māori in the future economic system (looking out to the year 2030), and to create a foundation for further analysis. This document is an outcome of Te Puni Kōkiri's work in this area over the last twelve months.

The purpose of this report is to:

- *Create an informed understanding of the possible future drivers of influence* affecting how Māori participate in both the future New Zealand and global economic systems
- Focus attention on the decisions that need to be made today to ensure active participation and shareholding of Māori in future economic systems

The aim is to share ideas and stimulate debate within Government as well as with all major Māori groups. Through the debate we would like to enable individuals to actively make positive decisions about their place in the future.

### The process through which Māori futures thinking has developed

Te Puni Kōkiri spent six months scoping the methodology for the Māori futures project. At the outset of the scoping exercise it was apparent that most planning methodologies and data were inadequate in seeking to developing a robust view of the future for Māori. Therefore Te Puni Kōkiri set about designing, researching, developing and testing a new way of looking at a Māori future.

This was done in the following steps:

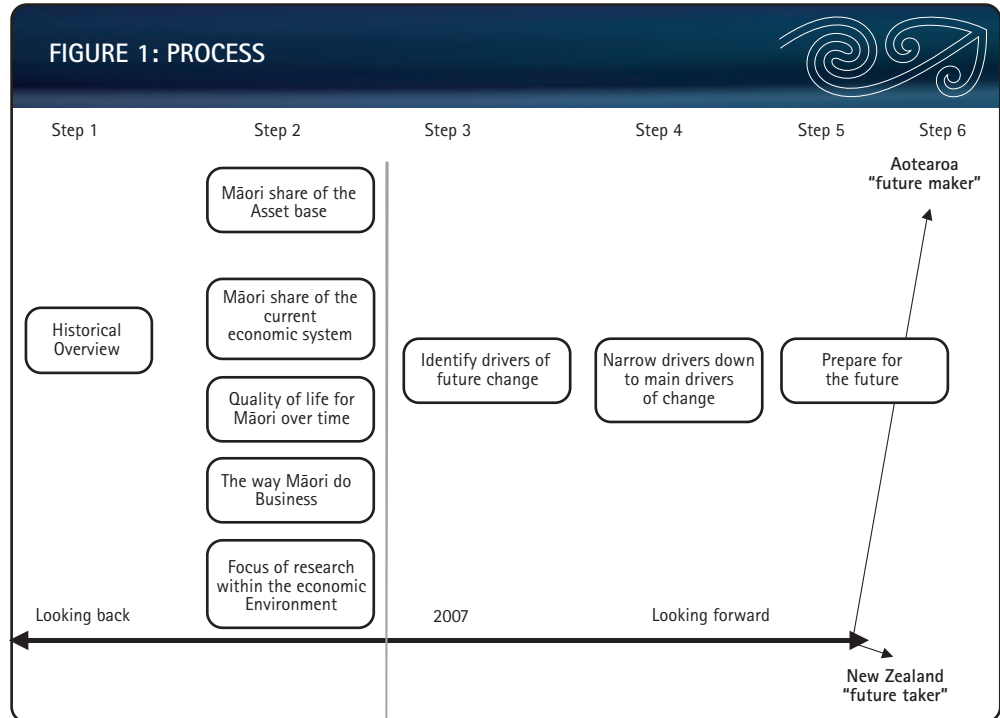
- Step 1: Identifying factors that have brought about change in the past
- Step 2: Creating an informed understanding of the current position
- Step 3: Identifying as many drivers of future change as possible
- Step 4: Narrowing the future drivers down to the main drivers
- Step 5: Exploring different future options
- Step 6: Preparing for the future.

Te Puni Kōkiri also spent time investigating, researching and participating in various futures exercises. Team members consulted with a range of national and international experts in the process of isolating the key drivers that will shape the future of Māori in the domestic and global economy over the coming decades. In addition, Te Puni Kōkiri commissioned a historical overview and various reports on the position of Māori in New Zealand's economy at present. Then two potential scenarios for Māori futures were developed: "Aotearoa - Future Maker" and "New Zealand - Future Taker". These two scenarios formed the basis for investigating a set of possible actions to prepare for a preferred future.

Figure 1 illustrates the process followed in developing the project and includes references to support documents (where relevant) that can be found on the CD-ROM enclosed with this report.

1. Māori Potential Approach is the strategic document that was implemented at Te Puni Kōkiri as the guiding principle for Māori succeeding as Māori, and is reflected in the Statement of Intent (Te Puni Kōkiri, 2007b)
2. The Futures Research Team consisted of Hillmarè Schulze, Vij Kooyela and Phillip Coghini.

Te Puni Kōkiri realised through the Māori Potential Approach that it is crucial to create an understanding of the future opportunities and threats for Māori



**Available on attached CD-ROM – Key to documents in Figure 1**

*Historical influences – Māori and the economy* Te Puni Kōkiri (2007)

*The Māori commercial asset base* Te Puni Kōkiri (2007)

*Māori participation in New Zealand economy* NZIER (2007)

*Quality of life for Māori, Discussion document* Te Puni Kōkiri (2007)

*Health of the Māori language Survey* Te Puni Kōkiri, (2007)

*Demographic trends and projections* Te Puni Kōkiri (2007)

*Investigating key characteristics of a Māori business for future measures* FoMA (2007)

*Annotated bibliography of Māori research* Massey University (2007)



KEY DRIVERS OF FUTURE CHANGE

The aim of this report is not to predict the future. But we need to have some idea of what the future is going to be like because we are going to have to live there

## KEY DRIVERS OF FUTURE CHANGE

The aim of this report is not to predict the future. But we need to have some idea of what the future is going to be like because we are going to have to live there.<sup>3</sup>

Based on the investigation undertaken by Te Puni Kōkiri, three key drivers have been identified that will influence the way that Māori participate in the economy leading to the year 2030:

- **Moving to the innovation economy**
- **Redistribution of world economic power**
- **Climate change and resource pressures**

### *Moving to the innovation economy*

The innovation economy is a fusion of technology and economics, creating global wealth, prosperity and power (Gordon, 2006). The Innovation Economy consists of those industries that transform scientific or technological knowledge into products, processes, systems and services that fuel economic development, create wealth, and generate improvements in a state's standard of living.

Key drivers of change for Māori in the innovation economy include creation of knowledge and innovation; technological advances through new as well as established sectors in which Māori have a share; research and development, as well as education.

Innovation is the process through which firms create new economic value by creating, adopting and adapting knowledge into new or improved products and services, processes and organisational arrangements. Signs of the emerging innovation economy include (Gordon 2006):

- Today more than one billion people are connected to the Internet by 2015 it is predicted that more than three billion people will be online
- At present the total information technology and communication spending worldwide is about US\$2 trillion. By 2015 it is expected to exceed US\$5 trillion
- Nanotechnology industries generate about US\$10 billion today. In 2015 it is predicted that they will generate about US\$1 trillion and employ one million people

**Knowledge and innovation** are increasingly the drivers of labour productivity growth across the world. For New Zealand there is a need to develop new strengths in the economy, based on knowledge and innovation, to supplement historical strengths in the primary production sectors (Skilling, 2006). This is particularly the case for Māori due to the high concentration of Māori economic activity in the primary production sectors of the economy.

At least three interdependent factors are essential in creating an innovation economy. One is **technological advances** which lead to the creation of new sectors (such as nanotechnology and biotechnology); they may also influence and sometimes lead to radical changes in traditional sectors. Another interdependent factor is **research and development**. At a more basic level, the innovation economy will depend on investment in **education**. The following sections consider the role of these three factors.

There is a need to develop new strengths in the economy, based on knowledge and innovation

3. For a similar line of thinking, see Frame et al. (2005a, 2005b).

Traditional factors that have determined economic success, such as productivity, will not be enough to ensure future economic growth

### *Technological advances*

Traditional factors that have determined economic success, such as productivity, will not be enough to ensure future economic growth. Technological advances will have a profound effect on economic growth and will be one of the main drivers of future economic development. Technological change will lead to the creation of new sectors, and will have dramatic impacts on existing sectors.

