

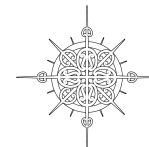
MATANGIRUA

He Kākahu Whenua:

A case study of Toha Network
and East Coast Exchange

DECEMBER 2025

Kahukore Baker, Hannah Chapman, Brianne Leef



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The FMA regulates New Zealand’s financial markets and has a statutory duty to:

- promote and facilitate the development of fair, efficient, and transparent financial markets
- promote the confident and informed participation of businesses, investors, and consumers in the financial markets¹.

Matangirua, the FMA’s Māori strategy, supports the FMA as an Independent Crown entity, to:

- uphold our obligation to enable the Crown to honour its obligations to Te Tiriti o Waitangi.
- help us fulfil our regulatory role to promote and advocate for fairness for all New Zealanders.
- enhance our understanding of Māori providers and consumers experience with the financial system.

(Title: *He Kākahu Whenua*, “Land Cloak,” Cloak of the Land; reflects the work of Toha Network, the East Coast Exchange and Te Kautuku, in “clothing” Papatūānuku once again with indigenous forest.)

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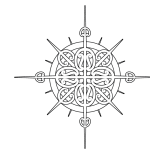
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¹ <https://www.fma.govt.nz/about-us/>



Mihimihi

Ka rere āwhiowhio taku kārearea ki te papanui o te rangi. E paratū ana te tiro whānui ki ngā tohu whenua. Ka tangi ia i te kahu o te whenua e panoni nei – hei whakatūpato, hei tiaki.

Tiaki rangi.
Tiaki whenua.
Tiaki tangata.

Ki ngā mate, takahia te nuku o te whenua e tae ai koutou ki ō koutou wehenga wairua. Haere, haere, haere atu rā.

Waiho rātou ki te ao wairua; huri ana ki a tātou e kawē nei i ngā take o te ora. E ngā hau e whā e haumiri ana i te whenua, tēnā koutou.

Tauti mai, rāhiri mai ki tēnei pūrongo māorooro kua tukuna atu i te roro o te whare tiaki o Te Mana Tātai Hokohoko.

Nō reira, tēnā koutou, tēnā koutou, tēnā koutou katoa.

My falcon whirls to the mist lined skies. From great heights, it surveys the features of the land. It cries to the changing of the landscape – to warn, to protect.

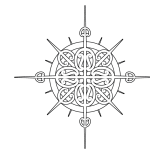
Guardian of the sky.
Guardian of the earth.
Guardian of the people.

To those who have passed on, trample the breadth of the land so that you may arrive at your departing place to the spiritual world. Go forth and farewell.

Leave those passed to the spiritual world; let us turn to those carrying the matters of the living. To the many peoples across the land, greetings to you all.

Welcome to this resounding report released from the house of guardianship – the Financial Markets Authority.

Therefore, greetings and acknowledgments to you all.



Acknowledgements

E ngā matakite, e ngā kaiwhakatere, e ngā manu kōrero o ngā taonga tuku iho - to the visionaries, navigators, and orators of ancestral knowledge and wisdom – Toha Network, East Coast Exchange and Te Kautuku – tēnā koutou, tēnā koutou, tēnā koutou katoa.

To Nathalie Whitaker (co-founder, Toha Network), Renee Raroa (Establishment Director, East Coast Exchange), Ralph Chivers (Chair, East Coast Exchange); Dr David Hall (Policy Director, Toha Network); Rangi Raroa (Te Kautuku Trust, third generation manager); Esther Raroa (Kaimahi, Te Kautuku Trust); the FMA is deeply appreciative of the wairua, experiences, insights and stories – so generously shared – which are the centre of this report. Your stories are inspiring and uplifting, as they bring hope. We understand that you have been called upon to tell these stories many times; we are grateful that you chose to do so again with the FMA.

To those who engaged with the FMA in the early stages of the project, we thank you for sharing your time and expertise in discussing the impacts of climate change on the East Coast, and exciting development opportunities for the future.

To Professor Tracey McIntosh MNZM for your advice and review of the ethics and project plan; and Dr Kathie Irwin MNZM, for your peer review of the draft report – our deepest gratitude for your time, expertise and invaluable assistance to this project.

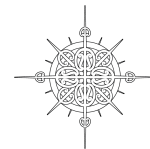
To the FMA staff who have supported the authors in their work: Samantha Barrass (Chief Executive Officer), Scott McMurray (as Acting Executive Director), Tipene Tahana and Jacob De Berry (Pou Ahurea), Gael Price (Head of Economics and Research), Amie White (Manager Consumer Economics), Ben Ritchie (Manager Data and Intelligence), Zanle Ludick (Team Support Administrator, External Relations and Communications), and Communications and Delivery: Heidi Norman (Manager), Amy Jones (Principal Adviser) and Rachael Joel (Business Adviser) – we value your advice and support.

Through the spirit of whanaungatanga, this report has been made possible.

Kahukore Baker (Te Upokorehe, Te Whakatōhea)

Hannah Chapman (Ngāti Tūwharetoa, Te Whānau ā Apanui, Te Whakatōhea, Ngāi Te Rangi)

Brianne Leef (Ngāti Pūkenga ki Waiau, Ngā Puhi)



Foreword

Firstly, I wish to acknowledge those who have shared their stories and experiences with us and made this research possible.

To Toha Network, East Coast Exchange, and the whānau of Te Kautuku - your voices have offered invaluable insights into the realities, challenges, and aspirations that shape the ways in which Māori consumers and providers participate in the financial system of Aotearoa New Zealand. Your contributions have highlighted the importance of the FMA engaging authentically with te ao Māori and ensuring we listen well.

Tēnā koutou.

In 2023, the FMA initiated Matangirua,² our evolved te ao Māori strategy. Drawing on navigation narratives and principles, Matangirua is designed to help the FMA enable Māori to participate as Māori in financial markets, and in so doing, strengthen our advocacy and ability to fulfil our regulatory obligations. This research project and the learnings that informed its inception emerged from Matangirua.

The FMA is in a phase of listening and paying careful attention to the experiences of Māori consumers and providers in the financial system. There is a growing number of innovative Māori providers whose business models are designed to be conducive to a Māori worldview and in so doing, address barriers to Māori participation in financial markets. It is critical that the FMA understand more about the barriers, challenges, and opportunities they encounter as they prepare to enter the licensing process to identify appropriate actions we can take.

The following whakataukāki, quoted by senior waka kaihautū (captain) Te Mihinui Frank Kawe, captures the importance of this study and how the FMA will carry its intentions forward.

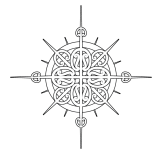
*“He herenga waka, he whitiwhiti whakaaro, he whitiwhiti kōrero,
e tū ko te māramatanga.”*

*“The binding of waka is the sharing of thoughts and of stories.
From this comes understanding.”*

The historical context and personal experiences shared in this study emphasise that continued, concentrated effort and intentionality is needed by the FMA and more broadly across the regulatory and financial systems to address inequities in the financial system and enable Māori to participate as Māori.

The FMA is committed to ensuring that the learnings from this research are factored into our regulatory activities and applied to help shape future work programmes and priorities. As a kaitiaki of the financial sector, we will also ensure that the learnings from this research extend

² Matangirua, meaning to use both sails and oars of a waka, symbolises the combined effort and energy required to undertake a journey.

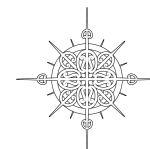


beyond the FMA, to help fulfil our responsibilities for promoting and facilitating fair, efficient, and transparent financial markets in Aotearoa New Zealand.

Ngā mihi maioha,

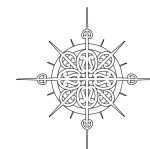
Samantha Barrass

FMA Chief Executive

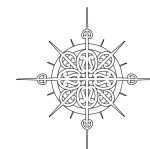


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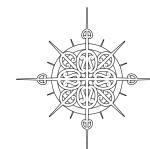


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³ Irwin, K.G. (2025) *The Papatūānuku Paradigm, A Gender Analysis Toolkit from a Te Ao Māori Lens*. Commissioned by The Coalition to End Women's Homelessness. Wellington: Kathie Irwin and Associates and the Coalition to End Women's Homelessness.



Executive summary

This Kaupapa Māori research report presents the stories and lived experiences of the whānau behind the establishment of the Toha Network and the East Coast Exchange; and the shared experiences of whānau living at Te Kautuku, a large multiple-owned Māori Land Trust in Te Tairāwhiti near Tikitiki.

This report is written to enable the executive summary and interview section to be extracted and used separately from the whole report, for ease of use.

Introduction

This is the first Kaupapa Māori research carried out by the FMA, and it speaks to different audiences – whānau, hapū, iwi and Māori, the FMA, and the wider state sector. These stories are important to te ōhanga Māori (the Māori economy) and the wider New Zealand economy.

Role of the Financial Markets Authority (FMA)

The FMA oversees New Zealand's financial markets to ensure fairness, efficiency, and transparency. It promotes trust and confidence by enforcing conduct laws and helping participants make informed decisions.

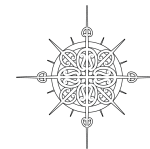
The FMA's Māori strategy, Matangirua, is designed to grow internal capability and support external engagement to enable Māori to participate as Māori in the financial system and in so doing, strengthen the FMA's advocacy and ability to fulfil its regulatory obligations.

Why the FMA conducted this research

The FMA conducted this research to address knowledge gaps in the FMA and across the sector regarding the experiences of Māori consumers and providers in Aotearoa New Zealand's financial sector. Actionable intelligence is necessary to help the FMA address inequities, and reduce harms, vulnerabilities and risks experienced uniquely or predominantly by Māori consumers. Additionally, through understanding business models that are conducive to a Māori worldview and the unique context and ecosystem in which they operate, the FMA can help facilitate and promote new opportunities to help grow Māori participation in the financial market.

Introduction to Toha Network

Toha Network is a collaborative ecosystem uniting impact investors, scientists, and communities to drive environmental regeneration, with a special emphasis on te ao Māori values and Indigenous Data Sovereignty. Founded in 2018, Toha bridges frontline communities and investors to tackle challenges like climate change, using a dual-token system: the MAHI token



rewards verified environmental work, while the TOHA token grants rights to data and governance.⁴

Toha has developed Digital Public Infrastructure (DPI)⁵ to deliver environmental and economic benefits to East Coast and Gisborne communities during and after Cyclone Gabrielle. The Network powers the East Coast Exchange (ECX) which is the digital, online platform that puts Toha's business model into action.⁶

Its approach centres on rigorous data verification, transparent fund disbursement, and prioritising control over sensitive environmental and community data, especially for Indigenous peoples.

Toha Network and ECX recognised at G20 Johannesburg, November 2025

The G20 is a forum of 19 countries and the European Union, addressing major global economic issues. It represents about 85 percent of global GDP, over three-quarters of world trade, and two-thirds of the world's population. Focus areas include the economy, climate and climate change, education, health, and more.⁷ At the G20 Johannesburg summit in November 2025, the International Environmental Guardianship (IEG) and UNDP launched the 8 Billion-Hour Pledge — a movement to mobilise one hour of verified action for nature from every person on Earth.⁸

ECX and Toha Network supported the Pledge's launch, with Te Kautuku in Tairāwhiti as a demonstration site for the Pledge's community-led action. ECX is committed to growing the Pledge globally.⁹

Toha Network and Kaupapa Māori methodology

The study focuses on Toha Network's experiences within their community and the financial market, as well as their interactions with the FMA, as they work towards becoming licensed by the FMA. Toha Network was invited to collaborate because of their innovative kaupapa, broad stakeholder network, and unique pre-licensing situation. This helps the FMA develop culturally responsive licensing and oversight that supports Māori economic growth. A Kaupapa Māori approach was chosen because it aligns with the FMA's Māori Strategy, Matangirua and reflects

⁴ Hall, D. (2025, February 26). Impact Investing Network Deep Dive – Toha (Interview with David Hall). *Impact Investing Network Aotearoa New Zealand*.

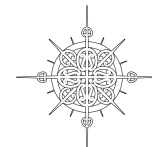
⁵ This refers to 'shared, secure and interoperable digital systems' to access digital identity, data sharing, payments and notifications services. In Digital Public Infrastructure for Governments, OECD Public Governance Policy Papers No. 68 December 2024 (p.6)

⁶ Ibid.

⁷ G20. (2025, November 22). G20. 2023 India. *G20 Background Brief*.

⁸ International Environmental Guardianship. (2025). *8 Billion Hour Pledge*. United Nations Development Programme.

⁹ East Coast Exchange. (n.d.). What an incredible moment to witness at the G20 in Johannesburg! *LinkedIn*



Toha's focus on te ao Māori values. Kaupapa Māori refers specifically to Māori knowledge, distinct from Pākehā, Western, or translated general knowledge.¹⁰

Research aim of the case study

The FMA aimed to work collaboratively with the Toha Network to co-design a Kaupapa Māori case study. The study seeks to gain insights into Toha Network's development, understand the challenges and opportunities they face in the pre-licensing financial context,¹¹ explore how Māori values shape their operations, and understand why Te Kautuku Trust chose to work with Toha Network.

Te Kautuku Trust and the structure of this report

Toha Network identified the importance of including Te Kautuku in this study. Te Kautuku is a large multiple-owned Māori Land Trust on the East Coast near Tikitiki, and a partner in their pilot project with Air New Zealand and Te Puni Kōkiri for regenerating the native ecosystem.

Understanding Te Kautuku's journey is essential to fully grasp the mana of Toha Network and ECX, and its significance to Te Kautuku. Consequently, the report starts with a summary of Te Tairāwhiti's social, cultural, and economic background. It then presents interviews with Te Kautuku, highlighting their experiences and insights.

"Without Toha, Te Kautuku would be in the same position as other land blocks, forced to lease out for grazing, further alienating the whānau from their ancestral lands" (Rangi Raroa, 3rd generation Trust manager).

"It's important that financial providers try to understand how to work with Māori and the realities Māori face when it comes to multi-owned land rather than just push us aside or put us in the too hard basket" (Esther Raroa, Kaimahi on Te Kautuku).

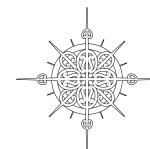
Interviews with Toha Network and the East Coast Exchange (ECX)

Toha Network is presented through interviews with key individuals. This section describes the establishment, barriers and opportunities of Toha Network and the ECX, as they navigate worldviews, and leverage new uses of data technology to embed te ao Māori values in the marketplace:

"Although the data technology already exists, its application so far has been shaped by Western financial logic. Toha applies it differently. By embedding

¹⁰ Pipi, K., Cram, F., Hawke, R., Hawke, S., Huriwai, Te M., Mataka, T., Milne, M., Morgan, K., Tuhaka, H., and Tuuta, C. (2004, December). 'A Research Ethic for Studying Māori and Iwi Provider Success'. In *Social Policy Journal of New Zealand*, (23). Ministry of Social Development.

¹¹ Pre-license refers to the preparatory steps and requirements an entity must complete before formally submitting a licence application for registration as a provider of financial services.



Indigenous values such as reciprocity and collective stewardship, Toha activates an economy based on trust and contribution rather than extraction. This enables markets to recognise goodness – not as a social value – but as a source of measurable, investable impact” (Nathalie Whitaker, co-founder Toha Network, founder, Givealittle).

“When people feel empowered, they are capable of miracles and that’s certainly what we need in terms of addressing challenges like climate change and biodiversity loss. We need to unlock that power, that social power” (Dr David Hall, Policy Director, Toha Network).

“Our community members expressed a distrust in sharing their identities and information with agents of the Crown. The independent, homegrown identity of ECX has been crucial in enabling users to feel confident in using the platform...” (Renee Raroa, Establishment Director, ECX)

“ECX will never exploit data, but funding is harder to find when you refuse to exploit data” (Ralph Chivers, Chair, ECX).

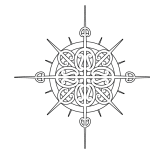
“After Cyclone Gabrielle, for every amount received and paid out, people had to do AMLs [Anti Money Laundering declarations]. We thought it was ridiculous in the circumstances to have to AML schools and marae that were actually at the heart of some of the most valuable response and recovery activity” (Ralph Chivers, Chair, ECX).

Review of research and selected literature

This review provides the background and context for discussion and analysis. Key aspects include fundamental differences between Māori and Western worldviews, the historical development of Māori economic practices, the emergence of Te Ōhanga Māori, ongoing systemic disparities in Aotearoa New Zealand's financial markets; and the call at the Koroneihana 2025 for Mana Motuhake in business and investment.

The literature highlights the central role of values such as whanaungatanga (kinship), mana (leadership), and kaitiakitanga (guardianship), manaakitanga (care and hospitality), tapu (sacred, restricted), and utu (balance, reciprocity) in Māori life. Justice Williams speaks of these values as part of whanaungatanga.¹²

¹²Joe Williams (3 April 2017) *The Treaty of Waitangi and whānau, hapū and iwi wellbeing* (PowerPoint slides). Keynote address, Te Ritorito 2017: Towards whānau, hapū and iwi wellbeing. Pipitea Marae, Wellington.
<https://thehub.sia.govt.nz/resources/te-ritorito-2017-towards-whanau-hapu-and-iwi-wellbeing>



Discussion

The discussion provides an analysis of Toha Network's experiences as a Māori Fintech provider, navigating challenges between worldviews – te ao Māori and Western financial market theory. It explores identified barriers and challenges that often lead to restrictive legislation, inflexible policies and regulatory processes, which contribute towards limiting Māori participation and investment, especially for collectively-owned Māori land. The discussion highlights how Toha Network bridges this gap by embedding te ao Māori values into its business model and operations.

The analysis then draws upon Dr K. Irwin's Te Tiriti o Waitangi Nation-building framework, *Te Aotearoa tangā* - to analyse the interrelated structural, institutional, and interpersonal barriers Māori face in the financial system. It outlines how, through Te Tiriti o Waitangi partnership, collective benefit can be further activated as part of the 'upwards trajectory towards Nation-building.'

Findings, and insights towards bridging worldviews

Te Tiriti o Waitangi is foundational in addressing and overcoming barriers

Te Tiriti o Waitangi plays a foundational role in addressing and overcoming structural, legislative, policy, institutional, and interpersonal barriers.

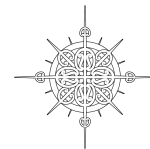
It provides a framework for collaborative problem-solving and shared decision-making between Māori and the Crown. By honouring the Treaty partnership, there is potential to redesign financial systems, policies, and institutions to be more inclusive, equitable, and reflective of te ao Māori values. Te Tiriti o Waitangi provides a practical framework for ensuring Māori knowledge and expertise are visible and valued in the financial system, collective participation is enabled, and that sustainable economic and social outcomes for all individuals and communities in Aotearoa New Zealand are supported.

Te ao Māori values and digital infrastructure enable new innovations

Toha Network has had to address three over-arching themes that are complex and interwoven: investment for Māori land; climate change and regeneration; and the overarching issue of a marketplace, shaped by Western financial logic, that does not make visible te ao Māori values and collective decision-making.

Applying te ao Māori values redefines barriers as challenges to be overcome

By embedding te ao Māori principles, fostering innovative partnerships, and embedding Māori Data Sovereignty into their business model, Toha enables Māori landowners to overcome regulatory challenges, diversify land-based revenue, and assert self-determination, while advocating for broader market reforms that recognise collective benefits.



Recognising the effectiveness of collective processes

Consensus-building processes and their inherent value are often overlooked, creating barriers to collective participation in the market. To enhance Māori participation in the finance market, regulation needs to evolve to better accommodate collective participation, and te ao Māori values that drive decision-making, innovation and entrepreneurship. Financial innovations designed for collective outcomes need a regulatory framework that appropriately considers relevant motivations and risks.

Regional and relational ecosystems reduce regulatory complexity

This case study reveals that replicated processes can create unnecessary, inequitable regulatory complexity, with administrative burdens on whānau, hapū, iwi and collectively owned Māori entities (for example AML requirements). In contrast, Toha Network is promoting an ecosystem approach, where regulatory and administrative processes are improved by recognising the collective involvement of communities.

