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Report 6

2058

Four Possible  
Futures for  
New Zealand  
in 2058

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<b>About the Institute</b>	The McGuinness Institute is an independently funded non-partisan think tank. The main work programme of the Institute is <i>Project 2058</i> . The strategic aim of this project is to promote integrated long-term thinking, leadership and capacity-building so that New Zealand can effectively seek and create opportunities and explore and manage risks over the next 50 years. It is hoped that <i>Project 2058</i> will help develop dialogue among government ministers, policy analysts and members of the public about alternative strategies for the future of New Zealand.
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# Contents

<b>Preface</b>	<b>1</b>
<b>Executive Summary</b>	<b>2</b>
<b>1. Purpose</b>	<b>6</b>
1.1 McGuinness Institute	8
<b>2. Methodology</b>	<b>9</b>
2.1 Terminology	9
2.2 Limitations	10
2.3 Method of Analysis	10
2.4 Method of Developing Scenarios	11
<b>3. The Four Scenarios</b>	<b>14</b>
3.1 Scenario One: Power to the People	14
3.2 Scenario Two: An Island Paradise – but Back to the Jungle	20
3.3 Scenario Three: Missed the Global Bus	28
3.4 Scenario Four: All Over Rover	37
<b>4. Discussion</b>	<b>44</b>
4.1 Four Possible Futures	44
4.2 Which Future Is Likely to Prevail?	45
4.3 What Should We Be Looking For?	47
4.4 How Can We Shape Our Future?	47
4.5 Implications	48
<b>Abbreviations</b>	<b>50</b>
<b>References</b>	<b>72</b>

## Tables

Table 1	The Four Scenarios Matrix	3
Table 2	The Essence of the Four Scenarios	4
Table 3	The Four Scenarios Matrix	6
Table 4	Terminology Within the Report	9
Table 5	The Essence of the Four Scenarios	45
Table 6	The Four Scenarios Matrix	56
Table 7	Global Drivers and Scenarios – New Zealand	57
Table 8	Global Drivers and Scenarios – World	57

## Figures

Figure 1	Global Drivers of Change	2
Figure 2	The Cone: Exploring the Future from 2008 to 2058	7
Figure 3	The Four Stages in the Preparation of the Report	11
Figure 4	The 21 Global Drivers of Change	13
Figure 5	The Workshop: The Seven Stages	55
Figure 6	The Results of a Brainstorm for Scenario Four	56
Figure 7	Hayley Leading a Discussion on Scenario Two	57
Figure 8	Dave Completing a Brain Dump	58
Figure 9	Participants at the Workshop	59

## Appendices

Appendix 1	The 75 Baseline Drivers	51
Appendix 2	April Workshop – The Method	54
Appendix 3	April Workshop – The Team	59
Appendix 4	April Workshop – A Visual Representation of Each of the Scenarios	61
Appendix 5	Change Agents for Each Scenario	63

## Preface

True, why make a fuss over something that's done anyway? I was never one to obsess about the past. Too much to do in the future!

Edmund Hillary, 1919–2008

(Reacting to the destruction of one of his jet boats by friend Jim Wilson)

This report forms a crucial step in *Project 2058* by exploring several possible futures, using four scenarios to see what New Zealand may look like in 50 years' time. We are not looking for probable futures or preferred futures, but instead possible scenarios are described in order to understand what the future could look like. In much the same way that an explorer climbs four mountains to look into and understand the terrain of the valleys beyond each, this report is the vantage point upon which we can stand in order to look at four different futures and visualise the scope of the territory ahead.

Scenarios are explorative, not predictive. They help clarify the linkages and logic inherent in each of the possible futures, but remain stories at heart. Starting in the present, like fiction, scenarios have a plot (in our case, extremes of good and bad ethics and management), a number of characters (the world and New Zealand) and a time frame (50 years from today, being the year 2058). What makes scenarios unique is the integrity and authenticity with which they must move forward in time. Thus we created four plausible timelines to support each of the four scenarios.

This process has enabled us to sharpen *Project 2058's* methodology (see version three) and to focus our research on critical gaps in our current knowledge. While our earlier reports focused on research (Part I), this report fits within the scenario work programme (Part II). Parts I and II cumulate in such a way that they inform our final objective, which is the design of a long-term strategy for New Zealand (Part III).

Critically, this future thinking not only helps to insulate us from future shock, but empowers us to actively and positively shape the journey ahead, seizing opportunities from challenges and participating in the creation of a desired future. Hence, the purpose of these four scenarios is to help develop a National Sustainable Development Strategy to enable governments to be proactive, rather than reactive, to the current and future challenges of our world. We are committed to *Project 2058* because, like Sir Edmund Hillary, we believe there is much to do to address the challenges ahead.

Much of the thinking underpinning this report was gained from attending the World Futures Conference in Washington DC in July 2008. My special thanks therefore go to the organisers, the speakers and attendees, all of whom shared their thoughts and ideas so generously. Thank you also to the excellent team at the McGuinness Institute, who built upon those ideas and turned them into stories about New Zealand's future. Throughout the coming months, we welcome your feedback and comments on this report and the scenario-development process.

**Wendy McGuinness**

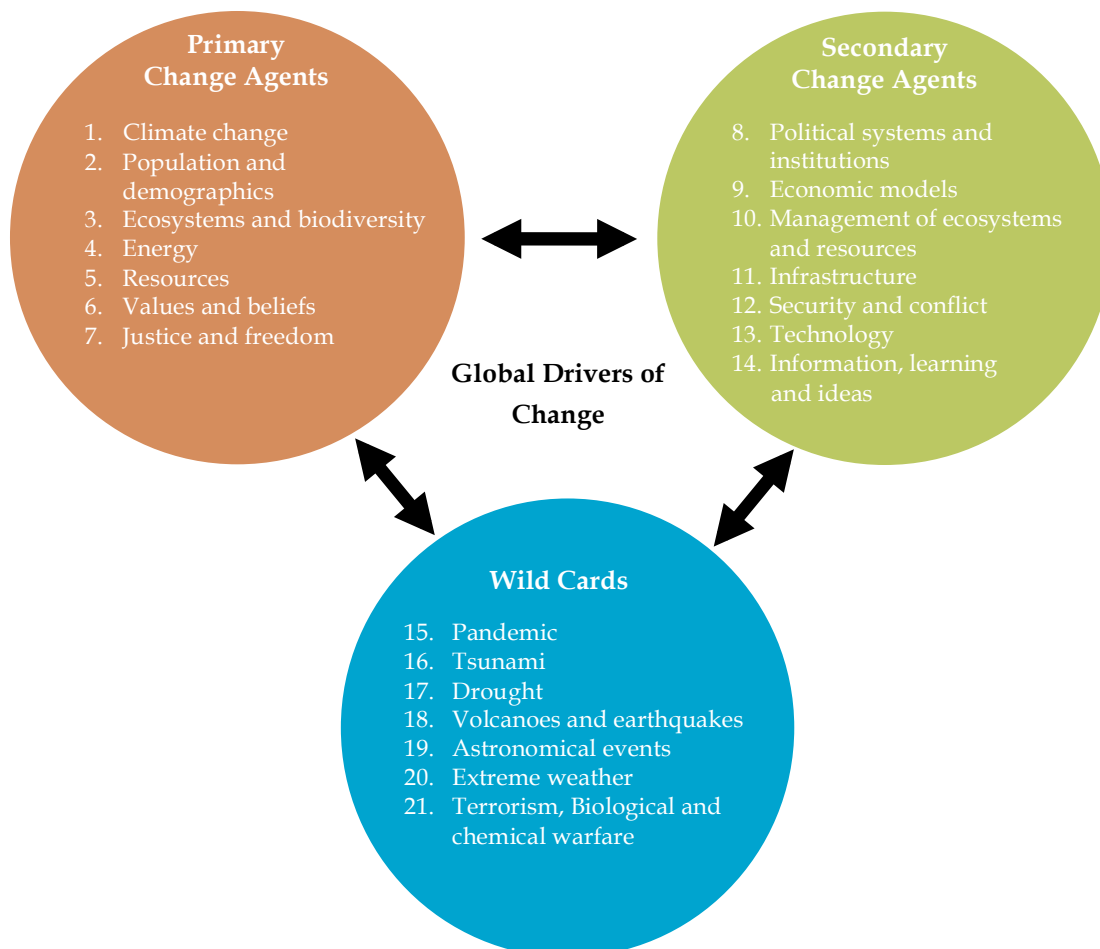
Chief Executive

## Executive Summary

This paper is the first report of Part II: Scenario Development, of the McGuinness Institute’s *Project 2058*. The aim of this report is to explore four possible futures for New Zealand in the year 2058, in order to help inform and develop a National Sustainable Development Strategy for this country.

This report builds on the global drivers identified in the research phase of the project (Part I), which will be discussed in more detail in an upcoming report, currently titled *The State of New Zealand’s Future* (in press). These include 21 global drivers of change, including 14 ‘change agents’ and seven ‘wild cards’. Although change agents and wild cards do feed off each other, we believe that there exist primary change agents that tend to initiate a crisis or a chain of events. In contrast, we identified a second group that often produce change by responding to a primary change agent or wild card. We have called these secondary change agents because government, civil society and/or individuals, through careful consideration, might solve a crisis, minimise harm and/or improve long-term outcomes. However, the converse is equally true; reactive policy initiatives may do more harm than good. The inter-relationship between these sets of three global drivers is reflected in Figure 1.

**Figure 1 Global Drivers of Change**



### The Method

In order to explore the ways in which New Zealand could change between 2008 and 2058, the team identified two overarching tensions: (i) how New Zealand manages itself, and (ii) how the world manages itself, as represented in the vertical and horizontal shaded areas of Table 1 below. This approach resulted in Scenarios One to Four. Each of these four futures is examined using the global drivers of change identified in Figure 1. Applying a combination of insight and foresight, the team then explored the events that might occur within each scenario.

**Table 1 The Four Scenarios Matrix**

	The world does manage its strengths, weaknesses, opportunities and threats	The world does not manage its strengths, weaknesses opportunities and threats
New Zealand does manage its strengths, weaknesses, opportunities and threats	<b>Scenario 1:</b> <b>Power to the People</b> New Zealand ✓ World ✓	<b>Scenario 2:</b> <b>An Island Paradise</b> New Zealand ✓ World ✗
New Zealand does not manage its strengths, weaknesses, opportunities and threats	<b>Scenario 3:</b> <b>Missed the Global Bus</b> New Zealand ✗ World ✓	<b>Scenario 4:</b> <b>All Over Rover</b> New Zealand ✗ World ✗

**What we found**

The essence of each scenario is captured in Table 2 below. Section 3 provides a detailed description of the journey forward towards 2058, while Section 4 considers what can be learnt from the scenarios, and examines the strategic implications for New Zealand.

**Table 2 The Essence of the Four Scenarios**

	The world does manage its strengths, weaknesses, opportunities and threats	The world does not manage its strengths, weaknesses, opportunities and threats
New Zealand does manage its strengths, weaknesses, opportunities and threats	<p><b>Scenario 1: Power to the People</b>                      Concepts such as global unity and balance are no longer myths. Intolerance is a thing of the past, as diverse cultures coexist peacefully, all partaking in one global community. Sustainability, once a determined lifestyle choice, is now the norm. The climate change and peak oil crises are under control as the world embraces innovative, sustainable technologies and systems. The New Zealand public is educated, diverse and informed, choosing to stay in New Zealand where infrastructure is of an excellent standard and the lifestyle is unmatched. The burning question for New Zealanders in 2058 is: How do we maintain peace and prosperity?</p>	<p><b>Scenario 2: An Island Paradise – but Back to the Jungle</b>                      Everyone wants a piece of what we have got, and despite our desirable lifestyle, there is increasing tension with the outside world that requires constant management. To stand up to this pressure, New Zealand has cultivated a resilient national identity and robust infrastructure, and has been among the first countries to make some tough decisions. There is particular pressure on our resources and immigration policy, and as we fend off those countries once considered to be superpowers, we look for allies in countries that are similarly positioned. The burning question for New Zealanders in 2058 is: How do we protect what we have?</p>
New Zealand does not manage its strengths, weaknesses, opportunities and threats	<p><b>Scenario 3: Missed the Global Bus</b>                      Our isolation is more pronounced than ever, as we lag behind politically, economically and in the management of our resources and environment. To make up for these shortfalls, our government grasps at unsuccessful ‘quick fixes’, fuelling rather than rectifying the nation’s downward spiral. Corruption, diminished cultural identity, an increase in slums and local terrorism have forced many educated New Zealanders elsewhere. The burning questions for New Zealanders in 2058 are: What happened? What can we do?</p>	<p><b>Scenario 4: All Over Rover</b>                      It is the end of the world as we know it. As each country embarks on a policy that is characterised by short-term goals designed to meet the self-interest of a few, the only international interaction is conflict-based and is fuelled by fear, an arms race and nuclear proliferation. As climate change, resource shortages, biodiversity depletion, population growth and inequality escalate, these global problems spiral out of control. The burning question for New Zealanders in 2058 is: Do we have another 50 years?</p>

**What this means**

Given that all four futures are possible, it is apparent that there are places where New Zealand does not want to end up. Scenario Four would deliver the probable end of civilisation as we know it within one hundred years; Scenario Three would likely deliver the end of our autonomy, and the country would be unrecognisable to New Zealanders of today, and Scenario Two would deliver us an isolationist and vulnerable nation in a hostile world. What becomes clear is that New Zealand has a very strong vested interest in ensuring that the world does manage itself well – because if it does not, this country cannot survive in the long term. The better the state of the world, the better the state of New Zealand, but the converse is also true.



The implications for 2009 and beyond mean New Zealand must try to find ways to support multilateral decision-making, rather than watching a few powerful countries making all of the strategic decisions. Small countries must *work hard* to make international multilateral decision-making organisations effective and, where necessary, create new organisations to fill the gaps.

Our scenario exercise makes it clear that New Zealand needs to:

1. Be seen to deliver on all of our international agreements and legal obligations under the United Nations and international law.
2. Design and apply indicators that measure progress in a comprehensive and integrated manner.
3. Identify, investigate, reflect and consider the implications of all available strategic options in an open and transparent manner. Such an approach will not only deliver the best decisions, but just as importantly, gain the commitment of New Zealanders to actively deliver on those decisions.
4. Focus more on what is 'important' rather than what is 'urgent'.
5. Respond appropriately, rather than over-react, under-react or not react at all. In periods of crisis, it will be those who understand not only the change agents, but how they interact over time, who will be able to deliver positive change.
6. Support and engage in thinking long-term about the future.
7. Develop a dynamic, creative and effective strategy for sustainable development that not only propels this country into an exceptional position internationally, but does so in such a way that other countries emulate our practices.

