



# Emissions Reduction Plan

## Strategy Mapping Workshop

## Emissions Reduction Plan Strategy Mapping Workshop

Attachment 1 (Draft as at 21 May)

**Agenda** **When:** Friday 21 May, 9.00am–1.30pm (start 9.30am)  
**Location:** Level 2, 5 Cable Street

<b>9.00–9.30</b>	Coffee, croissants and fresh fruit (in the hallway—we will provide options for a variety of dietary requirements) (please introduce yourselves) [30 mins]
<b>9.30–9.50</b>	Agenda, health and safety, introduce support team Review pre-workshop exercise: Aquaculture Strategy map Worksheet 1 and 2 [20 mins]
<b>9.50–10.50</b>	Group work (three groups/three locations – board room/meeting room/MI office) Morning tea will be provided to each group on a trolley [60 mins]
<b>10.50–11.10</b>	Assumption mapping in 3 groups of each map (Reuben Brady, Isabella Crawford and Maisie Hance) [20 mins]
<b>11.10–11.45</b>	Present back by each group (designers are present and take notes) [10 mins each – 35 mins total]
<b>11.45–11.55</b>	Designers testing look and feel (Sophie Wells and Dana King) [10 mins]
<b>11.55–12.15</b>	Lunch (in the hallway) [20 mins]
<b>12.15–12.45</b>	Collaborate as a bigger group on a shared strategy map [30 mins]
<b>12.45–1.00</b>	Patron's observations: James Palmer, Lionel Carter, Ella Lawton and Michelle Pawson [15 mins]
<b>1.00–1.30</b>	Next steps (with tea and coffee): Exercise written up (Lachlan Rule and Reuben Brady) Thank you (Wendy McGuinness) [30 mins]

Please feel free to stay and work with us on the exercise (with Lachlan Rule and Reuben Brady), the strategy map with the designers (Sophie Wells and Dana King), or simply chat with other participants on lessons learned and next steps.

The board room is available until 4.00pm.

## **Photography**

We will be taking a few photographs of the worksheets throughout the workshop.

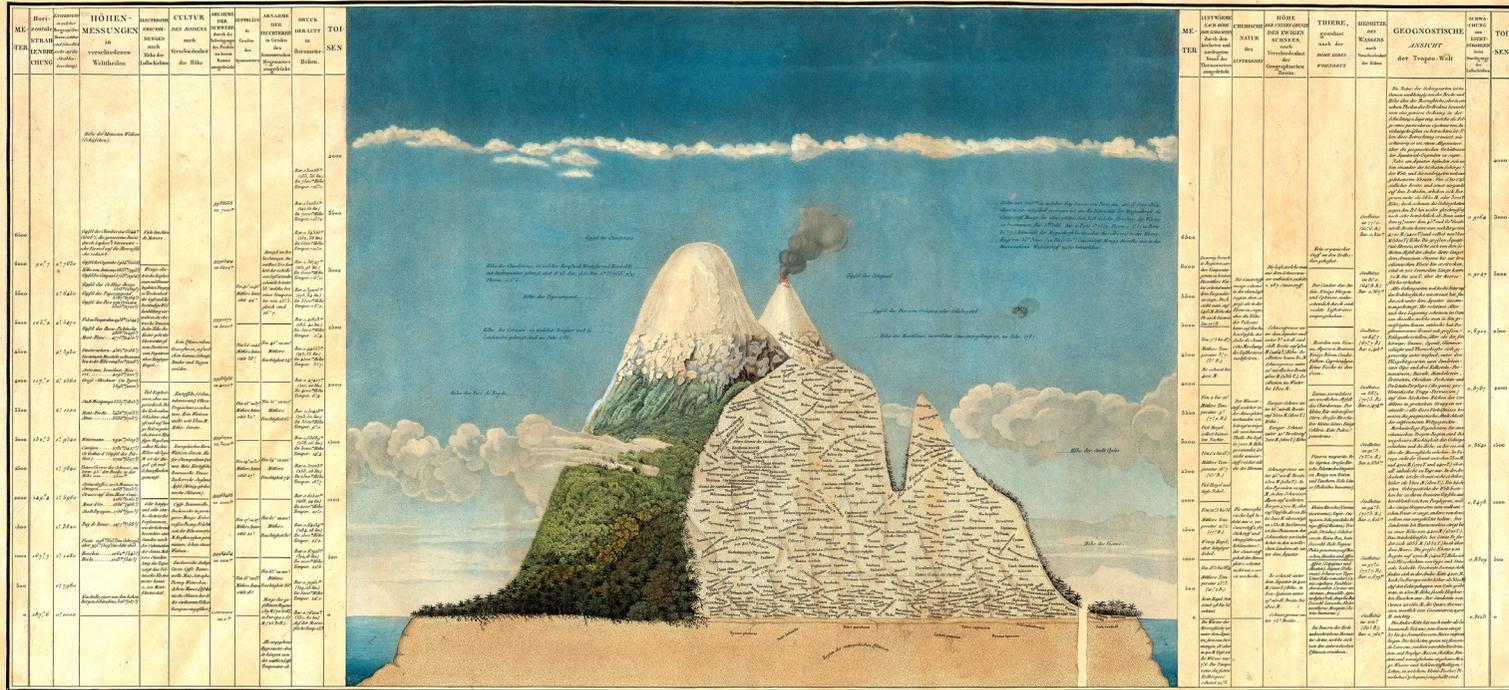
If you feature in any of the photographs, we will ask your permission before publishing them.