Instead of focusing solely on individuals, the system acknowledges group participation and ensures that the roles people play – often across several organisations within the same region – are properly identified and verified. This helps to streamline compliance, fosters collaboration, and reflects the interconnected nature of community activities, making regulatory oversight more effective and meaningful for all involved.

Toha Network and ECX model and digital infrastructure enables:

Benefits to Māori that exceed investment returns

Toha Network represents a paradigm shift. Through new digital infrastructure, Toha Network is redefining barriers and failures as challenges to be overcome through enabling markets to recognise te ao Māori values such as *whanaungatanga*, *kaitiakitanga*, *manaakitanga*, *utu*, *mana*, and *community generosity* – not as social values – but as ‘sources of measurable, investable impact.’¹³

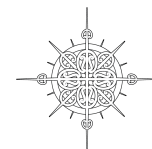
New pathways to access capital on multiple-owned land

A significant step forward is that Toha’s digital infrastructure enables separation of the data, and its value, from the ownership of the land from which the data is gathered. The concept of data being used as collateral rather than land, aligns with te ao Māori values and is potentially significant for addressing barriers for Māori access to capital. How this works can be seen in the example with Air New Zealand and Te Kautuku.

Te Kautuku and Air New Zealand

Kaimahi at Te Kautuku make a pledge to undertake nature-based work and to collect associated data. The data is collected via data templates that the East Coast Exchange has

¹³ Interview with Nathalie Whitaker, 30 April 2025.



co-developed with Toha Network. When pledged activities are undertaken and milestones are met, the proceeds from sales of MAHI (digital tokens) are disbursed to Te Kautuku. In this pilot, kaitiakitanga is activated and linked to systems where environmental work supports ecological and financial goals, and links to global environmental directions.

Opportunities for less extractive land use

As an economic value, data provides an alternative means of funding that is not reliant on extracting the land's resources to fund development, as the value lies in the data, not the resource extracted. Indeed, extractive and/or unsustainable environmental practices that deplete natural resources, may be another type of risk to the value of the data as a growing income stream.

Opportunities to redefine risk

Not only does the separation of data from land ownership provide Māori landowners with the potential opportunity to finance development without jeopardising their land, but it also frees the ownership of multiple-owned Māori land from the burden of immediate classification as a risk. Further, it affords communities greater control.

Communities to 'stack' separate units of value

Further, this innovation enables communities to capitalise the value of the original data asset through "stacking," which allows for separate verification and investment for individual environmental benefits. For instance, planting native cover supports carbon sequestration, biodiversity, wildlife restoration, and water quality—each of which can be claimed as an investable asset.

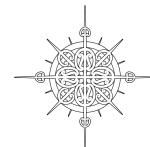
The development of 'third space' thinking

Innovative applications of data can power the growth of new platforms to enable new forms of exchange, providing a permanent platform for communities to organise under new market rules. Designing a new form of community exchange has meant creating new rules that enable new forms of value to be recognised, such as the role of the community navigator.

A navigator is essential in bridging systems and worldviews

The community navigator role is essential in building trust with the community and to act on behalf of whānau and hapū in navigating financial and regulatory systems. Navigators ground decision-making close to the land, ensuring representation is connected, accountable, and place-based. The navigator demystifies processes, infrastructures, regulatory and legislative complexities and requirements, while translating between Māori and Western worldviews:

"A navigator needs to have a foot in both worlds to build the bridge. The resourcing is inequitable, a constant push to bring worldviews together in the dataspace, which is at the middle of the design" (Renee Raroa).



Navigators interact with officials, systems, and organisations, quickly learn new information, and share it effectively. They understand their whānau, hapū, iwi, and community, picking up on subtle communication cues. For example, during the disaster response, the navigator reassured hesitant individuals that the data system was independent and would not share personal details.

Working with the FMA

Toha Network is an example of how the active application of a Māori worldview is inherent to the design and delivery of a Māori business model, with benefits to Māori and non-Māori. Te ao Māori values are inextricable drivers, determinants and definitions of their success.

Low-value exemptions and innovations like the sandbox model are instrumental

The Chair of ECX identified the FMA's sandbox trial as instrumental in enabling businesses to access guidance and low-value exemptions, in a controlled environment to test new innovations, without immediately facing the full burden of established regulations. Further, Parliament's Finance and Expenditure Select Committee inquiry into banking competition,¹⁴ identified FMA's regulatory sandbox trial as a key innovation. The Committee's recommendations to address barriers preventing competition in banking and impact of the regulatory environment included the following recommendation:

***“Broaden the “regulatory sandbox” trial** We recommend the Financial Markets Authority broadens its “regulatory sandbox” trial and explore a single licensing model to cut red tape for innovative financial service.”¹⁵*

While this recommendation is highly relevant to the ongoing development of initiatives like Toha Network and ECX, the FMA would need to ensure any model can accommodate and ensure Māori knowledge, values, customs and practices are applied to Māori business models. Otherwise, existing barriers to Māori providers will remain unaddressed, and additional ones will likely be created.

The sandbox also provides an environment in which the FMA can test and critique its own capability to recognise, understand, and accurately interpret business models that align with a Māori worldview. To effectively license, supervise, and monitor Māori business, and foster opportunities for increased business and product offerings, the FMA must be able to authentically and credibly apply Māori cultural capabilities and worldview expertise.

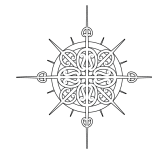
Structural and institutional challenges and market failure

A dominance of ‘Western financial logic’ in market theory and development

Western worldview dominance in New Zealand's financial and government systems shapes legislation and policies that limit Māori access to capital and credit and restrict Māori innovation

¹⁴ Finance and Expenditure Select Committee (2025, August). *Final report, Inquiry into Banking Competition*. Parliament. Wellington (pp. 5-6).

¹⁵ Ibid. (p 5).



and investment. Institutional rigidity contributes to siloed data. This affects data quality, creates information gaps, and undermines contract completeness and regulatory compliance. It also causes misalignment between policy settings, growth drivers, and the needs of consumers and providers.

The interpersonal impacts of these barriers contribute to increased economic and social exclusion of Māori providers and consumers, leading to increased financial pressure on whānau and communities. The resulting lack of opportunity in rural Māori communities contributes to their depopulation and loss of vital skills and human capital, with the financial literacy gap increasing vulnerability to riskier alternatives.

Despite efforts to address some of these barriers — such as legal reforms (Te Ture Whenua Māori Act 1993, Anti-Money Laundering and Countering Financing of Terrorism Act 2009) and targeted initiatives to improve Māori access to finance and support Māori businesses — further focussed effort is required to address these barriers and enable Māori providers to innovate and operate effectively in New Zealand's financial markets.

Towards giving effect to insights that bridge worldviews and market frameworks

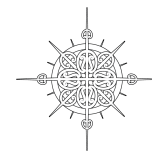
While there are significant and systemic structural and institutional barriers, improved digital infrastructure creates opportunities for markets to develop in ways that acknowledge and reward the positive contributions of communities. Nevertheless, for these advancements to succeed and expand, they need to be supported through structural and institutional settings that enable and scale up these developments. For example:

Recognising the public good aspects of digital public infrastructure and initiatives like Toha such as environmental sustainability, technology spinoffs, community self-sufficiency, strengthened regional eco-systems that produce collective, long-term benefits, and value-added trade in primary sector exports, warrant support and regulatory relief to improve viability and to increase offerings, scalability and impact.

Addressing regulatory challenges to enable markets to recognise collective actions as 'sources of measurable, investable impact'¹⁶ for collective value, and to support the sustainable growth of digital infrastructure initiatives.

Promoting the adoption and expansion of innovative models such as the FMA regulatory sandbox and strengthening collaboration between start-ups like Toha and regulatory authorities, will provide regulatory flexibility and reduce compliance burdens to enter the market, especially in disaster response scenarios. This includes working with

¹⁶ Interview with Nathalie Whitaker, 30 April 2025.



regulators and the Māori Land Court to streamline AML and other compliance requirements, to avoid stifling innovation and entrepreneurship, particularly for Māori landowners and collective or community-led initiatives.

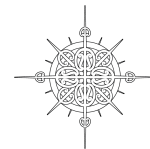
Establishing data standards that define how collective participation is recorded and reported, to reflect Māori concepts of collectivisation, and support fair engagement in financial markets. For example, a data standard that recognises Māori collectivisation – defining how collective participation is recorded and reported – so that Māori contribution is visible and valued in the market. Collective engagement and participation foster holistic and place-based financial innovation and economic development.

Implementing Indigenous Data Sovereignty principles in developing the above data standards that make te ao Māori values and knowledge visible and valued in financial markets, such as standards for recording and reporting Māori collectivisation and collaborative decision-making.

Fostering third space thought leadership and platforms to enable fair interaction between communities, government, and capital by ensuring secure and transparent data flows and leveraging trust. Transparent data-sharing fosters collective participation and enables accurate recognition of value added to the eco-system.

Designing systems that accommodate consensus-based governance and reduce unnecessary administrative burdens on collective structures, such as hapū and iwi, but also Māori landowners, trusts and legislated entities such as Post Settlement Governance Entities (PSGE's). Policy justifications should consider the role of Te Tiriti and Tikanga Māori to empower regulated and trusted intermediaries to fulfil regulatory requirements on behalf of collectives, ensuring collective governance and authority is not eroded.

Promoting the development of comprehensive strategies for scaling digital infrastructure and Indigenous Data Sovereignty initiatives that ensure robust local control and oversight. This includes investing in the expansion of local data centres and decentralised storage solutions to meet growing demand and enhance community trust.



Introduction

Purpose and background

This report by the Financial Markets Authority (FMA) presents the findings of a qualitative case study with the Toha Network (founded in 2018). Toha Network has developed Digital Public Infrastructure (DPI)¹⁷ to deliver environmental and economic benefits to East Coast and Gisborne during and after Cyclone Gabrielle. These communities face significant environmental, economic, cultural and social challenges that the government on its own is unable to solve.

What is the role of the Financial Markets Authority?

The FMA serves as a kaitiaki of Aotearoa New Zealand's financial services market, playing a pivotal role in shaping a fair, dynamic, and transparent environment for all participants.

At the heart of the FMA's mission is a commitment to promoting and enabling the growth of markets that are not only efficient and accessible but also inspire trust and confidence. To achieve this, the FMA administers conduct legislation, while also working proactively to ensure businesses, investors, and consumers can engage confidently and knowledgeably with the financial system. Through these efforts, the FMA contributes to a robust financial ecosystem where opportunity and integrity go hand in hand.

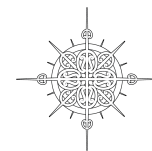
Why is the FMA carrying out this research?

In 2024, the FMA launched an evolved Māori strategy, Matangirua, which helps to provide capability and engagement to gain intelligence on the market that the FMA has not had access to before. Matangirua is designed to grow internal capability and support external engagement to gain actionable intelligence on the market to strengthen the FMA's advocacy and ability to fulfil its regulatory obligations.

By gaining insight into the experiences of Māori consumers in the financial markets, the FMA has access to more accurate information and data to help reduce harms, vulnerabilities and risks experienced uniquely or predominantly by Māori consumers.

Additionally, through understanding business models that are conducive to a Māori worldview and the unique context and ecosystem in which they operate, the FMA can contribute towards facilitating innovations and opportunities that grow te ōhanga Māori (Māori economy) and the wider New Zealand economy.

¹⁷ This refers to 'shared, secure and interoperable digital systems' to access digital identity, data sharing, payments and notifications services. In *Digital Public Infrastructure for Governments*, OECD Public Governance Policy Papers No. 68 December 2024 (p.6).



However, there is a knowledge gap in FMA's understanding of Māori experiences within the financial services sector. There is also a lack of research and data available in this area in general to help inform the FMA's understanding to be able to address barriers to participation and economic inequities uniquely experienced by Māori.

The FMA has begun to address these knowledge gaps, including through this Kaupapa Māori research project which explores the experiences of an innovative Māori provider, preparing to engage in a licensing process with the FMA.

To further address the knowledge gap about the experiences of Māori consumers and providers in the financial system, and how the FMA understands and interprets barriers, challenges and opportunities, this report provides an historical overview of the social, cultural, economic and environmental contexts of the people of Te Tairāwhiti and of Māori economic development in general.

Introduction to Toha Network

Toha Network is a collaborative ecosystem uniting impact investors, scientists, and communities to drive environmental regeneration, with a special emphasis on te ao Māori values and Indigenous Data Sovereignty. Founded in 2018, Toha bridges frontline communities and investors to tackle challenges like climate change, using a dual-token system: the MAHI token rewards verified environmental work, while the TOHA token grants rights to data and governance.

Toha has developed Digital Public Infrastructure (DPI)¹⁸ to deliver environmental and economic benefits to East Coast and Gisborne communities during and after Cyclone Gabrielle. The Network powers the East Coast Exchange (ECX) which is the digital, online platform that puts Toha's business model into action.¹⁹

Their approach centres on rigorous data verification, transparent fund disbursement, and prioritising control over sensitive environmental and community data, especially for Indigenous peoples.

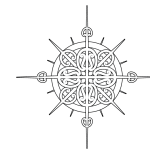
Toha Network and ECX recognised at G20 Johannesburg, November 2025

The G20 is a forum of 19 countries and the European Union, addressing major global economic issues. It represents about 85 percent of global GDP, over three-quarters of world trade, and two-thirds of the world's population.

Focus areas include:

¹⁸ Ibid. (p.6).

¹⁹ Hall, D. (2025, February 26). Impact Investing Network Deep Dive – Toha (Interview with David Hall). *Impact Investing Network Aotearoa New Zealand*.



- Socio-economic issues, agriculture, anti-corruption, climate and climate change, digital economy, education, employment, energy, environment, health, tourism, trade and investment.
- Fiscal and monetary issues, global economy, infrastructure, financial regulation, financial inclusion, international financial architecture and international taxation.²⁰

Launch of the '8 Billion-Hour Pledge' (8BHP)

International Environmental Guardianship (IEG), supported by the United Nations Development Programme (UNDP), launched the *8 Billion-Hour Pledge*, creating 8 billion hours of verified work for nature by 31 December, 2030, for every person on Earth.²¹ The IEG expressed appreciation for the support received from partners such as UNDP, Toha Network, iSimangaliso Wetland Park, Biodiversity Credit Alliance, IUCN, WWF, University of Venda, WWF Tanzania, and others.²²

In a LinkedIn post, the EXC stated:

"ECX is honoured to stand alongside International Environmental Guardianship (IEG), UNDP, Toha Network, and global partners as the 8 Billion Hour Pledge is launched on the world stage.

For Tairāwhiti, the Pledge opens a powerful doorway. Te Kautuku, our first ECX demonstration site, is now positioned to help show what verified, community-led hours for nature look like in practice.

ECX is committed to supporting the 8BH Pledge as it grows — hour by hour, community by community — toward a full global rollout. Time is precious, and every hour offered back to the whenua is a promise to future generations..."²³ (ECX)

This case study describes how Toha and ECX actively demonstrate "transforming collective time into measurable progress for the planet."²⁴

A case study of the Toha Network

The case study focuses on the experiences of Toha Network in their community, in the financial market, and in their engagement with the FMA. Toha has been invited to collaborate in this research due to the innovative nature of their kaupapa, wide network and stakeholder group, the unique pre-licensing context in which they have operated, and their willingness to contribute to the purposes of this research.

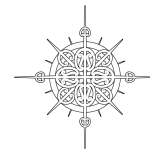
²⁰ G20. (2025 November 22). G20. 2023 India. *G20 Background Brief*.

²¹ International Environmental Guardianship. (2025). *8 Billion Hour Pledge*. United Nations Development Programme.

²² International Environmental Guardianship. (n.d.). 'IEG Announces 8 Billion Hour Pledge Flagship Initiative: In the race to save nature, time is our scarcest asset'. *LinkedIn*.

²³ East Coast Exchange. (n.d.). What an incredible moment to witness at the G20 in Johannesburg! *LinkedIn*.

²⁴ International Environmental Guardianship (n.d.) *LinkedIn*.



For the FMA, gaining a better appreciation of the pre-license context is important, especially for those operating within unique cultural or community contexts. It provides the opportunity for more meaningful engagement, knowledge sharing, and opportunity to identify specific challenges or barriers that may exist for Māori businesses. This will directly impact the FMA's ability to ensure that its licensing, supervision, and monitoring processes are effective, culturally responsive, and supportive of broader economic growth and participation.

How did the FMA's engagement with the Toha Network eventuate?

In 2024, an FMA staff member first encountered the work of the Toha Network at an iwi event. Recognising the potential for unique research opportunities with Toha Network the FMA later invited Toha to an initial hui to discuss potential synergies between the Network and the Matangirua research case study. This led to other online and in-person hui which established a shared desire to collaborate in this Kaupapa Māori research.

Background to the project and ethics plan

As the first Kaupapa Māori research project carried out at the FMA, it was important to establish a precedent and create a process where te ao Māori, te Tiriti o Waitangi and Māori Data Sovereignty were central to the ethics, project plan, research design, case study interviews, analysis and write-up.

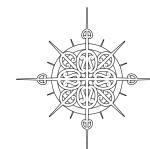
Research objective and aims

The objective of this research is to collaborate with the innovative Māori financial provider Toha Network, to co-design a Kaupapa Māori case study to better understand:

- the context and background journey that led to the development of Toha Network
- the potential inter-dependencies, barriers, challenges and opportunities experienced by Toha in their pre-licensing context as they seek to participate as Māori in the financial system; and with FMA
- the role of te ao Māori values within the Toha Network
- the context that led Te Kautuku Trust to choose to work with Toha Network as a pilot project.

Why did we adopt Kaupapa Māori methodology early in the planning?

Toha places **whakawhanaungatanga** at the centre of its work, which is critical to this research. Toha views the more conservative transactional model of relationships within the economic marketplace as incomplete, in relation to Māori. This resonated with FMA's decision to conduct research that is Kaupapa Māori in design. This is why this research was developed in collaboration with Toha and is inclusive of tikanga Māori research and data principles.



What is ‘Kaupapa Māori’ and what does it mean in this project?

In 2004, ten Māori researchers, with the International Research Institute for Māori and Indigenous Education, released a paper on Kaupapa Māori research and ethics.²⁵ The paper drew on Tuakana Nepe’s description (1991) of Kaupapa Māori as the “conceptualisation of Māori knowledge. Māori knowledge is not to be confused with Pākehā knowledge or general knowledge that has been translated into Māori.”²⁶ The paper then presented Linda Smith’s practice guide (1999):

“Seven Kaupapa Māori practices that guide Māori researchers:

- *aroa ki te tangata* (a respect for people)
- *kanohi kitea* (the seen face; that is, present yourself to people face to face)
- *titiro, whakarongo ... kōrero* (look, listen ... speak)
- *manaaki ki te tangata* (share and host people, be generous)
- *kia tupato* (be cautious)
- *kaua e takahia te mana o te tangata* (do not trample over the mana of the people)
- *kaua e mahaki* (do not flaunt your knowledge). ”²⁷

Drawing on this and other literature, our ethics plan stated that Kaupapa Māori is:

“Research in which the philosophy and practice of being Māori is the norm. Such a position accepts the validity of Māori concepts, values and practices and positions them as central to the whole research enterprise. Taken together Māori epistemology (Māori cultural theory), Māori ontology (Māori cultural practices) and Māori methodology (Māori methods) comprise the Māori worldview.”²⁸

We then adopted a Kaupapa Māori approach to enable Māori participants to draw on Mātauranga Māori to:

- contextualise their world, using the concepts and processes they were familiar with, to define, describe and articulate their experiences.
- identify te ao Māori values and principles that were important to them as Māori financial providers, as they seek to participate as Māori, in the financial system.