In other words, New Zealand must lead by example.

# 1. Purpose

The aim of this report is to:

explore four possible futures for New Zealand in the year 2058, in order to help inform and develop a National Sustainable Development Strategy for New Zealand.

The context for each of the four futures was set in early 2007 with the development of the scenario methodology matrix (Table 3). The McGuinness Institute team decided that the potential landscape would best be assessed by exploring the future in terms of two continuums.<sup>1</sup> In order to explore the ways in which New Zealand could evolve from 2008 to 2058, we identified two overarching tensions: (i) how New Zealand manages itself, and (ii) how the world manages itself. These tensions can be seen in the vertical and horizontal dark navy shaded areas of Table 3 below.

**Table 3 The Four Scenarios Matrix**

	The world does manage its strengths, weaknesses, opportunities and threats	The world does not manage its strengths, weaknesses opportunities and threats
New Zealand does manage its strengths, weaknesses, opportunities and threats	<b>Scenario 1:</b> <b>Power to the People</b> New Zealand ✓ World ✓	<b>Scenario 2:</b> <b>An Island Paradise</b> New Zealand ✓ World ✗
New Zealand does not manage its strengths, weaknesses, opportunities and threats	<b>Scenario 3:</b> <b>Missed the Global Bus</b> New Zealand ✗ World ✓	<b>Scenario 4:</b> <b>All Over Rover</b> New Zealand ✗ World ✗

This method creates four different and opposing futures (the inner boxes) which become Scenarios One to Four. Each of these four futures was examined using the global drivers of change identified in Figure 4 (p. 13). Using a combination of insight and foresight, the team then explored the events that might occur within each scenario, resulting in the timelines (see Section 3).<sup>2</sup>

<sup>1</sup> For more information on this or any other McGuinness Institute projects, you can view our website at [www.mcguinnessinstitute.org](http://www.mcguinnessinstitute.org) or alternatively email us at [enquiries@mcguinnessinstitute.org](mailto:enquiries@mcguinnessinstitute.org)

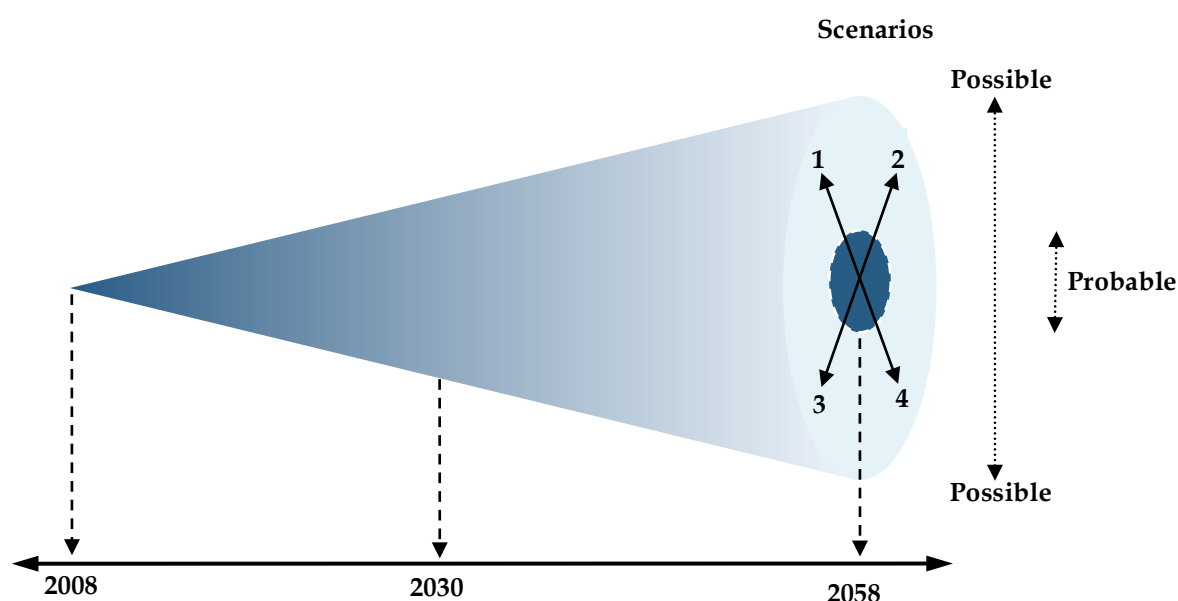
<sup>2</sup> Insight is about analysing current trends in order to find a deeper meaning, whereas foresight uses scenarios and critical thinking to consider what is coming next in order to prepare wisely for the future.

The aim of this report is not to be predictive, but to be explorative. The exercise is not merely to explore four possible futures, but to understand the terrain that New Zealand could possibly enter in the next 50 years. This information will be used to inform the type of strategy best suited for New Zealand in the long term.

This goal is illustrated by the cone shown in Figure 2 below. The shading represents the degree of uncertainty and the fact that as we move away from 2008, uncertainty is likely to increase.<sup>3</sup>

**Figure 2 The Cone: Exploring the Future from 2008 to 2058**

Adapted from Ilbury and Sunter (2001: 53)



In summary, the purpose of this report is to explore and gain an understanding of the dynamics of the terrain for New Zealanders in 2058 – that is, the nature of the outer circle represented in Figure 2. Furthermore, the purpose of the report is not to consider the probable future (the dark inner circle), but to explore the area of possible futures (the light-blue area).

This report describes our understanding of the four endpoints. The methodology explains how we reached these four endpoints (see Section 2); and the four resulting futures are then described in Section 3. Finally, a central aim of this work, considering the implications for New Zealand, is assessed in Section 4.

<sup>3</sup> There is, however, an alternative view that argues it is actually easier to predict the future in the very long term, rather than the short term, as all change levels out over time.

## 1.1 McGuinness Institute

The McGuinness Institute is an independent think tank specialising in research and policy analysis. The strategic aim of *Project 2058* is to:

promote integrated long-term thinking, leadership and capacity-building so that New Zealand can effectively seek and create opportunities and explore and manage risks over the next 50 years. (McGuinness Institute, 2009)

In order to reach our objective we have broken *Project 2058* down into three parts; this is Report 6 of Part II. For an explanation of the *Project 2058* methodology and to monitor our progress, please refer to our website.

The McGuinness Institute is looking to describe what New Zealand might look like in 2058 by exploring the wide range of 'possible' futures, using the four scenarios described in Table 3 (p. 6). These four futures all represent very real 'possibilities', and attempt to illustrate some of the more extreme paths we may take so that a wide 'field of view' can be captured.

The McGuinness Institute considers that the best way to plan for the future with integrity is through the use of a National Sustainable Development Strategy (NSDS), which will establish robust mechanisms through which government can help society progress towards sustainability. Earlier work by the McGuinness Institute has indicated that New Zealand is well behind on its international obligations to develop and implement an NSDS (McGuinness Institute, 2007).

The creation of an NSDS requires consideration of where New Zealanders would like to be as a country and what challenges lie ahead. This is often complex and requires large-scale change, much of which may be beyond our control. It involves planning for a desired future, while acknowledging our weaknesses and looking for solutions to the problems we envisage will be encountered along the way. With this in mind, this report is the next step towards *Project 2058*'s goal of creating an NSDS for New Zealand, and an integral component of *Project 2058*.

## 2. Methodology

The findings of this report will inform Part III of *Project 2058*. For further information on our methodology for *Project 2058*, please refer to our recently updated *Project 2058 Methodology: Version three*. This section provides an overview of the processes followed in preparing this report, including a brief discussion of the pre-workshop, workshop and post-workshop activities.

### 2.1 Terminology

In order to avoid ambiguity, Table 4 describes the terms used within this report.

**Table 4 Terminology Within the Report**

Term	Description
Baseline drivers (75)	Our initial list included 75 <i>baseline drivers</i> , being a list of factors likely to change the future. This was too many to be useful in the development phase of each scenario; consequently the list of 75 was condensed down to 21 <i>global drivers of change</i> , which were then broken down into 14 <i>change agents</i> and seven <i>wild cards</i> . All 75 <i>baseline drivers</i> are listed in Appendix 1.
Global drivers of change (21)	This is the overarching term used to describe the sum of the 14 <i>change agents</i> and seven <i>wild cards</i> .
Change agents (14)	<i>Change agents</i> are high-level groupings of <i>baseline drivers</i> . We identified 14 <i>change agents</i> , which can be broken down further into primary and secondary <i>change agents</i> .
Primary change agents (7)	Seven of the 14 <i>change agents</i> are primary <i>change agents</i> (i.e. where the first change emanates), therefore signifying the primary challenges that the world must deal with. Importantly, how we deal with these <i>change agents</i> can further affect change – hence the remaining seven <i>change agents</i> are called <i>secondary change agents</i> .
Secondary change agents (7)	This is the second group of seven of the 14 <i>change agents</i> . These are the tools, methods and systems through which we can engage both with the natural world and with society. The challenge here is to use these tools effectively, rather than over-react, under-react or not react at all.
Wild cards (7)	The <i>wild cards</i> are unpredictable events that happen quickly and unexpectedly, but when they do happen they have a major impact. Although preventive (mitigation) and responsive (adaptive) strategies can be put in place to prevent widespread negative effects (such as earthquake preparedness), we still have very little control over when the <i>wild card</i> will happen. Tsunamis, pandemics and terrorist attacks are three examples. In contrast, in this report, economic recessions and depressions are arguably seen more as trends, and are included as part of a <i>change agent</i> rather than a true <i>wild card</i> .

### 2.2 Limitations

The authors have backgrounds in specific areas, such as climate change and genetic modification, thus the scenarios must contain certain values and biases. We therefore acknowledge that in some instances, the scenarios do echo our personal views.

In addition, we accept that the above methodology is experimental and therefore may prove over time to be incomplete or inaccurate. We therefore hope that others will learn from this work and make further improvements to future methodologies.

The dates assigned in the various scenarios are arbitrary, as the timing of events in the future is understandably dependent on numerous factors, including the speed and way in which other events play out, how humanity is able to take action, and of course the role of the many 'unknown unknowns'. In addition, the pace of change is unclear; for example, what we consider could happen in 50 years might in fact occur in 20 years – or less.

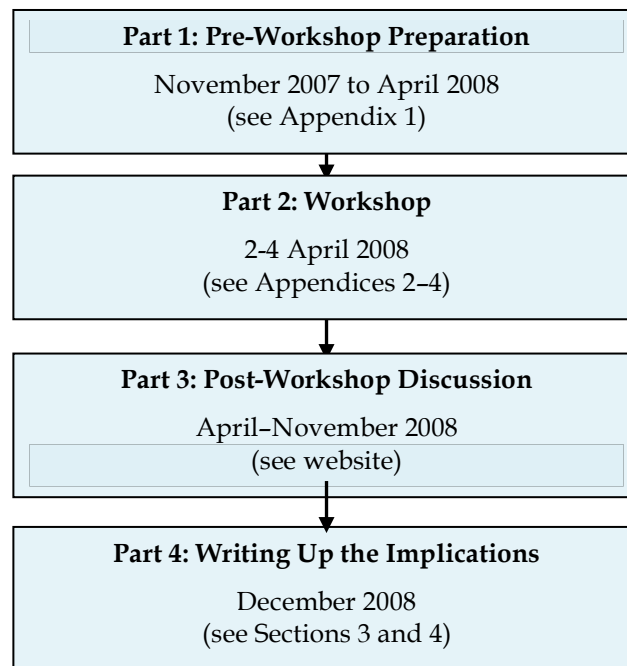
### 2.3 Method of Analysis

The four stages in the process (as outlined in Figure 3) included a mini-workshop held in late March 2008, a three-day workshop held in April 2008, and on-going discussion and research that continued throughout the remainder of 2008. This culminated in the writing of this report.

In early 2008, the concept of the 'global drivers of change' was born. These were further refined throughout the year. The final list, as at December 2008, is contained in Appendix 1.

Appendices 2–4 provide a more detailed explanation of what happened at the workshop, and Appendix 5 explores the links between the 14 global drivers and the four scenarios. This method allowed the authors to continually revert back to the global drivers to determine whether any gaps existed in the scenario timelines. This exercise was so useful that we have attached our final draft as Appendix 5.

Figure 3 The Four Stages in the Preparation of the Report



## 2.4 Method of Developing Scenarios

Scenarios are explorative rather than predictive, in that they explore a ‘landscape of possibilities’ rather than set out to make a series of specific predictions. Furthermore, a successful scenario must have integrity and be written in such a way as to create a world that is believable.

### Part 1: Pre-workshop preparation

The method for developing the scenarios was to first focus on gaining clarity over the baseline drivers of change likely to influence New Zealand’s future, and then to create stories based on those drivers. By early March our list of baseline drivers had risen to 75. This was clearly too many to be useful, consequently these 75 baseline drivers were grouped under 21 broad headings, which we have called ‘global drivers of change’.

Of the 21 broad headings, seven were clearly wild cards and identified separately, as they tend to operate suddenly and, to an extent, in isolation. We also found the remaining 14, which we have called ‘change agents’, could be further divided into primary and secondary change agents.

## 2. Methodology

Primary change agents signify the primary challenges that the world must deal with. They tend to be thrust upon us rather than being easily controlled. In contrast, secondary change agents are the tools, methods and systems through which we can engage both with the natural world and with society. The challenge here is to use these tools, methods and systems effectively, rather than over-react, under-react or not react at all. Importantly, our response to the primary change agents can create further negative effects; therefore good management necessitates wise counsel. An example of this can be seen in the contrast between the US government's response to the Bay of Pigs incident in 1961 and the Missile Crisis in 1962.

Appendix 1 lists the relationships between each of the 75 baseline drivers and the change agents and wild cards. The relationships between the two types of change agents and the wild cards are further reflected in Figure 4 over.<sup>4</sup>

### **Part 2-4: Workshop, post-workshop and write-up**

The change agents and the occasional wild card became the building blocks around which the scenarios were constructed. This involved applying two methods:

1. Brainstorming ideas in a large group in order to (a) develop a story from the perspective of someone living in 2058, who is reflecting on what has happened in the last 50 years, and (b) describe how each change agent might *play out* within each scenario, and
2. Working in small groups or in isolation, in order to prepare the chronological timeline of events from 2008 to 2058.

The first method allowed for a collaborative, creative process that investigated how each of the change agents might influence each scenario (see Appendix 5).

The second method was aimed at making the stories robust. Through a number of individual reviews and group discussions, these scenarios were further refined and strengthened.<sup>5</sup> The results are the timelines for each scenario found in the following section.

We discuss each of the global drivers from Figure 4 in the upcoming report currently titled *The State of New Zealand's Future* (in press).