## **Voice Recording**

We will voice record on an iPhone the presentations by each of the three groups and the learnings session. This will only be used to write up notes and ideas on how to do this work better.

## **Chatham House Rules**

You can refer to what was discussed at the workshop but not *who* said *what*.



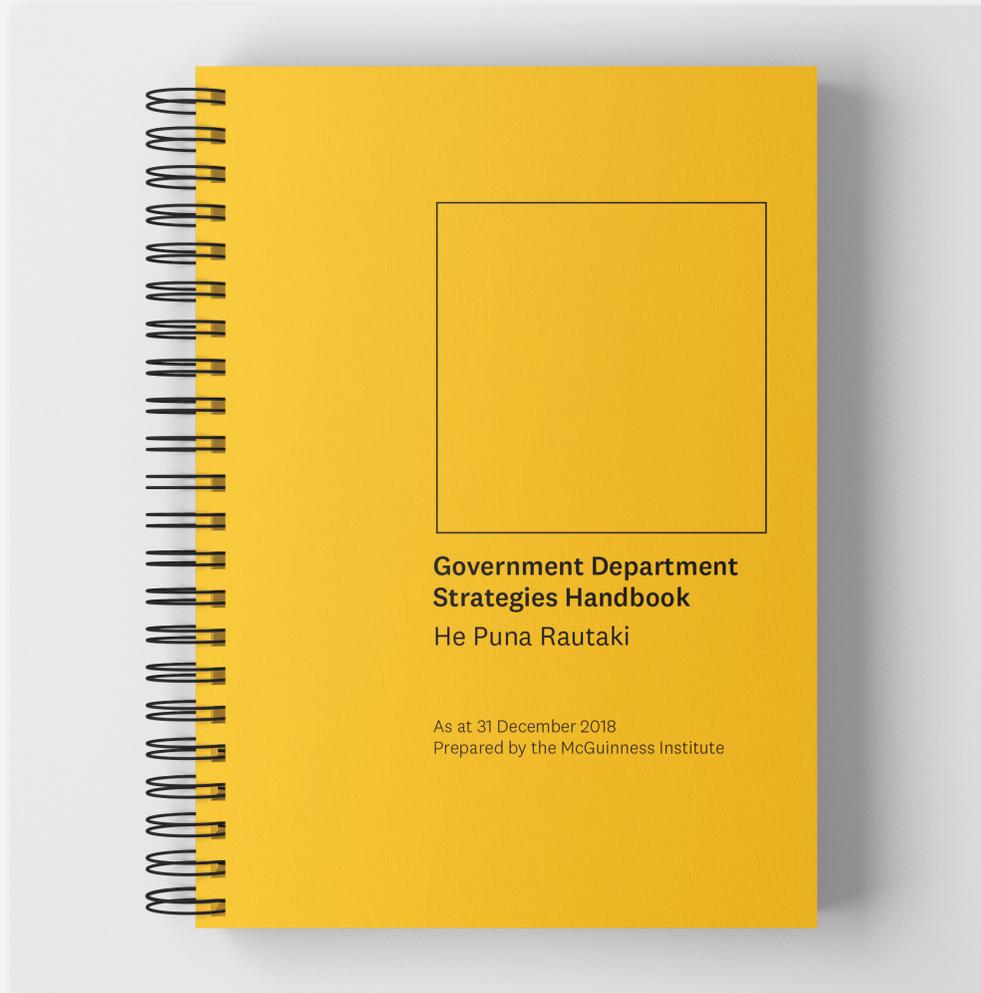
# Geographie der Pflanzen in den Tropen-Ländern;

## ein Naturgemälde der Anden,

gegründet auf Beobachtungen und Messungen, welche vom 10<sup>ten</sup> Grade nördlicher bis zum 10<sup>ten</sup> Grade südlicher Breite angestellt worden sind, in den Jahren 1793 bis 1805.

von ALEXANDER VON HUMBOLDT und A. G. BONPLAND.

