Tātaki Auckland Unlimited

The Transition to Low Carbon

June 2023

aucklandunlimited.com

Te Tāruke-ā-Tāwhiri : Auckland's Climate Plan

Tāmaki Makaurau Auckland's Climate Goals:

Reducing our emissions (Mitigation)

- 50% by 2030 and reach net zero by 2050

Building a climate-resilient Auckland (Adaptation)

- Understanding the impacts of climate change
- Adapting to climate change

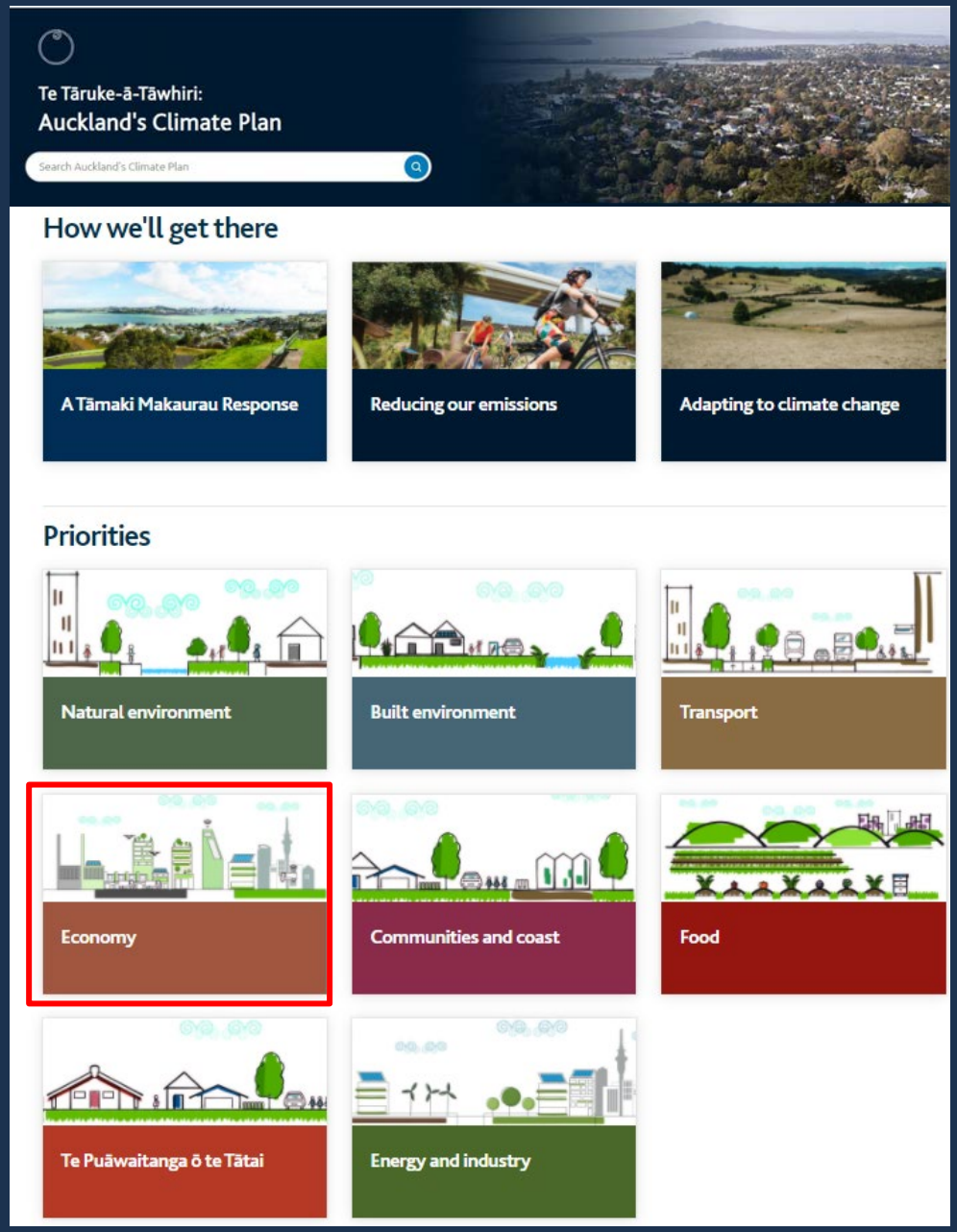
The overarching Tāmaki Makaurau response:

- The uniqueness of Tāmaki Makaurau
- The need to embed equity, te ao Māori, and a strong rangatahi voice.