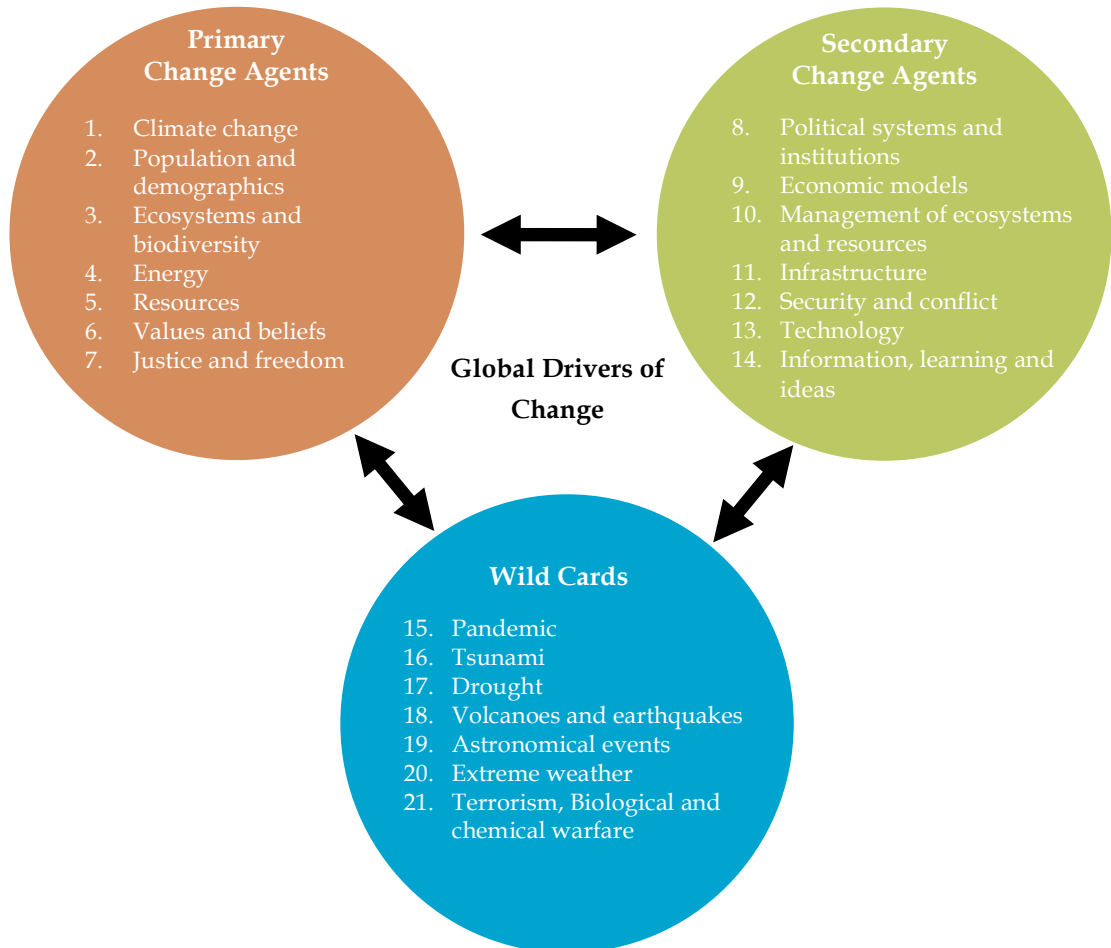
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<sup>4</sup> Figure 4 is the result of research that is contained in an upcoming report, currently titled *The State of New Zealand's Future* (in press), while this report discusses the scenarios themselves.

<sup>5</sup> The four draft scenario stories written at the end of the April 2008 workshop were the first attempts at creating the four possible futures. These were extensively reworked over the following six months and evolved into the timelines found in Section 3.



Figure 4 The 21 Global Drivers of Change



## 3. The Four Scenarios

Using the change agents and the occasional wild card, all four possible futures are discussed in detail below. Each future is introduced with a brief summary, followed by a boxed text of keywords, and concludes with a timeline of possible events from 2008 to 2058. Importantly, the timelines are used to explore how the tensions might play out, in order to reflect on the possible dynamics and interactions of the change agents over time. For this reason they do not contain a predetermined list of positive (or negative) decisions by New Zealand (or the world), but a mix of all tensions, where one set of tensions tends to dominate over time. For this reason, the events in each timeline need to be read together, as in isolation their meaning would be lost.

Appendix 5 is a useful reference document for those interested in a more detailed understanding of how the global drivers impact on the timelines. The implications are discussed in Section 4.

### 3.1 Scenario One: Power to the People

An unheralded spirit of global cooperation, and bold business, technological and social innovation have been the defining features of a remarkable 50-year period of history. Humanity has succeeded in ‘rising to the challenge’, and created a society and economy more appropriately aligned with the natural systems of the planet, while allowing for individual creativity and freedom to flourish.

The turning point came early, as visionary leadership gave clear signals to businesses and countries around the world. This inspired the confidence and cooperation needed for an era of innovation and transformation to a high-tech, low-carbon economy, confronting the ominous challenge of climate change and the need for a renewable energy system. Crucially, substantial changes to the way we measure progress – more inclusive of other vital values and lifestyle choices – were made.

It has not all been plain sailing, and the world has ‘creaked and strained’ through some difficult times. On more than one occasion tensions, often based around resources, water and ecosystem services, have come close to creating devastating conflicts. However, strong international support for a multilateral system, determined in its pursuit of equity and justice, has kept these situations at bay.

<p><b>Scenario One: New Zealand ✓ The World ✓</b></p> <p><b>Global keywords:</b> Diffusion of ideas / Cooperation / Information / Innovations / Capital / Diplomacy / Interconnected / Fluid / Relational / Multilateral / Participative / Common language / Global balance</p> <p><b>New Zealand keywords:</b> Resilience / Global citizenship / Compromise / Adaptive / Equilibrium / Cooperation / Strong sustainability systems / Unity / Negotiation / Leadership</p>
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### 3.1.1 The journey from 2008 to 2058

Scenario One: New Zealand ✓ The World ✓	
2009	The Green New Deal: governments around the world respond to the converging crises of the credit, energy, and climate crunches with a commitment to sustainability and innovative economic reform. Seizing what is actually an opportunity, strong investment in renewable energy, infrastructure, and a bold shift in regulation and taxation towards sustainability is made. This heralds the first tentative steps into a new era of innovation and global cooperation. Business opportunities abound, given the clarity of direction and the soaring demand for green solutions.
2013	Global oil production peaks and economic hardship is felt around the globe, but the emerging explosion in renewable energy generation offers hope. Unfortunately, the cost of building renewable energy systems (the hardware) has risen rapidly, and the price of the fossil fuels needed to construct the hardware acts as a barrier. Those countries that invested when oil was cheap develop a strong economic advantage.
2015	<p>New Zealand becomes a republic and recognises Te Tiriti o Waitangi (the Treaty of Waitangi) as the founding document, and as such, the key document upon which the new constitution is written. As a result New Zealand builds a robust national identity based on equality and freedom of expression for all. A new flag cements the relationship between all New Zealanders.</p> <p>National eco-verification and genetic engineering (GE)-free standards are designed, seizing on market opportunities and reinforcing the national brand and emerging identity.</p>

### 3. The Four Scenarios

Scenario One: New Zealand ✓ The World ✓	
2017	United Nations (UN) conference ‘One Earth – Unity in the Energy-Climate Era’ is held in Islamabad. This is the pivotal moment in global society’s shift to embrace a sustainable future. Coordinated and cooperative agreements emerge, including a shift from the use of GDP to ISEW (Index of Sustainable Economic Welfare), <sup>6</sup> which captures far more externalities and other aspects crucial to holistic, ‘healthy’ growth and well-being than did GDP. Strong multilateral energy projects are committed to, and a realignment of values globally is achieved. These are aimed at a far more holistic approach to the future. Commitment is made to transform manufacturing into a ‘cradle-to-cradle’ process (a revolution in design where products are fully reused, becoming feedstocks for the next product, or nutrients for the natural world, effectively resulting in zero waste). Though conflict and tensions continue to surface with growing scarcity of resources, a strong commitment to multilateral dispute resolution prevails as the ‘system’ is trusted and supported.
2018	Global celebrations for the inaugural ‘One Earth Day’ take place as the world switches to ISEW indicators and promotes global citizenship. Held on 1 December, the highlight is the simultaneous gathering of youth representatives from every nation at the centre of each of the seven continents. It is estimated that over 50% of the global population ‘tunes in’ to the interactive event via the internet and advanced holographic projections – meaning people from other nations can literally ‘beam in’ and interact – making this the largest gathering of humanity in recorded history. The event also spurs the rejuvenation of diverse music and cultures around the world and the growing emergence of an eco-centred ‘spirituality’ across many of the world’s religions and the secular world.
2020	Global carbon dioxide (CO <sub>2</sub> ) emissions peak, and the Organisation of Petroleum Exporting Countries (OPEC) renames itself OCEEC (Organisation of Clean Energy Exporting Countries) <sup>7</sup> in an effort to rebrand. OCEEC becomes a major exporter of renewable energy from extensive solar parks now covering large areas of desert in the Middle East. Overall global commitment and effort required to curb emissions have been significant. Only a widespread mobilisation of innovation, bold political leadership and sustained cooperation has enabled this to occur. The climate crisis is far from averted, but a vital first hurdle has been overcome.

<sup>6</sup> This is an existing index, developed by Herman Daly and John B. Cobb in 1989 (Daly & Cobb, 1989).

<sup>7</sup> This is not an existing organisation and has been created specifically for use in the scenarios.

Scenario One: New Zealand ✓ The World ✓	
2021	New Zealand launches the world's first full fleet of electric vehicles. Under an agreement with Honda of Japan and Tata of India, New Zealand acts as a prototype system for the globe. New Zealand's brand and reputation as a dynamic green innovator soars, and there is a sense of growing national pride and enthusiasm for this role. This connects with the modern version of a 'number 8 wire' mentality now resurgent in the New Zealand identity. In conjunction with the fleet launch, New Zealand also accepts its first quota of climate refugees under the Climate Communities Act.
2024	Ecocrete, an alternative to concrete, is developed in Sweden. One and a half times stronger than its predecessor, Ecocrete emits very low levels of GHGs during its manufacture in comparison with older materials. This is a breakthrough for the construction and development worlds, as emissions in this sector have a huge economic cost, as well as a significant environmental impact globally.
2025	New Zealand achieves a fully renewable energy system and completes construction of a 'super-smart grid'. The Cook Strait water current turbine farm is completed and finally linked to the grid, meaning New Zealand now has 100% renewable electricity generation. Following on from the roll-out of the electric car fleet, several major international companies (from China, the Arab union and Indonesia) offered to finance the world's first super-smart grid in New Zealand. This had several advancements on the United States' smart-grid system of 2015. The advanced grid allows for distributed generation and coordinated power optimisation across the country, with appliances turning on and off in response to grid signals, in order to maximise efficiency. Each building, vehicle and person is now a mini-power station, able to sell back to the grid excess energy that is generated on-site (e.g. via solar panels).
2026	Global commitment to closed-loop products is achieved; the cradle-to-cradle, zero-waste economy is a success, with 90% of products producing no waste and often becoming feedstock for reuse.
2029	Business practices have been transformed in the last 15 years, as self-organising and replicating business models and processes now dominate most companies. The internet allows organisations to 'spontaneously emerge' wherever complementary skills and passions align.

### 3. The Four Scenarios

Scenario One: New Zealand ✓ The World ✓	
2030	New Zealand's main exports are water (20%), high-quality, 'low-carbon' meat (30%), and increasingly low-input, 'organic standard' grains (20%). New Zealand also becomes one of three key designated global seed-banks, as efforts to preserve global biodiversity and feed the growing population are doubled.
2032	The 'Team NZ Innovation Project' <sup>8</sup> (in partnership with the Indian government and the Global Transport Innovation Network) develops state of the art solar/wind ship technology. This design rapidly grows to become the leading form of global trade transport with virtually no input energy required. The strong boat-building industry and innovative 'garage inventor' environment have led to New Zealand's unexpected role in this technology breakthrough. Both the Cook and Blake models of solar/wind ships begin mass production in India in 2033.
2034	The first global parliament is established: United Nations for One Earth (UNOE). <sup>9</sup> People increasingly identify as part of a common humanity. After building a sense of global unity, growing celebration of diversity, and open flow of information and ideas, an international democratic institution is founded to manage an increasingly integrated world. Nation states are retained, but with projects such as the orbital solar power stations in the pipeline, global governance is seen as a positive step to promote global cooperation while still retaining cultural national and regional identities.
2039	'Mandric' is now widely taught as a second language in the Middle East, Asia and North America. A fusion of Mandarin and Arabic, with influences from English, Mandric has quickly become a trendy and common second language. It initially emerged from use at virtual bars and holographic gatherings as diverse peoples socialised using the Humanity Interface (formerly the 'internet' and colloquially known as 'the face'), and is now the language of choice, along with English, for many business interactions as well as social exchanges.
2040	A Global Carbon Park initiative now protects over 10% of the earth's surface, and reforestation generates income and has replaced deforestation. This marks a crucial turning point for one of the most critical aspects of preventing climate change and maintaining as rich a biodiversity as possible.

<sup>8</sup> This is not an existing organisation and has been created specifically for use in the scenarios.

<sup>9</sup> This is not an existing organisation and has been created specifically for use in the scenarios.

Scenario One: New Zealand ✓ The World ✓	
2045	The Centre for Global Food Research is founded by the global parliament, UNOE, to ensure food supply and biodiversity. This is an extension of the seed-bank project of 2030. A major research branch is based in New Zealand as a recognised global leader in low-carbon and highly efficient production of water, meat and increasingly grains.
2047	Humanity Interface & Language Inserts (HILI) <sup>10</sup> are now in widespread production. The biological and electronic worlds begin to fuse as people increasingly connect to the Humanity Interface via an insert, generally placed behind the ear. Initially sold as an external unit used on glass frames, the insert now sits under the skin permanently and transmits to any number of headset mechanisms, and other displays such as fixed screens and projectors. Instantaneous language translation programs are also prominent, opening the door for an explosion of cultural exchange, exploration and business opportunities.
2050	Global population stabilises at 8.5 billion, thanks largely to an extensive and sustained programme of education and women's empowerment. This is a crucial achievement of the global cooperative effort to work towards sustainability, as many systems, such as energy and food production, would simply not have succeeded in meeting the requirements of a further 2 billion people.
2055	The Orbital Solar Power station (a UNOE project) goes on line. In combination, the Great Sahara (OCEEC-owned) and Gobi Desert solar farms now provide 65% of global energy needs. At the same time, the first mission to Mars takes place and a base is established. For the first time humankind seriously explores the possibility of permanently leaving the planet.
2056	UNOE announces a reversal of the extinction trend, and promising recovery of world fisheries stocks, while climate change looks likely to remain under the 2°C threshold and temperatures will eventually stabilise.
2058	New Zealand's population reaches 7 million and the country has continued to be an extremely desirable place to live. A combination of its reputation for innovative leadership, effective immigration, the retention of a unique cultural diversity, protection of its clean and bio-diverse outdoor environment, and timely investment in quality infrastructure has contributed to Auckland and Wellington becoming world-renowned centres of excellence.