### *New sectors*

Technological innovations will drive exponential change and the power tools for the innovation economy will be the convergent technologies (Gordon, 2006). The convergent technologies are focussed on enhancing human performance. The four main ones are:

- Nanotechnology
- Biotechnology
- Information technology and networks
- Neurotechnology

**Nanotechnology** is the engineering of functional systems at the molecular scale. "In its original sense, 'nanotechnology' refers to the projected ability to construct items *from the bottom up*, using techniques and tools being developed today to make complete, high performance products" (Centre for Responsible Nanotechnology, nd). The U.S. National Science Foundation gives some examples of advances that will be made possible in the future by nanotechnology: "Imagine a medical device that travels through the human body to seek out and destroy small clusters of cancerous cells before they can spread. Or a box no larger than a sugar cube that contains the entire contents of the Library of Congress. Or materials much lighter than steel that possess ten times as much strength." (Centre for Responsible Nanotechnology, nd).

Technological innovations will drive exponential change

**Biotechnology** as defined by the OECD(nd), is "the application of science and technology to living organisms as well as parts, products and models thereof, to alter living or non-living materials for the production of knowledge, goods and services". Products that have been developed through biotechnology to date include insect resistant corn, soybeans with healthier oil and new protein-based silk-like fibres, cosmetics and adhesives. Ethical debates continue over the efficacy of some biotechnological developments.

**Information technology and networks**, computers, microchips and the Internet have changed the way people do business, communicate and work. Just over one billion people, or 17 percent of the world's population, have access to the Internet today. In 2001, 24.5 percent of Māori had access to the Internet, compared to 45.4 percent in 2006. The usage growth of the Internet between 2000 and 2007 has been just over 200 percent worldwide (Internet World Stats, 2007). The Internet has made e-learning, virtual communities, virtual shopping and online medical consultations a reality.

The term **neurotechnology** "is often used to describe the tools and methods that can influence the human central nervous system, especially the brain, to achieve a desired effect" (Epic Biosonics Incorporated, 2005). This includes: pharmaceuticals; genetic engineering; psychological and social conditioning; physical augmentation and cellular implantation; electrical stimulation; and electro-mechanical nanotechnology. "More specifically, neurotechnology is defined as the application of electronics and engineering to human nervous system function" (Epic Biosonics Incorporated, 2005).

Even traditional sectors, based on commodities, are at the threshold of dramatic change

#### *Changes within existing sectors*

Even traditional sectors, based on commodities, are at the threshold of dramatic change. This is because many are maturing industries – characterised by slow growth and continuous declining profitability. But environmental pressures, particularly on agricultural products, are also playing a part. Countries relying solely on commodities are finding their economies slowly shrinking. Commodity prices on average have dropped continuously for the past 150 years (NZIER, 2006). Also, distance to markets is starting to play a crucial role in the commodity markets. Some of the sectors that are on the brink of change include the energy sector as well as various agricultural sectors.

The energy sector is facing the prospect of a dramatic change in direction. The first signs are advances in biofuel technology, the promise of efficient fuel cells, new approaches to solar power, and in the international context, a greater reliance on nuclear energy, though people may have an expectation that the new technology will improve safety and the ability to dispose of waste. Such advances have the potential, in the not-too-distant future, to overturn the economics of energy, making the world less dependent on oil and other fossil fuels.

The agricultural sector is also evolving rapidly due to environmental pressures and technological advances (such as biotechnology). Development of substitute products is also a factor. Wool is a good example, as synthetic products have steadily eroded wool market share and profitability.

#### *Research and development*

The average percentage of GDP spent on research and development in OECD countries in 2004 was 2.3 percent. Small countries like Sweden and Finland spend nearly 4 percent of their GDP on research and development. However, in 2004 New Zealand spent only 1.2 percent of GDP on research and development. Although the New Zealand Government sector has a ratio slightly larger than the OECD average on research and development expenditure (Ministry of Research, Science and Technology, 2006).

The United States accounts for roughly 40 percent of the world's research and development spending. More money was invested in research and development in the US than in the other G7 nations combined (Brooks, 2006).

#### *Investment in education*

The accumulation of skills and competencies through high-quality education systems has long been recognised as a fundamental driver of growth, not least via its impact on the creation and diffusion of new technologies (OECD, 2007). Conversely, technology is drastically improving access to quality education, through computer-assisted learning and internet-based distance learning.

Traditionally, a country's economic growth and social progress have been strongly correlated with educational attainment. Today, the innovation economy calls for changes in education: not just more education, but substantially different education.

Beyond the mastery of basic subject matters, success in the new economy requires behavioural skills such as the ability to think critically, communicate well and work effectively in teams. Computer literacy, too, has become a core competency.

The accumulation of skills and competencies through high-quality education systems has long been recognised as a fundamental driver of growth



Over the past two decades, the skills needed to succeed have changed radically, but not the skills taught in schools. In countries at all levels of income there is a mismatch between the skills of secondary school graduates and the needs of technology-driven employers.

A world bank report (Zhang, 2001) found that one out of every four adults in industrial countries failed to reach minimum literacy levels for coping with today's life and work. Some have low literacy skills despite high levels of education. Policies for the provision of education in the workplace and family settings are therefore needed, with employers playing an increasing role in promoting literacy skills, and workers willing and able to engage in lifelong learning.

### Redistribution of world economic power

The global power base is shifting from Europe and America to the new Asian economic powers. This will have a particular impact on Māori through investment and employment opportunities within the new markets driven by the enormous economic growth rates of these new economies, demographics and the rise in importance of mega cities.

#### *Asian economic powers*

The likely emergence of China and India, as well as others, as new major global players will transform geopolitical landscapes (National Intelligence Council, 2004a). The Asian Development Bank has forecast that China could be the world's largest economy as early as 2025. It should be noted that, due to the sheer size of China and India's population projections (US Census Bureau, National Intelligence Council, 2004b) the populations are projected to be 1.4 billion and 1.3 billion respectively by 2020, their standard of living need not approach Western levels for these countries to become important economic powers (National Intelligence Council, 2004b). Some of the facts and predictions are (Kynge, 2006):

- In 1949 when Mao seized power, there were eight Chinese cities with a population of between a half and one million, and five cities with more than a million. Today, the figures are 53 and 40 respectively. In 2005, 400 million Chinese lived in cities; by 2050, there will be another 600 to 700 million in cities - but even then only 70 percent will be urbanised (84 percent of Māori are urbanised, 87 percent of non-Māori are urbanised in New Zealand).
- In 2005, there were 350 million mobile phone users and 100 million Internet users in China. With global research and development centres now located in China, the country is moving up the technology ladder fast: "It is difficult to think of an area of technology in which China does not have credible ambitions to lead the world."
- In 2005, around 60 million Chinese were wealthy enough to buy a car; it is projected to increase to 160 million by 2010, making China the fastest growing auto market in the world.

It is predicted that the G7 countries in 2025 will be China, USA, India, Japan, Brazil, Russia and Mexico. This is radically different from the current G7 group which comprises the USA, Japan, Germany, UK, France, Canada and Italy. It means that there will not be a single European country in the G7 in 2025.

#### *Demographics*

Arguably one of the most profound changes to the future world economy could come from the inevitable effects of demographic shifts. Prosperous societies provide healthcare, and their citizens live longer. At the same time, people in richer nations tend to have fewer children.

The global power base is shifting from Europe and America to the new Asian economic powers

The Asian Development Bank has forecast that China could be the world's largest economy as early as 2025

Consequently, the proportions of older people in their populations are rising while birth rates are below what is required to keep the populations at their current levels (PricewaterhouseCoopers, 2007).

Italy's population, for instance, is expected to shrink by 28 percent in the next four decades. If this projection holds true, by 2050 some 45 percent of that nation's workforce will be foreign-born. For these economies to be sustainable and grow, immigration will have to be investigated.

This "demographic abyss" creates pressures to accept more immigrants from nations with fewer jobs and higher proportions of youth. Income disparity among nations is growing, and already far exceeds the levels that caused mass migrations a century ago. And certain kinds of work – including work in economic sectors that grow with an ageing population – cannot be "outsourced" or left to machines; examples are nurses, food-service workers and salespeople. Indeed, seven of the ten fastest-growing categories of work in the US fall into this personal-services category (PricewaterhouseCoopers, 2007).

One logical solution is to let more migrants into certain countries. Many developing nations, such as India, are getting younger, and thus are expected to have a plentiful supply of citizens looking for opportunities. Political and cultural debates over the issue are bound to have an impact on the lives of their citizens for years to come.