Economy priority goal:

'A resilient, low carbon economy, guided by our kaitiaki values, that supports Aucklanders to thrive'

Read the plan here



A resilient, regenerative and distributive economy

Assess climate change risks to Auckland's economy and develop targeted programmes to support the most affected sectors.

- Tāmaki Makaurau Economic Climate Change Risk Assessment
- Creative HQ – Impact Accelerator (sponsor)
- SBN Go Circular 2025 Programme (sponsor)
- X-Labs (sponsor an industry group for the 'Future of Food' programme)

Innovation, technology and solutions

Provide **a climate innovation hub** that enables Aucklanders to introduce climate compatible solutions to the market. **Partner and collaborate** with central government, business, academia and Māori.

Climate Connect Aotearoa

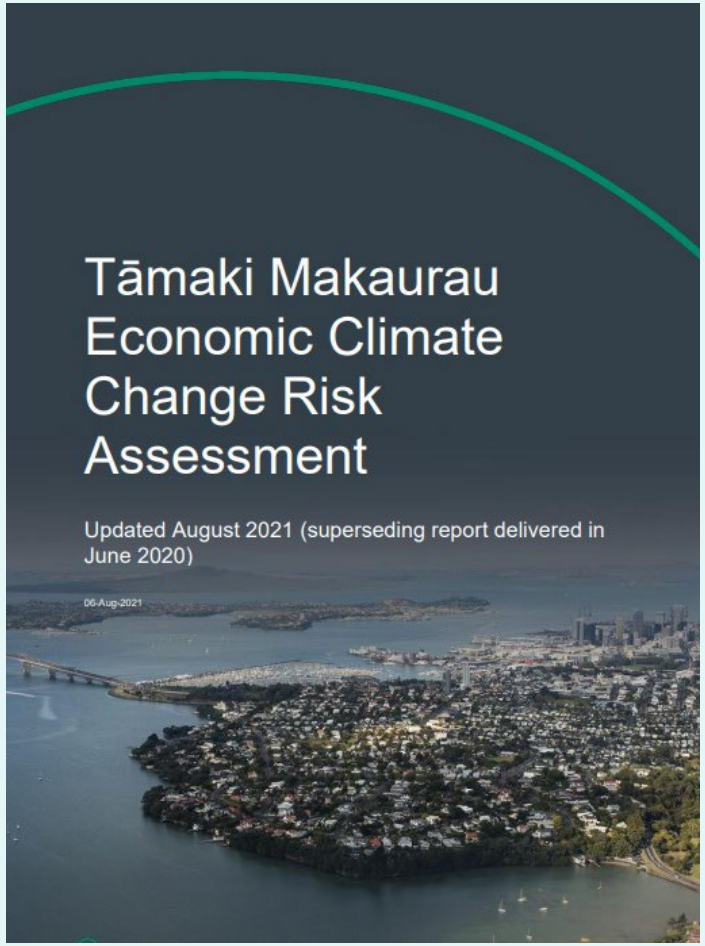
Ensure Aucklanders are prepared for the transition to a zero carbon economy

Collaborate with business, community, academia and Māori to develop a regional **just transition** plan for Auckland.

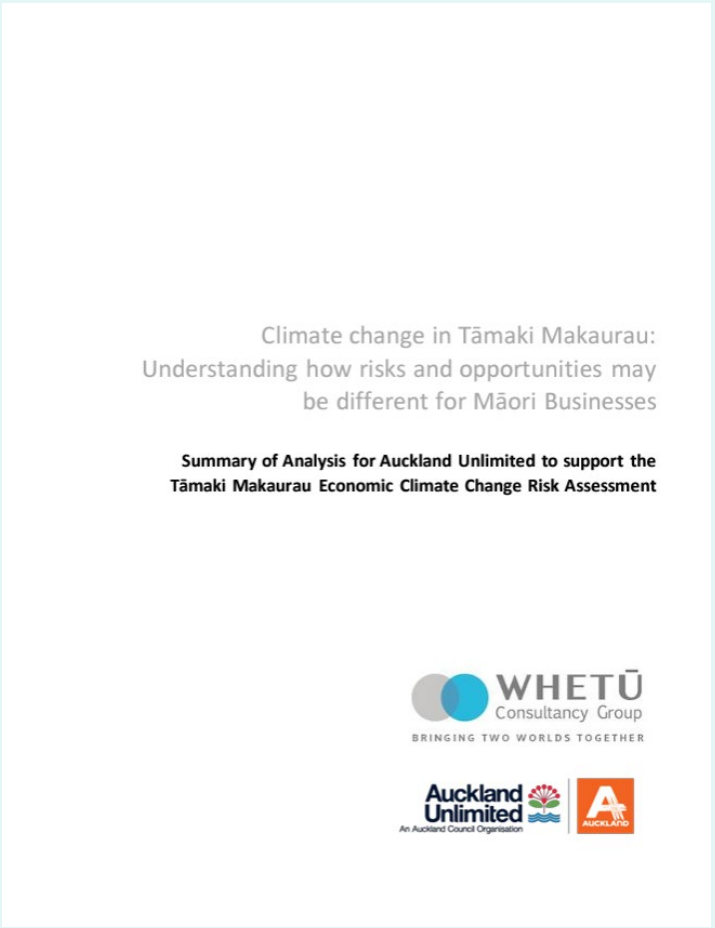
Tāmaki Makaurau Economic Climate Change Risk Assessment