<sup>10</sup> This is not an existing technology and has been created specifically for use in the scenarios.

## 3.2 Scenario Two: An Island Paradise – but Back to the Jungle

New Zealand has stood up on the world stage and spent the last 50 years cultivating a small piece of island paradise while much of the rest of the world has slowly disintegrated. However, more recently the increasingly hostile international scene has meant that New Zealand has come to rely on far larger countries for security, which has come at a serious cost to society's autonomy and prosperity. The global climate has warmed, leading to widespread resource shortages. Most other countries are in the midst of civil unrest as their citizens try to deal with the downward spiral. Increasingly New Zealand is drawn into participating in peacekeeping activities, providing more financial and resource aid, and taking in increasing numbers of environmental and political refugees.

This complex situation has been stimulated by New Zealand's readiness to take bold, progressive and at times controversial stances, reminiscent of our nuclear-energy position in the 20th century. As the rest of the world failed to mitigate and adapt to climate change, resource depletion and population growth over the past 50 years, New Zealand was prepared to tackle these issues head on. Consequently we have developed excellent research and innovation facilities, renowned sustainable technology and systems, and a robust infrastructure. We have largely been a culturally unified nation of people, although the intake of refugees has made this policy difficult to manage over the past 15 years. Our ecosystems and native species largely remained mostly intact for the early part of the century, but are now under stress due to the effects of global climate change.

The repercussions of such effective leadership within New Zealand were felt early on, as immigration demand increased, our Pacific Island neighbours began to ask for more assistance and the United Nations began demanding our help. Problems we now face include thousands of climate refugees (especially in the Pacific, where we feel a particular sense of responsibility), pressure on our resources (particularly water and food), and the difficulty of protecting ourselves and our country from increasingly hostile outsiders, who have been using quick-fix, conflict-based, short-term solutions. New Zealand has demonstrated undeniable strength and courage, but existing in isolation against the world is challenging and unlikely to be a sustainable option. Times ahead look difficult despite the country's excellent work over the first half of the 21st century.



<p><b>Scenario Two: New Zealand ✓ The World ✖</b></p> <p><b>Global keywords:</b> Reactive/ Conflict / Terrorism / Inequity / Disasters / Invasions / War / Fear / Hunger</p> <p><b>New Zealand keywords:</b> Isolated / Holistic and visionary leaders struggling in a dire world / Vulnerable / Resilient / In equilibrium / Cooperation / Strong sustainability systems / Unity / Negotiation / Wealthy</p>
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### 3.2.1 The journey from 2008 to 2058

Scenario Two: New Zealand ✓ The World ✖	
2009	New Zealand develops a long-term integrated strategy towards strong sustainability. The process is extensive and generates optimism within the country as opportunity is sensed. However, the government and businesses are initially limited in their commitment to this opportunity.
2012	A weak climate change agreement is passed at a post-Kyoto summit. Some limited support for stronger measures was offered by New Zealand. However, along with most developed nations, it was unwilling to take bold first steps without commitments from the developing nations to do the same. Any real action is delayed for at least five to six years, and there is great global disappointment and distress. Despite this, there is a buoyant confidence in New Zealand as exports continue to prosper (in the short term), and a resurgent national identity builds.
2016	New Zealand sets in action a path towards a low-carbon economy, passing the 'Clean, Green New Zealand Act' - motivated largely by the increased national security and economic opportunity this offers. The Act decrees that a group of indicators be used to measure progress rather than having such a focus on GDP. Real priority is given to environmental health and the concept of 'wellness'. In spite of dissenting voices, the majority of New Zealand is energised and motivated by the country's stance. Global action on climate and sustainability has been lacking, and New Zealand's relatively bold move is one of the world's first. This is a great contrast to the weak position the country had taken leading up to the 2012 negotiations, as vested interests at the time - particularly concerns about impacts in agriculture - had taken precedence. However, a groundswell of support gradually built within New Zealand following the failure of the 2012 climate talks, with growing anxiety about our vulnerability - economically, environmentally and in terms of national security.

3. The Four Scenarios

Scenario Two: New Zealand ✓ The World ✖	
2016 cont.	<p>There was a feeling of regret and anger that the country did not take a stronger stand in 2012, as it had become obvious that a bold global initiative at that time would have been in New Zealand’s best interests. These factors, a six-year east-coast drought that had really started to take its toll, and the brutal first African ‘Water War’ of 2014, combined with the fact that it had become increasingly obvious that there actually was significant economic opportunity in going low-carbon after all, had created the political will for action in New Zealand. Significantly, the Act decrees that a group of indicators be used to measure progress, rather than having such a focus on GDP. Real priority is given to environmental health and the concept of ‘wellness’.</p>
2020	<p>Renewed global climate change talks fail for a third time, sparking panic and conflict, and triggering the eventual collapse of the United Nations. Any hope of multilateral cooperation in a number of critical areas teeters on the brink. The World Trade Organization (WTO), North Atlantic Treaty Organization (NATO) members and the Global Business Roundtable (GBR)<sup>11</sup> attempt to fill the power void. Widespread rioting spreads through Europe and much of South America following the collapse of the climate talks, while armed conflict erupts in the Middle East and the Arctic in resource skirmishes. The night before the eventual collapse of the United Nations, the flawed but revered elder statesman, former president Barack Obama, makes a moving appeal to the nations of the world for unity. The now-famous address, historically known as ‘Obama’s Final Ode’, and including New Zealand’s bold stand as an example among others, is not enough to hold the multilateral system of the past 70 years together. The United Nations effectively collapses within 48 hours, heralding a time of global uncertainty.</p>

<sup>11</sup> This is not an existing organisation and has been created specifically for use in the scenarios.

Scenario Two: New Zealand ✓ The World ✖	
2021	<p>The Māori King Movement<sup>12</sup> gains growing support and is finally recognised as part of a new constitution. A sculpture of the first Māori King is unveiled outside Te Papa.</p> <p>New Zealand is a founding member of the Global Bastions Network,<sup>13</sup> together with Korea, Sweden and Cuba, a collection of innovative, world-leading countries that have made progressive approaches to energy, climate and economic issues. This group formed following the collapse of the United Nations and the limited success of other organisations such as the WTO in playing a global leadership role. While the climate and food supply situation worsens globally, the Network aims to inform and support countries in transition to a more sustainable approach. It is a tough task for such a small number of countries to exert much influence, given that the current lack of a global forum offers them few chances to be heard.</p>
2024	<p>New Zealand's leading export is now food production and agricultural techniques. The sharing of this intellectual property (IP) now generates over 40% of export earnings. Demand for IP is being driven by the inability of international trading partners to obtain cheap fossil fuels (used heavily in the traditional industrial farming model), the ballooning (and hungry) global population and the fact that climate is increasingly impacting negatively on the quality and quantity of harvests. Unfortunately, the lack of cheap fuel is also putting an increasing strain on New Zealand's economy; this is despite the country's impressive moves towards a low-carbon economy.</p>
2028	<p>After several weeks of uncertainty, the world aviation fleet is grounded due to fuel shortages and civil unrest. Airships – nearly a hundred years after the Hindenburg disaster – and hover trains become the major forms of long-distance transportation. Due to the cost of fuel, only an exclusive slice of society has been able to continue flying. The climate impact and 'fuel-injustice' of flying (both of which impact on food supplies) lead to massive protests, culminating in the Cape Town International and Heathrow airport bombings. Threats from extreme eco-sects at the proposal to relaunch the industry using fourth-generation biofuels destabilise the situation further. Traditional long-distance tourism collapses – this has some impact on New Zealand, but is not crippling, as there has already been a long-standing shift towards sustainable and domestic tourism.</p>

<sup>12</sup> See Appendix 5, Change Agent 6.

<sup>13</sup> This is not an existing organisation and has been created specifically for use in the scenarios.

### 3. The Four Scenarios

Scenario Two: New Zealand ✓ The World ✖	
2029	New Zealand begins major export of marine tidal and wave power technology and expertise, seizing the opportunity to share this technology with other countries, many of which are increasingly desperate for renewable energy.
2030	18% of New Zealand’s population are climate refugees. The impacts of climate change are really starting to be felt, with millions of people being forced to migrate from their homes. Due partly to New Zealand’s progressive approach to global responsibility, a programme of refugee resettlement is aggressively pursued. There is also an economic advantage, with refugees providing a pool of skilled and unskilled labour and the government extracting payments from countries of origin under the controversial ‘Relocation Arrangement Protocols’. The emerging demographic situation in New Zealand creates a huge challenge for cultural harmony, with a growing under-class, and threatens to weaken the ideological stance that has prevailed since the Clean Green NZ Act of 2016.
2032	20% of the Asian continental population is decimated by an unprecedented drought and famine. The Chinese Federation invades the Russian Union in search of gas and food supplies, starting a four-year war that leads to the deaths of over 15 million people. The international landscape is extremely tense as the first major powers directly take up arms over scarce resources. A major solar project in the Gobi Desert is destroyed during the conflict, a huge loss in capacity for Eurasia. An imperialistic and fearful atmosphere hangs over the globe, and things appear to have the potential to come apart at the seams.
2033	Only 30% of Papua New Guinea’s original rainforest remains intact. This is but one example of the dire state of many ecosystems around the globe. The remaining forested 10% of the Amazon is kept intact only due to massive payments to Brazil by the Global Bastions Network, several corporate conglomerates and donations from NGOs.
2034	New Zealand ‘exports’ space for the first time, leasing land and ecosystem services, and this quickly becomes one of the country’s top three export earners. This in effect is only affordable for the elite few living in rich nations and therefore further ignites inequality and injustice globally.

Scenario Two: New Zealand ✓ The World ✖	
2036	The first major terrorist attack occurs in New Zealand, with a strike on the national museum, Te Papa. The event shocks the nation and marks a sharp hardening in New Zealand's diplomacy and willingness to cooperate with the global community. Earlier in the century, the country's progressive approach and leadership role towards sustainability (founded by members of the Bastions Network in 2021) was revered globally. However, with such devastating ecological and economic strains being felt, the perception of New Zealand has vastly altered. While the global situation grows increasingly desperate, international resentment builds due to New Zealand's relative prosperity and increasingly protectionist stance.
2037	Compulsory military service is introduced in New Zealand and full satellite surveillance of the country is launched as New Zealand lurches towards a police state. The political landscape has shifted significantly in the last ten years as the 'roosters come home to roost' globally. There is a backlash against the tolerant approach previously embraced during the late 2010s and 2020s as larger nation-states and political blocs begin to threaten New Zealand's security.
2038	The European Military Alliance <sup>14</sup> starts construction of the first moon mine, while the Russian Union continues to mine the depleting reserves of the Arctic Circle.
2040	The Chinese Federation places enormous pressure on New Zealand to grant it exclusive water exports, as several foreign blocs take increasing interest in this country. In return, China offers military aid and protection (such as fly-overs) to an increasingly vulnerable New Zealand (similar to the interest shown by foreign powers in Israel and oil-producing countries in the 20th century).
2042	New Zealand becomes an Indonesian Protectorate, in an arrangement where food and water are supplied in return for military assistance and protection from the increasingly hostile Chinese Federation. This was a forced decision as the country became increasingly vulnerable and desperate for security. The choice of who to align with has been extremely difficult, earning New Zealand enemies as well as new 'friends' who have plenty of power to manipulate the country and its resources.

<sup>14</sup> This is not an existing organisation and has been created specifically for use in the scenarios.

### 3. The Four Scenarios

Scenario Two: New Zealand ✓ The World ✖	
2045	40% of all species in existence in 1900 are now extinct. The announcement of this figure by the World Conservation Union sparks a resurgence of spirituality and religion across the globe, as a sense of desperation spreads. Positively, the spiritual revival helps strengthen local communities and support local-scale political action in a number of countries. A 'nature-synergy' cult sweeps across much of North America as the international and economic might of the US teeters on the verge of disintegration.
2050	A major earthquake on the Indian peninsula triggers an eventual military push into the Chinese Federation in search of glacial water supplies. The conflict does not escalate to full-scale war, however, as the two mega-population centres rely on each other in their limited trade in food (China) and IT (India).
2053	The global population reaches 10.5 billion, and the temperature is now 2.5°C higher than in pre-industrial times. Food systems are stretched to the brink and many countries have to cope with famine, with over one-third of the global population being malnourished for at least four months of the year. Runaway climate change is underway and the world is an increasingly desperate and fragile place to live.
2055	Cold fusion technology <sup>15</sup> makes promising breakthroughs after well over 50 years of development, thanks to a European-Arabic project team. Access to clean, plentiful energy could revitalise the global economy. The celebrated moment of optimism is short-lived, however, as the technology proves to be prohibitively expensive and technically extremely difficult to run. This is compounded by the European-Arabic Union's (EAU) decision not to share the technology for fear of losing the power advantage that it offers. Instead energy is offered for export, but this is only accessible to a handful of relatively affluent countries, such as Brazil. Tensions escalate as the Chinese Union demands access to the technology as coal supplies are virtually exhausted.

<sup>15</sup> A hypothetical form of nuclear fusion occurring without the use of extreme temperature or pressure.

Scenario Two: New Zealand ✓ The World ✖	
2058	<p>The New Zealand population reaches 15 million, and the country commences the construction of three offshore floating settlement islands. Funded largely by the Indonesian Protectorate arrangement, one of the islands will be mainly inhabited by members of the elite of South-East Asia, who are keen to create a 'safe haven' in which to settle down. A combination of massive refugee pressure and significant political and military influence from Indonesia leads to this new type of floating property development, however fears grow, by the day, that New Zealand will be 'taken over' in the not too distant future. The 'country' grapples with its identity, now with a vastly different populace than just 30 years earlier.</p>

### 3.3 Scenario Three: Missed the Global Bus

Many of the problems the world has faced over the past 50 years have been dealt with efficiently and with ongoing political and social commitment. The effects of climate change are handled thanks to the strong leadership of the Group of Eight (G8) and Brazil, Russia, India and China (BRIC) nations. Unfortunately New Zealand has missed this opportunity entirely and exists at the bottom of the world as a Third World country in complete disarray, with the reputation for being the new 'Nauru' of the Pacific.<sup>16</sup>

This situation is largely accredited to short-term leadership decisions made around 2010, including disastrous use of genetic modification and haphazard and unregulated mining of our non-renewable resources. The resources that remain continue to be mined in order to obtain desperately needed export earnings. New Zealand finds itself in a double bind with many trading partners now refusing to be seen to trade openly with a country trailing so far behind in environmental and social measures.