This was further underpinned by the National Ethics Advisory Committee’s guidelines on principles, derived from te Tiriti o Waitangi, that inform the interface between Māori and research.²⁹

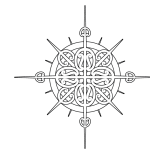
²⁵ Pipi, K., et al. *Social Policy Journal of New Zealand*, (23). Ministry of Social Development.

²⁶ Ibid. (p. 3).

²⁷ Ibid. (pp. 3-4).

²⁸ Irwin, K.G., & Workman, K. (2011). Whānau development and the Treaty of Waitangi: The Families Commission/Kōmihana ā Whānau work programme. In V. Tawhai & K. Gray (Eds.) *Always speaking: Public policy and the Treaty of Waitangi*. Huia Publishers, Wellington. (p. 11)

²⁹ National Ethics Advisory Committee. (2019). *National Ethical Standards for Health and Disability Research and Quality Improvement*. Ministry of Health



In addition to the above, while the ethics plan committed to several principles, mana and whakawhanaungatanga are essential for this research.

Mana: the rights and informed choice of the participants under mana tangata (autonomous individuals). Participants provide informed consent. In all engagement the process is to support the mana of the participants, and/or whānau and communities. The risks and benefits of participating will be explained to participants through the information sheet and consent form by the researchers. Participants receive a small koha as reciprocity for sharing their knowledge and expertise and will be assured that this is receivable regardless of performance or withdrawal.

Whakawhanaungatanga: Primarily, Kaupapa Māori research sits within whakawhanaungatanga. It is through whakawhanaungatanga with FMA's Strategic Adviser Māori and key people in Toha that this research can proceed. Whakawhanaungatanga embodies unspoken understandings of trust, mana and reciprocity between the parties. Through the application of whakawhanaungatanga, we have considered privacy/confidentiality issues, cultural authenticity and appropriateness in the research design. This project aims to embed these principles through co-design of the research with Toha Network, inclusive of Māori Data Sovereignty principles from Te Mana Raraunga.³⁰

This means a Kaupapa Māori design that contributes to the aspirations of both parties, in a way that ensures Toha Network contributors have control over the data/information they provide. Furthermore, they have control over how their data is managed, stored and disposed of, analysed, interpreted and presented. Finally, they have control over what is reported publicly, what is kept in house, and how the insights can be used by the FMA.

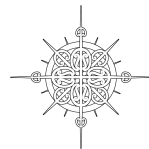
By co-designing the project with Toha Network, we had a built-in process where the Matangirua team was accountable to all those we interviewed, and to the values and principles of the Toha Network. This was to ensure we honoured our word and upheld the mana of everyone collaborating through the design, research process, analysis, and the write up of this report.

The significance of Te Kautuku Trust to this case study

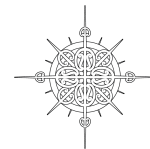
Following initial agreement that Toha and the Matangirua team would work together to develop the project, there was further discussion on what this would look like and who might participate in the research. Toha identified an opportunity to include Te Kautuku, a large Māori Land Trust on the East Coast near Tikitiki, and a partner in their pilot project with Air New Zealand and Te Puni Kōkiri, for regenerating the native ecosystem.

Only through being introduced to this significant journey of the whānau of Te Kautuku can the mana of Toha Network and the ECX be fully understood and truly realised. Consequently, the report proper begins with an historical overview of the social, cultural, economic and environmental contexts of the people of Te Tairāwhiti; then interviews with Te Kautuku.

³⁰ Te Mana Raraunga (October 2018). *Principles of Māori Data Sovereignty Brief #1*



Following the section on Te Kautuku, Toha Network and ECX are introduced through interviews with key figures. Having first presented the people and their kōrero in this report, we now present the research and literature that frame the context for the research, analysis, discussion, and findings sections.



Context for Te Kautuku, Māori land development

A century of economic, social and cultural challenges – land, leadership, and resilience

This section provides a brief overview of the social, political and economic contexts of the people of the East Coast, where Te Kautuku Trust is situated. A particular focus in this context is the scale of Ngāti Porou's commitment in both World War 1 (WW1) and World War 2 (WW2), and the impacts on the whānau and communities of the East Coast, Tikitiki, and Te Kautuku Trust. With the recruitment level high amongst Ngāti Porou for both wars, virtually every whānau was directly or indirectly impacted by the wars. This is also Te Kautuku's story. Currently managed by Rangi Raroa, Te Kautuku was previously managed by Rangi Raroa's father, Petuere Awatere Raroa, who served as Second Lieutenant in the 28th Māori Battalion.

While the Māori war effort is a national story, the localised impacts are significant. These stories provide a background, against which impacts of the wider regional and national cultural, economic, social, and political constructs are seen to play out.

During 1840–1850s the Māori coastal tribes were highly prosperous

The coastal tribes were a dominant force in shipping, and engaged in significant agricultural enterprises, with produce traded with Australia.³¹ However, increasing colonial pressure led to land sales and alienation, with the impacts of colonisation — including the New Zealand Wars, land confiscations, and the Native Land Court — drastically reducing the Māori land base and undermining economic and tribal strength.

By 1907, about 45 percent of Māori land in Waiapu Country (where Te Kautuku is situated) had been taken through various forms of confiscations and government interventions.³² This was further impacted by the passing of the Native Land Settlement Act 1907. This Act required Māori Land Boards to sell 50 percent of 'surplus' lands vested in them and lease 50 percent.³³

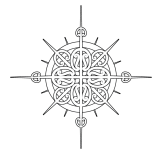
Māori enlistment in WW1: the 'price of citizenship'

Sir Apirana Ngata, (Ngāti Porou) a prominent Māori MP and advocate, worked with other Māori leaders to establish the formation of the Māori Pioneer Battalion during WW1. Out of a total of 500-550 in the Māori Pioneer Battalion, Ngāti Porou alone contributed 180 men. St Mary's Church in Tikitiki was dedicated in 1926 as a memorial to the Māori soldiers of the East Coast who fell during WW1.

³¹ Daly, S. (1997) *Rangahaua Whānui District 5b Poverty Bay. February working paper: first release*. Waitangi Tribunal Rangahaua Whānui series.

³² Soutar, M. (2015, March 01). 'East Coast region – Māori and Pākehā, 1870 to 1940', *Te Ara – the Encyclopedia of New Zealand*.

³³ Office of the Auditor General. (2011) *Government planning and support for housing on Māori land: Ngā whakatakotoranga kaupapa me te tautoko a te Kāwanatanga ki te hanga whare i runga i te whenua* (p. 104)



At the dedication of the memorial, Prime Minister Gordon Coates stated:

“...that he hoped that Māori would take note of the day, as it showed Pākehā what they owed to Māori and would strengthen the bond between Māori and Pākehā ‘You only have to look [at the memorial] on the hill’, said Coates, ‘and remember that when the Empire was in trouble New Zealanders offered their services as men, Māori and Pakeha, and as Māori and Pakeha they fell side by side.’”³⁴

Ngata referred to Māori enlistment in WW1 as ‘the price of citizenship,’³⁵ but it also brought tragedy, notably the 1918 influenza epidemic, which devastated Māori communities, with a death rate eight times that of Pākehā.³⁶ These blows, combined with land confiscation and inadequate government support for Māori farmers and returned servicemen, deepened rural poverty and vulnerability. With so many Ngāti Porou enlisting, the East Coast was significantly impacted – not only by the loss of life, but the epidemic, while ongoing land grievances continued.

Entrenched rural poverty, land dispossession and epidemics impact rural Māori

Ngata was deeply concerned about entrenched rural poverty among Māori, foreseeing a cycle of debt, land dispossession, joblessness, chronic health issues, and vulnerability to future epidemics. His concerns were justified — he had witnessed the evidence firsthand. By 1920, Māori faced an undeniably desperate situation. Recognising these hardships, Ngata championed reforms. As Minister of Native Affairs from 1928, his Māori Land Consolidation Scheme launched in 1929,³⁷ focused on consolidating Māori landholdings to preserve Māori ownership and encourage development. He pushed for policy changes to restrict land sales and boost Māori agriculture.

Ngata’s reforms occur at the same time as the Wall Street Crash

Unfortunately, these reforms came as New Zealand was entering the economic Depression of the 1930s, soon followed by WW2. The 1929 Wall Street Crash triggered global turmoil, with widespread unemployment and poverty. About 84 percent of New Zealand’s exports — mainly to Britain — were pastoral. Between 1929 and 1933, export prices dropped by 45 percent and earnings by 27 percent.³⁸ Māori communities on the East Coast were hit hard by the Depression and the 1931 Napier earthquake, leading to high unemployment and forcing many to seek work elsewhere.

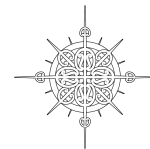
³⁴ Manatū Taonga Ministry for Culture and Heritage. (2024, May 29). *Tikitiki church war memorial*.

³⁵ Ngata, A. T. (1943). *The Price of Citizenship: Ngārimu V.C.* Whitcombe & Tombs.

³⁶ Lange, R. (n.d.). ‘Te hauora Māori i mua – history of Māori health.’ *Te Ara Encyclopedia of New Zealand*.

³⁷ Boast, R.P. (2019). Re-thinking Individualisation: Māori Land Development Policy and the Law in the Age of Ngata (1920-1940). In *Canterbury Law Review* 25, 1-30.

³⁸ Reddell, M., and Sleeman, C. (2008, June). Some perspectives on past recessions. *Reserve Bank of New Zealand: Bulletin*, 71(2), 5-21.



The long-lasting impacts of WW2 on East Coast whānau and communities

Encouraged by Apirana Ngata, many young Ngāti Porou men from the East Coast enlisted in large numbers, giving the region the highest voluntary enlistment rate in New Zealand.³⁹ With long-simmering land grievances, and Prime Minister Coates's comments laying a foundation of hope for the future, here was another chance for Māori to secure equal citizenship rights with Pākehā, and Ngāti Porou rose to the occasion.

The Ngāti Porou Deed of Settlement (2010) stated that during WW2, 25 percent of 3,600 who 'formed and reinforced' the Māori Battalion were from Tairāwhiti. Most of them served in C Company, which was 75 percent Ngāti Porou – and the casualty rate for C Company (killed, wounded, taken prisoner) was 70 percent.⁴⁰

Half or more of Māori men aged between 18 and 35 from the East Coast served overseas.⁴¹ The departure and loss of so many young Ngāti Porou men and leaders during WW2 deeply affected the communities, making it difficult to manage land interests and causing enduring pain for families. Whānau who had contributed significant numbers to WW1 again did so for WW2. Entire whānau descent lines disappeared, the ability to pass down knowledge and care for each other was weakened, and the loss of native speakers and cultural practitioners left a lasting void in the community.⁴² Amongst the Battalion casualties was Second-Lieutenant Moana-Nui-a-Kiwa Ngarimu, posthumously awarded the Victoria Cross.

*"The loss of Māori soldiers from isolated hapū who died overseas was catastrophic for tiny settlements like Ruatoria on the East Coast of New Zealand's North Island. For many iwi an entire generation of whānau died in the war and never returned home. It was tragic for small, isolated Māori settlements to grieve for the loss of many loved ones and detrimental because there were no leaders left to guide the people and the next generation."*⁴³

With so many men overseas, wāhine Māori supported the Māori War Effort Organisation, raised funds, prepared parcels for troops, made clothing and baked goods, and used both traditional and modern methods to preserve food like karengo (seaweed), pipi, pūpū, shark, crayfish tails, kūmara and karaka berries sealed in tins and sent away for soldiers abroad.⁴⁴

In each Māori community, wāhine Māori took on leadership roles in whānau, hapū, marae, on the land, in factories; and maintaining the social, economic and cultural infrastructures of their

³⁹ Te Mata Law. Amended statement of claim on behalf of Rulon Kahuroa 22 December 2022. Military Veterans' Inquiry.

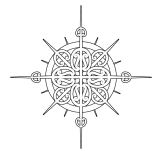
⁴⁰ Ngāti Porou and the Crown. Deed of Settlement. 22 December 2010. (p. 31)

⁴¹ Soutar, M. (2015, March 01). East Coast region – Growth and challenge, 1940 to 2010s, *Te Ara – the Encyclopedia of New Zealand*.

⁴² Ibid.

⁴³ Mahuika, J., R. (2015). *Patricia Grace's Tu: Reading the novel for indigenous insight*. A thesis submitted in partial fulfilment of the requirements for the degree. University of Waikato.

⁴⁴ Manatū Taonga — Ministry for Culture and Heritage. (2020, May 1). *Māori and the Second World War*. (p. 5). Impact.



communities. However, with so many Ngāti Porou men lost on foreign soils to ill-health and disability, wāhine Māori continued to do so beyond the end of WW 2.

Following WW1, Māori Members of Parliament Apirana Ngata and Paraire Paiea advocated in Parliament that Māori WW1 servicemen did not get the rehabilitation they needed. In 1944, government announced they would meet the needs of Māori servicemen, and the Minister of Native Affairs stated that Māori returned servicemen:

“will be treated in exactly the same way as the pakeha returned soldiers... They will have equal rights with others when it comes to land settlement.”⁴⁵

Despite this, Māori servicemen returning from war received fewer entitlements, benefits, and rehabilitation support than Pākehā. Instead, they found themselves again treated as second-class citizens on their return home. This inequity left many of them and their whānau facing poverty and poor physical and mental health, with ongoing impacts on wāhine and whānau. For Ngāti Porou who had contributed more than their share to the war effort, these impacts were magnified. In an amended statement of claim to the Waitangi Tribunal Veterans’ Inquiry, Rulon Kahuroa, a returned serviceman from Te Whānau a Kai, commented on the disparities Māori face today:

“If these men knew that their mokopuna would continue to face this level of oppression it is doubtful they would have wished to lay down their lives in defence of the Crown.”⁴⁶

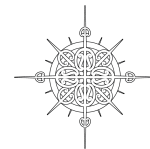
Overall, the 28th Māori Battalion itself suffered 50 percent more casualties than the New Zealand average.⁴⁷ Ngata had described Māori service in WW1 as the ‘price of citizenship’. After WW2, he stated that *“Māori had paid the price in full.”⁴⁸*

⁴⁵ Te Mata Law. Amended statement of claim on behalf of Rulon Kahuroa 22 December 2022 Military Veterans’ Inquiry. (p.50).

⁴⁶ Ibid. (p. 34).

⁴⁷ Ibid.

⁴⁸ Manatū Taonga — Ministry for Culture and Heritage. (2020, May 1). *Māori and the Second World War*. (p. 5). Impact.

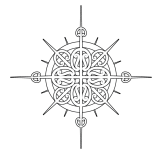


“With Tūmatauenga – Somewhere in Crete”

(To the members of the 28th Māori Battalion who were cut off in Crete and fought on to the end).

1. Kamate! Kamate! Kaora! Kaora!
One hundred mouths screaming
Challenges to destiny,
Tongues protruding rigid in contempt,
Two hundred eyes glaring defiance,
Arms shaking death-dealing weapons,
Two hundred feet stamping furiously,
Ground trembling in madness,
Frightening Taniwha –
Te-hoko-whitu-a-tu
Marching to drumbeats of gunfire,
Talons flashing in Cretan sun,
Sound of steel on steel,
Death is here!
Death is waiting!
2. Massed paratroopers jumping,
Junker armadas, black against the sun,
Stuka dive bombers
Blasting earth into flaming chaos,
Through it all, thunder of war god,
Encouraging furious charges,
Assaulting German might,
Locked in arms of death,
Tommy guns viciously showering,
Thrust and parry of close infighting,
Screams of dying and wounded,
Stench of disembowelled,
On blood-soaked sand,
Kamate! Kamate!
3. Gleaming altar of Tūmatauenga!
Bayonets hungry in the sun,
Poised in anticipation
Suddenly came plunging fire
Licking tongues of hate
Offerings crucified on blades of sacrifice!
Pitiful cries of impaled,
A chorus of the damned
no wounded or prisoners taken
Enemy blood is nectar, honey!
Shock of war god's victory
With dreaded monster
Hammered into history
On burning Cretan sands
Kamate! Kamate!
4. Avenging Stuka squadrons,
Lethal cargoes right on target
Churning a boiling fiery hell
Taniwha writhing in agony,
Spitting vicious tongues of flame
Clawing tormentors down
Crushing planes in red
Streams of exploding shells,
A final challenge Kamate! Ka...!
Stops from a mouth choked with blood,
Answered by thunder in heaven,
Tūmatauenga calling his warriors home,
To sounds of aero engines fading,
Over the battlefield, smell of death; -
silence,
Māori Battalion march to glory.

Heretaunga Pananehu Pat Baker, (1920 – 1988) © copyright, estate Heretaunga Pat Baker



WW2 creates opportunities for Māori in the urban areas

Urban migration of Māori increased after WW2, with the percentage of Māori living in cities rising from 10 percent in 1936 to 25 percent in 1945. By 1966 the urban Māori population stood at 62 percent, and by 1986 at nearly 80 percent. This movement had significant impact on many rural Māori communities.⁴⁹ Depopulation removed many whānau from their roles in supporting the ahi ka roa of whānau and hapū (long burning fires of occupation) - with many marae falling derelict.⁵⁰ This further weakened whānau ties to their whenua, and the ability of whānau to build new whānau stories interwoven with their lands.

The economic impact of the 1966 Wool Shock

In the early 1960s, New Zealand enjoyed strong economic growth, with wool accounting for about 31 percent of exports.⁵¹ This prosperity ended abruptly in November 1966 when the wool market crashed, cutting export income by one-eighth, virtually overnight. Wool prices dropped another 20 percent in both 1967 and 1968⁵² severely affecting Māori landowners on the East Coast who relied on sheep farming. In response, many Māori diversified their activities or migrated to cities for new opportunities.

In the 1950s and 1960s, government policies encouraged Māori migration to cities, offering employment, housing, and training opportunities in urban areas. Initiatives like trades and teacher training, plus hostels for young Māori, drew many away from their ancestral lands and altered their ties to the whenua.

Depopulation of rural Māori communities was a planned policy response

In 1961, the Hunn Report produced the first ever report on the social and economic gaps between Māori and Pākehā. It recommended a thinly veiled assimilation policy and depicted rural Māori who resisted as “living a backward life in primitive conditions.”⁵³ This perspective influenced sweeping policies. For example, under the *Māori Affairs Act 1953*, Māori whose shares in land were worth less than £25 were forced to sell them to the Māori Trustee.⁵⁴ Further, the *Māori Affairs Amendment Act 1967* provided for Māori freehold land (with fewer than five owners) to be reclassified as general land giving the Māori Trustee expanded authority to acquire and sell ‘uneconomic interests’ in Māori land.⁵⁵ These restrictions operated until the *Māori Affairs Amendment Act 1974* that removed the forced sale or conversion of uneconomic Māori land

⁴⁹ Harris, A. (2024, September 01). Ngā tāone nui – Māori and the city – Māori migrate to the cities’, *Te Ara – the Encyclopedia of New Zealand* (Accessed 2025, March 10).

⁵⁰ Ibid.

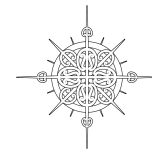
⁵¹ Reddell, M., & Sleeman, C. (2008). Some perspectives on past recessions. In *Reserve Bank of New Zealand Bulletin*, 71(2), 5 – 21.

⁵² Ibid.

⁵³ Hunn, J. (1961) *Report on the Department of Māori Affairs with Statistical Supplement*. Government Printers. (p.15)

⁵⁴ Boast, R. (2012, September 22). Te tango whenua – Māori land alienation – 20th-century developments. In *Te Ara – the Encyclopedia of New Zealand*.

⁵⁵ Manatū Taonga Ministry of Culture and Heritage (2024, May 27) *Treaty timeline* (p.5)- Treaty events since 1950.



interests. Simultaneously, the *Town and Country Planning Act 1953*⁵⁶ had the effect of restricting Māori from building on their land through the creation of council zoning schemes. Māori land was often zoned as rural or reserve lands, which meant it was not available for housing. This provision remained in place until 1977. The impacts from the joint operation of these Acts for over 20 years further alienated generations of whānau Māori from their lands.