Focus: Key sectors in the Tāmaki Makaurau economy based on Tātaki Auckland Unlimited's remit:

- Food and beverage
- Construction
- Visitor economy
- Māori businesses
- Screen
- Technology and advanced manufacturing



Link to report here



Link to report here

Physical Risks:

- Damage to building sites and equipment
- Supply chains
- Building and infrastructure failure

Transitional Risks:

- Cost of materials (cost of carbon)
- Compliance costs (regulations and policy)
- Increased capital outlay (higher energy/water efficiency standards)
- Lack of workforce capability and capacity

Opportunities:

- Demand for low-carbon buildings and infrastructure
- Energy efficiency > reduced operational costs
- Strengthen local supply chains

Construction sector

Subsectors: residential, non-residential and infrastructure

*In 2022, the construction sector **employed over 99,700 people, accounting for 10.5 per cent of total employment in Auckland** and accounted for 6.5 per cent of Auckland's GDP.*

***Skills may be required for:**

- Low-carbon, locally produced materials
- Low-carbon and less water-intensive processes (efficiency technology)
- Solar installation
- Urban planting and rain garden
- Business resilience and continuity planning (in line with changing regulations, policy and adaptation)
- Experts in net-zero buildings and infrastructure design
- Workforce capability in net-zero buildings and infrastructure processes
- Green building ratings
- Passive housing (from design to installation – building lifecycle)
- Increased local supply chain workforce
- Workforce understanding of sustainable supply chains
- Circular principles / designing waste out
- Project management and risk identification
- Deconstruction

*based on a qualitative analysis of the ECCRA and wider assumptions for sectoral changes

Cost of transition

Aim: Assess the economic impacts of the proposed pathways considered under the CCC Ināia tonu nei and Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan

- Using the Climate Policy Analysis model (C-PLAN)
- Tracing the transition on an annual basis over a 30-year period
- Key scenario results are presented for:
  - Emissions
  - Price of GHG permits
  - Impacts on industry, households, regional GDP and employment