Unable to look after our own anymore, New Zealand is now officially a state of Australia (a choice based on necessity rather than opportunity) and large demographic chunks continue to slip into poverty. We lack cultural identity and national unity, fuelling internal terrorism and violent unrest. There is little incentive to stay in the country, and those with the education and means leave while they can in a phenomenon likened to the 20th-century brain drain but on a much greater scale.

Those New Zealanders who have lived through the changes are left questioning what the situation could have been like if we had done things differently. This is a reasonable question, as the rest of the world has a much more prosperous and happy outlook. Many countries have taken affirmative and successful action in dealing with climate change and peak oil crises and their citizens feel empowered due to such inspirational leadership. The economies of these countries flourish in the current international environment, with its emphasis on accountability and holistic progress, and they have the support of an excellent sustainable infrastructure and participative and accountable political systems.

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<sup>16</sup> Nauru is a phosphate rock island, and its primary economic activity since 1907 has been the export of phosphate mined from the island. With the exhaustion of phosphate reserves, its environment severely degraded by mining, and the trust established to manage the island's wealth significantly reduced in value, the government of Nauru has resorted to unusual measures to obtain income. In the 1990s, Nauru briefly became a tax haven and money-laundering centre. Since 2001, it has accepted aid from the Australian government; in exchange for this aid, Nauru housed, until early 2008, an offshore detention centre that held and processed asylum seekers trying to enter Australia. (See <http://en.wikipedia.org/wiki/Nauru>)



**Scenario Three: New Zealand \* The World ✓**

**Global keywords:** Diffusion of ideas / Information / Innovations and capital / Diplomacy / Interconnected / Fluid / Relational / Participative / Common language / Global balance

**New Zealand keywords:** Manipulated by global power plays / Lost opportunities / Widespread apathy / Short-sighted governance / Lack of leadership / Indecision / Indifference / Conflict / Vulnerable / Dispirited citizens

**3.3.1 The journey from 2008 to 2058**

<b>Scenario Three: New Zealand * The World ✓</b>	
<b>2010</b>	New Zealand commits to becoming a leader in genetic modification (GM) agricultural technology and techniques. The country rebrands itself as a modern cutting-edge investment destination for agriculture, where the best of nature is mixed with the best of technology. ERMA fast-tracks several large-scale GM animal experiments set to commence in the central Waikato in October of the same year. The necessary funding and regulation alterations are supported by the government and farming sector. Simultaneously, the tourism marketing board 'rebrands' New Zealand as an innovative, advanced and cutting-edge global player. The previous '100% Pure New Zealand' drive, with its focus on the natural beauty of the country, is modified and a 'Live the Future' campaign replaces it.
<b>2013</b>	<p>The International Coalition for Climate Change (ICCC)<sup>17</sup> is created after the last Conference of Parties (COP-24) of the Kyoto Protocol, regrouping all Annex I and non-Annex I countries and exerting pressure on less compliant countries such as New Zealand. A small amount of progress has been made in reducing global emissions. New Zealand, as part of a small bloc of countries that see technological breakthroughs as the primary solution with less emphasis on mitigation, has now become an extremely weak, almost tokenistic, supporter of the process.</p> <p>In the meantime, New Zealand's decision to focus on agricultural GM appears to be paying off, as providing enough food for a hungry globe is increasingly difficult and GM is being adopted in many regions, particularly the less developed pockets. However, there is still an intensifying debate globally about whether GM is the answer to food scarcity.</p>

<sup>17</sup> This is not an existing organisation and has been created specifically for use in the scenarios.

### 3. The Four Scenarios

Scenario Three: New Zealand * The World ✓	
2014	In response to stalling negotiations, the declining power of the United Nations, and limited progress on climate change, the G8 and BRIC countries align to create the G8B. <sup>18</sup> This becomes the dominant international governing body, reducing the voices of smaller nation states as the G8B effectively takes over directorship of the IPCC. During the Tokyo summit, G8B charts a strong and strict course for climate mitigation and a full-scale energy revolution with strict sanctions placed on noncompliant countries. Due to the perceived need for quick action in the face of poor achievements since the start of the first Commitment Period for Kyoto (2008–2012), the G8B adopts a highly prescriptive approach to cutting GHGs. Despite this, most small countries are glad to see the long-awaited emergence of strong leadership on the issue, as the climate threat desperately needs an effective response. The strong approach is now also politically viable as communities are aware of the urgency of the situation and the strong ultimate linkages between inaction and economic hardship. Indeed, many communities around the world find that the common goal, though difficult, has helped foster stronger and more supportive communities. The annual international indicator known as ‘life satisfaction’ has significantly improved in most countries.
2015	Argentina wins the Rugby World Cup (held in Japan and Korea) – a ‘sustainable world’ event. The tournament revolutionises what it means to be branded a ‘sustainable world’ event, with stadiums and transport systems all powered by renewable energy, with zero emissions. This went far beyond the efforts of previous Cup hosts, such as New Zealand in 2011, who followed a more traditional approach. Although 2011 had seen some low-level efforts around sustainability – such as free trains provided to venues – 2015 ignited people’s imaginations, receiving rave reviews from around the globe (even from non-rugby-playing nations), and has helped bolster Japan’s brand and reputation for advanced sustainable solutions globally. The tournament also saw the US make their first semi-final, where they met and were defeated by the New Zealand All Blacks. Coverage featured extensive use of ‘holographic in-studio’ replays.

<sup>18</sup> This is not an existing organisation and has been created specifically for use in the scenarios.

Scenario Three: New Zealand * The World ✓	
2017	The European Union unexpectedly bans GM dairy products after Europe is hit by a world food safety scandal. There are rising incidences of children being born with illnesses associated with GM dairy products. A huge public outcry and series of protests in Europe eventually lead to the ban. Although the problem is traced back to the European sources, the ban on GM dairy products applies to produce from across the globe. This is an unexpected and crushing blow for New Zealand's now heavily GM-reliant dairy industry. New Zealand realigns its targets from western markets towards the massive demand from the developing world.
2018	Nearing the end of the decade, New Zealand finds its investments in infrastructure, GM and increased reliance on coal are strongly at odds with the global community, now under strong influence and leadership from the G8B. Along with the European food crisis of 2017 (which reduced the viability of GM food exports), strategic decisions have 'locked in' infrastructure for a more carbon-intensive economy. New Zealand realises it may have 'missed the global bus' as innovative and low-carbon economies around the world begin to assert their advantage. The country is increasingly seen as not pulling its weight on big issues such as climate change and biodiversity protection, and accordingly its brand has been severely compromised. As it strived to push itself higher in the global per capita GDP rankings, New Zealand was caught off guard. By mid-decade a more holistic group of indicators had gained favour internationally, and these have been introduced as the standard by the G8B. While the country has performed well in the GDP stakes (at least initially), it has begun to slide in many of the other social, environmental, innovation, and alternative economic progress measures.
2020	More Māori live in Australia than in New Zealand. Te Tiriti o Waitangi (the Treaty of Waitangi) is ignored and the Māori language is lost. For the first time in over 1000 years the majority of indigenous New Zealanders do not reside in their homeland. This is a reflection of the increasing hardship of living in New Zealand, but also a trend towards increasingly diverse and progressive cultures globally.
2023	Global CO <sub>2</sub> emissions peak after a necessarily firm approach is taken over the nine extremely difficult years following the G8B 'Tokyo summit'. These years come to be known as 'the bridge'. The G8B (and IPCC) promotes voluntary carbon trading systems which are largely adopted. New Zealand remains poorly placed and is most certainly a follower rather than a leader. Most nations maintain a price on carbon, and New Zealand struggles to compete on many fronts due to its relatively carbon-intensive industries and lack of comprehensive regulations.

### 3. The Four Scenarios

Scenario Three: New Zealand * The World ✓	
2025	International 'corporate invasion' of New Zealand begins as companies look to take advantage of the nation's poor regulations and gain access to resources. As a new economic climate solidifies following 'the bridge' years – with most of the world voluntarily favouring firm climate, environmental and social standards – corporations are on the look-out for opportunities. Desperate to attract foreign investment and capital to rejuvenate the country, New Zealand's relatively light regulatory framework is very attractive. However, in just a few short years, these corporations gain massive influence and now own an enormous amount of private and public land and resources. Gated communities and private beaches and peninsulas are common, as the population is further fragmented.
2028	A major viral epidemic hits the New Zealand GM livestock population. There are widespread livestock deaths and a devastating impact on beef and lamb exports. The New Zealand brand is shattered and the economy staggers. In a desperate effort to compensate, New Zealand is forced to boost its coal export industry, despite the negative implications in an increasingly low-carbon global economy. Though many of the most developed nations are well committed to clean energy, New Zealand is able to find markets in less 'committed' areas. This activity, however, comes at the expense of 'climate trade sanctions' and a plummeting reputation among countries aligned with the G8B climate framework.
2031	A trans-Atlantic floating transport-trade tunnel is opened. Hailed as the 21st century's first marvel of engineering, the 'tunnel' stretches the width of the Atlantic, connecting the eastern United States with Europe. The tunnel, along with rejuvenated airship fleets and wind-powered kite-ship tankers, is revolutionising global trade. The 'tunnel' – actually a floating segmented tube, positioned on average 50 metres under the ocean surface – is kept in position by a system of advanced computers controlling buoyancy aids and 'current neutralisation' propulsion devices. High-speed electric hover trains up to 10 km in length are the main mode of transport. The structure also acts as a massive power generator, with connections to several floating wind-farms, and shallow-depth current-turbine farms. The trans-Atlantic crossing takes 12 hours and there is talk of branches being added to connect the United Kingdom, South America and the west coast of Africa directly to the system.

Scenario Three: New Zealand * The World ✓	
2033	<p>New Zealand initiates the large-scale export of water. Supertanker ports already established for coal export are now expanded to incorporate a fleet of super water tankers. The trade is largely controlled by the three largest corporations present in the country. Most of the water is sold to China and India who can no longer rely on glacial water supply. There are also niche markets in some richer nations, but competition is difficult given New Zealand's poor energy standards and international reputation for poor environmental regulation and practice. For this reason, the New Zealand water industry makes some efforts to comply with the more 'climate friendly' practices, though there are many vested interests at play. In particular, the ownership linkages between the water corporation and the coal industry continue to create market barriers. Despite substantial 'low-skill job creation' and the generation of significant profits, most of the profits either leave New Zealand and are passed on to offshore owners or go to a few wealthy, elite New Zealanders.</p> <p>At the same time there are also increasing water rights conflicts within New Zealand in 'water harvest' areas as the surviving agricultural sector is impacted. Several violent protests by Future Federated Farmers and a 500,000-strong event in Auckland lead to violence and end in a brutal police crackdown on 'the dissidents'. For the great majority the economy continues to fall into ever deeper crisis, with living standards dropping. Government reaction to protests is sobering to the nation.</p>
2034	<p>Carbon becomes the main commodity traded and generates the greatest source of economic flow. There is enormous gain to be made by those companies and countries who can export and trade technologies and ideas that drastically reduce or remove carbon emissions. A continued lack of a robust carbon trading mechanism in New Zealand means the country largely misses out.</p>
2035	<p>Information flows around the world at unprecedented rates as selected memes (ideas) replicate quickly in cyberspace. Many citizens meet in virtual holographic cafés pioneered in the Middle East. Developed in 2023, this radical idea was initially used as a tool to generate greater understanding in the Palestine-Israel conflict, with groups meeting from each nation in virtual space. The enormous success of the project led to refinement of the technology, and it is used widely across the globe. It has been credited as a key tool in a flourishing of global cultural understanding despite the hardships and resource shortages that are faced. It is not at all uncommon for friendships forged in holographic cafés to be stronger than those made in the old-fashioned way (through family and friends).</p>

### 3. The Four Scenarios

Scenario Three: New Zealand * The World ✓	
2036	Global demand for coal and oil drops drastically. China and other G8B countries now have renewable energy systems. This causes major impacts on New Zealand as the export of coal is now of central importance to the economy following damage to the livestock brand and industry in 2028. The near-completion of a global shift away from most carbon-intensive fuels has been achieved earlier than many thought possible thanks to bold leadership and strong regulation in the late 2010s, an explosion of innovation, and high levels of business, political and social support for sustainable development.
2040	Argentina begins exporting major third-generation desalination water technology around the globe, reducing dramatically worldwide demand for fresh water. Combined with the drop in coal demand, this is a double whammy for the New Zealand economy, sending it into a nosedive. The new technology is vastly cheaper than previous technology and is widely adopted. It allows for small-scale, highly efficient plants, as opposed to the capital-intensive mega-scale desalination projects of the 2020s. A vibrant and economically developed African continent is one of the largest adopters of the new technology.
2042	The G8B announces that a great majority of the global community is 100% renewable in terms of energy production and waste reduction. This has been helped by the development of new clean technologies and incentives for consumption of environmentally friendly products.
2045	Although there have been many deaths from armed conflicts and small wars, the world has managed to avoid descending into a full-scale world war. This is a considerable feat considering the challenges faced over the last 100 years. The global situation has been tense at times, particularly in the 2020s and early 2030s as major food and resource shortages, population pressure, and environmental degradation culminated in civil unrest. Global celebrations are held to commemorate 100 years of 'peace' since the end of World War II. Over 450 million people attend the three-week 'Planet Earth Peace Festival' in either real or virtual life. Major events include a gathering of 4 million people for the largest concert in history, nestled in the dunes but within sight of the majestic North African solar and wind project. Headlining is the world's biggest act – the Kenyan band 'Amani Rafiki' (Peace Friend). In addition, a commemoration event is held in the North African desert, site of several battles in World War II.