1970s: New Zealand's economic landscape experiences significant upheavals

From the early 1970s to the 2000s, New Zealand's economic landscape shifted dramatically, marked by global shocks, domestic policy upheaval, and profound social change.

Beginning in the mid-1970s, New Zealand started to experience levels of unemployment that were unusual, given it had enjoyed decades of full employment. This unemployment was driven by several factors. With Great Britain joining the European Community in 1973, the long-guaranteed market for New Zealand agricultural exports shrunk. Reduced export earnings dampened demand for local manufactured products. Unemployment rose among unskilled agricultural and factory workers.⁵⁷

During the early 1970s, New Zealand experienced economic prosperity from booming commodity prices and strong foreign reserves. However, the 1973–74 oil crisis and a severe drought led to a sharp economic downturn, with falling export prices, rising unemployment, and soaring inflation.⁵⁸

A second oil shock from 1979–82 further worsened economic conditions, causing another global recession that heavily impacted New Zealand. Economic recovery stalled and unemployment rose rapidly. In response, the exchange rate was devalued at the same time as the government embarked on the 'Think Big' projects.⁵⁹

Market Reforms and Policy Overhaul (1980s)

The mid-1980s saw the new Labour government initiate unprecedented economic, social, and cultural reforms. An initial 20 percent devaluation was followed in 1985 by a float of the New Zealand dollar. Financial markets were deregulated, exchange controls removed, and in 1986, GST was introduced.⁶⁰

The government phased out most support for agriculture, including fertiliser subsidies, tax concessions, concessionary interest rates, and help controlling rabbits and noxious weeds.⁶¹

⁵⁶ Office of the Auditor General (2011). *Government planning and support for housing on Māori land*.

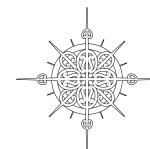
⁵⁷ Mintrom, M. and Thomas, M. (2019) Chapter 14: New Zealand's Economic Turnaround Public Policy Innovation Catalysed Economic Growth. In P. Hart & K. Compton (Eds.), *Great policy successes* (pp. 264–282). Oxford University Press.

⁵⁸ Ibid.

⁵⁹ Reddell, M., and Sleeman, C. (2008, June). Some perspectives on past recessions.

⁶⁰ Brash, D. (1994). Financial reforms in New Zealand and their relevance to the central bank, *Reserve Bank Bulletin*, Vol 57(3).

⁶¹ Nightingale, T. (2009, March 01). Government and agriculture – Deregulation and environmental regulations, 1984 onwards. In *Te Ara – the Encyclopedia of New Zealand*.



Crown agencies began to charge for services such as meat inspection, animal health inspections, quarantine and farm advisory services as part of the overall policy direction of shifting the cost of government services to users. By 1990 the farming sector was one of the more deregulated sectors in the economy.⁶² Export assistance was eliminated, tariffs slashed and the import licensing system was dismantled. Many state-owned enterprises, including government commercial forestry, were corporatised and eventually privatised.⁶³ These changes fundamentally reshaped New Zealand's economic structure.

The global 1987 stock market crash and the NZ share market

New Zealand's period of significant cultural and social transformation aligned with a global stock market boom where the Dow Jones Industrial Average surged by 282 percent between 1982 and October 1987.⁶⁴ In NZ, the combination of significant financial deregulation and removal of exchange controls had created a share market boom like no other. 'NZ had a deregulated, market-led economy; insider trading was not illegal and there were no continuous disclosure requirements'.⁶⁵ Speculation was rife and the term 'Queen Street Farmer' was coined, to refer to businesspeople living in Auckland and other urban areas, who purchased farms, often for a tax loss.

When the 1987 global stock market crash occurred, New Zealand was hit far worse than anywhere else in the world.⁶⁶ When the Wall Street Dow Jones Industrial Average fell by 22 percent, New Zealand's share market dropped 15 percent and kept falling. By the end of February 1988, New Zealand's market had fallen almost 60 percent.⁶⁷ The country went rapidly from protectionism to deregulation, fuelled by share market speculation.

Deregulation occurred in several industries and border protection was reduced significantly. Tax changes in 1986 resulted in the consolidation of sales taxes into one broad-based, value-added tax, set at a single rate with virtually no exemptions. At the same time, marginal rates of income tax were rapidly reduced from relatively high levels.⁶⁸

The restructuring of the 1980s saw the introduction of privatisation of state-owned assets, accompanied by closures and redundancies in secondary industries. Meat works closed throughout the country and the forestry industry was privatised. Through this process thousands of Māori workers lost their jobs. In September 1986 the Māori unemployment rate was 10 percent; the European unemployment rate 3.1 percent.⁶⁹

⁶² Ibid.

⁶³ Rhodes, D., & Novis, J. (2002). The impact of incentives on the development of plantation forest resources in New Zealand. In Enters, T. and Durst, P. B. (Eds) *What does it take? The role of incentives in forest plantation development in Asia and the Pacific*. (pp. 151-191).

⁶⁴ Dann, L. (2017, October 10). "The Crash." *New Zealand Herald*.

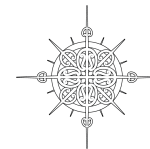
⁶⁵ Ibid.

⁶⁶ Ibid.

⁶⁷ Ibid.

⁶⁸ Mintrom, M. and Thomas, M. (2019) (pp. 264-282).

⁶⁹ Melville, D. (1998). (pp. 9-17). Department of Labour.



In 1990 the National Government was elected with a large majority and by 1991, New Zealand's Finance Minister, Ruth Richardson, announced a Budget known as “the Mother of All Budgets.”⁷⁰ The budget included benefit cuts, introduced market rents on state houses, and a range of new user charges. This significantly impacted low-income households already struggling to recover from the previous recessions.⁷¹ By 1992 the Māori unemployment rate had soared to 25 percent, with the European unemployment rate at 7.8 percent.⁷²

Impacts on the East Coast

The early 1980s had started off with significant economic optimism for Te Kautuku, the neighbouring town of Tikitiki, and the East Cape in general. Because of the dry climate the East Cape was identified as an excellent area for grape-growing. In 1980 an agreement was reached between Penfolds Winery Ltd, Māori Affairs and several hundred owners of Māori land around Tikitiki. The planting of the first vine was carried out by former PM Robert Muldoon.

“When people tread the New Zealand wine trail in the near future, they could well be stepping on Māori-owned land and sampling entirely Māori produced and managed wine stylish, beautifully textured red and whites.”⁷³

The venture was heralded as a wonderful opportunity for Ngāti Porou. By 1983, the estimated net area of the New Zealand vineyards was 5972 hectares, with Gisborne, Hawke's Bay, Marlborough, Auckland, and Poverty Bay identified as the main grape growing areas.⁷⁴

Sadly, this bright new hope for the region, long under pressure, came to an abrupt end as the removal of subsidies and the increased competition from overseas wines led to a grape glut in the mid-1980s, threatening the viability of many wineries.⁷⁵

However, it was the glut of lower-quality wine that led to the government, in 1986, paying growers to pull out their vines to reduce the productive capacity of the New Zealand wine industry. Up to 25 percent of the national vineyard was uprooted, mostly around Gisborne and in Hawke's Bay.⁷⁶ Production slowed, and it was not until 1993 that the area in vines reached the pre-1986 level.

While the growers in other parts of the country used their compensation to re-plant in better quality wine,⁷⁷ it does not appear the same advice filtered through to the East Cape growers:

⁷⁰ Colin James, National Party – The Bolger and Key years. *Te Ara – the Encyclopaedia of New Zealand*.

⁷¹ Brash, D. (1996, June 04). *New Zealand's remarkable reforms. Address to the Fifth Annual Hayek Memorial Lecture*. RBNZ.

⁷² Melville, D. (1998). (pp. 9-17). Department of Labour.

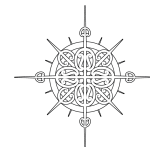
⁷³ Ramanos, M. (1985, April 01). The grapes of joy at Tikitiki. (p. 5). *Tu Tangata*, Issue 23.

⁷⁴ Department of Statistics. (1983). *The New Zealand Official Yearbook 1983*.

⁷⁵ Dalley, B. (2009, March 01). Wine – Foundations for the future 1960s to mid-1980s. In *Te Ara – the Encyclopedia of New Zealand*.

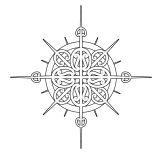
⁷⁶ Ibid.

⁷⁷ Scott, A. with Arnold, E. (2017, May 5). Marlborough Man. In *National Business Review: how a crazy government scheme created a billion-dollar industry*.



“There was a real push to plant grapes here on the East Coast and a number of Māori land trusts did...it was meant to be the new economic future for the East Coast. When I came back in 1985, I saw the vines all cut off at ground level. It was so sad seeing this. They were told there was a glut of varieties...All landowners were told they could have all the posts and wire if they removed the plants – killed grape growing on the Coast” (Rangi Raroa, manager, Te Kautuku).

This highlights the complex nature of economic development on Māori land. Unlike the other vineyards, the owners on the East Cape did not have any decision-making authority as the land was managed by Māori Affairs.



*“Ko Waiapu te awa
Ngāti Porou te iwi,
Taku manawa, ko Te Tairāwhiti”*

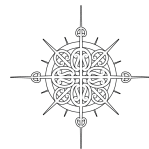


View of Waiapu River, (Photo: Rene Raroa)

To truly appreciate the impact of Toha Network for Te Kautuku, we need to understand the whakapapa of Te Kautuku in their long journey of commitment and sacrifice for the land.

Te Kautuku holds the ancient footprints of the revered Ngāti Porou ancestor Paikea. From the top of the cliffs at Te Kautuku Station, Manager Rangi Raroa pointed out the trail where his tupuna Paikea had walked, over the hills and along the beach, until he came upon the beautiful Huturangi; the union between Paikea and Huturangi was the origin of Ngāti Porou.

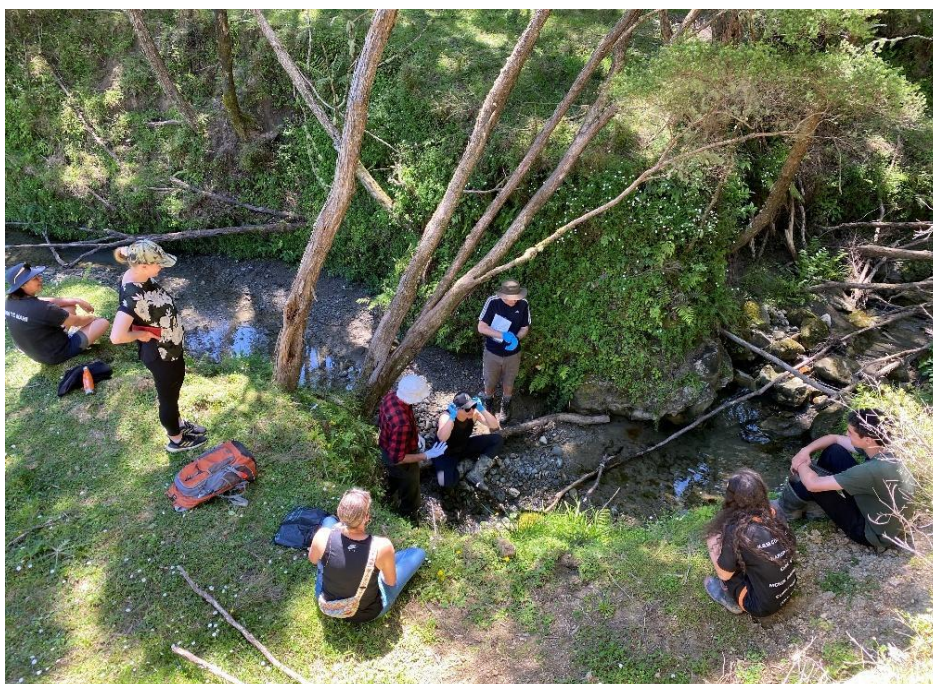
The path, which today is known as the Paikea Trail; is part of the sacred thread that binds Te Ira o Te Atua with Te Ira o Te Tangata o Te Whenua, preserving the mauri of Te Kautuku for the future.



Te Kautuku Station: A Legacy of Commitment and Sacrifice

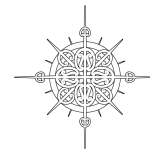


Mr Rangi Raroa, Te Kautuku Station Manager (Photo: Esther Raroa)



Waterway monitoring (Photo: Renee Raroa)

“Since Māori Affairs withdrew support in the 1980s, we’ve never borrowed money. Instead, we’ve relied on seasonal work, government schemes, and a range of initiatives to keep things going. The trustees made significant personal sacrifices — choosing not to take on debt also meant never earning a proper wage. We’ve sacrificed to keep the wheels turning.”



“I have no regrets. If you don't work you die, so keep working!”

Interview with Rangi Raroa, third generation Te Kautuku manager, 29 April 2025

“Prior to 1980, Te Kautuku was comprised of several small shareholdings that had been consolidated into one block. In 1980, Māori Affairs promoted the 438 Trusts to Māori land blocks to support land development; and took over the Trust as part of the Māori Affairs farming scheme. The scheme offered a lease with a commitment to develop the block, stock it, and train for farming enterprises for a 30-year period. During that time the land would be managed by Māori Affairs but after 30 years, it was to be given back as a going concern. We cleared forests, built buildings and put up fences. Māori Affairs cancelled the lease after 8 years and handed back the land, stating it was not profitable.

In 1988 the land was handed back to the Trust with substandard buildings and fences, everything was overgrown, and the ‘going concern’ now had \$1million debt.

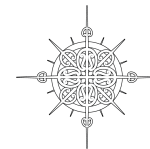
I believe the problem lay in the modelling used by the Department of Māori Affairs. They weren't on the ground on the East Coast. They based their budgeted projections and farming strategy on what was profitable based on the flat land in Hawkes Bay, which is a completely different topography to the hill country, so by their model, it failed. The land was now without forests and vulnerable to weather events.

At the time, Māori Affairs didn't consider how their lack of collaboration with the Trust and the owners blocked subject matter expertise; it's important not to apply stock-standard development principles, and to use local knowledge.

Te Kautuku has been completely run by trustees/landowners from 1988 when Māori Affairs pulled out, to the present. We formed our Ahu Whenua trust and took over the management from Māori Affairs. We ran it under owner control. It was a real struggle; things got harder for farming in general. From 1988 to today its run by owners – between those times the trust has run all different schemes, to keep our heads above water, and to have no debt.

With Māori Affairs gone and urbanisation impacting the available workforce, the scrub continued to grow. While Trade Training de-populated the Coast in the 1950s, the people have been moving back since 1985, but there isn't much work that those without certain skills can do. In many cases, the older family members leave to move to the cities, resulting in many of the younger generation being further disconnected from their whenua.

In 1988 Cyclone Bola further devastated the region, not long after Māori Affairs pulled out. This was compounded by the Trade Training schools in the cities de-populating the East Coast, lack of investment in regions; and lack of employment resulting in whānau moving back but now lacking the skills to live off the land, creating an intergenerational cycle of beneficiaries. These circumstances led to many landowners on the Coast not being able to maintain the whenua, due to the overgrowth of scrub and gorse that reduced grazing areas which reduced stock numbers, and not being able to maintain stocking levels as a consequence, to cover costs.



Most of these Trusts have turned to leasing out their blocks – many lease out up to 80 percent of their land to people who are not landowners, but it's still not enough. These people can end up having to sell capital stock to pay their way.

Te Kautuku had to find other sources of revenue and tried multiple activities: - sheep, cattle, worm farming, Mānuka oil, bee-keeping, firewood, tourism (backpackers and guided tours), making use of Taskforce Green (fencing, scrub cutting, poplar planting) - anything to try and keep things going and stay out of debt.

The way out was for us to minimise the wages paid to ourselves. From 1988 until today we continued with sheep and cattle. The regeneration of scrub made it hard to continue with sheep leading to pasture reduction, and then there are problems with hunters and their dogs roaming over the block. Further, the flat land available to fatten stock as grazing land, was reducing.

With land use change being inevitable, funding needed to be secured.

The funding journey for Te Kautuku has evolved over several years through extensive engagement with a range of potential funders, leveraging Toha's broader strategic relationships. Renee played an enabling role as 'whānau/Trust navigator' between Toha, the ECX and Te Kautuku, encouraging the Trust to develop finance and resourcing plans to support the big decisions around long-term land use change."

[Renee Raroa speaks to the whānau navigator role at Te Kautuku:

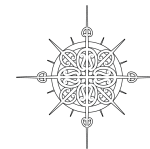
"For me, navigation is about my whakapapa back to whenua, knowing the design was unproven and a risk, it's my whakapapa that gave me the confidence to approach the land-block. Asking yourself 'do you think this is useful for whānau Māori? Knowing we had to test it on the ground so others would then look at it..."

I think the main skill set is in navigation into the community, to bring in different land-blocks, bringing in differing values and perspectives is of huge value. A navigator needs to have a foot in both worlds to build the bridge. - The resourcing is inequitable, a constant push to bring worldviews together in the dataspace, which is at the middle of the design."]

Rangi Raroa:

"To diversify land use and generate income, the Trust has identified six environmental projects: carbon credits, native regeneration, Kanuka oil, bee keeping, [plant] nurseries, and pest control. Te Kautuku is also considering connecting the ancestral Paikea trail with the Te Ara Tipuna Trail, offering hikers accommodation to boost revenue and reconnect over 400 landowners with their whenua as native bush recovers.

To support its projects, the Trust is working with AgResearch to identify which land areas can be fenced off for cows and deer. With deer frequently entering from neighbouring properties, the Trust has already installed 5 kilometres of costly deer fencing and needs 2 more. Ongoing pasture loss



from erosion and scrub, as well as necessary de-stocking, highlight the need for major long-term land use changes.

Diversifying land use and land regeneration on a 940-hectare Ahu Whenua Trust is an enormous task. The environmental projects identified as alternative income streams are costly to establish. With such a significant shift in land use being critical to the future of Te Kautuku, the positive engagement from Te Puni Kōkiri and Air New Zealand as a practical project enabled the Trust to make the key decisions for change.

Air New Zealand's Climate and Nature Fund is the main supporter of the environmental pilot project; corporate environmental finance instrument aimed at accelerating biodiversity and climate resilience outcomes. Te Puni Kōkiri also contributed regional development funding to Te Kautuku Ahuwhenua Trust, contingent on ongoing proof and verified ecological and community results.

This was further supported when the Ministerial Inquiry into Land Use report recommended that the government engage with the ECX and Toha to explore a co-investment partnership around the biodiversity. While ECX played a central role, the success of this funding arrangement was also enabled by the leadership and support of multiple individuals across sectors.

This co-investment structure, channels capital to frontline Māori communities in Te Kautuku to implement interventions that enhance ecological resilience, restore native biodiversity, and support post-cyclone recovery efforts. Activities funded include riparian planting, erosion control, and the deployment of mātauranga Māori-informed land management practices.”

[This partnership is described in the following Toha update, October 2024:⁷⁸

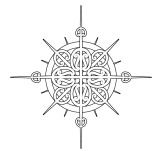
“Air New Zealand first MAHI funder in Tairāwhiti co-investment pilot

The key to unlocking momentum for Te Kautuku has been MAHI, a digital token which will represent a unit of work in service to nature. Through the funding of MAHI, which will happen via Toha’s test software network, payments can be made directly and securely for actions that restore and regenerate the landscape. This is a vital part of the digital public infrastructure that Toha is building to enable new forms of collaboration across the private, public and community sectors to address climate change and biodiversity loss.