Note: *the report is not yet available online*

Cost of transition - GDP

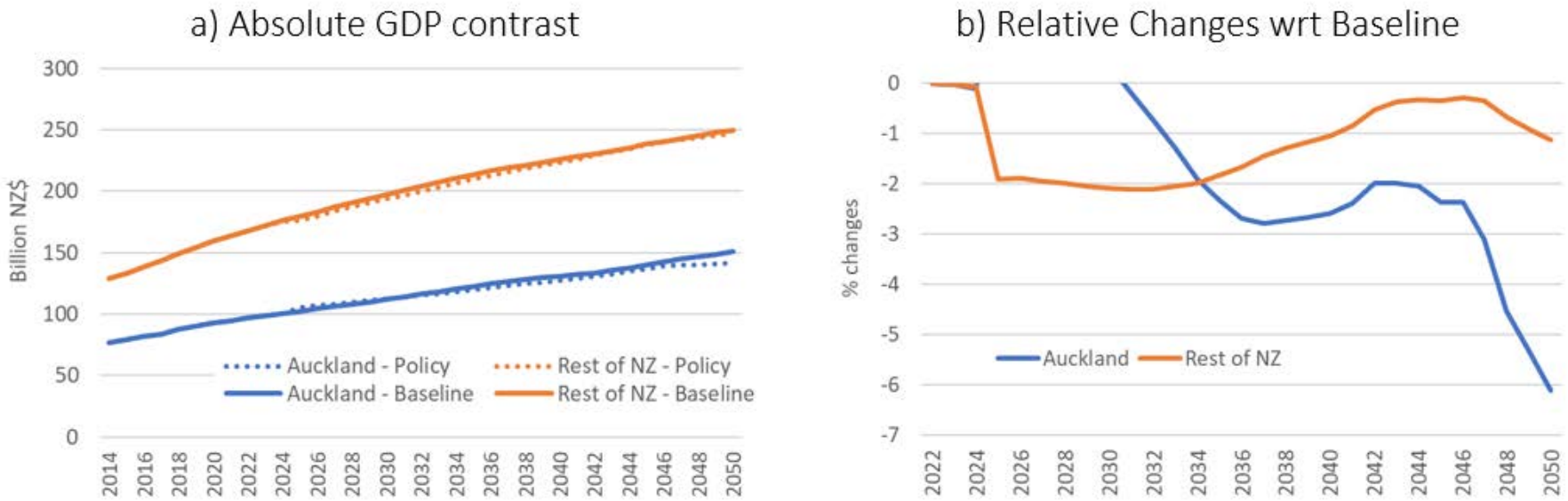


Figure 16. Absolute and relative contrast of regional GDP for Auckland region and the Rest of New Zealand under both baseline and policy scenarios

"These results show that while changes in GDP for the whole of New Zealand might be modest, the changes in GDP for certain regions like Auckland region are higher than expected due to the different emission profiles generated by a different set of emission-intensive sectors."

– Excerpt from report, analysis of Figure 16 – Market Economics

Initial employment results

Net job losses in Auckland region's economy in industries

	2015	2020	2025	2030	2035	2040	2045	2050
Sheep, beef cattle and grain farming – traditional	52	155	197	233	-983	-975	-966	-952
Dairy cattle farming – traditional	14	-5	-546	-546	-545	-542	-540	-607
Oil and gas extraction - gas	0	2	-1	-1	-2	-2	-2	-5
Electricity generation and supply – coal	-1	-5	-9	-9	-9	-9	-9	-9
Electricity generation and supply – gas	0	1	-1	-1	-1	-1	0	-2
Electricity generation and supply – geothermal	11	13	41	-40	-128	-162	-162	-162
Road transport - traditional	343	2,709	4,060	6,383	6,348	2,696	-6,324	-13,068

The total number of net job losses by 2050 is estimated at 14,800, or approximately 1% of the expected 1,540,000 employees the region will have by that time.

However, when accounting for transitions to new 'green jobs' the net job losses do not appear to change significantly.

Instead, a gradual transition would likely take place as more green jobs supersede the carbon intensive sectors.