Scenario Three: New Zealand * The World ✓	
2049	<p>New Zealand gains Third World status as the economy substantially collapses, and within 10 months negotiations are under way to become a state of Australia. The peace celebrations of 2045 offered a last reprieve for the country as it reflected on its earlier identity and past involvement in world leadership for democracy and human rights. With the collapse of coal and water exports, and the pull-out of two of three major corporations that controlled these industries in New Zealand, the economy grinds to a halt. The co-Prime Ministers' address in February confirms the worst and appeals for calm and unity, but is insufficient to prevent social meltdown. Widespread rioting and looting breaks out in central Auckland and several other parts of the country as the population of 8 million turn on each other in desperation. Two water supertankers are bombed and sunk by protesters before water corporations can extract their infrastructure from the country, while several thousand people are killed in fighting as private security units protect other assets. The G8B authorises Australian and Indonesian troops to intervene and a peacekeeping force enters New Zealand in late July. By December relative calm returns, though it is accompanied by widespread unemployment and the breakdown of many services. In the same month, the government enters negotiations to become a 'dependent' state of Australia. As part of this an agreement is made to begin construction of a water pipe to supply fresh water to the east coast of Australia.</p>
2052	<p>The first large-scale extra-terrestrial power plant is launched on Mars by the International Spatial Agency for Sustainable Energy (ISASE).<sup>19</sup> This initially supplies energy for 25% of the global population, as energy is beamed via laser back to orbiting transfer-distribution platforms and then on down to the Earth's surface.</p>

<sup>19</sup> This is not an existing organisation and has been created specifically for use in the scenarios.

### 3. The Four Scenarios

Scenario Three: New Zealand * The World ✓	
2058	<p>Australian resource extraction corporations move from Australia, where regulations are very tight, to the easy pickings in unregulated New Zealand. The New Zealand population provides labour, though wages are only 10–15% of the global average. There is international condemnation of this move by the G8B but little action is taken to follow up, much to the disappointment of New Zealand's population. The Australian government makes some efforts to cater for New Zealand's needs. However, under the 'dependent state' arrangement the New Zealand Islands are still responsible for their own welfare and education systems as the Australian public is unwilling to subsidise the Islands. Meanwhile, the Coromandel Peninsula, East Cape, the Southern Lakes and Marlborough Sounds are all isolated by the federal government as 'recreation reserves', with patrolled gate entry. These destinations are visited by the elite of Australia, while most New Zealanders are restricted due to the prohibitively high entrance fees.</p>



### 3.4 Scenario Four: All Over Rover

The countries of the world have collectively pursued the most destructive course of action that could have been imagined back in 2008. Consequently the world bears very little resemblance to the place it once was, and is characterised by runaway climate change, a booming population and widespread conflict over resource shortage. Any global unity once exhibited has long dissolved, culminating in the disintegration of global governance institutions, and the painful descent into outright conflict in World War III. The world has emerged as three distinct blocs with very little interaction between them. New Zealand, like many other small countries, exists in isolation, with the South Island being governed separately from the North.

It is hard to know where to place the blame. Many are eager to point fingers at quick-fix technology (including nuclear and genetic modification), adopted with little thought and poor regulation, resulting in significant impacts on the environment. Uranium is now in short supply and sold on the black market for huge sums, making nuclear power stations no longer viable. In addition, there is an international military build-up and arms race. These are only responses to the problem. The real issue lies in the fact that no successful, creative and courageous leadership has emerged anywhere over the past 50 years. The problems that the people of 2008 worried about were either ignored or ineffectively managed.

Globally, some immense lessons have been learnt, but whether or not the mistakes made can be rectified remains to be seen in a world now governed by a 'survival of the fittest' mentality. Given that short-term survival is paramount, people have simply stopped thinking about the long term altogether.

**Scenario Four: New Zealand ✖ The World ✖**

**Global keywords:** Reactive/ Conflict / Terrorism / Inequity / Disasters / Invasions / War / Fear / Hunger/Narrow thinking

**New Zealand keywords:** Selfish / Intrusion / Paralysis / Exploitation / Destabilisation / Corruption / Tensions / Marginalisation / Trauma / Disillusionment / Cultural pollution / Neglect / Escalation

### 3.4.1 The journey from 2008 to 2058

Scenario Four: New Zealand ✖ The World ✖	
2009	Further attempts to create a global solution to climate change are made in Copenhagen during the United Nations 'Kyoto Protocol Conference of Parties' (COP-15). Despite a vastly more vocal and supportive United States, the talks are marked by strong resistance from developed nations to make any binding emissions targets at a significant level and avoid the 2°C limit of climate change. Even with this setback there is hope that an alternative can be negotiated in the following three years.
2012	The Kyoto Protocol's first Commitment Period ends with many nations failing to meet their obligations and without significant emissions reductions. Further global climate change talks end in disaster, with no follow-up agreement or framework obtained. The recently elected US President Sarah Palin announces plans to exponentially increase oil exploration around the United States, including Alaska. The US also establishes a naval base and exploration team in the Arctic Circle and in Antarctica. The United States, in partnership with Britain and India, places severe sanctions on Saudi Arabia and threatens invasion unless oil production is vastly increased.
2015	New Zealand falls from being the world leader in efficiency for protein production in 2007 to no. 10 in just seven years, as other countries use innovative agricultural production methods far more effectively. To compensate for its reduced market share, New Zealand shifts exports towards coal, oil and gas. The Southern Basin is opened to mineral exploration and extraction but without any accompanying legislation to protect the marine environment.
2016	Many New Zealand waterways are now unsafe for human use. Unemployment reaches 9%, while several tropical diseases and pests that have appeared in the past two years are decimating the fruit and wine industries.

Scenario Four: New Zealand * The World *	
2018	World oil production peaks at the same time that polar bear populations plummet to 10% of their 1990 numbers. The United States, Britain, India and Israel invade Saudi Arabia, while China and Russia sign an Allegiance-Energy Pact. Despite outcries and protest at the United Nations, the invasion of Saudi Arabia is justified by the US and UK on evidence of human rights abuses. Within eight weeks, 80% of Saudi Arabian oil production is exported to the four occupying coalition countries, while the other 20% is sent to the China/Russia bloc, largely to mitigate the possibility of conflict between the two groups.
2021	The World Wide Web crashes for two weeks, bringing the world economy to a standstill and paralysing many essential services. The cause is a computer virus traced to a small settlement in western Turkey. This replicated itself and was able to transmit using city-wide and satellite wireless networks.
2022	Efforts are made to resurrect climate talks by the weakened UN – thanks largely to the leadership of France and Japan – but fail after India and China disagree with harsh measures imposed by Europe, while most of the Middle East refuses to negotiate because the United States is occupying Saudi Arabia. Ecological tipping points are reached in many areas. The total destruction of the Amazon is estimated to be less than five years away as biofuel demand drives deforestation.
2025	The New Zealand population passes 10 million as a flood of climate refugees arrive in the country, prompting massive cultural change, civil unrest and a move towards a police state. A semi-autonomous region is established in Northland and in the process several gated communities and settlements in the area (largely foreign-owned, or occupied by the elite sector of society) are looted and burned, resulting in a number of deaths.
2027	90% of seeds produced in India are ‘owned’ by Genetico International and most of these use sterile-seed GM technology. There are widespread protests as both agricultural producers and subsistence farmers are forced to purchase seed rights for each season.
2028	Several Pacific Islands, deserted by their inhabitants as a result of climate change, are sold as dumps, particularly for nuclear waste. In New Zealand, where many of the former occupants of the islands now live, there is an outflow of emotion. A tension shows between those who are horrified at what has become of their homelands and those who see the capital raised from the sale of the islands as a positive resource to support the interests of their people into the future.

### 3. The Four Scenarios

Scenario Four: New Zealand * The World *	
2029	Natural hazards become increasingly frequent and intense. Bangladesh encounters the worst flood in history this year, making 27 million people homeless. The Gobi Desert in China has now reached all major cities. Arable land is at a premium, with 20% of the population now starving. Critical infrastructure such as communication and transportation is no longer working. At the latest count, over 500 million Chinese have joined the one billion climate change refugees.
2030	Stage-three geo-engineering experiments to combat an increasingly serious climate change situation fail to produce hoped-for results, and have a large negative impact on fish stocks in the northern Indian Ocean. There has been very limited success at achieving a concerted global effort to reduce GHGs, and the use of coal generation is now 200% of 1990 levels. The United Nations, with several private firms, has placed its hopes on geo-engineering projects. Although experiencing some limited success, it is not nearly enough to counter the forces of climate change and some side effects have been very negative.
2031	New Zealand capitalises on increasingly desperate countries trying to meet their energy requirements, with our main exports becoming fossil fuels and other solid resources. Coal exports to China grow immensely to supply its giant liquid coal production plants. Although many innovative fuel efficiency measures are now being applied, the world has failed to make any real transition away from a fossil-fuel-based economy. The countries that form the European Climate Protection bloc heavily sanction New Zealand for its coal exports but the profits this creates far outweigh the loss in other exports.
2032	Global governance and any hope of widespread co-operation dramatically end as an increasingly weak United Nations disintegrates. This leaves a vast power vacuum globally and a lack of any representative global forum. Overwhelmed by the flood of global crises and the persistent, unwavering pursuit of national and corporate interests, the institution collapses after a vote of no confidence initiated by several of the larger nations. Despite a majority of countries wanting the UN to continue operating, the organisation effectively dissolves within several months.

Scenario Four: New Zealand * The World *	
2035	The world's major corporations – led by the major water desalination corporation, 'WorldWater' – form the Global Corporate Union (GCU). <sup>20</sup> This is an attempt to operate as a global governance system, filling the power vacuum and maintaining conditions where business can operate successfully. The effect is greatly reduced autonomy of individual rights and states, resulting in a total change to the concept of governance. The GCU commands a response to the climate crisis with large-scale geo-engineering adopted, and an aggressive project to build a solar farm in the Sahara. Massive interests in control of global water supply mean that 50% of freshwater is now provided by desalination corporations.
2037	The Nobel Peace Prize is awarded to a corporation for the first time, a manufacturer of boats that collect solid ocean rubbish and decontaminate water. With the world's oceans in a very poor state, these vessels are seen as having significant potential and several thousand are already in production. However, the award is surrounded by controversy given the corporation's close ties to the Global Corporate Union (GCU) and allegations of corruption and GCU influence.
2038	New Zealand effectively operates as two states – contrasting fortunes and an increasing reliance by the North Island on the South Island for electric power, coal export revenues and agricultural food lead to the further segregation of the country. The South Island population, feeling they are not receiving a proportionate return, demand greater political power and push for autonomy (as the Northland region had done several years earlier). Matters culminate in August with the inauguration of the first South Island Governor and Council. The Council ultimately controls most resources and exports. There are allegations of involvement by powerful players in the GCU, who are believed to finance the Council and are thought to have guaranteed the security of the South Island with the provision of private militia. Meanwhile, desperate for water, Australia enters into strong diplomatic efforts to secure water from the newly autonomous South Island.
2039	Global population passes 9 billion and resource depletion is significantly threatening most countries.

<sup>20</sup> This is not an existing organisation and has been created specifically for use in the scenarios.

### 3. The Four Scenarios

Scenario Four: New Zealand * The World *	
2040	Separatist crime syndicates challenge the GCU for control. Their cause is helped by public unrest in several parts of the world. The ongoing power struggle eventually sparks a fully fledged conflict – World War III. Eventually this diminishes, largely because fossil fuels become so expensive that widespread fuelling weaponry is impossible. Initially the crime syndicates harness extremist groups and use small-scale nuclear weapons to attack hundreds of key desalination plants and the Sahara solar energy farm simultaneously. This causes massive social and economic disruption and conflict. This quickly escalates into wide-scale conflicts between many groups – global famine is triggered and millions of deaths result. In the space of five years, over 20% of the global human population is lost, and millions of species become extinct.
2047	In the aftermath of the Third World War, the world forms into three isolated blocs, each with a different form of governance. There is little exchange or travel between the blocs and global communications are effectively severed. The African bloc is dominated by crime syndicates and food and water wars. The Eurasia <sup>21</sup> bloc is governed by a loose religious-military alignment which has emerged over the 2040s in response to worldwide terrorism, global crime, and food and water shortages. In contrast, the remnants of the GCU, established in 2035 but now renamed Americaralia, <sup>22</sup> control the Pacific through ownership and exploration of natural resources, especially water and minerals, and land for food and fuel production.
2050	Global CO <sub>2</sub> atmospheric concentrations pass 600 ppm. Runaway climate change causes a vast ecological transformation of the globe. Global temperatures are now 3°C higher than in pre-industrial times and any form of climate mitigation other than geo-engineering projects is no longer considered. Deforestation is extreme and tropical forest cover has reached 2% of the total land area, engendering massive species extinctions.

<sup>21</sup> Eurasia comprises the traditional continents of Europe and Asia.

<sup>22</sup> Americaralia is not an existing union and has been created specifically for use in the scenarios.

Scenario Four: New Zealand * The World *	
2052	<p>New Zealand is swamped with environmental and political refugees, despite the decimated global population, and resorts to subsistence farming on the remaining small parcels of land not owned by Americaralia.</p> <p>Cultural intolerance leads to terrorism, as Māori activists fight for the right to speak Māori publicly, to prevent their ancestral burial grounds being bulldozed for commercial development, and for Te Tiriti o Waitangi (the Treaty of Waitangi) to be upheld.</p>
2058	<p>The New Zealand population reaches 15 million, with the wealthy either no longer living here or living in isolated and heavily protected gated communities. New Zealand is a place for the poor, with many working on subsistence plantations. The long-term survival of modern civilisation appears in serious doubt as international political, trade, ecological and food systems all hang in the balance.</p>

## 4. Discussion

The purpose of this exercise was to explore possible futures for New Zealand through the use of scenarios. This will inform and help in the development of a National Sustainable Development Strategy for the country.

This was an explorative, rather than a predictive, study. We aimed to better understand and gain foresight into possible conflicts, compromises and opportunities that *could* occur over the next 50 years, but we believe we learnt a great deal more. Before discussing our thinking, we wish to clarify our understanding of the four possible futures described in the scenarios, within which New Zealand's actual future may fall. Following this we will discuss the three questions that emerge:

1. Which of the four possible futures is likely to prevail?
2. What signals should we be looking for?
3. How can we shape our future?

Each of these points and questions is discussed below.

### 4.1 Four Possible Futures

Scenarios are tools for exploring the future. They must have a high level of integrity in order to provide an effective tool for decision-making. Table 5 provides an overview of each of the four ends of the spectrum in the year 2058.<sup>23</sup> From our analysis, it is clear that:

- The world is likely to become increasingly complex and challenging.
- New Zealand is likely to struggle without strong and visionary leadership.
- Good management requires a proactive and determined approach. It will only be by proactively developing strategies to shape the world that we will get to a better place; to do nothing is to slip towards Scenario Four (All Over Rover).
- Even if New Zealand manages itself well, but the world does not, we cannot possibly maintain a peaceful existence or a high quality of life, especially in the long term. We are not insulated from the shocks and troubles of the outside world.

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<sup>23</sup> The scenarios were based on the initial stories prepared at the April workshop.