### *Rise of mega cities*

In 1950 there was only one city, New York, which had more than 10 million inhabitants. In 2005 there were 25 cities with more than 10 million people. In 2007, for the first time in history, more people live in cities than in the countryside. Large numbers of people are moving to cities in search of better jobs and lives.

Ninety percent of the world population growth by 2030 is expected to be concentrated in cities. The mega cities of Asia, Africa, the Middle East and Latin America are expected to swell by almost another two billion people. That translates to over four billion developing world mega city-dwellers, the equivalent of building another Los Angeles every three months for the next 25 years (Rohrer, 2006).

Economically, many of the world's great cities are already divorced from their nation-states, with their main streams of investment coming from other great cities (Rohrer, 2006). This means that in future trade will be forged between cities rather than nations; this is already happening between cities such as London and New York in terms of financial markets.

### *Climate change and resource pressures*

Environmental pressures are clear drivers of future change both on a global and domestic scale. Key global environmental drivers of economic change with a particular impact on Māori include climate change and fossil fuel depletion. Key domestic drivers with a particular impact on Māori include potential fisheries depletion, and water use and quality.

Ninety percent of world population growth by 2030 is expected to be concentrated in cities

There is still uncertainty as to how (and when) climate change will manifest itself

### *Climate change*

Long-term global warming is occurring as a result of increasing greenhouse gas concentrations in the atmosphere. It is predicted (Frame et al, 2006) that this will result in:

- Higher sea levels
- More extreme weather events (e.g. floods, droughts)
- Shifts in rainfall patterns
- Shifts in diseases in line with the range of vectors
- Changes in the biological range of crops and livestock

Warmer temperatures and the associated increased release of fresh water in the Polar Regions are believed to have potential to alter the circulation of the entire world ocean, possibly bringing rapid alteration of global climate patterns (Delaney and Frame, 2007). Changing ocean temperatures may also have a dramatic impact on fish stocks.

There is still uncertainty as to how (and when) climate change will manifest itself. Rises in sea levels, gradual temperature shifts and intensifying weather patterns have the potential to impact heavily on the global economy. There is also a possibility of abrupt climate change – large shifts in climate that persist for years or longer (such as marked changes in average temperature, or altered patterns of storms, floods or droughts) over a widespread area, that takes place so rapidly (in the order of a decade) and unexpectedly that human or natural systems have difficulty adapting to it (Delaney and Frame, 2007).

### *Fossil fuels*

Like other developed countries around the world, New Zealand is dependent upon fossil fuels as an energy source. Most studies estimate that oil production will peak sometime between now and 2040 (US Government Accountability Office, 2007). Political and climate-related upheavals affecting oil-producing countries have already been shown to affect the supply, and in turn, the price of oil. Given this context, national energy security will be an increasing concern for New Zealand, lying as it does at the end of a long oil-supply chain (Frame et al, 2006). Energy, particularly oil, price shocks are likely over the next 20 to 30 years. It is predicted that oil prices will continue to rise until oil users cannot afford to use oil-based products (Futures Thinking Aotearoa Energy Group, 2006).

New Zealand has Kyoto Protocol obligations that require it to reduce its global warming gas emissions to 1990 levels. This will increasingly lead to pressure for a shift to using alternative energy sources in the future. Other countries have already made moves in this direction. For example, Sweden has recently put in place a strategy to eliminate dependence on imported oil by 2020. This small European country has a similar population density to New Zealand and is currently investing in research and development for oil alternatives (Frame et al, 2006).

There are important trade implications for New Zealand, as exports may need to be carbon neutral or carbon emissions from those exports will have to be offset through market mechanisms (Frame et al, 2006). Business opportunities for New Zealand farmers may arise through the need to bring alternative energy sources into the marketplace in the near future. For instance, there may be benefits to New Zealand farmers of a US swing toward the production of crops for biofuels. If biofuel crop production in the US leads to a decrease in food production, there may be a corresponding increase in demand for New Zealand agricultural exports.

### *Water use and quality*

Globally, freshwater systems are under stress because of urbanisation, agricultural intensification, industrialisation, population growth and more water-intensive lifestyles. It is estimated that 40 percent of the world will live in water-scarce regions by 2025 (World Resources Institute, United Nations Environment Programme and the World Business Council for Sustainable Development, 2002).

Climate change predictions indicate potential water shortages, and increased incidences of flooding, in different parts of New Zealand. And increased intensification of farming methods are already leading to declining water quality in many parts of the country (Parliamentary Commissioner for the Environment, 2004).

### *Fisheries depletion*

Over-fishing is a classic 'tragedy of the commons', where anyone with access to a shared resource has an interest in exploiting it, but it is in nobody's interest alone to maintain it. Numerous examples of over-fishing, leading to sudden changes in marine habitat are emerging; a well known example is the collapse of the Atlantic cod fishery off Newfoundland in the early 1990s. Scientists estimate that the number of large fish in the oceans has fallen by perhaps 90 percent since the 1950s (Delaney and Frame, 2007). Few deepwater fisheries are of long standing; however, accumulating evidence about stock declines indicates that many of these fisheries are being exploited unsustainably (Delaney and Frame, 2007). New Zealand's fisheries stock management system (the Quota Management System) insulates this country from depletion of species within our exclusive economic zone. However, it does not insulate us from depletion issues of highly migratory species, or the potential impacts of changing ocean temperatures on fish stocks.



## IMPACT OF KEY FUTURE DRIVERS ON MĀORI

## IMPACT OF KEY FUTURE DRIVERS ON MĀORI

This section explores the possible impact that the key drivers of change identified in the previous section will have on Māori participation in the future economic system. These possible impacts builds on the comparative advantages that were identified within the key factors illustrating Māori position in the current economy.

### Move to the innovation economy

The innovation economy represents one of the largest future opportunities (or threats) for Māori wellbeing, careers and business. Māori will need to navigate the new economy as it will change the nature of work, jobs, capital, markets and Māori society. At present Māori share of the innovation economy is minimal.

The greatest benefit of the innovation economy will accrue to Māori who can access and adopt new technologies. Indeed, having an innovative Māori society may be more important for growth than having a high rate of capital investment.

As previously discussed, one of the main factors driving the innovation economy will be technological advances. These advances will impact both on the existing sectors in which Māori participate, and the new sectors that have great potential for Māori. Research and development coupled with education will be additional important factors enabling Māori to excel in the innovation economy.

### *Technological advances*

Technological advances will have major implications for Māori due to their ownership of agricultural, fisheries and tourism assets. New technologies will change these industries and the sorts of products and services produced; they will also open up new sectors and markets for Māori. Technological advances allow Māori to produce more output from the existing mix of resources. These advances may take the form of less costly methods of producing existing output or may result in the production of new products.

### *New sectors*

According to the OECD, New Zealand had relatively low growth in high and medium technology manufactured exports between 1994 and 2003. However, New Zealand has one of the world's fastest growing biotechnology sectors: its biotechnology industry generated an estimated revenue of \$811 million in 2005, with over \$250 million in exports (supplemented by \$160 million in manufactured agritech exports). This income comprised \$515 million from the private sector, \$160 million from the public sector and \$135 million from the education sector (New Zealand Trade and Enterprise, nd).

The development of biotechnology products by Māori companies has not been strong. However, there are a number of Māori entities actively prospecting for bioactives that exist naturally in New Zealand's fauna and flora (NZIER, 2006). By taking advantage of consumer perceptions that these biological products have natural enhancers such as nutraceuticals, Māori may be able to develop high value products from commodities and other fauna and flora that were previously of low value or seen as waste material.

The innovation economy represents one of the largest future opportunities (or threats) for Māori wellbeing, careers and business

Technological advances will allow Māori to produce more output from the existing mix of resources

### Changes within existing sectors

Technological changes will have a profound impact on the existing sectors in which Māori invest and participate. For example, in the dairy industry the need for large processing facilities will diminish once it becomes economic to take water out of milk on-farm. This will take away one of the advantages (scale of processing) of belonging to a large co-operative and could well have impacts on the structure of the dairy industry in the long term (NZIER, 2006).