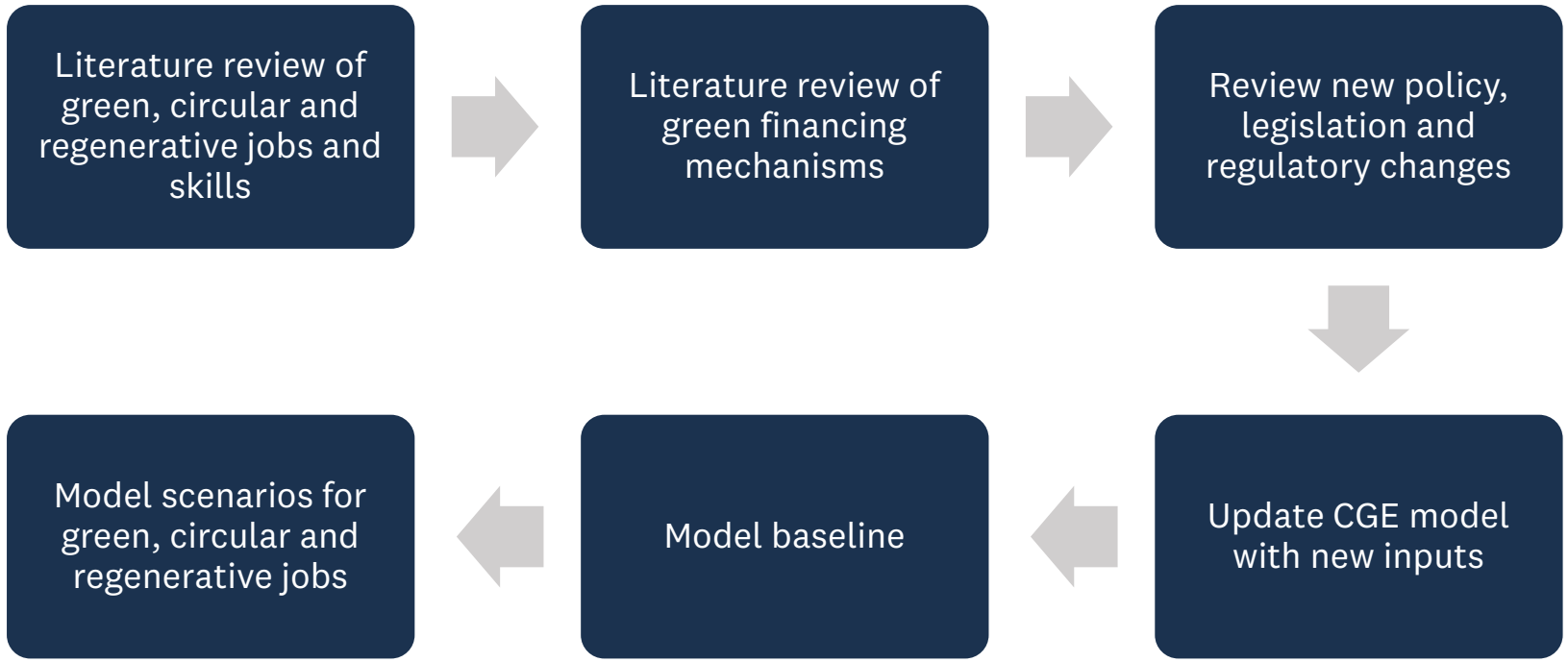
New 'green jobs' for Auckland region's economy

	2015	2020	2025	2030	2035	2040	2045	2050
Sheep, beef cattle and grain farming - methane inhibitor	0	0	0	0	1,362	1,388	1,419	1,469
Water, sewerage, drainage and waste services	74	526	1,005	1,305	1,583	1,868	2,175	2,431
Wholesale trade	27	194	370	481	583	688	801	896
Road transport - EV	4	30	327	1,403	3,710	7,873	14,360	19,674
Other transport, postal, courier, transport support and warehousing services. - domestic	33	236	450	585	711	839	977	1,094
Rental, hiring and real estate services	28	198	378	491	596	703	819	915
Professional, scientific, technical, administrative and support services	228	1,621	3,099	4,023	4,880	5,761	6,706	7,495
Local government administration	93	661	1,264	1,641	1,990	2,349	2,735	3,057
Central government administration, defence and public safety	44	310	592	768	932	1,100	1,280	1,431
Education and training	124	879	1,681	2,182	2,647	3,125	3,638	4,066