Table 5 The Essence of the Four Scenarios

	The world does manage its strengths, weaknesses, opportunities and threats	The world does not manage its strengths, weaknesses, opportunities and threats
New Zealand does manage its strengths, weaknesses, opportunities and threats	<p><b>Scenario 1: Power to the People</b>            Concepts such as global unity and balance are no longer myths. Intolerance is a thing of the past, as diverse cultures coexist peacefully, all partaking in one global community. Sustainability, once a determined lifestyle choice, is now the norm. The climate change and peak oil crises are under control as the world embraces innovative, sustainable technologies and systems. The New Zealand public is educated, diverse and informed, choosing to stay in New Zealand where infrastructure is of an excellent standard and the lifestyle is unmatched. The burning question for New Zealanders in 2058 is: How do we maintain peace and prosperity?</p>	<p><b>Scenario 2: An Island Paradise – but Back to the Jungle</b>            Everyone wants a piece of what we have got, and despite our desirable lifestyle, there is increasing tension with the outside world that requires constant management. To stand up to this pressure, New Zealand has cultivated a resilient national identity and robust infrastructure, and has been among the first countries to make some tough decisions. There is particular pressure on our resources and immigration policy, and as we fend off those countries once considered to be superpowers, we look for allies in countries that are similarly positioned. The burning question for New Zealanders in 2058 is: How do we protect what we have?</p>
New Zealand does not manage its strengths, weaknesses, opportunities and threats	<p><b>Scenario 3: Missed the Global Bus</b>            Our isolation is more pronounced than ever, as we lag behind politically, economically and in the management of our resources and environment. To make up for these shortfalls, our government grasps at unsuccessful ‘quick fixes’, fuelling rather than rectifying the nation’s downward spiral. Corruption, diminished cultural identity, an increase in slums and local terrorism have forced many educated New Zealanders elsewhere. The burning questions for New Zealanders in 2058 are: What happened? What can we do?</p>	<p><b>Scenario 4: All Over Rover</b>            It is the end of the world as we know it. As each country embarks on a policy that is characterised by short-term goals designed to meet the self-interest of a few, the only international interaction is conflict-based and is fuelled by fear, an arms race and nuclear proliferation. As climate change, resource shortages, biodiversity depletion, population growth and inequality escalate, these global problems spiral out of control. The burning question for New Zealanders in 2058 is: Do we have another 50 years?</p>

## 4.2 Which Future Is Likely to Prevail?

Although this work is not about predicting the future, it does raise issues about which of the four futures is likely to prevail. Many would argue that the election of Barack Obama as President of the United States of America, and his commitment to diplomacy and mitigating climate change, will move the world towards better management of its people and environment. At the same time, we are also seeing a growth in the importance of the Group of Eight (G8) which would suggest a continued asymmetry of power and inequality of outcome in global decision-making. Vesting so much power and decision-making in so few is concerning and problematic for the big challenges of energy security, climate change, economic equality and stability that are already on our doorstep.

However, there are also signs that the G8 wishes to work closely with the United Nations. For example, we note that in July 2008 a three-day G8 summit in Japan closed with pledges on the food and oil crises, and its leaders passing tough decisions on climate change, Africa and Zimbabwe on to the United Nations. A particular highlight was the G8's commitment to halve global greenhouse gas emissions by 2050, although ultimately a more ambitious goal will be required to have a realistic chance of mitigating the climate crisis.

There is also the continuing emergence around the world of a vibrant civil society, as evidenced by the explosion in the number of Non-Governmental Organisations (NGOs). It is an increasingly co-ordinated and collaborative network, in no small part thanks to the internet and its ability to connect groups. Similarly, the force of globalisation will have a major influence over our future. How these institutions evolve to operate beyond the 'Industrial Age Bubble' will be crucial.

On an optimistic front, it is clear that the world may currently be moving in the right direction. The important question for New Zealanders is how we can ensure we do not miss the global bus – as mapped out in Scenario Three. What will become increasingly important is understanding how we can actively support positive global steps, while making sure that they sufficiently meet the urgency of the situation, and identifying what role we as a country can play in terms of actual leadership, innovation and participation.

With the recent change of government in New Zealand, it is hard to be sure whether we are on the right track or not. The National Party developed *A Bluegreen Vision for New Zealand* (National Party, 2006), and in 2008 the party campaigned on a strategy of developing infrastructure, relevant scientific research and effective education, all of which are potential stepping stones to sustainably managing the future effectively. What this report has made clear, however, is that bold leadership is needed and real changes to our thinking and actions demanded. New Zealand will need to be proactive and innovative in its approach to the future. Internationally, we must support forward thinking and global management, and contribute positively to them. The more the world moves towards the 'power to the people' scenario (i.e. Scenario One) the more likely it is

that New Zealand will benefit from, and contribute to, a better and more improved quality of life.

### 4.3 What Should We Be Looking For?

One of the difficulties in any future studies work is to identify with any certainty the current global drivers that will shape the future. Consequently, many futurists keep careful watch, scanning the present to assess the future. But in practice futurists can use scenarios to do more than just explore the future; they can create a list of things to watch that indicate which of the futures is likely to prevail.

Lessons learnt from the scenarios indicate things to watch for include:

- A fortress mentality versus a desire to work with others, both between individuals and between countries.
- Disparities in wealth, health, education and technological adoption within societies and between countries.
- The type of leadership style, in particular whether it is proactive and forward thinking or complacent and reactive.
- The extent to which privacy and secrets are accepted norms in government, or whether transparency and public accountability are the more common ethic.

When we review the four futures described in Section 3, it becomes clear that regardless of size, every country has a role in the future of the planet. In particular, we want to see powerful countries move away from a mindset that focuses on a fortress mentality and move towards serious engagement with the current problems facing the planet. We also want to see small countries have the confidence to move towards wider engagement and adoption of innovation. We look for signs that all countries have a voice and where there is an adaptive culture ready to support and move the citizens of the world to a more interesting, healthy and dynamic way of living.

### 4.4 How Can We Shape Our Future?

Scenarios help us shift from reactive leadership, based in the mental modes of past experience, towards proactive, innovative and forward-thinking leadership. By exploring the landscape of possible futures, and expanding the time horizon we normally consider when making decisions, it is possible to gain more understanding of the interactions between global drivers and to be more aware about what a desirable future actually looks like. This then allows us to take steps to actively create that future.

Scenarios can also ‘buy time’, providing space for decision-makers to collect additional information, consider options and reflect on the consequences of their actions in advance, so as to work out the best way of responding to global drivers in a calm and considered manner – before they occur, in effect creating the desired future.

Importantly, success is not measured by predicting the future accurately, but by achieving the future you want. In light of the four futures described in Section 3, it is clear that countries which are proactive are more likely to succeed both at a national level and at an international level. Thus, countries that monitor world events, engage in international agreements, support global initiatives to improve world peace and prosperity, and actively adapt and shape the world through leading by example will not only be successful economically, but will also deliver their citizens a great place to live.

### 4.5 Implications

Given that the four futures are possible and plausible, it is apparent there are places where New Zealand does not want to end up. Scenario Four may mean the end of civilisation as we know it, and Scenario Three would mean that the nation of New Zealand may be unrecognisable to New Zealanders of today. However, our most significant learning came from exploring Scenario Two.

If Scenario Two were to eventuate, the New Zealand government would face many difficult and complex challenges. The more we explored this future, the more we could see that if New Zealand is a clean, beautiful, sparsely populated and safe place this could be problematic, due to worldwide terrorism, religious and resource wars, food and water shortages, and a population well over 10 billion. The key learning was therefore that New Zealand has a very strong vested interest in ensuring that the world does manage itself well. There is simply no viable alternative.

As Scenario Two will not work for New Zealand in the long term, and Scenarios Three and Four are clearly not in New Zealand's best interests, *game theory*<sup>24</sup> would indicate that New Zealand should focus on ensuring the world manages itself well – because if it does not, New Zealand cannot survive in the long term. The only scenario where New Zealand has a robust outcome is Scenario One. This is likely to be the situation for most small to medium-sized countries with similar ethics to New Zealand.

The implications for 2009 and the long term mean New Zealand must try to find ways to support multilateral decision-making, rather than watching a few powerful countries making all the strategic decisions. Small countries must work hard to make international decision-making organisations effective and, where necessary, support the creation of new organisations to fill the gaps.

This requires a visionary and proactive approach, whereby New Zealand must:

1. Be seen to deliver on all of our international agreements and legal obligations under the United Nations and international law. This includes refusing to participate in events that are not sanctioned under international law (as illustrated by the stand taken by the New Zealand government over involvement in the Iraq war). This will

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<sup>24</sup> 'Game theory' refers to the study of how individuals (or, in this case, countries) interact to achieve their own goals. This can include maximising one's gains, maximising the probability of attaining a certain goal, minimising risks or causing damage to competition.

be challenging, but such an approach is necessary, even when other countries become self-obsessed or use intimidation.

2. Design and apply indicators that measure progress in a comprehensive and integrated manner that reflects the four pillars of sustainable development: economy, society, culture and environment. The use of gross domestic product (GDP) as an indicator of change is not sufficient to monitor and guide change. Current work by government bodies, such as Statistics New Zealand's Sustainable Development Indicator Framework, is one such promising initiative.
3. Identify, investigate, reflect on and consider the implications of all available strategic options in an open and transparent manner. Such an approach will not only deliver the best decisions but, just as importantly, will gain the commitment of New Zealanders to actively deliver on those decisions.
4. Focus more on what is 'important', rather than what is 'urgent'. Critical thinking focused solely on what is urgent will not suffice. In his book *The 7 Habits of Highly Effective People*, Steven Covey introduced the idea that effective people spend most of their time on what is 'important' rather than what is 'urgent'. The challenge for governments is to have the ability to tell the difference.
5. Respond appropriately, rather than over-react, under-react or not react at all. In periods of crisis, it will be those who understand not only the change agents, but how they interact over time, who will be able to deliver positive change. Furthermore, the scenarios suggest that a focus on 'secondary change agents' is likely to be most effective, as these are the tools, methods and systems through which we can best manage the primary change agents and wild cards, over which we have little control.
6. Support and engage in thinking long-term about the future to ensure that future thinking becomes part of our culture and therefore part of the way we govern.
7. Develop a dynamic, creative and effective strategy for sustainable development that not only propels this country into an exceptional position internationally, but does so in such a way that other countries emulate our practices.

In other words, New Zealand must lead by example.

## Abbreviations

BRIC	Brazil, Russia, India and China
CO <sub>2</sub>	Carbon dioxide
G8	Group of Eight: comprising Canada, France, Germany, Italy, Japan, Russia, United Kingdom, United States
GDP	Gross Domestic Product
GE	Genetic engineering
GHG	Greenhouse gases
GM	Genetic modification
IP	Intellectual Property
ISEW	Index of Sustainable Economic Welfare
IT	Information Technology
NATO	North Atlantic Treaty Organization
NGO	Non-Governmental Organisation
NSDS	National Sustainable Development Strategy
OPEC	Organization of the Petroleum Exporting Countries
UN	United Nations
WTO	World Trade Organization

## Appendix 1 The 75 Baseline Drivers

Baseline Drivers	Global Drivers	Type of Global Driver
1. Climate change	<b>Global Driver 1</b> Climate Change	Primary Change Agent
2. Foreign investment and ownership in New Zealand 3. Our ageing population 4. Changing family structures 5. Changing population numbers 6. Migration 7. Generations Y and Z 8. Student debt 9. Youth issues	<b>Global Driver 2</b> Population & Demographics	Primary Change Agent
10. Biodiversity 11. Collapse of central ecosystem services	<b>Global Driver 3</b> Ecosystems & Biodiversity	Primary Change Agent
12. Nuclear technology 13. Peak oil	<b>Global Driver 4</b> Energy	Primary Change Agent
14. Water shortage 15. Antarctica 16. Exploitation of the European Economic Zone 17. Natural gas	<b>Global Driver 5</b> Resources	Primary Change Agent
18. Growing consumerism 19. Heightened public environmental awareness 20. Religious fundamentalism versus liberalism	<b>Global Driver 6</b> Values & Beliefs	Primary Change Agent
21. The poverty gap 22. Housing affordability and living costs 23. Violence and climate of fear 24. Overseas commitment to war 25. Eroding civil liberties 26. Individualism versus collective identity	<b>Global Driver 7</b> Justice & Freedom	Primary Change Agent
27. Public versus private ownership 28. Commercial interests in the political sphere 29. Increasing media power and influence 30. The effect of MMP on political party structure	<b>Global Driver 8</b> Political Systems & Institutions	Secondary Change Agent

Baseline Drivers	Global Drivers	Type of Global Driver
31. New Zealand's unwritten constitution 32. New Zealand's role as a leader in the Pacific/World 33. The civil society movement 34. Levels of political understanding and democratic participation 35. Central versus local government tension 36. Geopolitical power shifts 37. Global governance 38. Regional development 39. Level of government involvement in everyday life		
40. Tourism in New Zealand 41. New Zealand's labour market: the skills required for 2058 42. Increasing independence from Britain 43. Urban development 44. Free trade 45. Property ownership 46. Clean green brand and reputation	<b>Global Driver 9</b> Economic Models	Secondary Change Agent
47. Impact of changes in land use 48. Soil management 49. Mining of non-renewable resources 50. International conflict over resources 51. Waste issues	<b>Global Driver 10</b> Management of Ecosystems and Resources	Secondary Change Agent
52. Moving people, freight and information (economic focus) 53. Supporting health, education and recreation (social focus)	<b>Global Driver 11</b> Infrastructure	Secondary Change Agent
54. Changes in the global economy: volatility/recession/crisis 55. Privacy versus security	<b>Global Driver 12</b> Conflict and Security	Secondary Change Agent
56. Rapid growth of the internet 57. The cellular phone revolution 58. Increasing personal web pages and blogs 59. Increasing broadband access 60. Growth of genetic modification technology 61. The development of molecular	<b>Global Driver 13</b> Technology	Secondary Change Agent



Baseline Drivers	Global Drivers	Type of Global Driver
nanotechnology/robots 62. Emerging antibiotic resistance 63. Gene therapy 64. Obesity and type-2 diabetes 65. Mental health and rates of depression		
66. Increasing focus on social research 67. Education 68. Culture and intellectual property in New Zealand	<b>Global Driver 14</b> Information, Learning & Ideas	Secondary Change Agent
69. Pandemic	<b>Global Driver 15</b>	Wild Card
70. Tsunami	<b>Global Driver 16</b>	Wild Card
71. Drought	<b>Global Driver 17</b>	Wild Card
72. Volcanoes and earthquakes	<b>Global Driver 18</b>	Wild Card
73. Astronomical events	<b>Global Driver 19</b>	Wild Card
74. Extreme weather	<b>Global Driver 20</b>	Wild Card
75. Terrorism, biological and chemical warfare	<b>Global Driver 21</b>	Wild Card

## Appendix 2 April Workshop – The Method

The four stages in the process included pre-workshop preparation (including a mini-workshop held in late March 2008), a three-day workshop in April 2008, and post-workshop research and discussion, culminating in the writing of this report (see Figure 3, p. 11). This Appendix describes more closely Part 1 and Part 2.