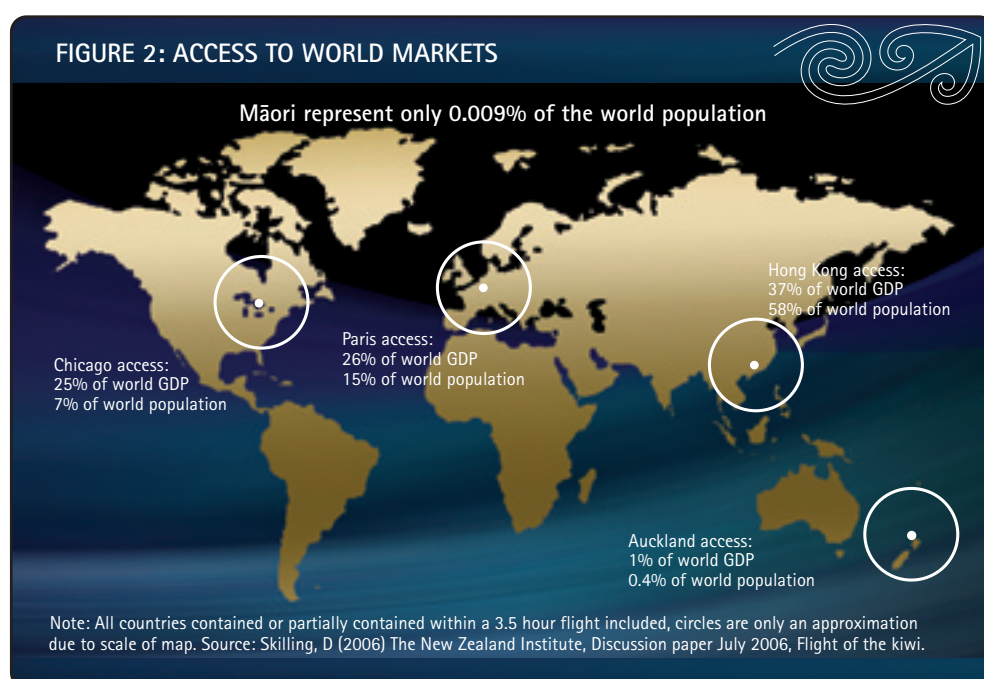
Other technological advances which may assist sectors currently favoured by Māori include:

- Biotechnologies have the potential to improve agricultural productivity and product quality
- Growing crops for biofuels could replace unproductive farming methods and/or traditional practices, and reduce fossil fuel dependency in transportation
- Adoption of traceability technologies within primary sectors, allowing food to be tracked from paddock to plate, as consumers will expect more information about what they eat and use in their daily lives (Frame et al, 2006)

New technologies could improve Māori access to export markets

Additionally, new technologies could improve Māori access to export markets. Exporting is a key factor for New Zealand and Māori businesses. Adoption of new technologies could assist Māori to remain competitive in world markets in the context of an overall decline in New Zealand's market share.<sup>4</sup>

New Zealand's remoteness could be a disadvantage for commodity exports. As can be seen in Figure 2 below, Auckland companies have access to 1 percent of world GDP and 0.4 percent of the world population within a 3.5 hour flight time. In contrast, Hong Kong has access to 37 percent of world GDP and 58 percent of the world population within the same flight time. Thus New Zealand is a long way from markets, which creates logistical problems such as increased transport costs as well as an increased carbon footprint for New Zealand products, including those produced by Māori businesses.



4. New Zealand's exporting level (volumes of export) has remained static since the mid-1980s despite a growing world economy. Furthermore, New Zealand relies on a limited number of firms for its export earnings and has a high proportion of very small firms. Only one hundred and sixty companies account for 75 percent of exports (NZTE, 2006).

The development of high-value, Māori-branded products, connoting quality, tradition and healthy living, could open up new export markets or provide a competitive advantage over other suppliers

To combat the "tyranny of distance" it is commonly thought that New Zealand producers need to find competitive advantage in existing sectors. Advances in technology may assist Māori to differentiate products in the global marketplace. For example, innovations in primary production methods and uptake of best environmental practice can create added value in existing markets and open up access to new markets. The development of high-value, Māori-branded products, connoting quality, tradition and healthy living, could open up new export markets or provide a competitive advantage over other suppliers.

### *Research and development*

Research and development is an important factor in promoting economic growth, and facilitating dynamic Māori participation in the New Zealand and global economy. Analysis of the key drivers of future change points to the need for research and development to assist Māori economic development in the following areas:

- Development of new technologies to increase participation in the innovation economy
- Diversification in terms of utilisation of the Māori asset base
- New products in the mature industries
- Development of niche Māori branded specific products
- Alternative energy opportunities in relation to current and potential Māori assets and business connections

Māori businesses need to build strong relationships with tertiary institutions to create an environment for further research and development.

### *Investment in education*

The worldwide trend is to place less reliance on commodities as a source of wealth. Instead, the challenge is to move towards an economy based on knowledge and, as part of the process, to develop the greatest asset Māori have: 523,000 people (Durie, 2003).

Given the increased importance of knowledge in the innovation economy, investment in education will be needed to ensure that Māori, along with other New Zealanders, are equipped with the right skills and knowledge to participate in the innovation economy. There is a substantial body of evidence showing that those with higher levels of education are more likely to participate in the labour market, face lower risks of unemployment, have greater access to further training and receive higher earnings on average (OECD, 2006).

Beyond education, the institutional dimensions of the innovation economy are also vital. To make the most of its human capital, New Zealand needs an efficient innovation system of firms, research centres, universities and think tanks. It also needs a strong national information infrastructure that facilitates effective communication, dissemination and processing of information (Zhang, 2001). Māori involvement at all levels of this system is vital to ensure that Māori perspectives, concerns and well-being are promoted within the innovation economy.

### *Redistribution of world economic power*

#### *Asian economic powers*

The rise of the Asian countries to become economic superpowers will bring some level of uncertainty for Māori, specifically in terms of employment and investment. The rise of immigration from Asia may lead to competition for jobs in local markets. Also, as Asian firms make acquisitions in New Zealand, and potentially in Māori businesses, corporate cultural integration will become an important issue.



However, while the emergence of India and China will present new challenges, the scope for new opportunities in trade should not be underestimated. Two related developments could be the creation of new export markets for New Zealand and a source of cheaper inputs. For example, as the number and wealth of the middle classes in China, India and elsewhere in Asia rises, so will their demand for meat products, wine and luxury travel. The opportunity lies in New Zealand continuing to develop as a niche exporter of high-value products and low-volume tourism. In this context, there is an expanding opportunity for Māori to provide Māori-branded niche products and tourism experiences to this vast market.

### *Demographics*

Over the next couple of decades, the reshaping of the age pyramid – growing numbers of older people relative to the younger population – will have implications for all parts of society. However, different dynamics will be seen in the Māori population compared with New Zealand's population more generally. The Māori population overall will become older, but will continue to have a much younger age structure than the total New Zealand population, because of higher Māori birth rates. The relative youthfulness of the Māori population, taken alongside the trends towards a higher proportion of Māori in the population and improving quality-of-life indicators for Māori, point to a future expansion of the Māori middle class. This will lead to increased wealth and higher levels of education, creating both opportunities and threats for Māori.

The challenges will be around ensuring enough employment and investment opportunities within the New Zealand market. However, opportunities may be created due to ageing of the general population and increased demands on service sectors to support older members of society. These are jobs that require personnel and cannot be replaced by automation: examples are nurses, health and care workers, food-service workers and salespeople. Growth in these parts of the service sector will create new job opportunities and business prospects for the relatively more youthful Māori workforce. For the Māori population specifically, the ageing population and increasing wealth of Māori, may offer opportunities for Māori businesses: they could provide care of elders in ways more sympathetic to Māori preferences than mainstream facilities and develop Māori-focused products aimed at the older market.

### *Rise of mega cities*

New Zealand is not likely to have any mega cities in the future. Auckland is the biggest city with just over one million people. If the notion that cities will primarily trade with each other rather than trade occurring between nations comes true, will Auckland be able to participate?

In terms of its Māori population, Auckland is projected to experience the largest numerical growth over the next few years (up 39,000, from 144,000 in 2001 to 183,000 in 2016). Other regions that will experience substantial growth are the Bay of Plenty Region (up 17,000, from 71,000 to 88,000) and Waikato Region (up 17,000, from 80,000 to 97,000). The Auckland Region will be home to one-quarter of New Zealand's Māori population by 2016.