Phase 2 – Green jobs and skills

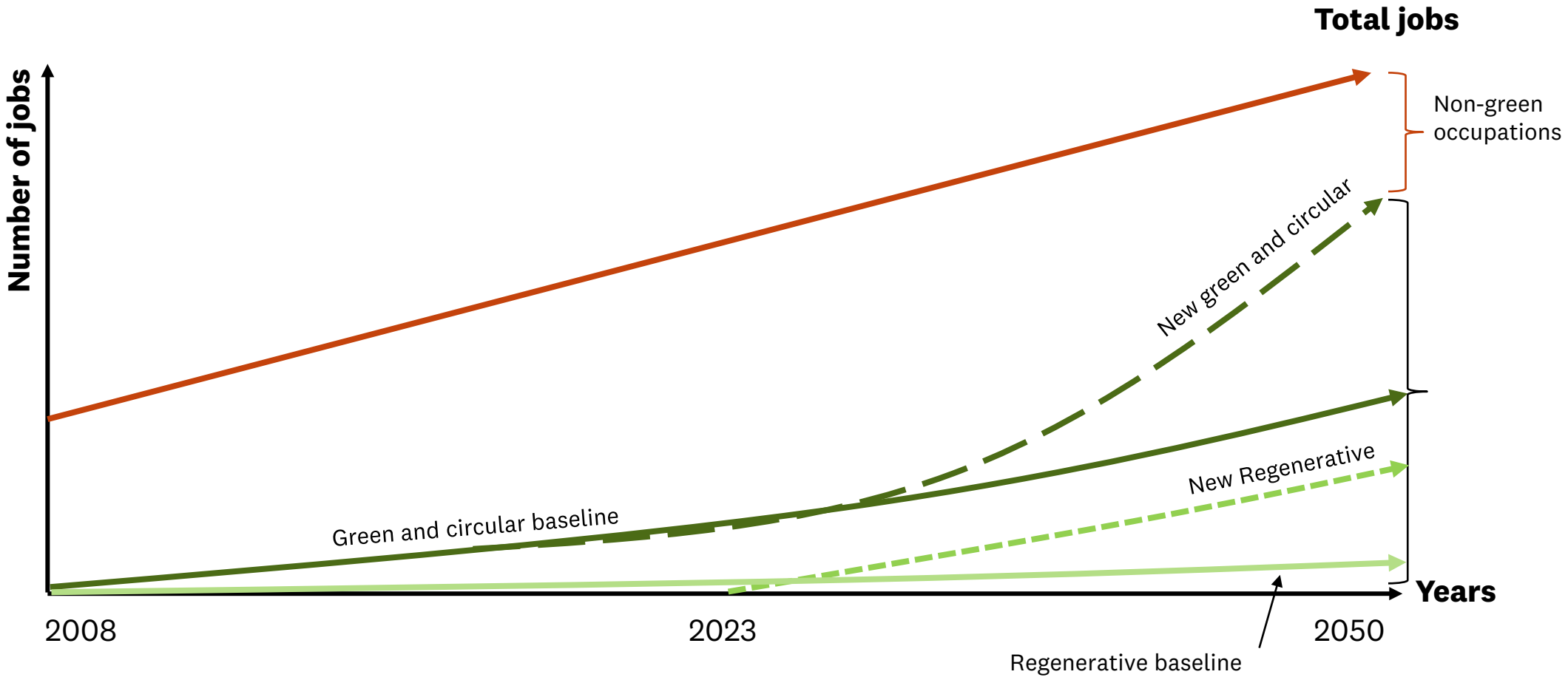
Tātaki Auckland Unlimited is working with Market Economics to understand the baseline and trajectory of Tāmaki Makaurau Auckland's green, circular and regenerative jobs and skills.

This builds on the first phase of research which modelled the cost of transition with initial results for green jobs.



Indicative baseline and scenarios

This research will identify both the baseline and expected trajectory of new green, circular and regenerative jobs over the set timeframe. This graph is an example only, with the work scheduled for completion later in 2023.



Potential uses

- Re-training for the current workforce
- Career pathways for rangatahi
- Sector-level workforce gaps and opportunities
- Further understand spatial impacts and opportunities
- Further work to understand the cost of failing to drive green skill development
- Community-based capability initiatives
- R&D for research centres and universities
- Master planning for the region
- Immigration settings