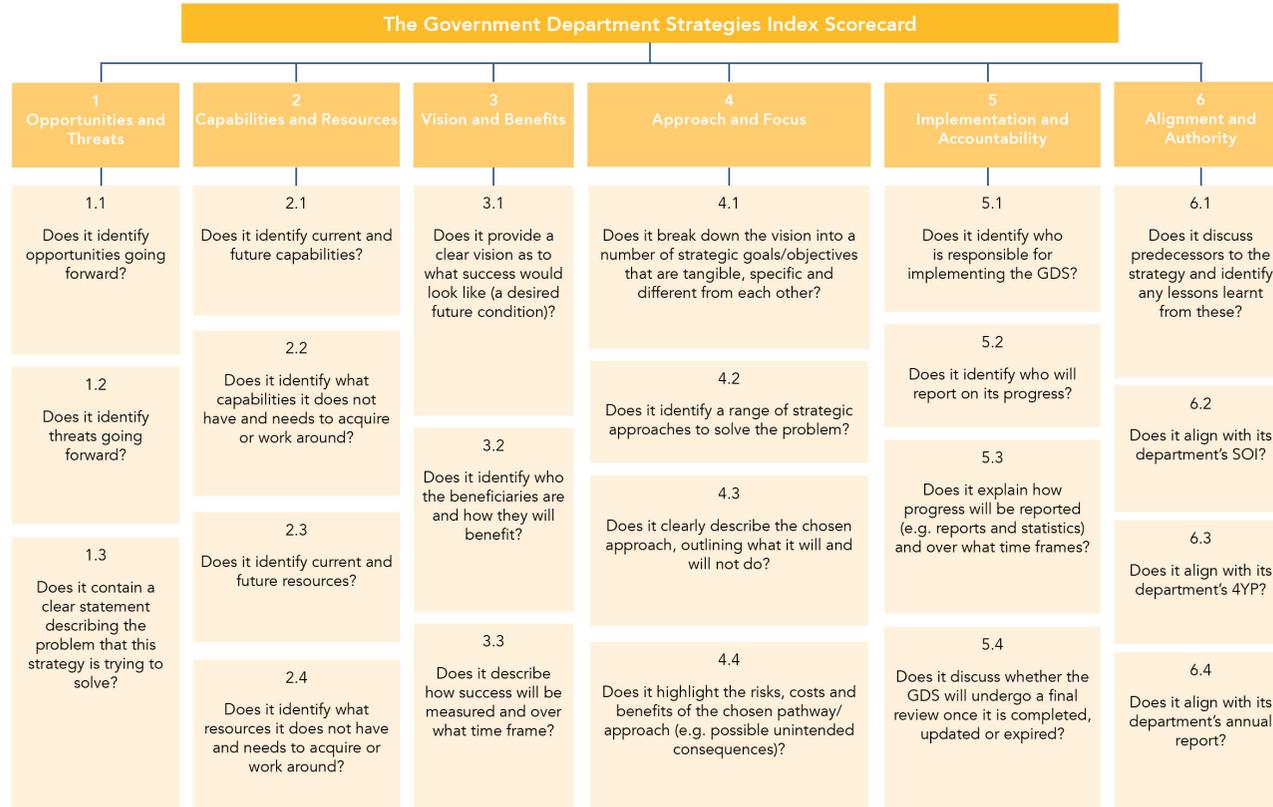
ALEXANDER von HUMBOLDT (1769-1859) diagram of Chimborazo showing his formulation of Naturgemälde from his *The Geography of Plants*, 1807



## 2020 GDS Index (1–20 of 202 entries)

GDS Number	Government Department Strategy (GDS)	Date GDS Published (Month/Year)	Department	Sector
GDS01	<a href="#">Subantarctic Islands Research Strategy</a>	May 2005	Department of Conservation	Environment Sector
GDS02	<a href="#">Hector's and Maui's Dolphin Threat Management Plan</a>	August 2007	Department of Conservation	Environment Sector
GDS03	<a href="#">National Education Strategy 2010–2030</a>	March 2011	Department of Conservation	Environment Sector
GDS04	<a href="#">Information Systems Strategic Plan</a>	April 2015	Department of Conservation	Environment Sector
GDS05	<a href="#">Mātauranga Whakauka Taiao - Environmental Education for Sustainability (jointly held between DoC and MFE)</a>	July 2017	Department of Conservation	Environment Sector
GDS06	<a href="#">New Zealand sea lion/rāpoka Threat Management Plan (jointly held between DOC and MPI)</a>	July 2017	Department of Conservation	Environment Sector
GDS07	<a href="#">National Compliance Strategy</a>	August 2017	Department of Conservation	Environment Sector
GDS08	<a href="#">Tourism Strategy (held jointly between DOC and MBIE)</a>	May 2019	Department of Conservation	Environment Sector
GDS09	<a href="#">Te Mana o te Taiao, the Aotearoa New Zealand Biodiversity Strategy</a>	August 2020	Department of Conservation	Environment Sector
GDS10	<a href="#">Critical Ecosystem Pressures on Freshwater Environments 4 year research strategy</a>	November 2020	Department of Conservation	Environment Sector
GDS11	<a href="#">Towards a Predator Free New Zealand - Predator Free 2050 Strategy</a>	February 2020	Department of Conservation	Environment Sector
GDS12	<a href="#">National Plan of Action Seabirds</a>	May 2020	Department of Conservation	Environment Sector
GDS13	<a href="#">Te Kaweka Takohaka mō te Hoiho</a>	August 2020	Department of Conservation	Environment Sector
GDS01	<a href="#">National Historic Heritage Strategy</a>	October–December 2013	Department of Corrections	Justice Sector
GDS02	<a href="#">Our Drug and Alcohol Strategy Through to 2020</a>	March 2016	Department of Corrections	Justice Sector
GDS03	<a href="#">Health and Safety Strategy 2016–2020</a>	May 2016	Department of Corrections	Justice Sector
GDS04	<a href="#">Change Lives Shape Futures: Investing in Better Mental Health for Offenders</a>	March 2017	Department of Corrections	Justice Sector
GDS05	<a href="#">Change Lives Shape Futures: Wahine - E rere ana ki te Pae Hou – Women's Strategy</a>	June 2017	Department of Corrections	Justice Sector
GDS06	<a href="#">Hōkai Rangī Strategy</a>	August 2019	Department of Corrections	Justice Sector
GDS01	<a href="#">Te Huri Mōhiotanga Hei Uara: Nga Tohutohu Rautaki Ki 2030 – Turning Knowledge into Value: Strategic Directions to 2030</a>	December 2016	Department of Internal Affairs	Finance and Government Administration Sector

## HOW TO ASSESS THE CONTENT OF A GOVERNMENT DEPARTMENT STRATEGY (GDS) DOCUMENT



2 May 2019

## It is one of the better GDS strategy maps, but:

1. Order/Sequence
2. 7% average annual growth equals \$1.5m
3. Outcomes
  - maybe values?
  - assumptions?
  - cause and effect?
  - Te Ao Maori
  - climate change
  - type of investment: public/private?
4. Language (e.g. lift industry s/b lifting industry ... but how?)