The diversity of Auckland is seen as a strength for the city in terms of innovation and ideas. This level of diversity will increase in the future with higher levels of migration to Auckland. Māori cultural expressions and values will offer Auckland (as well as New Zealand as a whole) a comparative advantage: a point of difference. The danger is that this could lead to misinterpretation of Māori culture and intellectual property.

Māori cultural  
expression will offer  
Auckland a comparative  
advantage

## Climate change and resource pressures

### *Climate change*

Climate change impacts will be a challenge for Māori given the economic concentration of Māori businesses in the agriculture and fishing sectors. Adapting to climate change will require the uptake of new technologies to mitigate and withstand potential climate-related shocks. Additionally, Māori producers will increasingly need to position their products as genuinely "clean and green", in order to keep and grow the share of the export market in these sectors. Conversely, opportunities will arise for Māori in developing and promoting new technologies - or moving traditional agricultural sectors into alternative production systems (for example, cropping for biofuels).

### *Fossil fuels*

Oil price spikes over the next 20 to 30 years are expected and these will have a disproportionate effect on people with low to moderate incomes (Futures Thinking Aotearoa Energy Group, 2006). This will include a large number of Māori, who are still likely to be overrepresented in the lower income brackets.

On the other hand, the shift away from fossil fuels to alternative energy sources may present opportunities for Māori business. There may be opportunities for Māori to use Māori-owned land as a source of renewable energy, for instance as a site for wind farming, coppicing<sup>5</sup> existing forest cover for biofuels or growing biofuel crops. Māori primary producers could also take advantage of these opportunities to move away from the traditional commodity markets, or supplement current production.

### *Water use and quality*

Water has a strong significance and purpose for Māori, in relation to what the water is for. There are strong cultural and spiritual values linked to water use and quality. For Māori the relationship with water is different than the "business" of water. The balancing of competing interest may be an opportunity for Māori to provide unique advice on protecting water quality. There is potential for markets in 'clean' and 'grey' water systems and infrastructure (Delaney and Frame, 2007), creating opportunities for Māori to build expertise in alternative sources of water (for example, desalination or water re-use). Cultural dimensions relating to water re-use would need to be considered in this regard.

### *Fisheries depletion*

The relationship between guardianship roles/responsibilities of fishing for Māori is a crucial point in terms of cultural and spiritual significance of fish. Again, this is a balancing act between customary fishing interests and economic interest. From this experience, fisheries management will be a key issue for Māori given their strong presence in New Zealand's fishing industry.

New Zealand is a global leader in developing quotas for sustainable yields in its key marine fisheries. Māori are developing huge experience in fishing and fisheries management through their large scale ownership of fisheries resources gained through the Fisheries Settlement.

5. Coppicing is a traditional method of woodland management in which young tree stems are cut down to a low level. In subsequent growth years, many new shoots will emerge and after a number of years the cycle begins again and the coppiced tree, or stool, is ready to be harvested again.

There may be opportunities for Māori to use Māori-owned land as a source of renewable energy

Provision of advice for developing and other developed nations on quota systems for fisheries management is likely to become a growth area; Māori are well placed to contribute in this area.

Fish farming is a potential solution. Marine/inland aquaculture accounted for over 30 percent of total fish production in 2005, up from around 26 percent in 1998 and single figures in 1985. However, most farmed fish are fed with other fish caught in the sea. For example, between 15-25 kilos of fish are needed to produce one kilo of farmed tuna (Delaney and Frame, 2007). Māori involvement in aquaculture could become a sustainable growth industry in 2030 through active participation and commitment to create the enabling environment for the business to grow.



## UNDERSTANDING PAST AND PRESENT

Māori do not start from a zero base and are building on a strong economic foundation

## UNDERSTANDING PAST AND PRESENT

This section creates a launching pad for integrating our thinking about the future. Māori do not start from a zero base and are building on a strong economic foundation. To provide context, we need to understand the past, and establish a baseline for the present position of Māori in the economy. The following discussion gives an overview of Te Puni Kōkiri's findings about the past and present position of Māori in the economy. More information is available on the CD ROM that accompanies this report.

### Māori in the economy – past

Initially, Te Puni Kōkiri sought to provide an overview of the historical events that have influenced and shaped the way that Māori have participated in the economic system in New Zealand. Research was carried out by the Policy Unit within Te Puni Kōkiri in 2006 to assess the past from a historic Māori economic development perspective. The full report is available on the attached CD ROM, and this section provides a brief summary of the report's main findings.

The key influences on Māori economic development from the pre- and early-contact economy were characterised by trade, new alliances and new enterprise. From the mid-19th century there was loss of land and a declining Māori population, with the Māori economy becoming increasingly marginalised. From World War II onwards, Māori increasingly moved to urban centres to find jobs. In 1965 nearly two-thirds of Māori lived in rural areas while, by 2006, 40 years later, 84 percent of Māori lived in urban areas (Statistics New Zealand, 2007). This was due to the problems of sustaining communities in rural areas; urban life often meant better housing and full-time employment, although predominantly in low skill occupations.

From the research it is evident that various internal as well as external factors played a role in Māori decisions in participation in the economy. From the early 1980s, Māori began to regain control of their economic development, but still remained over-represented in indices of social deprivation.

### Māori in the economy – present

This section provides updated facts about current Māori participation in the economy based on various pieces of work recently commissioned by Te Puni Kōkiri. Through analysis of this work Te Puni Kōkiri has identified the following seven key factors illustrating the present Māori position in the economy:

- **Increasing level of Māori economic contribution**
- **High Māori exposure to world markets**
- **Importance of employment for Māori within New Zealand**
- **Māori population is young and growing**
- **Improved quality of life for Māori**
- **Māori asset base is growing**
- **Māori culture and identity is strong**

Māori contribution to the economy has steadily increased over the past two decades

### *Increasing level of Māori economic contribution*

Māori contribution to the economy has steadily increased over the past two decades. This is evident through recent Te Puni Kōkiri commissioned studies (NZIER 2003a; 2007)<sup>6</sup> showing that Māori contributed 1.96 percent to the New Zealand economy in 2003 (total value added). This has shown a marked increase from 1.23 percent in 1996 (see Table 1 below). Production is concentrated in agriculture, fishing and owner occupied dwellings; these three sectors together account for approximately 75 percent of the output generated by Māori.

This trend is slowly changing with Māori diversifying their investment portfolio to include investments in wine and horticulture distribution channels, thermal energy companies, telecommunication businesses, large corporate dairy farms and major tourism businesses and infrastructure (Te Puni Kōkiri, 2006). However, at present, the majority of future increased participation in the economy will still be produced from mature industries such as agriculture and fisheries.

**Table 1: MĀORI CONTRIBUTION TO GDP**

	1996	2003	% change
Māori contribution to GDP (\$m)	1, 150	2, 563	123%
National GDP (\$m)	93, 387	130, 687	40%
Māori contribution to GDP (%)	1.23%	1.96%	

Note: Includes the components of GDP not allocated to industries such as GST and bank service charges.  
Source: NZIER, Statistics New Zealand

### *High Māori exposure to world markets*

As Māori, iwi, hapū, whānau, or as individuals, have embraced world markets in order to achieve sustainable economic growth. Māori are heavily exposed to world markets in fishing, forestry, agriculture and tourism. These industries are mostly mature industries characterised by slow growth and declining profitability. Approximately 60 percent of Māori assets are exposed to international trade relative to about 31 percent for the whole economy (NZIER, 2006). There are no signs that this trend is likely to change in the future.

### *Importance of employment for Māori within New Zealand*

Employment within New Zealand is a crucial part of Māori economic development. A total of 206,800 Māori were in full and part-time paid employment as at March 2007, and between 2002 and 2007 there was a net gain of 26,500 jobs for Māori. For the 2004 year, Māori households were estimated to earn \$10.7 billion from wages and salaries. This represents nearly 16.9 percent of all wages and salaries received in New Zealand, while Māori represent 15 percent of the total population. Māori, like New Zealanders in general, also live and work in countries all over the world. It is estimated that there are about 100,000 Māori living in Australia at present.