Air New Zealand’s Chief Sustainability and Corporate Affairs Officer, Kiri Hannifin, says:

‘Addressing emissions and moving away from fossil fuels is the greatest challenge we face as an airline. It’s not enough just to wait and see what the future holds, particularly when the impacts of climate change are so visible and happening right now. Investing in Te Kautuku via the East Coast Exchange and the Toha Network gives us an opportunity to support local communities and contribute to greater resilience and native

⁷⁸ Toha Network. (2024, October). Air New Zealand first MAHI funder in Tairāwhiti co-investment pilot. <https://info.toha.network/announcements/air-new-zealand-first-mahi-funder>.



restoration in the short-term, but also to support innovation that could help develop a biodiversity market in Aotearoa that others could use in the future.”

“At Te Kautuku, this nature-based work includes natural habitat regeneration, biodiversity enhancement, waterway restoration, erodible slope stabilisation, native nursery development, and the restoration of ancestral trails. Each MAHI will hold verifiable data to prove that its sale is supporting frontline activities, and in future will create access data for claimable impacts such as biodiversity uplift, climate risk reduction and carbon sequestration”⁷⁹].

Rangi Raroa:

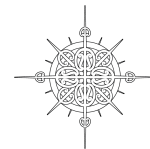
“The main goal is to motivate Māori to retain and restore their land, increasing owner use and amalgamating holdings. Te Kautuku totals 935 hectares, made up of over 400 small holdings with shares based on block size. The Trust's pilot project will replant much of this land with native forest.

Housing and education are needed to support future plans and whānau reconnections. Although the land is ancestral, many whānau remain disconnected from it due to historical and current issues. Education is vital to enable ongoing generations of trustees to make quality contributions, and to understand the complex Māori land court processes which are difficult to navigate. Expanding land use encourages greater whānau and beneficiary involvement, supporting succession planning and ongoing development.

This requires housing, and we need to look at establishing papakāinga as there are none here. Many of the landowners don't know about what goes on here - their holdings are small, and they moved away a long time ago. Often those moving back from the cities don't have the skills to live here. Without Toha, Te Kautuku would be in the same position as other land blocks, forced to lease out for grazing, further alienating the whānau from their ancestral lands.

To this present day we are still debt-free (other than seasonal debt) and our ‘name is still on the gate’.”

⁷⁹ Ibid.



“Access to financial services or financial advice can be difficult”

Interview with Esther Raroa, Kaimahi on Te Kautuku, 29 April 2025

“Access to loans can be difficult because of the land being multi-owned Māori land. I feel like this is an area that needs major improvement. It’s important that financial providers try to understand how to work with Māori and the realities Māori face when it comes to multi-owned land rather than just push us aside or put us in the too hard basket.

Access to banking services is a challenge also because of how remote we are. To give an example of the difficulties surrounding this, a Māori company we are a part of had a change in one of its directors and a change in banking policy. This required all the directors to travel to the closest branch, which is a four-hour drive return, to change bank signatories and to provide ID. The cost in doing so is high – a whole day off work was needed, not to mention the travel and food costs that come with it. To make matters worse, before I left to visit the bank, I rang the bank concerned to make sure I had all the necessary documents requested e.g. ID, proof of address etc. but when I got there, I found they needed different information! That was frustrating, this meant another day off work and for me to cover the associated costs to get the required information back to the bank.

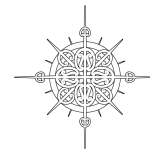
Moving forward though, to assist those that live remotely or are unable to travel to banks due to work responsibilities, remoteness, etc banks need to set up secure online portals to provide confirmation of IDs. I'm sure there is technology out there that can help make this happen safely.

Isolation/remoteness creates a similar issue with products from the land that are harvested or products that are created by individuals or businesses. For example, the transport of our honey, the buyers normally pay the transport but hesitate when they find out how rural we are and the extra associated costs to them, which is understandable. Its then up to us to absorb those costs.

Social media, though, has played an important role in helping rural businesses get their product moving off the shelves.

Access to financial advisors in this area is unheard of. I did, however, hear that there was budgeting support and financial budgetary advice given through the local rūnanga for those on benefits, but I have not heard of any land investment support.

Toha and East Coast Exchange are the two organisations/companies that have helped us the most, with a futuristic vision and the necessary expertise to go along with this vision, they've been able to assist us financially through funding applications etc, which has created job opportunities for those living on the whenua and within the community. We couldn't do this before as the finance wasn't there, like a lot of our land blocks in the Tairāwhiti District. One of the biggest barriers I see though for Māori, is having the knowledge of how to navigate the current funding application systems in place, they can be very time consuming and difficult to understand and to navigate. So, to an



average worker on the ground, this can be an impossible achievement. AI though has a growing value in this space.

The pilot project we are a part of, has a very important part to play in this regard because, as its name suggests, it can be an example for others to follow if successful. Also, areas that prevent Māori from making progress can be identified and hopefully cause change to happen within those spaces.

Another barrier is finding good reliable workers and keeping them here. However, there is an influx of people moving back from the cities, so it will be interesting to see what expertise or ideas they bring back with them. It can, however, take time for these ones to fit in or settle back into the local community if they have been away for a while. It's almost like you need to earn the trust of the local people first, before any ideas are pushed forward.

Another challenge is that employers can't afford to pay above the minimum wage without jeopardising their businesses and therefore livelihood. Whānau, who would like to move back, has identified that the biggest challenge in moving home is the drop in income. Other challenges or barriers are getting land or finding a rentable property, there is nothing around.

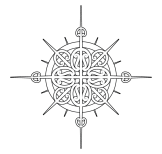
Creating Papakāinga's on whenua Māori with infrastructure assistance is an option I hear. But more financial assistance is needed to support employers to start employing and training others, especially for those that live in low economic areas.

How can FMA or similar organisations reach Māori?

I think it's important to build trust; by having Māori help Māori that's a great start because a lot of trust has been lost through the years. Also, understanding and acknowledging cultural differences and taking them into consideration when approaching Māori is important.

AgResearch is a great example of an organisation that has put this into practice. When they come into a Māori space, they have a Māori adviser who provides the knowledge to others of how to show respect for Māori traditions. This helps promote a respectful and trusting atmosphere. It's beautiful to see!

Financial providers need to understand how to work with Māori and the realities Māori face, especially on multi-owned land."



What is the Toha Network?

“The Toha Network is an ecosystem of ventures, impact investors, scientists and frontline communities committing to radical collaboration for the regeneration of our planet.”

In his interview with Impact Investing Network (February 2025) *Impact investing deep dive – Toha* David Hall provides clarification about the purpose and function of Toha Network:⁸⁰

“Toha Network was founded in 2018 to build an impact investment marketplace that bridges the gap between investors and frontline communities to address challenges like climate change and biodiversity loss.

What makes Toha distinctive is our founding principle of data sovereignty for all. This is the idea that everybody should ideally have influence over data that represents them and their interests, especially by exercising consent over how such data is used. Nature markets are dependent on massive volumes of data – often highly sensitive data – and if market providers cannot protect that data from foreseeable risks, we believe those markets will lose their social licence to operate. In this, the Toha Network is inspired by the Indigenous data sovereignty (IDSov) movement, but we maintain that data sovereignty ought to be a concern for everyone. Accordingly, we are committed to data sovereignty as a minimum operational requirement for nature markets – and for impact markets generally.

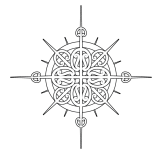
Cyclone Gabrielle marked the shift of the Toha Network from an R&D phase to a demonstration phase. Most visibly, we created the East Coast Exchange (ECX) as a demonstration of Toha’s digital capabilities in enabling community-led climate adaptation.

We also brought forward the transition of the Toha Network to an ecosystem of entities, which provides the separation of network functions that can sustain trust in Toha’s data stewardship. This, in turn, enabled us to advance our pipeline of pilots, starting with the nature data transaction at Te Kautuku in partnership with Air New Zealand and Te Puni Kōkiri.

This pilot fulfils key recommendations from the Ministerial Inquiry into Land Use to deliver a proof-of-concept co-investment arrangement for whenua Māori. In that sense, the cyclone was a true test of Toha’s MVP: if we couldn’t be of value to Te Tai Rāwhiti at that moment, then what was all this for?”⁸¹

⁸⁰ Hall, D. (2025, February 26). Impact Investing Network Deep Dive – Toha (Interview with David Hall). Impact Investing Network Aotearoa New Zealand.

⁸¹ Ibid.



Toha Network's Dual Token System: investing in frontline climate action

(This section is from the Toha Network website: <https://substack.toha.network/p/introducing-mahi>)

Toha uses science-based digital templates to measure and verify environmental impact. These templates support various types of claims—reporting, contribution, and compensation—and enable the creation of trusted data assets. The system also supports pledges, which are forward-looking commitments backed by data, enabling upfront financing and robust impact tracking.

The MAHI token

This is defined as a unit of work in service to nature and climate. For example, tāngata tiaki at Te Kautuku make a pledge to undertake nature-based work and to collect associated data. The data is collected via data templates that the East Coast Exchange has co-developed with Toha Network. When pledged activities are undertaken and milestones are met, the proceeds from MAHI sales are disbursed to Te Kautuku. Each MAHI token is priced at the Living Wage –i.e. \$26 per hour –however the funds from MAHI sales can be allocated flexibly to the operational and capital expenses of the project. This process ensures that data for verification of actions and outcomes is collected through the project process:

“This may be photos with geolocation and time/date metadata, receipts for costs incurred, or lab results. Before any MAHI payments are released, the action and incurred costs are verified using this data. Also, to ensure that data is trustworthy, the identity of Toha Network members is authenticated by collecting and triangulating data. Toha's data verification and authentication processes were tested in the East Coast Exchange.”⁸²

Air New Zealand's purchase of ~\$1 million worth of MAHI has enabled the piloting of this fund disbursement mechanism at Te Kautuku, where the ECX can release payments on verification directly to those who carried out the work.

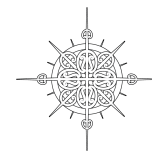
The TOHA token

This is defined as a network token which generates rights to data and governance in the Toha system.⁸³ In the pilot phase, these can be accessed through purchasing MAHI tokens, which are then able to be 'swapped' for TOHA tokens. For example, in the pilot project at Te Kautuku, Air New Zealand's funding of MAHI tokens provides the right to use TOHA tokens, to use and access the data:

“In the initial phase of the Toha system, in order to acquire TOHA, one must convert MAHI that they already hold. This is akin to a currency swap where MAHI, which represents proof of work, is exchanged for TOHA, which represents rights to data and governance.”

⁸² Toha Network. (2024, June 21). <https://substack.toha.network/p/introducing-mahi>

⁸³ Ibid.



Through the design of this swap, the Toha system has in-built incentives for early action which reflect the urgency of the challenge on climate change and biodiversity loss.

The swap occurs using a fixed exchange rate which accords greater value to early action than the same action in the future.”

This dual-token system enables participants to pay for, and be paid for, impact data which in turn unlocks new sources of funding for the impact that data represents. Critically, it significantly reduces the transaction costs of funding frontline action, which makes it easier to convert will into action. None of this would be possible, without the data system to support it.

The data sharing network

The value of data is realised through use and re-use by being shared, analysed, converted, interpreted, and incorporated into decision making, especially climate and nature data. Sharing builds collective insight, but open data carries risks, including privacy concerns; appropriation and exploitation of data by intermediaries or third parties. These risks can harm people, and trigger a backlash against openness, undermining data’s potential to deliver public value.

Data sovereignty is a foundational principle of the Toha system

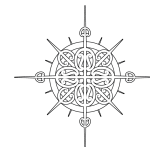
It ensures that individuals, groups, and states retain control over data that pertains to them—particularly data about their relationships, environments, and activities. This principle is especially important for Indigenous communities and others whose sovereignty has been historically undermined, as well as for those exposed to disproportionate risks in global systems, such as farmers and rural landowners.

The Toha Network, as an Indigenous-led organisation, prioritises Indigenous Data Sovereignty (IDSov) at the core of its system design. Since 2018, this commitment has influenced all aspects of its development, especially within nature markets, by recognising the unique bonds Indigenous peoples have with their environments and ensuring data rights are strengthened. IDSov is based on international legal frameworks, notably the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), which upholds self-determination and the need for free, prior, and informed consent. Indigenous communities have also played a key role in establishing data sovereignty standards, such as the CARE Principles.⁸⁴

Toha affirms the unique relationship Indigenous peoples have with specific ecosystems and places and asserts that Indigenous Data Sovereignty (IDSov) must be strengthened — not compromised — through the exchange of nature-related data.

The tokenisation of data – that is, the process of substituting data into digital assets with unique identifiers – can enhance data sovereignty. Those who create the data control how their data is

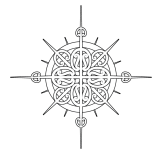
⁸⁴ Carroll, S., Garba, I., Figueroa-Rodríguez, O., Holbrook, J., Lovett, R., Materechera, S., Parsons, M., Raseroka, K., Rodríguez-Lonebear, D., Rowe, R., Sara, R., Walker, J., Anderson, J., and Hudson, M. (2020). ‘The CARE Principles for Indigenous Data Governance.’ In *Data Science Journal*, 19(XX), 1-12.



used, even as it circulates. Toha will offer cryptographic protection,⁸⁵ and enable consent-based participation in the data economy. Toha sees data sovereignty as a baseline for any market-based system that rewards environmental stewardship.

By bringing MAHI and TOHA together in a token economy, Toha is designing a more balanced distributive model between the providers of capital and the providers of labour. [For further information see: <https://substack.toha.network/p/introducing-mahi>]

⁸⁵ Cryptographic protection refers to the use of encryption techniques to safeguard data during communication or storage, preventing unauthorized access or theft by hackers. It involves the secure generation, management, and use of keys to ensure the confidentiality and integrity of the information being protected. See website: <https://www.sciencedirect.com/topics/computer-science/cryptographic-protection>



“Business has to operate at a higher purpose than making money”

Excerpts from interview with Nathalie Whitaker, co-founder of Toha Network and founder of Givealittle, 30 April 2025

What led to the development of the Toha Network?

“When I was at school, I worked in my uncle’s employment agency, where people with difficult lives got help to return to work after injury, sickness or some sort of life event or transition. It was really challenging work, like helping Māori men transition from prison back into work. In that environment, our business wasn’t something separate from our community, it was a way of restoring dignity, connection, and purpose to the people who needed a hand up, not a hand out. I only realised later that this way of seeing business as a perfect vehicle for community building was considered unconventional in the mainstream economy.”

Nathalie’s early experience revealed a fundamental truth: **people are not asking for charity; they are asking for systems that trust them to act in their own best interests.** She saw first-hand how institutional processes were often designed around risk avoidance rather than unlocking human potential, preventing people from moving forward even when the pathway was clear and affordable.

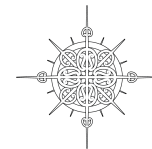
“I saw that the system didn’t trust decision-makers on behalf of communities, whānau, or individuals. There was no mechanism to recognise goodwill, reciprocity, or future value. The tools existed but the trust to self-determine investment didn’t.”

This insight became concrete through a real example. ACC had invested heavily in a man’s rehabilitation after a severe accident but refused a small request to adapt his vehicle so he could begin earning an income again. The financial case was strong, yet the system couldn’t move because it didn’t recognise trust or future potential as valid inputs to decision-making.

“...so, I wondered if we could simply ask the people who believed in him—his future customers within the community—to prepay a month of services in advance. They’d all said yes, and the issue of value exchange was just about timing. That act of trust —prepaying someone you trust —unlocked what the formal system could not. That’s where Givealittle came from.”

Givealittle

After researching international models of digital giving, Nathalie created Givealittle to make generosity visible and accountable. The platform helped fundraisers set targets, delayed the



release of funds, required public identity, and allowed contributors to see who else was giving before their donations were disbursed. These marketplace features were not designed as compliance tools, but as trust tools, recognising that when relationships are transparent, risk is managed by the community itself.

“In a small market like New Zealand, when people place their name and reputation alongside their transaction, they are signalling trust and accountability. Fraud rarely occurs when identity is visible, because transparency leverages personal reputation, invites reciprocity and self-regulation.”

A critical realisation

While Givealittle proved that transparency builds trust, it also revealed a deeper systemic pattern: those who benefitted most were already connected in social networks with wealth and influence. The platform made generosity easier, but it did not change who had access to opportunity. It exposed the inequality embedded in the market—and showed that transparency alone is not enough to shift resources toward those without existing capital bases.

From giving to investing: the emergence of a new marketplace

Givealittle taught Nat that people are willing to fund each other when they can see the impact of their contribution and trust the process. But it also revealed that donations alone could not shift long-term outcomes for communities facing systemic barriers. What was needed was not just generosity but a new market infrastructure that could recognise and invest in the future value created by communities themselves.

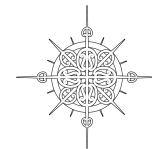
“Givealittle showed us that trust is a form of capital. The next step was to build a system where that trust could be translated into real investment for long-term outcomes.”

Rather than creating another charity platform, Toha was designed as **an investment marketplace** — one where people could pre-purchase verified future impact, not just give to immediate needs. To realise this, they needed to ground the marketplace in a real community, responding to real conditions, where the limitations of the existing financial system were most visible.

Moving to Gisborne grounded Toha in community reality

In 2018, Nathalie moved with her family to Gisborne to begin building Toha from the ground up. It was clear that the region was going to bring more than enough design inspiration. Tairāwhiti experiences both the consequences of environmental disruption and social inequality yet the strength of collective leadership. It provided the perfect conditions to design a system that values what sits at the heart of communities — trust, reciprocity, and contribution as the basis for capital formation.

Nathalie began deep research and relationship-building, learning about land-use systems, primary industry dynamics, Māori land ownership structures, emissions markets, banking and



insurance barriers, and the disconnect between local knowledge and national capital flows. The goal was not to build technology in isolation, but to embed it in a living community context, so that the design would reflect the realities of those closest to land, water, and climate impacts.

Cyclone Gabrielle: the moment theory became practice

When Cyclone Gabrielle hit it was the sixth major weather event since Toha's arrival in the region. It was already clear that the existing system would not respond at the speed or scale required. Funding from Cyclone Hale was already delayed, official channels were overwhelmed, leadership were tired and yet communities mobilised instantly, giving their time, equipment, and resources to protect each other.

“The very night Gabrielle hit, we wrote the rules of engagement for what became the East Coast Exchange — because the system we had been designing had just become urgently necessary.”

The East Coast Exchange (ECX) was activated as a live demonstration of Toha's model: a marketplace that records and verifies community contribution in real time, so that funding can follow action, rather than precede it. It transformed generosity into investable impact — proving the concept that began with Givealittle had evolved into Toha.

Toha's response: creating a system that recognises contribution as capital

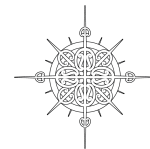
In moments of crisis, communities do not wait for funding before they respond immediately, drawing on relationships, local knowledge, and collective responsibility. What Nat knew from Givealittle but learned first-hand through Cyclone Gabrielle is that while money is often the last thing to arrive, but value is generated from the very first act of contribution.

This is manageable if the event is a one-off disaster, but what Tairāwhiti was experiencing was a series of extreme weather events that were drawing down on the goodwill and resilience of the community. With each event it was clear that the market, however, does not recognise value of the community capacity until capital moves. This is a fundamental distortion.

The purpose of Toha is to correct that distortion.

“When people step forward to protect their land, their neighbours, or their community, that action creates value. If we can record that contribution in real time, it becomes visible, verifiable, and investable. This is not charity—it is capital formation.”

Traditional markets only recognise value once a financial payment is made. But in a climate and nature economy, value is often created *before* financial transactions occur—through labour, stewardship, local knowledge, restoration, and reciprocity. Toha was designed to capture that emerging value at the point of action and turn it into a digital asset that can be funded, traded, or held for future benefit.



“We are not asking people to donate. We are designing a system where contribution generates rights—rights to capital, rights to future benefit, and rights to participate in the governance of the data that proves impact.”

For Nathalie, recording contributions is not just about fairness; it is about building the next generation of investment infrastructure. When contribution is recorded with evidence, it is transformed from goodwill into proof—proof that capital markets can respond to. This is the foundation of the East Coast Exchange, and of Toha’s dual-token system. It is the shift from generosity as a one-off act to contribution as an investable asset class.