Aquaculture can be **extremely valuable** for the space it uses. A 10 hectare salmon farm can be worth **\$140 million in annual revenue:**

Comparison of the approximate annual value per 10 farmed hectares for different primary products	
Salmon	\$140,000,000
Mussels	\$850,000
Oysters	\$800,000
Kiwifruit	\$800,000
Dairy	\$77,000
Sheep and beef	\$8,500

Source: Zespri, Beef+Lamb, DairyNZ, AQNZ

# Industry at a glance

\$600 million in sales in 2018

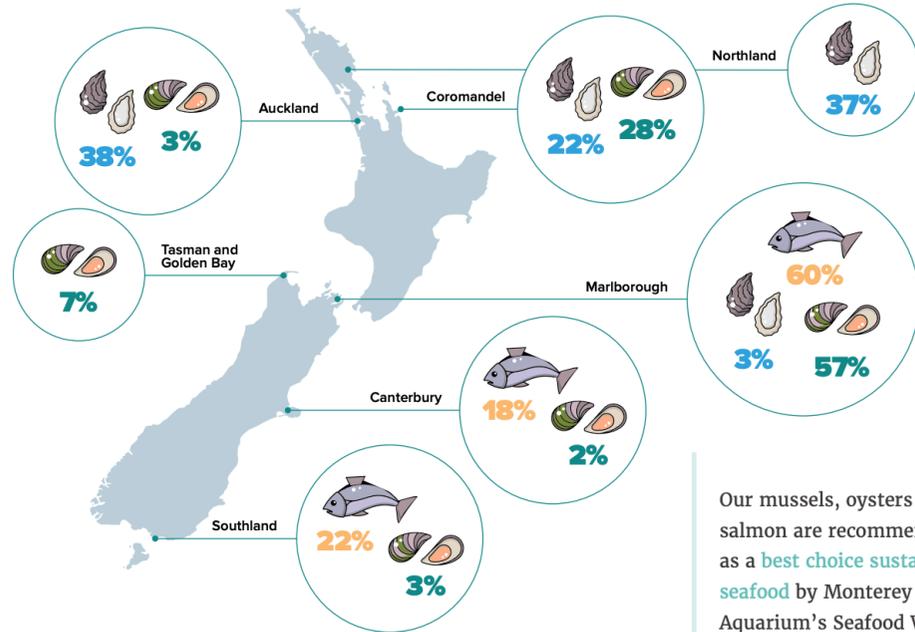
3,000+ jobs in New Zealand communities

7% average annual growth since 2012

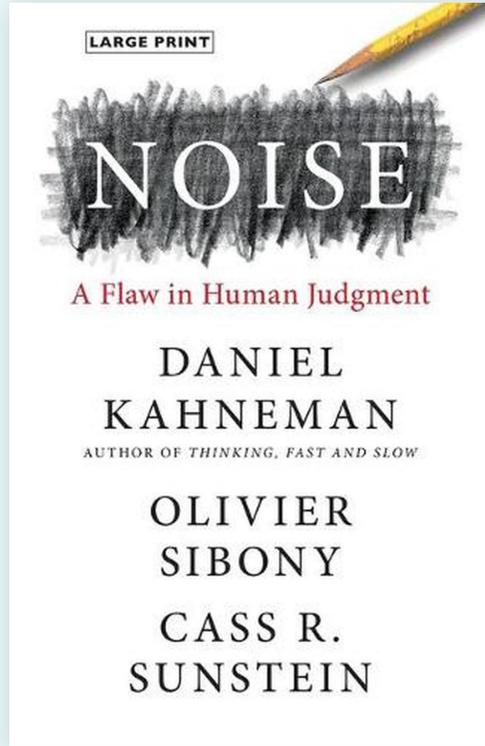
## Top 5 products by export value



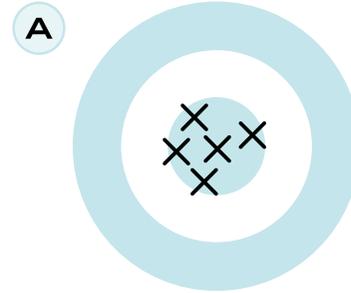
## Major aquaculture areas



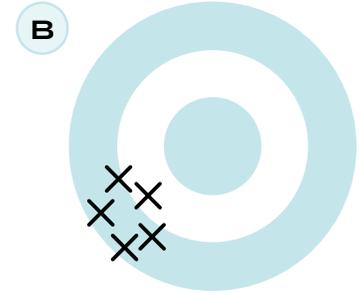
Our mussels, oysters and salmon are recommended as a **best choice sustainable seafood** by Monterey Bay Aquarium's Seafood Watch