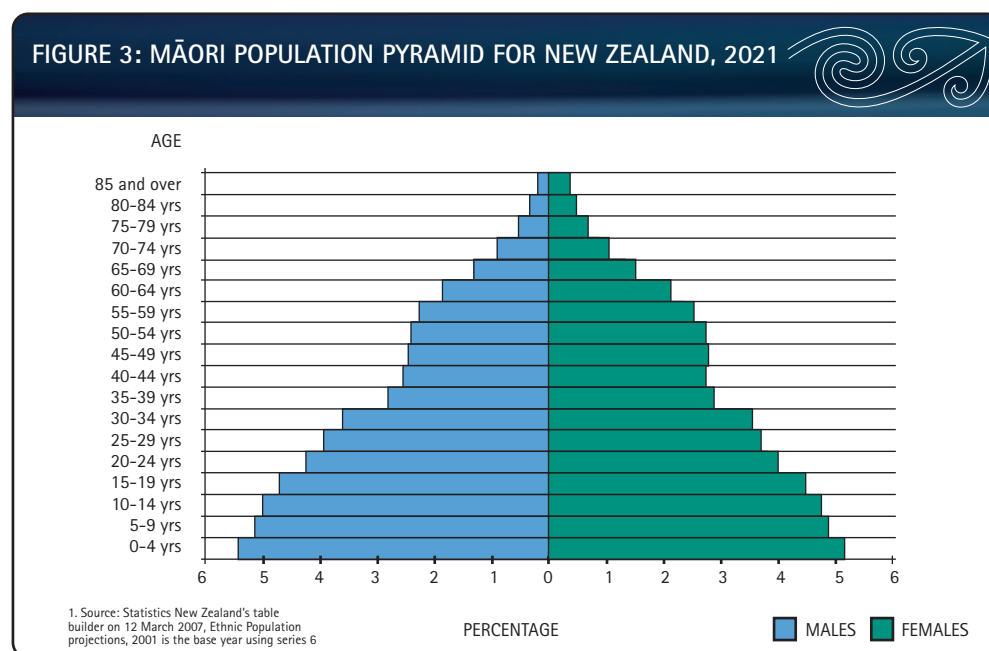
Employment within New Zealand is a crucial part of Māori economic development

6. Available on the attached CD ROM

### *Māori population is young and growing*

The Māori population is much younger than the total population.<sup>7</sup> The median age of the Māori ethnic group was 22.7 years at 30 June 2006, 13.2 years younger than that of the total population (Statistics New Zealand, 2007). The number of Māori aged 65 years and over is projected to reach 56,000 by 2021, almost three times the 2001 population of 20,000. By 2021 they will account for 7 percent of all Māori, compared with 3 percent in 2001 (Statistics New Zealand, 2005).

Thus Māori population overall will become older, but will continue to have a much younger age structure than the total New Zealand population because of higher Māori birth rates (see Figure 3). Half of the Māori population is projected to be older than 26.4 years in 2021 (compared with 22.1 years in 2001). In contrast, half of the total New Zealand population is projected to be older than 40.3 years in 2021 (compared with 34.7 years in 2001).



The Māori population is projected to grow at a faster rate than the total population, and the Māori share of the New Zealand population will increase from 14 percent in 2001 to 15 percent in 2021.

### *Improved quality of life for Māori*

Māori quality of life has been improving over time as shown by the Quality of Life Indicators for Māori discussion document (Te Puni Kōkiri, 2007a).<sup>8</sup> This document proposed a set of Lead Quality of Life (QOL) indicators for Māori (summarised in Table 2. That could potentially be used for monitoring and reporting on Māori quality of life in future.

7. Available on the attached CD ROM
8. Available on the attached CD ROM. The discussion paper documents the scientific methodology which was used to develop the quality of life indicators for Māori, explains how the selected subset of lead indicators was relevant to the Māori Potential Approach at the time and documents the sources of information used to report on the performance of these lead indicators over time.

Table 2: Changes in Lead QOL Indicators for Māori over time

Lead Economic Indicators	Lead Social Indicators
Māori Household Income (1991)-(2001) ↑	Comparative life expectancy at birth (1950-52)-(2000-02) ↑
Proportion of Tamariki participating in Early Childhood Education (2000-2005)-(2006) ↔	Māori involvement in unpaid work 2001
Proportion of Māori school leavers (1993-2004)-(2005) ↔	Māori housing tenure (1991-2001) ↓
Māori participation in tertiary education (1999-2002)-(2002-2005) and central government (1993) ↔	Proportion of Māori candidates represented in local (2001)-(2004) (2005), DHBs (2001)-(2004) and school boards of trustees (1998)-2006) ↑
Share of Māori in highly skilled occupations (2000-2004)-(2004-2006) ↑	
Lead Cultural Indicators	Lead Environmental Indicators
Māori affiliation with their iwi (1996-2006) ↑	Māori participation in the Resource Management Act 1991 (the RMA) (1996/97-2003/04) ↑
Māori participation in cultural activities (2003)	
Proportion of Māori able to speak Te reo Māori (1996) - (2006) ↔	
Proportion of Tamariki participating in Kura Kaupapa (1992)-(2006) ↑	
Proportion of Tamariki participating in Kōhanga Reo (1991-1993)-(1994-2005) ↓	
<p><b>Key to Table 2</b></p> <p>↑ Improvement in the indicator over time</p> <p>↓ Negative performance in the indicator over time</p> <p>↔ Improvement in the indicator over a period of time but there has been a turning point in the recent past. Hence the indicator needs urgent monitoring in the short term.</p> <p>No arrow indicates there is insufficient data to make any judgment as to whether the indicator has improved or deteriorated over time.</p> <p>Source: Te Puni Kōkiri, 2007a</p>	



Overall, the indicators show improvements in Māori health, income, work and involvement in community institutions. However, as shown in Table 2, areas of concern or requiring close monitoring include:

- *Proportion of Māori school leavers and Māori participation in tertiary education;*  
There has been progress at certain levels of education for Māori. Māori participation rates in tertiary education continue to exceed those of other groups (Ministry of Education, 2007). Māori women outnumber Māori men at post graduate level by more than two to one (Ministry of Education, 2007a).
- *Proportion of Māori able to speak Te Reo Māori since the 1996 census.*  
Although the Census figures do not show a marked increase, Te Puni Kōkiri commissioned in 2006 the second survey on the health of the Māori language. One of the key findings of this survey is that there has been an increase in the proportion of Māori adults with a degree of speaking proficiency in the Māori language from 42 percent in 2001 to 51 percent in 2006 (Te Puni Kōkiri, 2007c).<sup>9</sup>
- *Māori housing tenure*  
Housing census data (Statistics New Zealand, 2001) shows that over the 1991-2001 period, there has been a significant decline in the proportion of Māori living in houses owned with a mortgage. There has also been a corresponding significant increase in the proportion of Māori living in rented households.

There has been an increase in the proportion of Māori adults with a degree of speaking proficiency in the Māori language

### *Māori asset base is growing*

An estimate of the Māori asset base was made in December 2003 based on 2001 customized data from Statistics New Zealand's Annual Enterprise Survey (Statistics New Zealand, 2005b) and the 2001 Census of Population and Dwellings. It showed that the Māori asset base was estimated to be \$9 billion or roughly around 1.16% of the reported value of the New Zealand business sector in 2001.

Since then, a number of changes in Māori participation in the economic system have occurred. For instance, Treaty settlements have added to the asset base and there has been an increase in the number of Māori employers and self-employed individuals.

Māori asset base has increased from \$9 billion to \$16 billion, contributing to 1.5 percent of the value of the New Zealand business sector

Te Puni Kōkiri has recently produced an updated estimate for the value of the Māori commercial asset base. It showed the Māori asset base was estimated to be \$16.5 billion as at 2005/06. This update is based on the 2005 Annual Enterprise Survey and the 2006 Census of Population and Dwellings. In 2005/06, the same methodology has been used as in the December 2003 update (with special consideration given to the recommendations made by Business Economic Research Limited (BERL) following the December 2003 update). Table 3 below provides a provisional update for the total Māori commercial asset base for 2005/06; it represents an increase of 83 percent compared with the situation in 2001. However, it still only represents 1.5 percent of the value of the New Zealand business sector in 2005/06, slightly better than the 1.2 percent in 2001.