### Part 1: Pre-workshop preparation

In preparation for the three-day workshop, the team completed both a literature search of effective processes for developing scenarios in order to understand ‘best practice’ (see the McGuinness Institute website<sup>25</sup>). In addition an extensive list of drivers likely to shape New Zealand’s long-term future (see Appendix 1). This list grew to 75. Clearly, this was too many for the workshop to use in discussions, therefore a shorter list of summary drivers was necessary to capture and convey all 75. To facilitate this process, we were fortunate to have the assistance of Leanne Holdsworth,<sup>26</sup> who ran a day-long mini-workshop for the McGuinness Institute team in late March, with the goal of narrowing this list of 75 baseline drivers down to a smaller, more manageable list. Leanne guided the team in creating a systematic trial-and-error process which included the opportunity to revisit and revise. This became the foundation for the process used in the three-day April workshop. This process narrowed the 75 into 21, which became the global drivers of change and wild cards (see Figure 1, p. 2).

### Part 2: The workshop

On the 2nd to the 4th April 2008, a three-day intensive workshop was held, with the goal of establishing an effective scenario-development process and using it to create four scenarios for New Zealand in 2058. Given how instrumental this workshop was in the development of this report, a description of each stage is outlined (see Figure 5 over).

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<sup>25</sup> [www.mcguinnessinstitute.org](http://www.mcguinnessinstitute.org)

<sup>26</sup> From Holistic Business Solutions [www.holisticbusiness.co.nz](http://www.holisticbusiness.co.nz)

**Figure 5 The Workshop: The Seven Stages**

**1: Confirm global drivers of change**

This was an interactive step in the process and one that we continued to rework in the six months following the workshop. The final result is Figure 1, found on page 2 of this report.

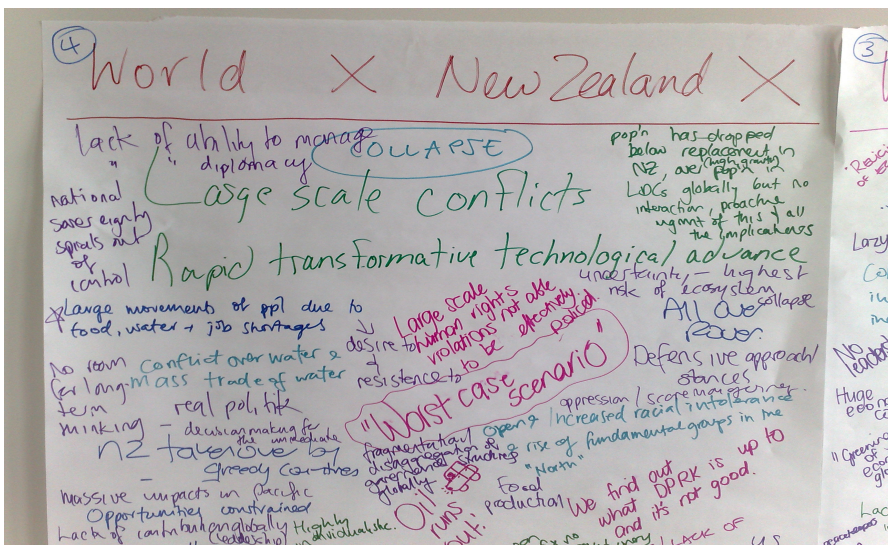
**2: Scenario brainstorm**

The context of each of the four scenarios was set within the original methodology for *Project 2058* and is outlined in Table 6 (see over). To begin the brainstorming, the title of each scenario was written on a large piece of paper (such as in Figure 6), all four were laid out on a table, then the group was given time to think about how they imagined this scenario might look in 2058. Each participant could write down any thoughts, drawings, diagrams or ideas on these sheets of paper without any discussion.

Table 6 The Four Scenarios Matrix

	The world does manage its strengths, weaknesses, opportunities and threats	The world does not manage its strengths, weaknesses opportunities and threats
New Zealand does manage its strengths, weaknesses, opportunities and threats	<b>Scenario 1:</b> <b>Power to the People</b> New Zealand ✓ World ✓	<b>Scenario 2:</b> <b>An Island Paradise</b> New Zealand ✓ World ✗
New Zealand does not manage its strengths, weaknesses, opportunities and threats	<b>Scenario 3:</b> <b>Missed the Global Bus</b> New Zealand ✗ World ✓	<b>Scenario 4:</b> <b>All Over Rover</b> New Zealand ✗ World ✗

Figure 6 The Results of a Brainstorm for Scenario Four



3: Guided scenario discussion

The next task was to refine these ideas and consider what the central issues might be in each vision of 2058. The group decided that the best way to achieve this was to discuss each of the scenarios independently of the others.

An hour was spent exploring each scenario and refining the brainstorms (see Figure 7). At the end of each discussion, a list of important issues and ideas for each scenario was written up. These covered what New Zealand and the world might look like in 2058 and what New Zealand’s position in this world might be.

**Figure 7 Hayley Leading a Discussion on Scenario Two**



4: Revisit impacts and management of global drivers

Next, we returned to the global drivers, seeking to link them to the scenarios more thoroughly and deliberately. Tables 7 and 8 were completed for each driver to see how its effects might vary for each scenario. The goal here was to ensure that the driver was considered in terms of each end of the spectrum (i.e. both in regard to its strongest and its extreme weakest form), thus giving breadth and depth to the final scenarios.

**Table 7 Global Drivers and Scenarios – New Zealand**

New Zealand	Causes	Effects
<input checked="" type="checkbox"/> Global drivers are well managed		
<input checked="" type="checkbox"/> Global drivers are not well managed		

**Table 8 Global Drivers and Scenarios – World**

The World	Causes	Effects
<input checked="" type="checkbox"/> Global drivers are well managed		
<input checked="" type="checkbox"/> Global drivers are not well managed		

5: Exploring the scenarios: painting a picture of New Zealand in 2058

Exploration of the scenarios through story creation was the final step in the workshop, bringing together ideas generated in the brainstorming, guided scenario discussions and the work on the global drivers, to paint a picture of what life could be like in 2058. What began as key words was expanded into a written piece about how New Zealand and the world might look under each scenario and what New Zealand's role in this changed global community might be. This was followed by exploring ways to represent our findings diagrammatically (see Appendix 4).

6: Brain dump by participants

To close the workshop, all participants were asked to download their thoughts, experiences and observations from the three days. This was called a brain dump, as caught on camera (see Figure 8 below).

**Figure 8 Dave Completing a Brain Dump**



7: Writing up the results

Although strategic discussions concluded at the end of day three, the work continued over the next six months. In early July all participants received a final draft of the workshop's findings, giving the team time to reflect on their thinking, and providing an opportunity for participants to feed back their thoughts, which were further reworked into the current report.

This report represents the culmination of this process of discussion and review.

## Appendix 3 April Workshop – The Team

The following includes brief details of the workshop participants (see Figure 9).

**Figure 9** Participants at the Workshop



Back, from left to right: Richard, Steph, Sarah, Superman (our team mascot), Hayley and Patrick.

Front: Amelie, Wendy, Miriam and Dave.

**Richard Shonakan:** Richard is our technical support person, who keeps the organisation running smoothly.

**Steph Versteeg:** Steph has a Bachelor of Arts in Developmental Studies and a Bachelor of Science in Environmental Studies. At the time of writing she was about to head off on a volunteer exchange to Zambia.

**Sarah Wilson:** Sarah is originally from Christchurch and is currently completing a double degree in law and international relations at Victoria University.

**Hayley Vujcich:** Hayley has a Masters in Environmental Studies and a background in botany and ecology; she is currently travelling in Europe.

**Patrick Farrell:** Patrick is from the United States and is currently studying towards a Masters in Environmental Studies at Victoria University.

**Amelie Goldberg:** Amelie has a background in studies of ecology and biodiversity, and has a Masters in Environmental Studies.

**Wendy McGuinness:** Wendy is a chartered accountant, with a BCom from Auckland University, an MBA from Otago University and a number of environmental papers from Massey University.

**Miriam White:** Miriam has just completed a Bachelor of Design at Massey University.

**Dave Henley:** Dave has a background in physics and medicine, and recently completed a Post Graduate Diploma in Geography focusing on Sustainability, Energy and Climate Change at Otago University. After a bike expedition in Tanzania in the middle of 2008, he is now based at Aoraki Mt Cook working with DOC, and continues his work with the McGuinness Institute from there.

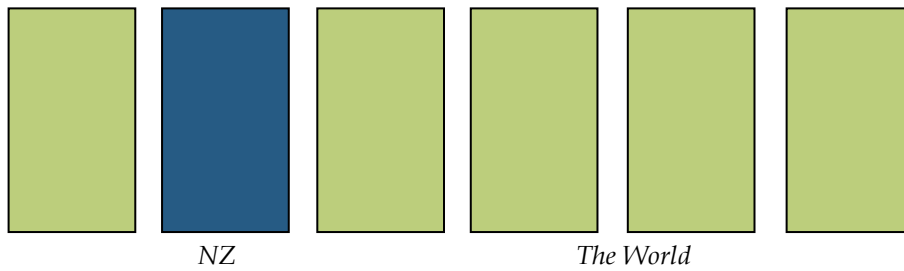


## Appendix 4 April Workshop – A Visual Representation of Each of the Scenarios

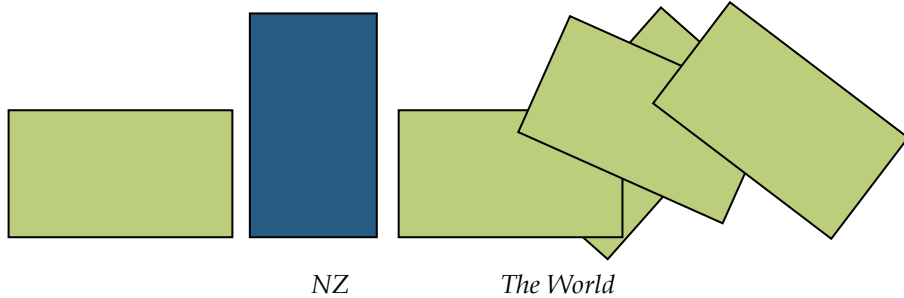
At the end of the workshop, two diagrams – the ‘Building Block Model’ and the ‘World Map Model’ – were produced, to reflect the relationship between New Zealand and the World.

### (i) The Building Block Model

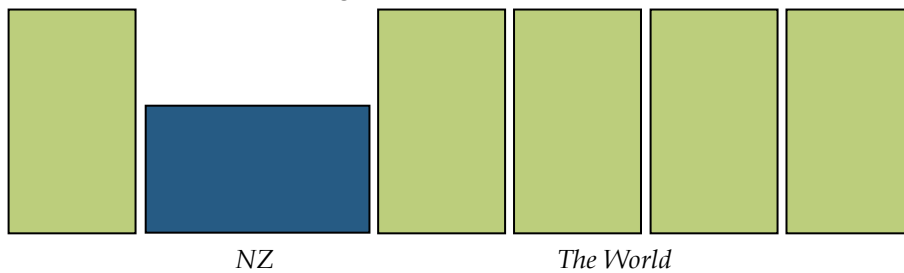
Scenario 1: Both New Zealand and the world manage themselves well



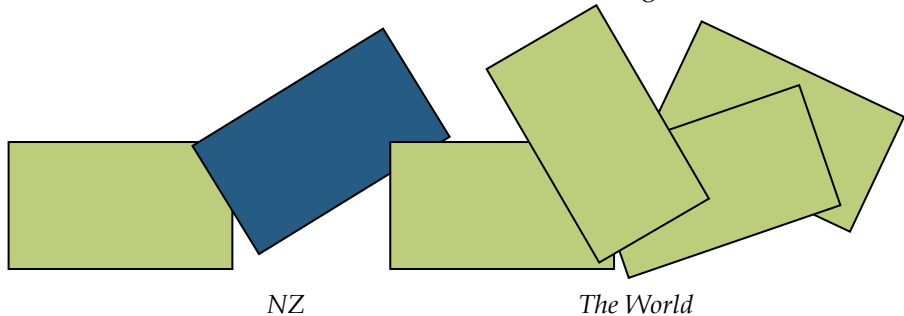
Scenario 2: New Zealand manages itself well, but the world does not



Scenario 3: The world manages itself well, but New Zealand does not

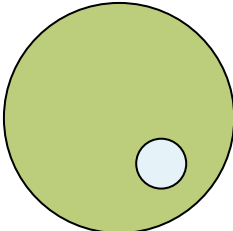


Scenario 4: Neither New Zealand nor the world manage themselves well

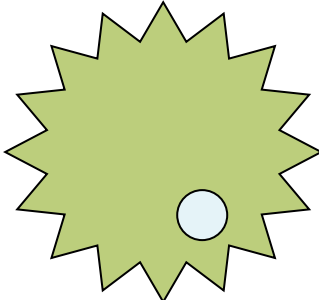


(ii) World Map Model (world depicted in green, New Zealand depicted in blue)

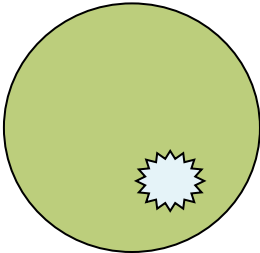
Scenario 1: Both New Zealand and the world manage themselves well



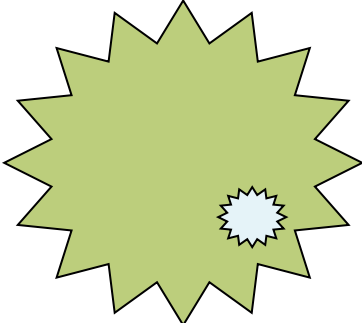
Scenario 2: New Zealand manages itself well, but the world does not

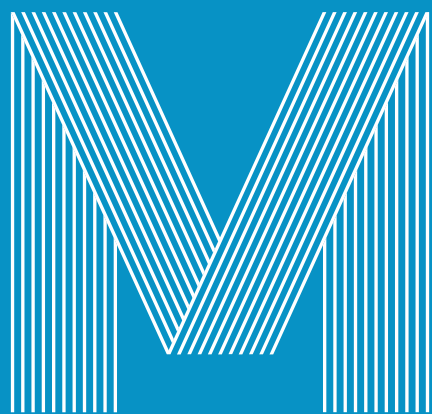


Scenario 3: The world manages itself well, but New Zealand does not



Scenario 4: Neither New Zealand nor the world manage themselves well





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