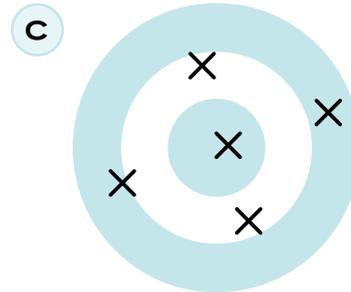
## Two Types of Error: Noise and Bias



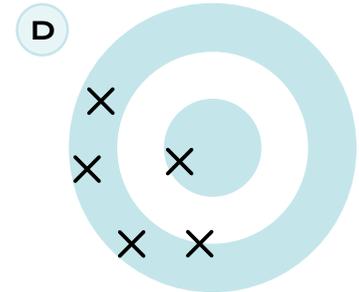
Accurate



Biased



Noisy



Noisy and biased

## **Questions to stress test your strategy**

1. Complete the assumption mapping exercise (Worksheet 2).  
Does this change your themes, goals, actions or requirements?
2. Check that cause-and-effect relationships exist throughout the strategy map. Do this by going from the bottom of the strategy map to the top, reviewing each relationship along the way.
3. Place your hand over portions of the strategy map and see if alternative (less costly/more effective) themes, goals, actions or requirements exist.
4. Check that words are precise and familiar, and sentences are short and straightforward (apply the Write Plain Language Standard).
5. How would you know whether the strategy is working correctly?  
Do feedback loops exist?

# Worksheet 1: Strategy mapping exercise

Attachment 4 (Draft as at 18 May 2024)

## Worksheet 1: Strategy mapping exercise



### Emissions Reduction Plan Strategy Mapping Workshop

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#### Purpose

**Step 1: Select one of the budgets below.**

Emissions budget 1: 2022-2025

Emissions budget 2: 2026-2030

Emissions budget 3: 2031-2035



**Table E2: Our proposed emissions budgets. All gases are combined as CO<sub>2</sub> equivalent**

	2022	Emissions budget 1 (2022-2025)	Emissions budget 2 (2026-2030)	Emissions budget 3 (2031-2035)
All gases, net (Mt CO <sub>2</sub> e)	271	271	286	223
Annual average (Mt CO <sub>2</sub> e/year)	68.2	67.7	57.3	44.6
Average reduction vs 2022 levels		2%	17%	36%

Re Plan a Reg's Climate Change Commission, 2020 Draft Advice for Consultation, p. 17

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#### Values

**Step 2: Select the lens you will use for decision making.**

Māori/Crown relations     Productive     Resilient     Inclusive     Sustainable     Other

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#### Themes

**Step 3: Select themes that will meet the purpose above (ideally 3-6).**  
Examples could include:

Housing & urban reform     Energy sector shift     Land use adaptation & innovation     Circular, low-emissions economy

Other     Other     Other     Other

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#### Goals

**Step 4: Select a number of goals that fit logically under each theme (ideally 3-6).**

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#### Actions

**Step 5: Select what actions are necessary to achieve each goal (ideally 3-6).**

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#### Requirements

**Step 6: Select what requirements are necessary to ensure each action is achieved (ideally 3-6).**

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#### Questions to stress test your strategy

**Step 7: Stress test your strategy map.**

- Complete the assumption mapping exercise (Worksheet 2). Does this change your themes, goals, actions or requirements?
- Check that cause-and-effect relationships exist throughout the strategy map. Do this by going from the bottom of the strategy map to the top, reviewing each relationship along the way.
- Place your hand over portions of the strategy map and see if alternative (less costly/more effective) themes, goals, actions or requirements exist.
- Check that words are precise and familiar, and sentences are short and straightforward (apply the Write Plain Language Standard).
- How would you know whether the strategy is working correctly? Do feedback loops exist?

#### Creating one integrated strategy map

**Step 8: Combine all 3 strategy maps into one map.**

Budget 1:  
2022-2025

+

Budget 2:  
2026-2030

+

Budget 3:  
2031-2035

=

Integrated  
Strategy  
Map

1. Purpose
2. Values
3. Themes
4. Goals
5. Actions
6. Requirements
7. etc

## Worksheet 2: Assumption mapping exercise

Attachment 5 (Draft as at 18 May '20)

**Worksheet 2: Assumption mapping exercise** **ERP** Emissions Reduction Plan  
Strategy Mapping Workshop

**Explanation**  
An assumption map helps to test, validate or identify holes in the strategy (an assumption being an unchallenged input that shapes the strategy). It helps identify issues that could prevent the strategy from succeeding.

**Step 1: Write down a list of assumptions that you think may exist.**  
(e.g. use sticky notes – but not orange ones)

**Step 2: Sort similar assumptions** and then choose a high-level assumption to reflect the group (e.g. use an orange sticky note).

**Step 3: First rank these high-level assumptions from top to bottom** on the left of the diagram below by whether they have a high or low impact (magnitude) on the success of the strategy (use the orange sticky notes only on this worksheet).

**Step 4: Second move these high-level assumptions across the diagram** from left to right to show what is explicit (well recognised) and what is implicit (not well recognised).

**Step 5: Now think about how you could move the assumptions from right to left and/or from top to bottom.** Note: You will not be able to remove all assumptions, but by making them more explicit/transparent you are ensuring you know where you are taking a calculated risk. This will ensure when the strategy is reviewed or assessed, learnings can be made, and action can be taken early (saving money and time).