9. Available on the attached CD ROM.

Table 3: Provisional Māori commercial information for 2005/06<sup>10</sup>

Asset	Asset Value (\$ million)
A. Māori Trusts	3,177
B. Māori Trustee land assets	725
C. Māori organisations	1,545
D. Iwi Treaty settlements*	188*
E. Māori Trust Boards	355
F. Māori businesses	10,460
<b>Total Assets</b>	<b>16,450</b>

\*Note: Excludes \$170 million each for Waikato-Tainui Raupatu settled in 1994/95, Ngāi Tahu settled in 1996/97 and Fisheries settled in 1992/93. These are incorporated in the net assets under Māori organisations.

Māori culture is unique, treasured and increasingly valued as part of New Zealand culture

### *Māori culture and identity is strong*

Māori culture is unique, treasured and increasingly valued as part of New Zealand culture. According to Census 2006, there has been a significant increase in awareness about iwi affiliations (84 percent of Māori know their iwi). Technology has enabled increased access to information about whakapapa and iwi through the Internet and services such as Tūhono. There are around 1000 marae across New Zealand, which continue to be focal points for Māori communities (Te Puni Kōkiri, 1998).

Māori have a positive attitude towards the Māori language with willingness to share and progress the knowledge of the Māori language and culture with all New Zealanders (Te Puni Kōkiri, 2006a). There has been a major shift in the age profile of the Māori speaking population, from a predominantly elderly population to a new generation of young people with high levels of Māori language skills. The number of young Māori between 15 and 24 years with a high proficiency in the Māori language has more than doubled from 2001 to 2006 (Te Puni Kōkiri 2007c).<sup>11</sup>

Kapa Haka remains the most popular Māori performing art, in terms of participation and spectators, and through wānanga, a pool of kaikaranga, kaiwhakairo and other expert practitioners has developed. However, there is also a growing market for contemporary Māori art. Māori participation in sport is an important contributor to both cultural connections and social outcomes.

10. Details on how these figures have been arrived at can be found on the CD ROM on "Māori commercial asset base, Te Puni Kōkiri, June 2007".

11. Available on the attached CD ROM.



PREPARING FOR THE FUTURE

## PREPARING FOR THE FUTURE

This section systematically explores greater participation of Māori in the future economy. It builds on the groundwork laid in the previous sections of this report. It takes into account the connection between the present position of Māori, the key future drivers of change in the economy and their impact on Māori.

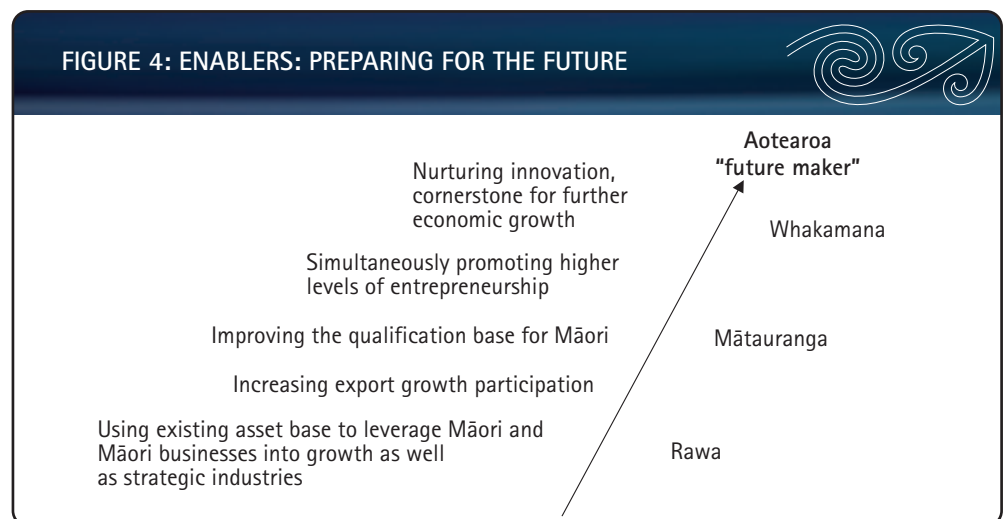
To identify key areas for greater Māori participation in the future economy, Te Puni Kōkiri considered key enablers that are fundamental to Māori achieving improved quality-of-life and realising their potential. These are:

- Rawa – development and use of resources
- Mātauranga – building of knowledge and skills
- Whakamana – strengthening of leadership and decision-making.

**From the research it is evident that future economic growth and development should be directed at increasing Māori share of the economy, growing and diversifying of the asset base and broadening of economic activities for Māori.**

These considerations lead to the identification of five key areas for greater Māori participation in the future economy: these key areas are shown in Figure 4 and each of the key areas is discussed in more detail below. Together they contribute to building capacity in order to make the future scenario "Aotearoa: Future Maker" a reality.

Māori businesses have changed over time, adjusting to commercial and social demands by creating higher levels of sophistication and participation in the economic system



### Leveraging Māori businesses into growth and strategic industries

As part of the investigation for this report Te Puni Kōkiri undertook case studies<sup>12</sup> of 30 successful Māori businesses (Te Puni Kōkiri, 2006).<sup>13</sup> The research results indicated that Māori businesses have changed over time, adjusting to commercial and social demands by creating higher levels of sophistication and participation in the economic system. A set of characteristics were identified that are commonly present in successful Māori businesses. The six characteristics in Figure 5 have been identified as particularly important in enabling Māori businesses to excel in the innovation economy of the future.

12. Mostly Māori Land Incorporations and Trusts, mainly formed under the Te Ture Whenua Māori Act 1993 or the Companies Act 1993

13. Available on the attached CD Rom

**Figure 5: Six characteristics contributing to success of current Māori businesses and important for success in a future innovation economy**

**1. *The majority of the entities tend to have low debt-equity ratios***

The majority of the businesses in the case studies had low debt-equity ratios. In business, debt is normally sufficiently covered by some kind of equity. Māori organisations have struggled to provide "sufficient" equity for various reasons such as the limited relationship between Māori and financial institutions, collective assets and the conservative nature of governance.

The initial research has shown that this trend is starting to change. There is a move towards sourcing funds from other resources, such as joint ventures and banks; this will lead to a change in the debt-equity ratios over the next few years. The anticipated changes may be small as the majority of the businesses will still rely on their own resources to finance growth.

**2. *The separation of commercial activities from non-commercial is seen as an important process***

The separation of commercial activities from non-commercial activities has emerged as an important process for doing business. A range of subsidiary companies have been established to enable partnerships and joint ventures to take advantage of opportunities and to share risk.

The establishment of subsidiary companies or overview trusts (for amalgamation) could play a major part in improving performance and for utilising poor performing or non-active assets/lands in the near future.

**3. *Movement to diversify assets***

There has been a strong move to diversify the asset base for Māori businesses. In less than 15 years Māori have acquired a diverse range of businesses, such as private hospitals, retirement villages, wine and horticultural distribution channels, thermal energy companies, telecommunication businesses, major tourism businesses and infrastructure.

This trend is set to continue with higher levels of diversification over time to ensure spreading of risks.

**4. *Strong focus on quadruple bottom line***

Māori businesses are increasingly comfortable in integrating commercial and cultural values in business vision statements. Māori businesses are focussing on balancing social, cultural, environmental and business goals.

Making a profit is an important aspect of the business environment and an extremely important element for the Māori businesses. However, more important is what is done with the profit and ensuring that benefits are transferred to future generations.

**5. *Value being Māori***

All participants in the case studies valued being Māori and most saw it as a positive difference. Tikanga is used at various levels, but the overriding principle is that tikanga guides decision making and that tikanga does not make the decisions.

The businesses stated that ownership matters and is non-tradable. Also, making a profit is important. However, more important is what you do with that profit.

**6. *Recruit best skilled people***

There is a notable trend to change the skill sets for governance and management. The majority of participants in the research indicated that they seek to recruit the best skilled people to ensure effective and efficient management of the organisation.

These characteristics are a clear indication of the ability of Māori businesses to diversify and adjust to the changing economic environment. The focus should be on creating the right information and access to opportunities for Māori businesses to explore and invest in new growth sectors as well as expanding and diversifying opportunities in current sectors.