Toha is building a system where Māori can participate in all the capitals

“Toha is building a system where Māori can participate across all forms of capital – environmental, cultural, social, economic, natural, land access and knowledge.”

There are opportunities for Māori to secure capital not only as recipients, but as recognised contributors of value. By recording and verifying contribution, Toha enables Māori to build resilient and risk-adjusted capital grounded in whakapapa and collective purpose.

“Time – the most sacred and overlooked asset in the current system – becomes investable when contribution is made visible.”

Toha reflects a te ao Māori view of transactions not currently recognised in markets

“Although the data technology already exists, its application so far has been shaped by Western financial logic. Toha applies it differently. By embedding Indigenous values such as reciprocity and collective stewardship, Toha activates an economy based on trust and contribution rather than extraction. This enables markets to recognise goodness – not as a social value – but as a source of measurable, investable impact.”

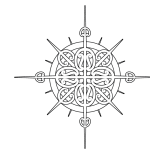
Tikanga, kotahitanga and the natural system are the essence of kaitiakitanga

“We can’t reduce our systems to what works financially. If tikanga and relationships remain intact – in their authenticity and complexity – then we know we have upheld kaitiakitanga. Concepts like utu, whakapapa and whanaungatanga ensure benefits flow in the right direction.”

Global nature markets increasingly demand integrity and Indigenous alignment. These values are not an add-on; they are essential for markets to deliver real environmental outcomes. Te ao Māori provides the system logic that global markets are now seeking.

Collective decision-making will need to evolve as part of the system

To embed new forms of governance, real-world businesses must continue to be held to account. Innovation cannot be separated from the entities responsible for real outcomes; this requires different institutional arrangements that reflect collective authority and responsibility.



Market regulation must provide for collective decision-making

Financial innovations designed for collective benefit require a regulatory approach that recognises shared motivation, long-term risk, and public good outcomes not only private interests. Regulation must therefore be responsive to collective structures, particularly those that underpin Māori participation in markets.

The value and process of consensus is not recognised

For example, when Te Kautuku seeks to register land in the Emissions Trading Scheme, all trustees must be involved in a lengthy process. This burden arises not from inefficiency, but from a governance model based on collective mandate.

“If the ECX had an agreement with the Trust and trustees for wider purposes, then the trust’s collective nature would no longer block access to value—the ECX could act on their behalf.”

This highlights the importance of intermediaries. When financial innovation emerges from collective ownership, intermediaries should be empowered to meet regulatory requirements without shifting the governance burden away from the collective or eroding its authority.

“If being more holistic and collective is treated as more risky, then we must design systems that can connect collective governance, regulatory expectations, and market recognition. This is ‘third space’ thinking.”

The ‘third space’ platform is community

A permanent platform is required for communities to organise under new market rules. Designing for a new form of community exchange means creating rules that enable new forms of value to be recognised. Roles such as the community navigator ground decision-making close to the land, ensuring representation is connected, accountable, and place-based.

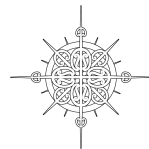
In Toha, participation is tied to place. Each place is represented by a trusted identity, endorsed by their community, ensuring that navigation of the system is legitimate and accountable.

Data-sharing is essential for fair markets

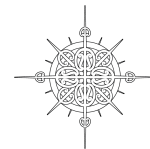
A third space platform enables fair interaction between communities, government, and capital by ensuring transparent data flows. Unfairness occurs when one party lacks access to information. Transparent data-sharing supports collective benefit and enables accurate compensation. For example, in silt removal or environmental reporting.

Traditional knowledge must be made visible to the market

Māori-led financial innovation requires governance structures and digital processes that recognise collective participation. Establishing data standards that reflect Māori concepts of collectivisation supports fair engagement in financial markets.



“For example, the FMA could support a data standard that recognises Māori collectivisation—defining how collective participation is recorded and reported—so that Māori contribution is visible and valued in the market.”



“Building a system for frontline action requires connection to that action”

Excerpts of interview with Renee Raroa, Establishment Director, East Coast Exchange (ECX) 28 April 2025

In the wake of Cyclone Gabrielle’s impact on Tairāwhiti, the team activated the initial stages of the East Coast Exchange (ECX) – a locally led interface linking Toha’s digital infrastructure with the immediate activities of the community response. Building a system for frontline action requires connection to that action. Being based in Tairāwhiti means the team is face-to-face each day with the realities of extreme weather, land-use decisions, and the impacts of climate change on whenua and communities.

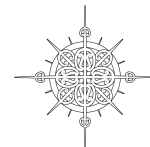
The ECX applies Toha’s digital public infrastructure in practice, enabling communities to track and verify disaster-response, recovery, and regeneration mahi. If requested, verified records can be connected to relevant funding pools. The system documents hours worked, and expenses incurred as part of an open public record, building relational transparency and trust.

For several days following the disaster, there was no internet, cell coverage, or power to support digital tracking of activities, so the ECX turned to clipboards, notebooks, and photo-taking. The team documented food distribution, clean-up efforts, and resource sharing as community members rallied together to support one another. Once connectivity was restored, these logs were digitised to provide public visibility of each line of activity.

The mahi that sustains communities during disasters often goes unrewarded. Traditional funding rounds are slow, complex, and often exclude work already completed. ECX reverses this pattern by enabling communities to record and verify their contributions as they happen, building trust through public visibility and allowing funders to recognise and support real-time action on the ground.

Recording work through ECX allows contributors to track and verify their efforts, with options to receive payment, donate their contribution, or earn points. The process uses the living wage as a guideline and simple online forms that include verification evidence, such as photos, receipts, or the contact details of a person who can confirm the activity. The data captured during Cyclone Gabrielle’s response and recovery period reflects the immense generosity of communities. Most users choose to donate or earn points, while some request that funds be redirected to others ahead of them or ask to transfer their earned points to those they know have a need for extra support at that time. ECX is built to respond to such requests, grounded in the values and priorities of the community it serves.

Participants submit details of their contributions through simple online forms, including information such as location, tasks, hours, and photographs or other evidence of the work completed or costs incurred. Participants self-select their hourly rate, with the living wage



offered as a guideline. Contribution records are checked against standard ranges, and any discrepancies are addressed directly with the claimant to maintain accuracy and fairness. Once validated and verified, records seeking funding become eligible to receive full or part payment. These contributions are then matched to available funding pools, and funds are distributed to aligned records in chronological order.

Fig. 1: ECX website: publicly available emergency response contribution record

Select a category

Select an action type **Or search for a contributor**

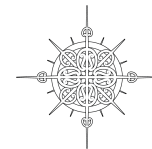
2,584,199 total action value recorded Data reuse ⓘ

Created	Type	Name	Date	Points	Funding status	Verified
02/11/2023	Manual Labour	Broadlands Contracting	12/02/2023	4,650	\$ Seeking funding	Verified
19/05/2023	Supplied Emergency Food	Enable Grow	12/02/2023	920	\$ Donated to the community	Pending
27/05/2023	Processed Emergency Supplies	Reagan Mitchell	12/02/2023	2,016	⊙ Funded via emergency response pool	Verified
09/06/2023	Manual Labour	Te Atarau Te Eke-Houia	12/02/2023	1,400	⊙ Funded via emergency response pool	Verified
18/10/2023	Emergency management & communication	Tokomaru Community Response	13/02/2023	18,000	\$ Donated to the community	Pending
18/10/2023	Emergency management & communication	Tokomaru Community Response	13/02/2023	10,800	\$ Donated to the community	Pending

(Screenshot provided by Renee Raroa)

ECX is designed in response to the needs of its community, with the flexibility to make real-time improvements as needs emerge. At first, some participants were hesitant to record their time or claim payment for mahi they considered part of being a good community member. In response, ECX introduced functionality that allowed contributors to donate their points rather than seek funding. These contributions aren't funded but are added to an aggregated picture of community action, strengthening the collective funding pull. In response to requests by Te Rūnanganui o Ngāti Porou, one of the platform's largest users, mechanisms were established to support collective data entry by communities and organisations rather than individuals.

“Our community members expressed a distrust in sharing their identities and information with agents of the Crown. The independent, homegrown identity of ECX has been crucial in enabling users to feel confident in using the platform. The long-term vision is for ECX to become a user-owned cooperative, governed by representatives of the community” (Renee Raroa).



Visual tools, including maps showing the placement of activities across the region, are overlaid with relevant datasets to bring further validity to the contribution records.

“Having a map overlay of all the different things going on was really helpful. People could zoom into their part of the region and see what was being reported in real time. Seeing these mapped in place creates a different type of connection to the data points” (Renee Raroa).

As the region moved out of response and recovery mode, the ECX expanded to include climate action data.

“Climate action is similar to disaster response — it’s just a slower burn, requiring activities across a longer timeline such as regeneration work. The same system we used for recording response and recovery efforts after Cyclone Gabrielle is now being used to support mitigation and adaptation” (Renee Raroa).

Data verifying climate action and outcomes can also be packaged as Toha Claims, attracting a range of potential buyers — from philanthropists wanting to enable trusted climate-positive initiatives to distributors seeking evidence of nature-positive supply chains.

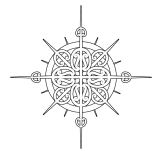
“Claims create value from data, becoming assets that can be borrowed against. This is especially significant for whenua Māori, which is passed on’ rather than sold, so holds no equity to enable financing in the way privately owned land can” (Renee Raroa).

The Outrage to Optimism: Ministerial Inquiry into Land Use Causing Woody Debris and Sediment-Related Damage in Tairāwhiti and Wairoa report endorsed ECX and Toha as a model for government co-investment in biodiversity. These findings facilitated initial funding from Te Puni Kōkiri alongside Air New Zealand for ECX’s first pilot site — the Māori land block of Te Kautuku in Rangitukia. The pilot marks a shift for this whenua from farming to an interwoven landscape of diversified land use. Pilot projects support threatened-species recovery and protection, waterway restoration, native forest regeneration, and cultural reconnection.

“The first hurdle was to make the idea of receiving funds in exchange for the supply of activity data real — for people to see it happening. It can be a difficult concept to grasp when it’s theoretical, but once you see it in action, especially by people you know, it speaks for itself” (Renee Raroa).

Toha Claims being tested at Te Kautuku combine place-based knowledge, mātauranga Māori, scientific approaches, and spatial monitoring technologies. New revenue streams through verified data mean the Te Kautuku Trust is no longer dependent on extractive land-use practices.

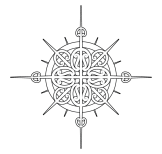
Funders can invest in frontline costs and purchase proof of environmental outcomes for climate reporting, moving beyond reliance on carbon-only mechanisms such as the Emissions Trading Scheme (ETS). The Toha system recognises Indigenous data-sovereignty principles, enabling the use of verified outcomes to attract investors while ensuring data ownership remains with its



originators. This approach strengthens community autonomy and protects mātauranga, ensuring that funders can support initiatives without interfering in local operations or traditional practices.

To attract investment in activities on collectively owned land, financing must move beyond land-equity-based models to new frameworks such as the Toha system, which treats data as an asset. Independent and autonomous data management builds trust and security, while Toha's token-based infrastructure streamlines investment for more inclusive collective-land financing.

A regulatory and policy framework is proposed to facilitate co-investment, enabling government funding sources to offset risk for corporate investors by providing upfront financing that is later repaid. This approach acknowledges both the land and the value contained within associated data layers. As trust in the system grows over time, investment risk will reduce.



“ECX will never exploit data, but funding is harder to find when you refuse to exploit data”

Excerpts from interview with Ralph Chivers, Chair, East Coast Exchange, 28 April 2025

The East Coast Exchange is a regional environmental platform powered by Toha. It operates as a community-led mechanism for valuing and verifying nature-positive actions, using a data-driven approach to quantify ecological outcomes and ensure transparent reporting to funders and stakeholders.

A change in government and instability in the carbon industry created uncertainty, which was further amplified by the effects of Cyclone Gabrielle. While carbon market losses - which originated in Gisborne - aren't new, they highlight the resilience and value of Toha's approach which is focussed on proof of outcome.

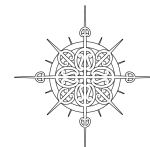
Attracting funding for environmental action hinges on demonstrating the value of outcomes through robust data.

“Verifiable evidence not only validates success but also unlocks further investment in diverse regeneration and carbon reduction initiatives across the region. By contrast, the traditional donation model — “give me money and I promise I’ll plant trees” — lacks verification of environmental outcomes and risks cases of fraud.”

Unlike the traditional models that lack outcome verification, Toha's model ensures environmental work is tracked and validated, reducing the risk of fraud. The ambition is to create a market for biodiversity credits—similar to carbon—but focused on ecological outcomes. A key challenge lies in defining what to measure and how to provide credible proof of impact. Much of the current effort is still driven by belief and vision. While the concept of a biodiversity market is promising, the real test is designing it to work equitably for all participants and to incentivise uptake—especially in a space marked by past failures.

“For long-term viability, the ECX needs to earn over \$500k per annum from a range of sources. If we charged a 5% commission on transactions, we facilitate that means we need approximately \$10 million worth of nature transactions per year to be self-sustaining. Until we reach that scale, we need funding from equity investors and other sources.”

ECX needs scalable, locally grounded digital infrastructure that serves nature, not just facilitating transactions. A locally stored, decentralised data system linked to larger networks can empower local decisions and connect investors to frontline efforts. However, network effects only emerge at scale. Venture capital seeks quick returns, and public funding is limited. ECX must attract financially capable participants and expand large projects, especially in sectors like beef and lamb.



In the short term, the model must demonstrate enough value to justify transaction fees and make participation worthwhile for all involved. Network effects need a critical mass of people and funding. A national infrastructure is essential to support widespread adoption, but network effects will only become visible once the system reaches sufficient scale.

Stacking Proof to Unlock Value

“There is a core opportunity in delivering and verifying environmental outcomes. ECX’s opportunity lies in verifying environmental outcomes, by linking actions to multiple individually valuable benefits—like carbon sequestration, biodiversity gains, wildlife restoration, and improved water quality —each claimable as an investable asset.”

“This concept, known as “stacking,” allows each benefit to be claimed and verified separately, turning proof into an investable asset. For example, wetland restoration can generate carbon credits while also enhancing biodiversity and water health. These benefits arise from common actions, but the outcomes may be of interest to different investors.”

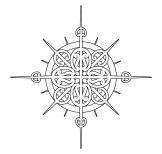
While the value of these outcomes is clear, scale is critical. A high volume of verified activity is needed to ensure the system delivers value to all participants—communities, investors, and partners alike. Strong local engagement is essential, but it must also translate into economic viability. Like any early venture, ECX needs baseline funding and transaction flow to become stable and profitable.

Without ECX, many would be left to navigate this space alone. Its infrastructure and approach offer a shared pathway forward, but national-scale systems are needed to support widespread adoption and long-term success.

Infrastructure and data

A key focus is on building digital infrastructure and data systems locally, with the intent that they can be scaled nationally and internationally. Central to this is **data sovereignty**, which ensures that control, access, and use of data remain local. It’s about protecting taonga, maintaining oversight, and preventing exploitation, while enabling a system that supports communities and ecosystems. For the ECX, Data Sovereignty is about ensuring local oversight and control of the use of data to protect taonga and prevent exploitation.

ECX will **never** exploit data, but funding is harder to find when you refuse to exploit data. There is a demand for local storage – decentralised data - held locally in local data centres. A local data centre, connected with others, recognises the demand for data to be stored locally in a rohe; builds a system that serves everyone: connecting investors and the frontline while facilitating a cooperative / community approach.



Environmental issues facing Gisborne and East Coast

Regeneration of 3B land (moderate quality agricultural land, with 3A being higher grade) is underway, including significant restoration following Cyclone Gabrielle. Currently, ECX is focused on recovery, but there's a need for larger, self-sustaining projects like Te Kautuku to help with economic recovery of the region including tourism—a key potential funding source. Gisborne needs long-term environmental initiatives, and platforms like Toha offer opportunities to attract funding and demonstrate impact at scale. While there is strong local support and community engagement, this hasn't yet translated into economic outcomes. A baseline of funding is needed to turn these projects into profitable, stable assets that can grow as regenerative businesses.

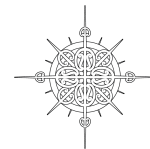
Support is needed for regulatory requirements

“Regulatory concerns are challenging, though legal advice has eased some worries. As an environmental fintech, we don't fit neatly into existing regulations and need a permissive approach for development. ECX's unique position requires its own market space and regulatory framework. Collaborative guidelines that foster cooperation among former competitors are beneficial, as are clear guardrails. Managing regulations collectively, including AML, is essential, otherwise the overhead exceeds any value.”

The sandbox model is a valuable innovation—offering transparency and guidance without excessive compliance, which is crucial when testing new ideas. FMA's support for innovation, including the AML low-value exemption, has made an enormous difference:

“After Cyclone Gabrielle, for every amount received and paid out, people had to do AML's. We thought it was ridiculous in the circumstances to have to AML schools and marae that were actually at the heart of some of the most valuable response and recovery activity.”

This level of regulatory overhead is ridiculous, especially in a disaster context; there is a need for a more flexible, supportive regulatory approach. Excessive compliance can stifle innovation, especially when AML requirements outweigh their value.



“The challenge is attracting investment that supports local prosperity without being extractive”

Excerpts from interview with Dr David Hall, Policy Director Toha Network, 8 May 2025

“When people feel empowered, they are capable of miracles and that’s certainly what we need in terms of addressing challenges like climate change and biodiversity loss. We need to unlock that power, that social power.”

David Hall joined Toha two months before Cyclone Gabrielle hit. There was a big communication gap -they could not connect with people for a whole week. Nat, Renee and the Tairāwhiti team completed the first transaction under ECX, relocated oranges from a cool store that had no way to transport oranges to markets out of region, to those who needed it on the streets. Built the foundation for the ECX.

A lack of digital infrastructure is a global challenge, especially in countries that do not have any traditional infrastructure for things like verification of personal identity, or financial exchange. David Hall identified India as a leading example, with its Aadhar system⁸⁶ enabling digital identity and widespread use of digital payments. Digital infrastructure also opens opportunities for New Zealand, where, regions have different levels of access and engagement with traditional institutions, there is distrust in the existing system. Opportunities exist to create new and trusted forms of regional governance, and new forms of financial exchange.

Toha enabled faster and more direct support, distributing \$300,000 in grants to farmers and volunteers via the ECX platform, bypassing intermediaries. Ngāti Porou became the first investor by purchasing MAHI tokens, which gave them governance rights over data management and platform strategy.

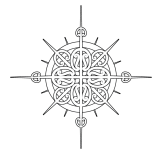
Toha Network is comprised of three entities:

Toha Network Trust (TNT) is governing for integrity of the network; and is the guardian of the network, it ensures data is managed with responsibility, and that responsibility needs to be delegated to a Trust, so commercial imperatives do not drive the strategy.

Toha Network Ltd (TNL) is a limited liability entity owned by the Trust. It facilitates market operations and relationships with members, delivering on questions around strategy, in time the company will be responsible for voting. Has oversight of all tokens.

Toha foundry – marketplace operator, contracted by TNL to build technology stack. This structure of innovation ecosystem follows from IDSov CARE principles. *[Collective Benefit, Authority to Control, Responsibility, and Ethics]* (RDA IG 2019)]. The long-term plan is for a

⁸⁶ See website: <https://medium.com/career-drill/aadhar-system-design-39b1425a0983>



decentralised platform. Right now, governance is with Toha Network. But one day, this should be decentralised.

Participation is reliant on participants having trust in the system, which is ensured with appropriate governance. For example, ECX holds sensitive personal data, disaster-specific data such as washed-out fences, spatially located data, and other sensitivities.