**High magnitude**  
If the assumption is incorrect, it will impact the success of the strategy


← **Explicit**      **How well acknowledged is the assumption?**      **Implicit** →

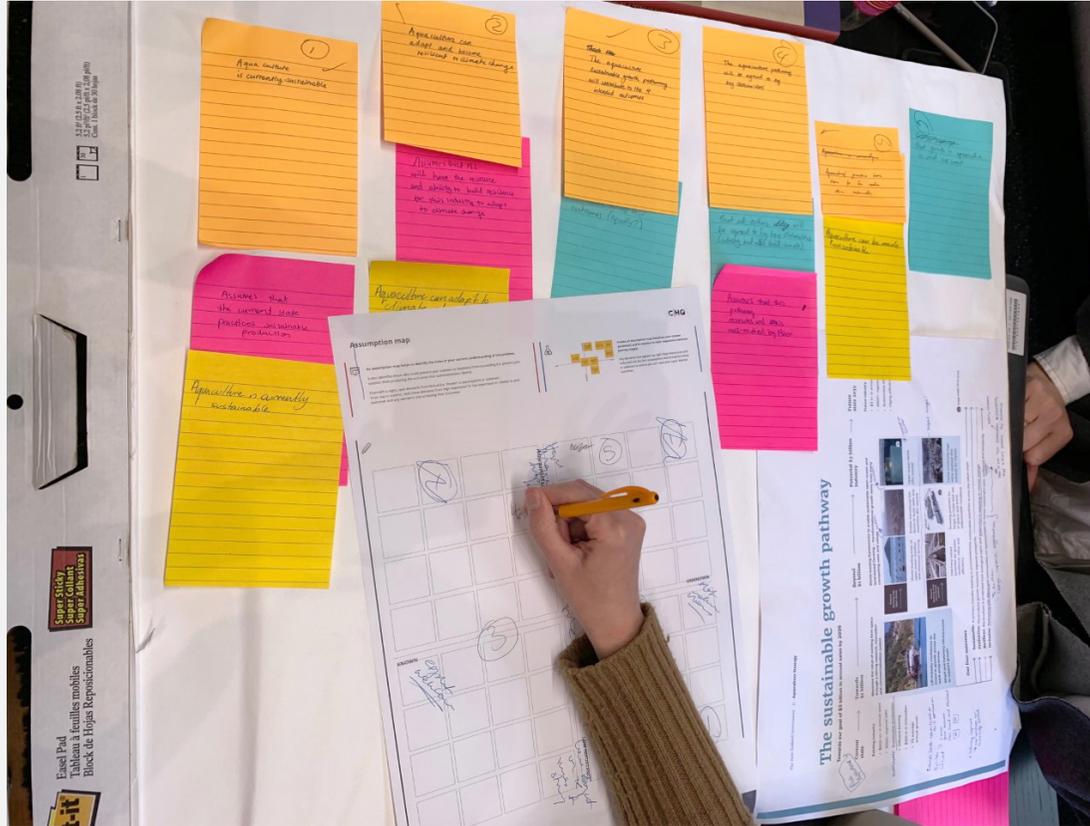

**Low magnitude**  
If the assumption is incorrect, it will not impact the success of the strategy

**M** MCGUINNINSTITUTE  
TE KŪKŪNOHONOHONO

1. Write a list
2. Sort/group similar assumptions
3. Rank by extent assumption, **if incorrect** will impact the success of the strategy (low to high magnitude)
4. Rank by extent assumption is well recognised (explicit to implicit)
5. Consider:
  - (a) Can I make my assumptions more explicit? (Improves the quality of debate/ ideas and delivers buy-in)
  - (b) Can I remove other risks of the strategy failing? How can I get a better understanding of the risks (e.g. break the assumption down; obtain expert independent advice)?

# Assumption mapping process

Thurs 13 May 2021



31 January 2021 Draft Advice for Consultation

Table 3.1: Key transitions along our path.

		Budget 1	Budget 2	Budget 3
Transport	Road transport	Accelerate EV uptake Improve average efficiency of new ICE vehicles		Phase out new light ICE vehicles Electrify medium and heavy trucks
	Reducing travel demand	Encourage remote working for those who can Encourage switching to walking, cycling and public transport		
	Non-road transport	Electrification of rail	Biofuel blending Start electrification of ferries and coastal shipping	
Heat, Industry and Power	Buildings	No new gas heating systems installed after 2025 Improve thermal efficiency		Start phase out of gas in buildings
	Electricity	Phase out fossil base-load generation	Transmission and distribution grid upgrades Reduce geothermal emissions	Expand renewable generation base Achieve ~95% renewable generation
	Industrial process heat	Replace coal with biomass and electricity		Replace gas with biomass and electricity
	Agriculture	Adopt low emissions practices on-farm	Adopt low emissions breeding for sheep	Encourage the adoption of new low methane technologies when available
Land	Native Forests	Ramp up establishing new native forests		Establish 25,000 hectares per year
	Exotic Forests	Average 25,000 hectares per year of new exotic plantation forests		Ramp down planting new exotic plantation forests for carbon storage
Waste and F-gases	Waste	Divert organic waste from landfill Improve and extend landfill gas capture		
	Hydrofluorocarbons (HFCs)	Reduce import of HFCs in second-hand products Increase end-of-life recovery		

# Excel 1 - Open book strategy map of the Climate Change Commission Draft Advice

Attachment 6: Excel 1 - Open book strategy map of the Climate Change Commission Draft Advice