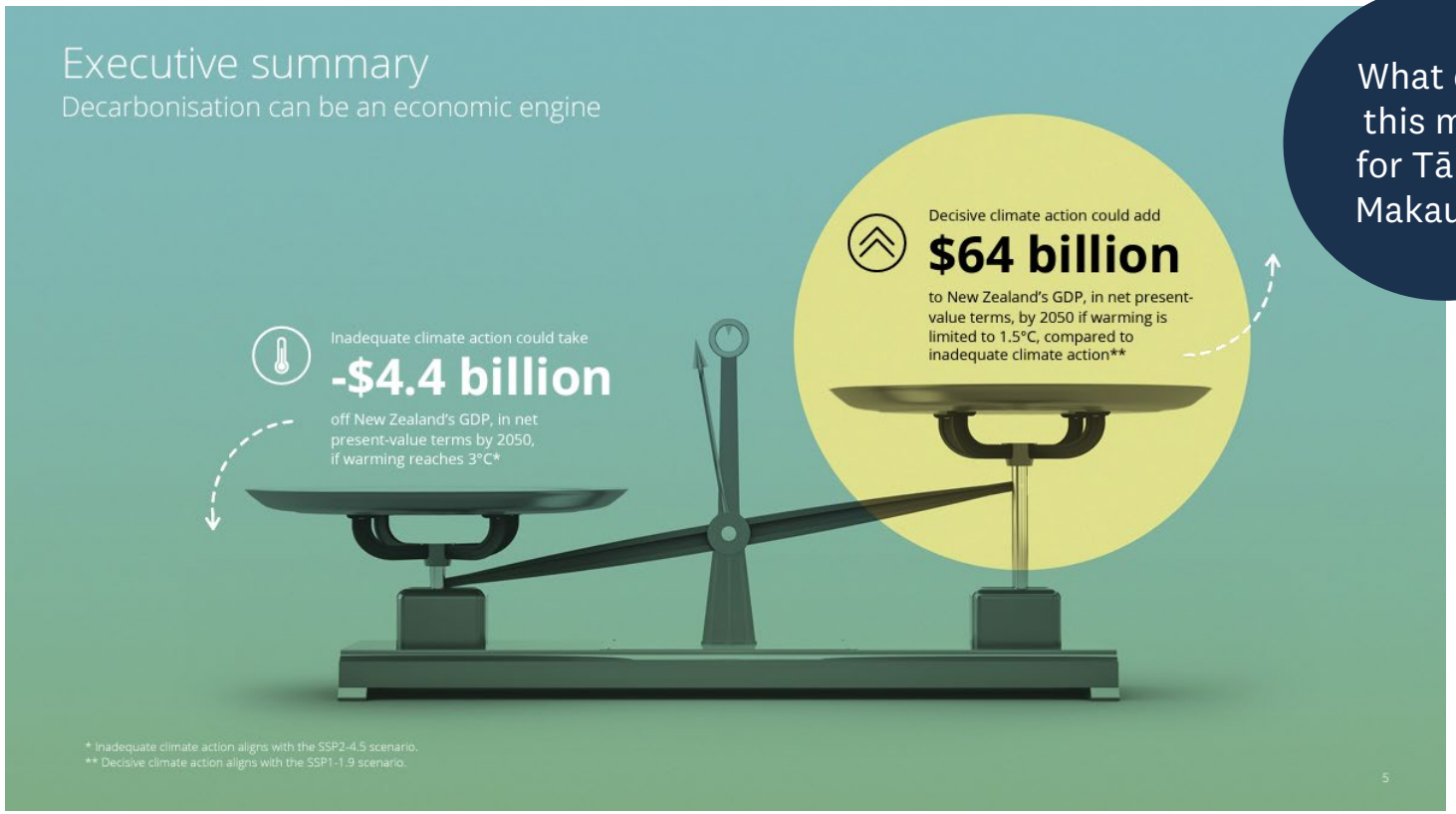
Informing a just transition into high-value jobs and careers for a low-emissions, regenerative economy

Phase 2 - Decisive climate action and inaction

Tātaki Auckland Unlimited is working with Deloitte to assess the economic impacts of decisive climate action and inaction for the Auckland region. This builds on Deloitte's work modelling Aotearoa New Zealand's Turning Point.

This piece of work will contribute towards building a robust evidence base to inform engagement and decision-making by outlining the economic opportunity that may exist for Tāmaki Makaurau Auckland.

Decisive climate action will ultimately contribute towards a just transition for Tāmaki Makaurau Auckland, as we quickly seek and adopt opportunities that build climate resilience and prepare for a climate-defined future.



What does this mean for Tāmaki Makaurau?

Climate Connect Aotearoa

A collaborative innovation hub for inclusive and transformative climate action.

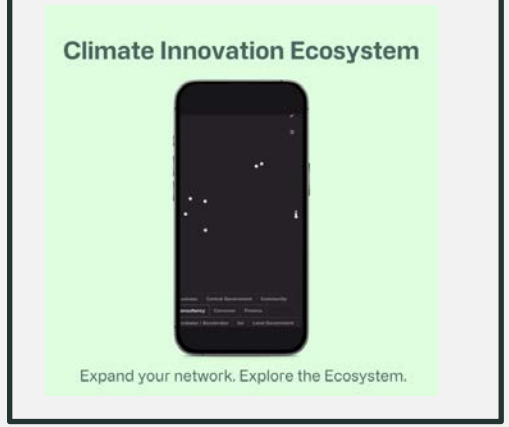
Seed funded by Auckland Council and brought to life by Tātaki Auckland Unlimited, Climate Connect Aotearoa brings together the diverse organisations required to scale the solutions needed to reduce emissions, adapt and thrive.

www.climateconnectnz.com

Goals

1

Connect and grow the ecosystem



2

Connect demand-led challenges to scalable solutions

- Energy
- Built
- Food
- Transport

3

Build system-wide knowledge and capacity

Find out more here > https://climateconnectnz.com/

Ngā mihi

Tātaki Auckland Unlimited

AUCKLAND
TĀMAKI MAKAURAU