The ECX started off with channelling a lot of grant-based funding

Not so much the investment-oriented funding which Toha had been set up to facilitate. However, once the initial phase passed then that was when we piloted MAHI that got us closer to where Toha wanted to go. Prior to that we had distributed \$300k of grant-based funding over weeks and months, direct funding into the bank accounts of those in need such as farmers and voluntary workers, without intermediation.

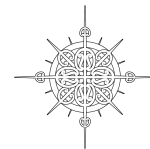
The Red Cross and similar organisations cannot pay people directly. They must send the money to community organisations who then make decisions about how the funding is spent. Toha's approach ensured immediate financial support to the recipients. People most in need often don't benefit much from funds raised later. Although significant donations were made for those affected by the Auckland Anniversary floods and the cyclone, this money doesn't always reach them directly.

This was a key focus of COP 16 (the 16th meeting of the Conference of the Parties (COP16) to the Convention on Biological Diversity (CBD):

"We were at the UN Biodiversity Conference last year in Columbia, COP 16, and on our first day, there was a full day dialogue set up by the UN Environment Programme Initiative ...between Indigenous peoples, local community representatives, Afro-descendant people, and the finance sector, talking through that interface between those groups and the global finance sector. One of the strongest themes by far coming through from the Indigenous peoples and local communities was again, that problem of intermediation – that there were all these entities between themselves and the funders through which the money was flowing and therefore the money wasn't necessarily hitting the ground...and often had all sorts of conditionalities attached to it."

There's a desire to support more investment-focused funding, as the common experience is the money raised doesn't always get directly to the ground.

Toha aims to circumvent traditional bottlenecks to ensure resources reach communities directly and efficiently. For Toha it's about having a clear Kaupapa to provide maximum benefit for the people who need support most, whereas much of that benefit as possible flows through to them.



In an interview with Impact Investing Network, David Hall spoke of the ethics that underpins Toha:

“The spirit of reciprocity that underpins the Toha economy... is designed to reallocate value fairly in the system, in proportion to the risk that participants carry. It is frontline communities – farmers, Indigenous peoples, local communities – who are most exposed to climate vulnerability and ecological breakdown. So, their work to strengthen landscape resilience must be properly resourced, not only for their own benefit, but also the benefit of regional and national economies.”⁸⁷

What are the opportunities for Gisborne?

The key opportunity is to attract climate-aligned, nature-positive investment to support regenerative land use in regions like Gisborne, where extractive industries have caused harm. The aim is to transition to sustainable models that benefit both communities and markets.

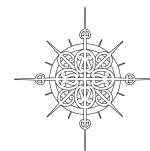
The main challenge for regions like Gisborne, as well as globally, is whether we can unlock investments that are not extractive; and are genuinely about local prosperity and production of value that can benefit the region. The region’s reliance on the primary sector is expected to continue, so it is important for these industries to internalize their environmental costs and adopt regenerative and proactive approaches and not shift this on to others. This includes mitigating climate risks and restoring habitats when feasible, aligning with the vision outlined in the MILU report.

There are genuine concerns that some of the Forestry Council hold, as to whether alternative land-use systems can be economically viable. While that is the aspiration, there is genuine uncertainty about whether alternate land use is sustainable; whether we can strike the right balance. Maybe that’s a shortcoming of the global financial markets as they exist today, in that they don’t enable those sorts of business models to take root. However, we have not yet tried those other business models to know whether they are viable or not, as we have no empirical experience.

For example, continuous cover forestry – in theory it can be a profitable forestry management system. Everyone agrees it addresses a lot of those externalities for the environmental and social risks that are associated with clear fell harvesting - and maybe they are financially viable. It’s just about those investors and forestry companies taking less profit than they have, and more about **relative profit**, rather than a choice between profitable and unprofitable.

Government intervention is crucial for enabling land-use change, particularly through targeted subsidies and payments for biodiversity and climate adaptation. These measures help fund initiatives such as erosion control, which support nature-positive practices and provide public benefits like cleaner water and reduced flood risk. Historically, projects like the East Coast

⁸⁷ Hall, D. (2025, February 26). Impact Investing Network Deep Dive – Toha (Interview with David Hall). *Impact Investing Network Aotearoa New Zealand*.



Forestry Project offered subsidies for land stabilisation, resulting mainly in pine plantations that now pose liabilities, highlighting market shortcomings that policy must address. For example, government could provide a small subsidy to the private sector, to support biodiversity payments and erosion control funding, ensuring more sustainable outcomes than past efforts.

What are the Emissions Trading Scheme (ETS) impacts for forests on Māori land?

Pre-1990 exotic forests—often returned to Māori through settlements—were automatically included in the Emissions Trading Scheme (ETS). Deforestation of these forests becomes very costly due to carbon liabilities ((which has ranged between \$45–\$85 per unit over the last few years). These restrictions can make land-use change prohibitively expensive and are viewed by many Māori landowners as discriminatory, especially compared to non-Māori farmers who have long benefited from uninterrupted land ownership and agricultural development.

Toha could play a role in enhancing the ETS by supporting native forests, which currently receive limited incentives despite their ecological value. Exotic forests on erosion-prone land are becoming unsafe to harvest, making the transition to native forests appealing but costly. If biodiversity payments were introduced, Toha could help unlock them by collecting impact data. Additional revenue streams—like erosion control, flood mitigation, and forest-based food—could build a more resilient and diversified land economy.

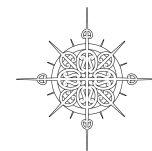
What are some of the challenges for modern financial and environmental regulation?

As financial and environmental markets evolve, regulators struggle to keep pace with new technologies. The Toha Network, a small start-up, faces early-stage challenges such as capacity and limited resources. This makes it difficult to clearly communicate their system and engage all necessary stakeholders, such as regulators, investors, and customers. Their emphasis on platform development can lead to low visibility and fewer collaboration opportunities.

Toha also requires rigorous market rules for its own marketplace. Just as regulators ensure market activities align with public interest, Toha must ensure its platform supports responsible practices. For example, if carbon offsetting proves harmful, Toha must be able to exclude such activities to protect its mission and maintain integrity.

How can Toha take a collective approach in an individual focused existing market?

Toha embraces collaborative funding and value-sharing grounded in Māori values. Rather than focusing solely on economic outcomes, it prioritises ethical governance and relationship-building through whanaungatanga. It supports flexible mechanisms for individuals to either receive payments directly or contribute to collectives like Marae. Toha's approach is guided by Māori Data Sovereignty and te Tiriti o Waitangi principles.



Review of research and selected literature

To understand the fundamental issues that Te Kautuku, Toha Network and ECX are grappling with, means firstly, understanding the fundamental differences between worldviews. This section presents an essential overview of the different worldviews; origins and development of the early Ōhanga Māori (Māori Economy); ongoing systemic socio-economic disparities, and existing barriers that exist uniquely for Māori within Aotearoa New Zealand's financial markets.

This context includes a lack of knowledge, evidence and understanding overall, about Māori in the financial markets, and the significance of te ao Māori in setting the values and principles of Te Ōhanga Māori. It concludes with the call by Māori nationally, recently reinforced at Te Koroneihana 2025, for Māori to pursue mana Motuhake in the Māori economy.

Understanding the fundamental differences between worldviews

In 2011, the Waitangi Tribunal released *Ko Aotearoa Tenei, A Report into Claims Concerning New Zealand Law and Policy Affecting Māori Culture and Identity*.

The report identified that in 1769, Tangata Whenua of the East Coast and Cook's people from the Endeavour met for the first time. The new arrivals brought science and technology and heralded from a country that had developed 'mass production of commodities for the first time in human history.' This meeting was of very different worldviews; with new settlers also bringing the written word; a different theology, and the legal concept of individual property rights and citizenship rights.⁸⁸

The Preface to the report by Presiding Officer Justice Joe Williams emphasised that, as the Treaty is fundamentally about relationships, they would begin with what they termed the stories of our two founding cultures: those of Kupe's people, and Cook's people, and that these two cultures brought their own laws – Kupe's law and Cook's law.⁸⁹

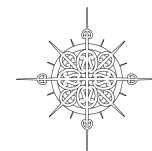
Justice Williams further elaborated on this theme in 2017, for his keynote address at the forum, *Te Ritorito 2017 – towards whānau, hapū and iwi wellbeing*. Williams spoke of 'Kupe's Law' as the prime law in Aotearoa NZ from around 1,000AD, until approximately 1812.⁹⁰ Kupe and his people brought with them systems of values and principles for the organisation and administration of kin communities; noting that the most important principle or law was 'the law of whanaungatanga, the centrality of kinship and careful attention to relationships above all else.'⁹¹

⁸⁸ Waitangi Tribunal. (2011) *Ko Aotearoa Tenei, A Report into Claims Concerning New Zealand Law and Policy Affecting Māori Culture and Identity*. (p.10)

⁸⁹ Ibid. (Preface).

⁹⁰ Justice Williams clarified that other tribal areas may well name a different founding tipuna

⁹¹ Address by Justice Joe Williams, 3 April 2017 Te Ritorito 2017: Towards whānau, hapū and iwi wellbeing, (transcribed notes).



“Whanaungatanga – centrality of kinship and careful attention to relationships

Mana – principles of leadership and individual dignity

Tapu – behavioural control and sacred/ profane divide

Utu – reciprocity obligation

Kaitiakitanga – obligation to care for one’s own.”⁹²

Further, that your rights depended on whakapapa – genealogical descent from the senior lines. Williams stated that in Māori society, senior lines include those from wāhine Māori, not only tāne Māori; and rights, obligations and social status were defined by ‘whanaungatanga relationships’. This included all rights to land, water, fisheries, mountains and rivers; as well as obligations to those around you; to those who had gone before, and to those yet born; even knowledge itself, was and is, explained by whakapapa.

“They had no idea about me owning that mountain, no idea about me owning that river - had a very good idea of the river owning me...A whole world, visible and invisible, was explained, rationalised, realised and rendered tangible by the law of whanaungatanga.”⁹³

This continued until approximately 1812, when the impacts of early settlers and their law, referred to as ‘Cook’s law’ began to emerge. Williams stated that the new law was fundamentally different, as “social and economic relationships were not defined by kinship...they were defined by contract, entered into (theoretically) by autonomous individuals,” and dispensed by a centralised system.⁹⁴ In this new system, relationships with the environment were not kinship relationships – instead:

“...they were defined by the concept of private property and ownership; reflecting John Locke’s philosophy that the government’s purpose is to safeguard the individual property rights of its citizens or subjects.”

“So, in understanding the clash between these two systems, you’ve got to get how fundamental that difference is – between a system whose impelling power is kinship, and a system whose impelling power - is property, augmented by the autonomous power to enter into contracts in respect of that property.”⁹⁵

Mana of the Haakari: tribal wealth and leadership in te ao Māori

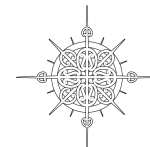
A living example of the ‘law of whanaungatanga and the practice of collective rights and obligations is the Haakari, (celebratory feast, banquet). This was of great interest to early

⁹² Ibid.

⁹³ Ibid.

⁹⁴ Ibid.

⁹⁵ Ibid.



European ethnographers, such as Elsdon Best,⁹⁶ James Cowan,⁹⁷ Robert Fitzroy, and Charles Buller⁹⁸ who all wrote extensively about the significance of tribal wealth as illustrated by displays of mana and manaakitanga to visitors. Of significant interest to these early writers, was how the entire community would all come together to prepare for the Haakari.

Inter-tribal Haakari were also a means of demonstrating to manuhiri that the hosts held mana over the rohe where the resources could be gathered; and, that they held sufficient mana to procure resources found outside of the tribal area, through inter-tribal trade or other means. Should the hosts not adequately provide for such an occasion, the slight to the mana of the manuhiri could lead to warfare.

Economist Raymond Firth (1973) also drew on records from the early to mid-1800s to provide a description of the 'economic effects of the Haakari'. Firth noted the Haakari given in Remuera in April 1844 "arranged by the Waikato tribe under Te Wherowhero and Te Wetere for the tribes to the south-east of them, apparently Ngāti Haua, in chief, by whom Waikato had been feasted the year before":⁹⁹

"Quantity: 11,000 baskets of potatoes; 100 large pigs; 9,000 sharks; liberal supplies flour, sugar, rice and tobacco.

Other details: about 4,000 visitors (Buller) approx. 3,420 (Fitzroy). Feast lasted nearly a week. Shed nearly 400 yards long, covered with Witney blankets and 1,000 more besides as presents. Residue of gift-food sold to Europeans."¹⁰⁰

The description of another Haakari of inter-tribal significance to honour the peace between Ngāti Haua and Ngāti Whakauae in Matamata, was documented as attended by approximately 3,700–4,000 people; and included half a million eels and 8,000 baskets of kumara.¹⁰¹

In 1949 Te Rangi Hiroa (Sir Peter Buck), one of the leaders of the Young Māori Party, parliamentarian and anthropologist, published *The Coming of the Māori*. The book was described as "the greatest authority on the Māori people and their history, traditions, customs, culture, social organisation and economic life."¹⁰² In this work, Te Rangi Hiroa described the significance of the Haakari as an illustration of tribal leadership, wealth and power, where the entire pā would be involved in its preparation. He noted:

"We have been accused of wastefulness in holding such gatherings in modern times, but our critics belong to a culture based on a money economy and they

⁹⁶ Best, E. (1941). *The Māori Volume Two*. Wellington Polynesian Society Inc.

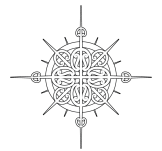
⁹⁷ Cowan, J. (1910). *The Māoris of New Zealand*.

⁹⁸ Firth, R. (1973). *Economics of the New Zealand Māori*. (pp. 326-327). Government Printer.

⁹⁹ Ibid.

¹⁰⁰ Ibid.

¹⁰¹ Ibid.



cannot realise that here are emotional values which the individualist cannot feel.”¹⁰³

The ‘Economy of Mana’

The late Māori anthropologist and economist, Professor Manuka Henare, wrote extensively about the significance of **mana**, ethics, and tikanga Māori principles within Māori leadership, economy, and te ao Māori, in his ground-breaking work on the ‘Economy of Mana’:

“Economic transformations were a significant part of the dynamic towards the articulation of nationhood. Māori accounts describe the living history of what I have coined an Economy of Mana, when economic sovereignty was measured by inclusive prosperity and well-being in a time of peace and harmony, he whenua Rangatira...”

“The Economy of Mana describes ‘a worldview and tribal modes of production that consider spiritual and human ancestors and descendants not yet born and prioritise holistic well-beings and value creation over profit maximisation.”¹⁰⁴

Professor Henare’s work is a significant contribution to the knowledge base for the Māori and New Zealand economy as a whole, underpinning much of the development of the concept of economy within te ao Māori as an integral part of holistic wellbeing. This approach challenged the ‘traditional profit-centric view’ as seen in *Relational Wellbeing and Wealth: Māori Businesses and an Ethic of Care*.¹⁰⁵

The research explored the concept of relational well-being, wealth, and the ethic of care for four Māori tourism businesses. It highlights how Māori values, such as kaitiakitanga (guardianship), aroha (care and empathy), and manaakitanga (care, respect), are integral to creating spiritual, cultural, social, environmental, and economic well-being; demonstrating how these businesses integrate traditional Māori values with modern business practices to create multi-dimensional wealth.

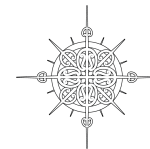
This approach challenges the conventional profit-centric view of business and demonstrates that prioritising people and the planet can lead to long-term sustainable success. The study highlights the importance of adopting a holistic, relational view of business that values the intrinsic worth of all stakeholders and the environment. As Henare notes:

“The resilience of Māori economic practices of inclusive prosperity, manifest as reciprocity and gift exchange during a period of sustained growth over the centuries, is not yet understood or appreciated. However, the Economy of Mana is

¹⁰³ Hiroa, T.R. (1977) *The coming of the Māori*. Wellington. Māori Purposes Fund Board. (p. 378). Whitcoulls Ltd

¹⁰⁴ Henare, M. (2011) He Whenua Rangatira A Mana Māori History of the Early–Mid Nineteenth Century. In *Research in Anthropology and Linguistics Electronic Series* – Number 8, 2021.

¹⁰⁵ Spiller, C., Erakovic, L., Henare, M., & Pio, E. (2011). Relational wellbeing and wealth: Māori businesses and an ethic of care. *Journal of Business Ethics*, 98(1), 153–169. <https://doi.org/10.1007/s10551-010-0540-z>



*evident in Māori conceptualisations of te rongo me te āta noho, the good life as prosperity in a time of lasting peace as described in the preamble of Te Tiriti o Waitangi.*¹⁰⁶

Emerging research on the Māori economy

In the early 2000s as New Zealand emerged from the economic recessions and restructurings of the 1980s and 1990s, the growth and resilience of the Māori economy was catching the attention of Māori and economic researchers alike.

In 2003, NZIER published *Māori Economic Development. Te Ōhanga Whanaketanga Māori*. The publication was a successful collaboration between Te Puni Kōkiri and the New Zealand Institute of Economic Research (NZIER).

In this first publication on the emerging Māori economy, the Māori economy is defined as:

*“The Māori economy, under the definition we use, includes all those businesses and transactions where ‘Māoriness’ matters. It includes the activities based on collectively owned Māori assets, the businesses of the self-employed who identify as Māori, commercial transactions involving Māori culture, services oriented to specific Māori needs, as well as the housing owned by Māori. The wages and salaries earned by Māori workers are also part of this definition.”*¹⁰⁷

The report found that in 2000 the Māori economy (as defined above) accounted for 2.5 percent of total exports, despite accounting for only 1.4 percent of value added).¹⁰⁸ The Māori economy had a higher savings rate than the overall New Zealand economy, and that ‘Māori are net lenders to the rest of New Zealand’ ie Māori remitted \$100 million more in tax, than they received in benefits. The report identified the fact that Māori incorporations retain a greater proportion of their earnings than general New Zealand businesses, may be due to a lack of access to finance and the ability to raise capital on multiple-owned land, which means they have to finance growth from their own savings.¹⁰⁹ The report identifies:

*“Overall, we believe the evidence does support the view that, from a Māori perspective, there are elements of market failure in the mainstream financial system.”*¹¹⁰

In 2007, the ongoing issue around access to capital in terms of Māori land was discussed by Māori Land Court Judge Stephanie Milroy:

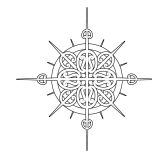
¹⁰⁶ Henare, M. (2011). He Whenua Rangatira A Mana Māori History of the Early–Mid Nineteenth Century. In *Research in Anthropology and Linguistics Electronic Series* – Number 8, 2021

¹⁰⁷ NZIER. (2003.) *Māori Economic Development Te Ōhanga Whanaketanga Māori*. (p 2). NZIER.

¹⁰⁸ Ibid. (p.15).

¹⁰⁹ Ibid. (pp. 11- 12).

¹¹⁰ Ibid. (p. 88).