Emissions Reduction Plan  
Strategy Mapping Workshop



VISION	THEMES	GOALS	ACTIONS	REQUIREMENTS
Create a thriving, climate-resilient and low emissions Aotearoa (see p. 9)	Innovative and resilient food and fibre sectors (see p. 9)	Reduced on-farm biogenic methane, nitrous oxide and carbon dioxide emissions from transport and processing plants, while remaining globally competitive (see p. 88)	Approximately 20,000-30,000 farm businesses must reduce on-farm emissions through reduced animal numbers, improved farming practices (better animal, pasture and feed management, and high-quality data) (see. p. 12, 88).	The development, adoption, implementation and use of practices, policies and technologies to adapt and improve land use to ensure Aotearoa remains as an agricultural world leader (see p. 12).
	Abundant native bush (see p. 9)	Increased carbon storage capability, erosion control, biodiversity and recreational benefits, as well as improved shelter for native birds and plants (see p. 9, 121)	Establish a sustained, high rate of planting new native forests on steeper, less productive land to provide an enduring source of carbon removals through to 2050 (p. 50). Development and implementation of measures to incentivise establishing and maintaining at least 16,000ha of new permanent native forests per year by 2025, increasing to at least 25,000ha per year by 2030 and continued until 2050 (see p. 123).	Develop an appropriate forest management plan for all forests over 50ha defined as permanent to monitor the forest's permanence and limit exposure to risks. Design a package of policies (to amend the NZ ETS and land use planning rules) to deliver the amount and type of afforestation needed for emission reduction and removals while addressing intergenerational equity (see p. 123).
	Flourishing bio economy (see p. 9)	Plant more forests to support low emissions construction, materials, and energy creation (see p. 9)	Increased conversion of land into forestry to plant an average of 25,000 hectares per year of new exotic plantation forests to EB2 (see. p. 48, 55).	Develop an appropriate forest management plan for all forests over 50ha defined as permanent to monitor the forest's permanence and limit exposure to risks. Design a package of policies (to amend the NZ ETS and land use planning rules) to deliver the amount and type of afforestation needed for emission reduction and removals while addressing intergenerational equity (see p. 123).
	Cities and towns created for people (see p. 9)	Improved urban form and better low emissions transport that is accessible to everyone equally (see p. 9).	Encourage walking and cycling by making it easier with good cycleways and footpaths. Move freight off the road and onto rail and shipping. Establish more reliable and affordable public, integrated and electric/low-emissions transport system (see p. 14).	An integrated national transport network must be created to ensure that reductions of transport emissions have an immediate and lasting impact (see p. 14).
	Strong local business and adaptive employment (see p. 9)	Manufacture high-value low emission products that are of high demand both domestically and globally, as well as enabling employers and employees to successfully transition toward climate-resilience (see p. 9).	Ensuring that there is investment in people and their skills, whilst providing opportunities for transition to viable work that is environmentally and socially sustainable (p. 80).	The development of proactive, inclusive and transparent localised transition planning programmes that are co-developed. Must be developed in collaboration with iwi/Māori, local government, local communities, businesses, civil society groups and other stakeholders. Vocational education and training systems will need to be able to adapt to skill demands. Barriers that restrict anyone's access to participation must be addressed (see p. 102).
	Equitable transition (see p. 80)	Create a fair, equitable and inclusive transition (see p. 80)	Ensuring the transition take opportunities to reduce inequalities, builds strong communities, and meets the needs of current and future generations over time. Prioritising support to those most adversely impacted and least able to adjust. Sending clear and stable policy signals to provide predictability for communities and businesses and allow time to plan and respond (see p. 80).	An inclusive and considered equitable transition strategy to ensure a just transition (i.e. the benefits of climate action are shared across society and that the costs do not fall unfairly on certain groups). A steady rate of change fast enough to make a difference, whilst slow enough to adapt to change (see p. 11, 80).
	Affordable, accessible renewable energy (see p. 9)	Achieve 95% renewable generation (hydro, wind, solar and geothermal energy power) by EB3 (see p. 9, 55).	Renewable energy sources must expand at a faster rate than what is possible under current policy settings. Actions include: NZ battery project, building new generation in the North Island, improve resilience of the electricity grid, reinforcing the transmission infrastructure, deploying new technologies such as batteries and diversifying into new fuels such as biofuels and hydrogen that boost energy security (see p. 90).	Transformation of Aotearoa's energy system - annual electricity generation must increase by approximately 20% over 2018 levels by 2035 (see p. 90).
	Circular economy (see p. 9)	Minimise, recover, and reuse waste where possible. Any surplus waste should be used to generate energy (see p. 9). Total amount of organic waste going to landfills to decrease by at least 23% from 2018 to 2030 (see p. 68).	Reduce waste emissions by increasing the amount of biogenic methane which is captured and destroyed from landfills, through either upgrading landfill gas capture systems, or diverting organic waste from sites without landfill gas capture to those with capture (see p. 68).	Strengthened product stewardship and a commitment to resource recovery and reuse must be a part of the approach toward creating a circular, self-sustaining economy (see p. 13).
	Te tiriti aligned (see p. 11)	Climate-related policies do not further compound historic grievances for Māori (see p. 11)	Central and local government must acknowledge Māori rights to exercise rangatiratanga and kaitiakitanga whilst reducing emissions (see p. 11)	Tiakitanga and manaakitanga by acting as good stewards and demonstrating equitable and mana enhancing behaviour within the Treaty Partnership. Tikanga and kotahitanga by working in partnership with iwi/Māori, through the right decision-makers and following the right process, to ensure Māori communities can prepare for and transition to a climate-resilient, low emissions Aotearoa. Whanaungatanga by enhancing relationships within whānau and communities and with the whenua (land) or taiao (environment) (see p. 41).