Māori should explore investment into new sectors and diversify investments in existing sectors as previously discussed. To recap some of the opportunities to be investigated are:

- Investment in new technologies such as businesses opportunities in nano, bio, neuro and IT technologies
- Encouraging investment opportunities in strategic sectors within New Zealand which will include the energy, telecommunications and infrastructure sectors
- The development of high-value, Māori-branded products, connoting quality, tradition and healthy living, could open up new export markets or provide a competitive advantage over other suppliers
- Business opportunities may be created due to ageing of the general population and increased demands on service sectors to support older members of society
- Expanding opportunities for Māori to provide Māori-branded niche products and tourism experiences, of which the 2011 Rugby World Cup will be a great opportunity for Māori

### Increasing export growth participation

Increasing export growth participation should be focussed on developing an understanding of, and supply chains in, international markets, diversification of the current product range and the development of new products for export.

#### *Understanding the export market and development of supply chains*

Successfully moving into international markets depends on developing an in-depth understanding of the export market, establishing efficient supply chains and getting access to local channels to market.

Māori need to develop a better understanding of potential export markets. This should be done through research as well as linking with other businesses or potential businesses that are investigating or investing in these export markets. Also, Māori businesses should further develop an understanding of products that can be traded on the international markets, including new opportunities for niche products. Work around setting up of supply chains for existing products and the development of local channels in the export markets should also be a focus.

#### *Diversification of product range for export*

The concentration of Māori businesses in agriculture, forestry and fishing leads to supply of a huge range of relatively undifferentiated commodity products: there have been long-term downward trends in most of the agricultural commodity prices since the 1990's (FAO, 2005). Also, various externalities influence these markets, especially weather related shocks, production shocks, energy prices, investment in bio fuel capacity and future international policy developments, particularly in international trade. These factors cannot be controlled by a single country, even less a specific group such as Māori.

Half of all world trade growth comes from new product development

The focus for future economic development for Māori should be better utilisation of assets, as well as diversification of the asset base to ensure a more even spread of risk across the investment portfolio. This could be achieved through investments in new export markets as well as new product ranges either from the existing product base or entirely new products.

### *Development of new products for export market*

Half of all world trade growth comes from new products (NZIER, 2006). There needs to be a focus on creating an enabling environment to allow Māori to develop new products and services that meet world demand. At the same time work is needed to address the challenge of moving beyond the "farm gate" and up the value chain especially for agricultural products.

The development of new products will be a great opportunity for Māori in particular niche markets. This could include products which incorporate Māori culture to reflect a range of positive values including cultural, environmental, health, tradition, animal welfare etc.

Another area will be in the convergent technologies as the "tyranny of distance" in these weightless technologies is irrelevant. Examples include the new generation of internet companies growing at exponential rates. Over the past two years, there has been an explosion of internet companies, including social networking websites and forums for user-created content. For example TradeMe is the largest internet auction website operating in New Zealand. The entrepreneur Sam Morgan founded the site in 1999, and after many years of rapid growth sold it to Fairfax in 2006 for NZ\$700 million. A global example is YouTube, the online video site where users upload their own videos. YouTube has nearly 20 million unique users per month, and it only started in February 2005 (Pricewaterhouse Coopers, 2007). These industries have no "old boys" clubs and are fluid, with only limited barriers to entry.

### **Improving the qualification base for Māori**

There is a need to create a learning environment that will ensure that Māori can take full advantage of the opportunities created by - and needed for - the innovation economy. It will be necessary to ensure that Māori develop a strong base of literacy and numeracy skills. Building on these, skill education should also focus on:

- Increased Māori participation in branding agricultural products and developing new production methods
- New environmental technologies (e.g. water-related)
- Improved production methods (e.g. cleaner agricultural production)
- Increased level of understanding of use and protection of Intellectual Property
- Subject fields which we anticipate will grow in the future such as biotechnology and nanotechnology

### **Promoting higher levels of entrepreneurship**

Māori economic performance will be enhanced by promoting higher levels of entrepreneurship. A particular focus is developing a new breed of skilled entrepreneurial young Māori with the qualities required to increase Māori share in the innovation economy. Entrepreneurship is increasingly important for sustainable Māori development at all levels of the community (Hui Tuakana, 2005).

The development of new products will be a great opportunity for Māori in particular niche markets

It will be necessary to ensure that Māori develop a strong base of literacy and numeracy skills

The number of Māori career entrepreneurs<sup>14</sup> increased from 17,094 in 2001 to 21,069 in 2006 (Statistics New Zealand, 2007) – a 23 percent increase in entrepreneurs. Support for existing Māori entrepreneurs may encourage more Māori to get involved in new businesses in future.

The Hui Taumata 2005 addressed the question of how to grow a new generation of entrepreneurs over the next 20 years. Some of the key points agreed on to promote higher levels of entrepreneurship were (Te Aho, 2005):

- Creating a culture of expectation – everyone is clear on what is expected of them and what is expected of others
- Encouraging young Māori to aspire to excellence
- Publicising successful Māori businesses and entrepreneurs to build a climate of success
- Providing mentors who are exceptional role models
- Including professional development in the educational system within schools

Research has shown that the creation of investment companies, the provision of low-interest loans, and the availability of credit guarantee schemes for small business financing have all contributed to the establishment of new businesses (Zapalska, 2003). The focus should be on creating assistance programs and networks for developing entrepreneurship. They can enhance the business capability of entrepreneurs, provide support, motivate, give examples and role models, provide expert opinion, counseling and access to opportunities, and provide information and resources.

In summary programmes should be focused on:

- Delivering good business information
- Improving business capability and management skills
- Encouraging growth in innovation and technological industries
- Delivering information to help Māori businesses to enter new markets and increase their businesses' presence within existing markets
- Management training to help Māori businesses raise the quality of their management

### Nurturing innovation

It is difficult to get a sense of the level of innovation in Māori enterprises. One indicator is the level of public funding (primarily through the Foundation for Research Science and Technology) for Māori-centred (kaupapa Māori) research contracts. This increased from \$2.8 million in 1999 to \$20 million in 2004.

The innovation challenge for Māori is the same as for other New Zealand businesses – to identify, develop and then commercialise new products and approaches (The Treasury, 2005). Ideas are not the end result and should be supported by marketing, commercialisation and access to finance. Māori businesses need to build relationships with research entities to ensure that commercialisation of new innovations are realised from an early stage in the innovation process.

The innovation challenge for Māori is the same as for other New Zealand businesses – to identify, develop and then commercialise new products and approaches

14. Defined as Māori self-employed and without employees and Māori employers





CONCLUSIONS

## CONCLUSIONS

Succeeding in the fast changing economic environment is going to be crucial for Māori moving into the future. The reality is that Māori represent only 0.009 percent of the world's population. Māori are not in a position to substantially influence global forces but rather are influenced significantly by global forces.

Māori should be able to balance economic activities between current investments and future opportunities. The current concentration of Māori in agriculture, forestry and fishing supplies a huge range of relatively undifferentiated commodity products, with general long-term downward price trends since the 1990s. Various externalities influence these markets especially weather related shocks, production shocks, energy prices, investment in bio fuel capacity and future international policy developments (especially with respect to international trade). These factors cannot be controlled by a single country, even less a specific group such as Māori.

The focus for future economic growth will be better utilisation of assets as well as diversification of the asset base to ensure a more even spread of risk across the portfolio of Māori assets. Innovation and adoption of new technologies will give Māori the tools to participate in new sectors as well as finding ways to remain profitable in existing sectors.

The success of future economic development will be based on Māori having the capacity to lead, influence and make positive decisions for themselves to ensure economic growth. This will present many opportunities that should be supported by increased investment in technology and a closer appreciation of the markets. To ensure the realisation of these opportunities Māori will also need the skills to make it happen. Life-long education and focused research and development will provide Māori with the skills and knowledge to ensure that the Māori future is "Aotearoa – Future Maker".

The purpose of this report was to establish a greater level of awareness and to fuel debate about the future. Looking forward we are optimistic that we can, through our investment and policy work at Te Puni Kōkiri, establish an enabling environment for ensuring that Māori are a Future Maker.

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TE PUNI KŌKIRI FUTURES TEAM: Researchers from left to right, Phil Coghini, Vij Kooyela, Hillmare Schulzé, with CEO Leith Comer (centre) and Deputy Secretary, Policy Kim Ngarimu (far right).

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