Excel 2 - Closed book strategy map of the Climate Change Commission Draft Advice

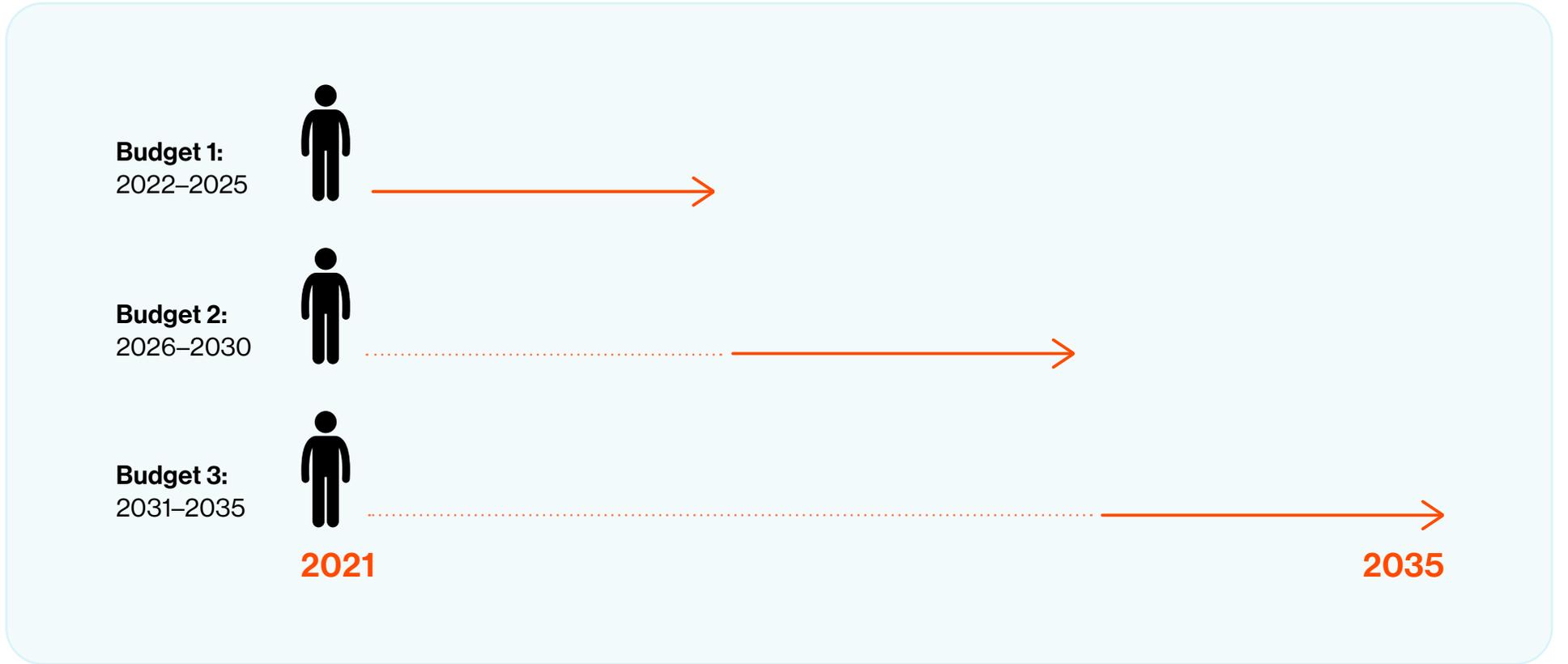


Emissions Reduction Plan  
Strategy Mapping Workshop



Attachment 7 - Excel 2 - Closed book strategy map of the Climate Change Commission Draft Advice

VISION	THEMES	GOALS	ACTIONS	REQUIREMENTS
A thriving New Zealand that successfully mitigates and adapts to climate change	Housing and urban reform	Urban spaces planned around people and hubs Public and private low emissions Transport reform Housing reforms focusing on low emissions and health	Accelerate EV uptake Remote working Public transport Improve efficiency of new ... vehicles	National Transport Network Regulation of new housing builds, urban development and natural gas use Avoid unnecessary cost Leverage co-benefits Equitable transition Create options
	Energy sector shift	Low emissions and affordable Waste utilisation	Phase out fossil base-load generation Replace coal with biomass and electricity Increase renewables	Diversify sources Avoid unnecessary cost Leverage co-benefits Equitable transition Create options
	Land use adaptation and innovation	Food and fibre innovation Native bush revitalisation + biodiversity Plantation forests	Low emissions farming practices New native forests New exotic forest	Policy support for new farming practices Long-term national plan Research on carbon storing Native tree incentives Avoid unnecessary cost Leverage co-benefits Equitable transition Create options
	Circular, low-emission economy	Waste utilisation Support businesses, SMEs to be low emitting Decarbonising industries, both domestically and internationally	Build new markets Retrain and invest in the skills of people Hydro-fluro carbons Waste reuse and diversion	Employers bring employees along (supportive transition for adversely affected workers) Early movers supported Leverage co-benefits Avoid unnecessary cost Equitable transition Create options



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**Budget 1:**  
**2022–2025 (2%)**  
Short-term



Ella Lawton (P)

Tom Milton

Lachlan Rule

John Stewart

Alex White

Leah Murphy

**Support person:**  
Reuben Brady

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**Budget 2:**  
**2026–2030 (17%)**  
Medium-term



Roana Bennett

Greg Briner

Matthew Everett

Michelle Pawon (P)

Ali Segura

Nigel Taptiklis

**Support person:**  
Maisie Hance

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**Budget 3:**  
**2031–2035 (36%)**  
Long-term



Lionel Carter (P)

Malisha Frawley

David Gawith

David Hall

Donna Purdue

Elliot Scholz

**Support person:**  
Isabella Crawford