“Judge Milroy wrote of the difficulties faced by owners of Māori land in accessing finance to develop their land blocks. With iwi beginning to receive settlements arising out of breaches of Te Tiriti o Waitangi, the time has come, her Honour said, for the establishment of a Māori bank to serve the needs of owners of Māori land, and Māoridom as a whole.”¹¹¹

In 2010, Te Puni Kōkiri collaborated with BERL, to publish *The Asset Base, Income, Expenditure, and GDP of the 2010 Māori Economy* for the Māori Economic Taskforce, established by Māori Affairs Minister, Hon Pita Sharples. The report highlighted a Māori asset base of \$36.9bn for the 2010 year. It included measurement and conceptual changes on earlier estimates, as well as growth of the Māori economy. The total from agriculture, forestry and fishing was \$10,579m.¹¹²

Te Puni Kōkiri further commissioned BERL to publish *Te Ōhanga Māori 2013: Māori economy report*. The Māori asset base had increased by “\$5.7 billion (or 15.4 percent in nominal terms) from \$36.9 billion in 2010 to \$42.6 billion in 2013, 6.1 percent of the total New Zealand asset base, with GDP from Māori economy producers totalled \$11 billion in 2013, representing 5.6 percent of overall GDP from New Zealand economy production.”¹¹³

Importantly, the report noted that while productivity of these assets was below average, “the nature of many of the land-based assets (restricted access, limited potential, and/or difficult management/ownership structures) tends to make this below-average outcome inevitable.”¹¹⁴

In 2018, the Reserve Bank of New Zealand released *Te Ōhanga Māori 2018: The Māori Economy 2018*. Key findings revealed that both the Māori population and workforce are expanding faster than the general population, positioning Māori to make up an increasing share of the future labour market. The value of the Māori economy’s asset base was \$68.7 billion; however, Māori businesses continue to face challenges in securing access to capital.¹¹⁵

The Māori population and Māori economy grow yet disparities persist

The 2023 *New Zealand Census of Population and Dwellings* revealed that one in five New Zealanders identified as being of Māori descent. The Māori population is growing at double the rate of the entire population; a 12.5 percent increase since 2018 compared with 6.3 percent for the general population. Further, 54.2 percent of the Māori population is under 30 years of age, with one in three Māori under 25 years of age.¹¹⁶

¹¹¹ Hitchcock, J. (2008). Ko Ngaa Take Ture Māori Financing Māori Land Development: The Difficulties Faced by Owners of Māori Land in Accessing Finance for Development and a Framework for the Solution. In *Auckland University law review*, 14, 217–243.

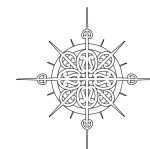
¹¹² BERL. (2011). *The Asset Base, Income, Expenditure and GDP of the 2010 Māori Economy*. Report for the Māori Economic Taskforce and Te Puni Kōkiri. (p.1).

¹¹³ BERL (2013). *Te Ōhanga Māori 2013*. Commissioned by Te Puni Kōkiri (p. 1).

¹¹⁴ Ibid. (p. 2).

¹¹⁵ RBNZ. (2018). *Te Ōhanga Māori 2018: The Māori Economy 2018*.

¹¹⁶ StatsNZ. (2025). *2023 Census population counts (by ethnic group, age, and Māori descent) and dwelling counts*.



Data from the 2021 Australian Census of Population and Housing identified a Māori population of 170,057 residing in Australia,¹¹⁷ this total is between one in five to one in six of the entire NZ Census 2023 Māori descent total. They are drawn for better opportunities and in some cases family reunification, which can have intergenerational impacts.

In 2024 *Te Ōhanga Māori 2023*¹¹⁸ reported that between 2018 and 2023 the Māori asset base¹¹⁹ grew significantly, increasing by 83 percent from \$69 billion to \$126 billion. This total includes \$66 billion in assets held by Māori businesses and employers, \$41 billion by Māori trusts, incorporations, and other collectives, and \$19 billion by self-employed Māori. Over the same period, Māori entrepreneurship also saw strong growth, with the number of self-employed Māori rising by 49 percent and the number of Māori employers increasing by 31 percent.

Furthermore, Ministry for Women¹²⁰ identified that wāhine Māori generated a \$5.9 billion value-add to all sectors of the economy in 2022:

- The largest value-add came from business services (\$1.9 billion) and social services (\$1.8 billion); with the value-add from the manufacturing (\$535 million), primary (\$246 million), and construction (\$198 million) sectors was relatively low.
- However, the value-add of unpaid work added an additional \$6.6 billion to the wāhine Māori economy taking the size of the wāhine Māori economy to \$12.5 billion, equalling 3.2 percent of national production GDP.
- The number of wāhine Māori employers and self-employed grew by 31 percent between 2013 and 2018 (non-Māori wāhine, by seven percent). Further, this report notes that the number of wāhine Māori entrepreneurs, business-leaders, and employees will continue to grow much faster than non-Māori wāhine.¹²¹

Also, in 2024 Statistics New Zealand released *Tatauranga Umanga Māori – Statistics on Māori Businesses*, which provided an update on the Māori economy. The report presented data on 'economically significant'¹²² Māori authorities and businesses, although not all entities were captured.

Among the 1,353 Māori authorities and 4,425 other Māori enterprises identified, Māori authorities employed around 12,700 people, while other Māori enterprises employed approximately 44,000.

¹¹⁷ Australian Bureau of Statistics: *The Australian Census of Population and Housing 2021*; <https://www.abs.gov.au/>

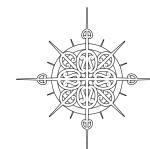
¹¹⁸ BERL. (2024). *Te Ōhanga Māori 2023*.

¹¹⁹ BERL sourced business entity counts (in line with Te Matapaeroa), as well as the workforce status of Māori individuals (sourced from Census 2023 and consistent with previous iterations of *Te Ōhanga Māori*).

¹²⁰ Ministry for Women (2024) *Te Ōhanga Wāhine, The Māori Women's Economy*.

¹²¹ Ibid.

¹²² Stats NZ. (2024). *Tatauranga Umanga Māori – Statistics on Māori Businesses*: 'economically significant' means meeting at least 1 of the following: greater than \$30,000 annual GST expenses or sales; a rolling mean employee (RME) greater than three; a GST-exempt industry, (except for residential property leasing and rental); part of a group of enterprises; new GST registration that is compulsory, special or forced (this means the business is expected to exceed the \$30,000 boundary); is registered for GST and is involved in agriculture or forestry; 'has IR10 income greater than \$40,000 annually.'



A significant portion—21 percent—of Māori authorities operated in primary industries, and 420 were involved in tourism. Māori authorities exported \$903 million in goods, with 27 percent going to China, while other Māori enterprises exported \$510 million.

Overall, the Māori authorities generated \$5.6 billion in total income, reflecting a 6.8 percent increase from the previous financial year.¹²³ Finally, the *Business Operations Survey 2021* identified that ‘over half of Māori authorities, compared with a third of all New Zealand businesses, took actions in response to climate change in the last two years.’¹²⁴ Further, two out of five Māori authorities reported they did so because they have experienced the physical impacts of climate change. With approximately a quarter of Māori authorities in the primary industries, they are vulnerable to climate-induced impacts. The survey identified that 54 percent undertook climate-change related actions; 30 percent reduced waste; 26 percent developed programmes to offset emissions; and 17 percent measured direct greenhouse gas emissions.¹²⁵

While the Māori economy is showing significant strengths, there are actions the Crown can take to support this growth. For example, a 2025 review by the Auditor General revealed that many public organisations are not adequately managing their Treaty commitments, which include around 12,000 obligations across 80 settlements involving 70 groups and \$2.738 billion in transferred assets. The review calls for a major shift in how these commitments are handled and stresses the importance of viewing Treaty settlements as the basis for long-term, meaningful relationships with iwi and hapū.¹²⁶

At the same time, entrenched disparities persist (measured over the 2024-25 financial year). Māori communities continue to experience higher rates of unemployment with Māori 9.6 percent,¹²⁷ non-Māori 5.2 percent;¹²⁸ youth disengagement (as measured by the NEET rate not in employment, education or training for youth aged 15-24 years old) Māori 19.2 percent,¹²⁹ non-Māori 12.6 percent.¹³⁰

In the *2023 Census of Population and Dwellings* 27.5 percent of Māori reported owning, or partly owning, their own homes (31.3 percent in 2013) compared 41.1 percent of all New Zealanders. Further, 67.7 percent of Māori neither owned nor held a home in a family trust, compared with 48.7 percent of all New Zealanders; with 4.8 percent of Māori (compared with 9.1 percent of all New Zealanders) held a home in a family trust.¹³¹ Finally, for the last 3 months of the June 2025

¹²³ Ibid.

¹²⁴ Stats NZ. (2022, March). *Business Operations Survey 2021*.

¹²⁵ Ibid.

¹²⁶ Office of Auditor General (2025, April 10). *How public organisations are fulfilling Treaty settlements*.

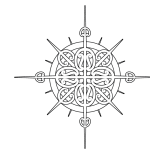
¹²⁷ MBIE. (2025). *Māori Labour Market Statistics Snapshot – Annual March 2025*.

¹²⁸ Stats NZ. (2025). *June quarter 2025*.

¹²⁹ MBIE. (2025). *Māori Labour Market Statistics Snapshot – Annual March 2025*

¹³⁰ Infometrics. (2025, June). *Quarterly Economic Monitor | New Zealand | Aotearoa | June 2025 | NEET rate*.

¹³¹ Te Whata. *New Census 2023 release*.



financial year, 39.3 percent of working age Māori were in receipt of some form of supported living payment, including benefits and young parent support (MSD).¹³²

In May 2024 the Productivity Commission released research on persistent disadvantage in Aotearoa,¹³³ providing detailed analyses of several population groups: sole parent households, public renters, households without high school qualifications, jobless households, Māori, Pacific and Asian households, multiple family households, and the Counties Manukau DHB region.¹³⁴

The report revealed that among Māori public renters (10.5 percent of the group), 61.9 percent experienced one domain of persistent disadvantage. For Māori jobless households (9.8 percent), 70.0 percent faced one domain. Of the Māori households without qualifications (12.6 percent), 71.9 percent experienced one domain. Finally, for Māori sole parent households (20.2 percent), 43.0 percent faced one domain of persistent disadvantage. The report also identified that Māori or Pacific people, sole parents, or disabled people were more likely to enter disadvantage and less likely to exit.

As Manuka Henare noted in 2012:

“Now to change that we’ve got nearly four generations of people all living in poverty. This makes it a systemic problem in my mind. So, it’s not a matter of a three-year intervention programme by any particular government. All that’s going to do is just take a little bit of pain away, the pain of poverty.”¹³⁵

Systemic inequities also exist in Māori access to financial services

Māori have less confidence in financial markets

The FMA’s 2024 *Consumer Confidence Survey*¹³⁶ shows Māori consumers, and women, are less likely to feel confident in financial markets. Māori, (especially wāhine Māori) are more likely to use Buy Pay Later schemes. Māori consumers are also less likely than non-Māori to hold a credit card, invest in KiwiSaver and in term deposits. Māori are less likely than non-Māori to have life and health insurance but are more likely to hold funeral insurance.

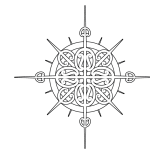
¹³² MSD. (2025). *Quarterly Benefit Fact Sheets National Benefit Tables June 2025*.

¹³³ Productivity Commission. (2023). *A quantitative analysis of disadvantage and how it persists in New Zealand. A supplementary report to the A Fair Chance for All inquiry*.

¹³⁴ Selected because ‘people living in the Counties Manukau (DHB) region had the highest likelihood of experiencing persistent income poverty, deprivation, or simple or complex persistent disadvantage than people in households in any one of the other seven regions’ (p. 58)

¹³⁵ Henare, M. (2012, July 24). *He Ara Whakamua Building pathways together for the future*. (Final report).

¹³⁶ Financial Markets Authority. (2025, April). *Factsheet: Consumer Confidence Survey Ethnicity and Gender Analysis*



Māori continue to experience greater access issues to banking services

Research from the Commerce Commission's 2024 market study *Personal Banking Services*, identified that Māori are disproportionately more likely to experience some access issues compared to other New Zealanders, such as:

- restricted access to personal banking services associated with rural living and digital exclusion
- exclusion from basic personal banking services
- financial literacy and confidence when engaging with providers of personal banking services
- lack of transparency in how banks make decisions.¹³⁷

Previous RBNZ research *Analytic Note - Ethnic variations in firm financing* (2022) identified that the financial system is not flexible and/or informed enough to ensure that Māori are well-served by the financial system, identifying systemic and other issues:

“Māori firms, defined using the ethnicity of the owners, are paying higher implied interest rates on average than non-Māori firms, by about 50 basis points...Further research is required to determine why Māori firms tend to have firm characteristics that raise financing costs - the role of home ownership and socioeconomic disparities would be interesting areas of future research.”¹³⁸

“We are missing information on how Māori firms navigate starting up a firm, and access early-stage capital. We also do not have good visibility of the loan application stage.”¹³⁹

“Access to capital, or the ability to leverage existing assets, continues to be a barrier for Māori.”¹⁴⁰

Māori Access to Capital – Market Failures

In May 2025, the RBNZ released a comprehensive report *Māori Access to Capital – Market Failures*. The authors describe market failure as “a situation where a competitive market fails to allocate resources efficiently.”¹⁴¹ The report discusses common market failures that may affect Māori disproportionately and those that are Māori-specific (which are summarised in this section).

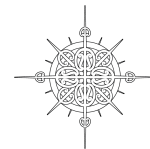
¹³⁷ Commerce Commission. (August 2024). *Personal Banking Services*. (p. 80).

¹³⁸ Ball, C., Richardson, A., and Zheng, G. (2022). *Analytic Note - Ethnic variations in firm financing*. RBNZ, AN2022-11. (p 1).

¹³⁹ Ibid. (p.9)

¹⁴⁰ BERL. (2018). *Te Ōhanga Māori*. (p.1)

¹⁴¹ Cherry, R., and Cheung, C. (2025, May 14). *Māori Access to Capital – Market Failures*. *Bulletin*, 8(44). Reserve Bank of New Zealand.



Common market failures that may disproportionately affect Māori

Information asymmetries

When lenders lack information about borrowers, they may raise interest rates or deny loans, particularly impacting small and new Māori firms which often have unstable cash flows, with limited financial histories. This information gap prevents sellers from distinguishing between high- and low-risk projects, leading to reliance on proxies or average pricing. As a result, lending rates may exceed actual risk levels, and viable projects might be excluded due to insufficient data.

Market failure from mis/information deficiencies

When lenders lack information about borrowers, they often raise interest rates or deny loans — especially affecting small and new Māori firms with unstable cash flows and limited financial histories. Without clear data, lenders rely on proxies or averages, which can inflate lending rates and exclude viable projects.

A critical issue is the lack of understanding around Māori values and how they shape distinct business models. The authors noted that in research by MBIE, some banks and investors perceive these models as inherently risky or "unbankable."¹⁴²

Low financial literacy among Māori and a lack of culturally appropriate services continue to limit equitable financial access for many whānau. Additionally, rural isolation raises monitoring and operational costs for financial institutions. For many whānau Māori, this is exacerbated through a lack of infrastructure, as well as limited opportunity to establish a bank account. Further the potential isolation of rural areas increases costs for financial institutions to monitor borrowers, or to 'operate at scale'. The authors quote Stein, Randhawa, and Bilandzic (2011) to note that:

*"financial institutions serving rural areas tend to respond to these challenges through excess credit rationing or reliance on traditional forms of collateral."*¹⁴³

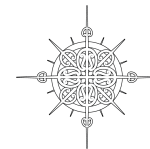
The authors also note that the World Bank's Global Findex Survey identified that 20 percent of financially excluded individuals cite physical distance from financial services as a key reason for not having a bank account.¹⁴⁴ Limited access creates information gaps, leading to credit restrictions to small, young, and rural firms, often resulting in denied or inadequate loans.

RBNZ consultations show Māori SMEs, especially startups and those in early growth, struggle to get debt financing due to lack of collateral. Some banks have exited the SME market over high service costs. While Māori SMEs with 6–49 employees match non-Māori firms in debt acceptance, they have lower equity acceptance rates. Larger Māori enterprises have even less access to both

¹⁴² Ibid.

¹⁴³ Cherry, R., and Cheung, C. (2025) Māori Access to Capital – Market Failures. Reserve Bank of New Zealand.

¹⁴⁴ Ibid. (p. 8).



debt and equity. These barriers are further reflected in low rates of securing equity from angel or venture sources, with limited data restricting deeper analysis.¹⁴⁵

Market failures specific to Māori

Information failures with lending on Māori land

The reluctance of banks to finance development on multiple-owned Māori land, or to agree to funding requests that seek to use multiple-owned Māori land as collateral, is an ongoing barrier that has been studied in depth.

The Native Land Court, known to Māori as ‘Te Kooti Tango Whenua’ the Land-Taking Court, was set up in the 1860s to individualise Māori land ownership, making land easier to sell.¹⁴⁶ In 1860, approximately 80 percent of the land in the North Island was held by Māori. By 1890 following the New Zealand Wars and land confiscations, that total was reduced to 40 percent, and by 1939, that total was 9 percent.¹⁴⁷

The preamble to Te Ture Whenua Māori Act 1993 now emphasises keeping Māori land with its owners. While some experience the Act as a barrier to development and finance, it aims to balance development with the significance of land as whakapapa, identity, and belonging.

Investors often view multiple ownership of Māori land as a risk, making it difficult to use as loan security and hindering development and home ownership. Despite the Māori Land Court's 2024 *Practice Note for Lending on Whenua Māori*,¹⁴⁸ banks and finance companies remain hesitant, limiting Māori home ownership and business opportunities.

Market information failures from low trust and awareness

Finally, Cherry and Cheung note that the relationship between Māori and the banking sector is marked by deep-rooted mistrust and limited engagement, stemming from historical and ongoing experiences of colonisation, discrimination, and institutional bias. This has contributed to a persistent information failure in the financial market, where Māori are less likely to trust or participate in mainstream financial systems that do not reflect their cultural values or include their voices. Addressing this disconnect requires greater Māori representation, culturally responsive financial services, and a commitment to rebuilding trust through inclusive and equitable practices.

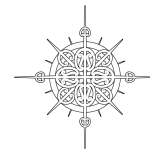
The relationship between Māori and the banking sector is marked by limited engagement, shaped by colonisation, systemic bias, institutional practices and racism. These factors have created an information gap, with Māori participation in the financial system remaining low.

¹⁴⁵ Ibid. (p.9).

¹⁴⁶ Whaanga, M. (n.d.) Māori Land Court – Te Kōti Whenua – Te kōti tango whenua, 1865–1873, Te Ara – the Encyclopaedia of New Zealand.

¹⁴⁷ Manatū Taonga — Ministry for Culture and Heritage. (2021, April 21). *Māori land loss, 1860–2000*.

¹⁴⁸ Māori Land Court. (2024, April 29). *Tuhinga Ārahi – Nama Pūtea mā Whenua Māori. Practice Note for Lending on Whenua Māori*.



Proposed solutions include increasing Māori representation, offering culturally responsive services, and adopting inclusive practices to build trust and encourage involvement.

Initiatives towards responding to market failures and access to finance

The authors identify that while several initiatives have been introduced towards addressing market failures and improve access to finance—such as regional banking programmes, venture capital funds, and targeted Māori business support—significant challenges remain for Māori entrepreneurs. These include low uptake of lending products for Māori land, high transaction costs, and regulatory barriers.

Legislative reforms (including amendments to Te Ture Whenua Māori Act 1993, and the Anti-Money Laundering and Countering Financing of Terrorism Act 2009) aim to simplify processes and reduce compliance burdens. However, underrepresentation, limited access to culturally appropriate support, and misapplied banking risk assessments continue to hinder progress. Further systemic changes are needed to ensure financial services are inclusive, culturally responsive, and accurately reflect the true risk profile of Māori borrowers.

Tawhia Banking Group: responding to disparities for Māori

In December 2024, Ringa Hora Services Workforce Development Council released its Industry Action Plan, *The Power of People in Finance and Advisory*, targeting vocational and training needs in financial and advisory services. The Industry Plan emphasised collective action, partnership, and collaboration as key strategies for responding to some of the key issues for Māori in the Financial & Advisory sector.¹⁴⁹

To further highlight these points, the plan presented a ‘deep dive’ into Tawhia Banking Group, formed in 2021 to unite senior Māori banking sector representatives, to address disparities for Māori in finance and banking.

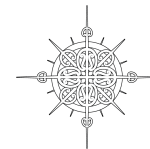
Tawhia focuses on increasing access to capital for Māori land and housing by addressing barriers that have historically limited Māori businesses and whānau from securing loans and other financial resources. Tāwhia does this by advocating for changes in policy, promoting culturally appropriate lending models, and assisting stakeholders in navigating complex regulatory environments to improve financial inclusion for Māori.

With about 6,000 Māori workers in Financial and Advisory, the emergence of Tawhia can be seen as a progression of Māori entering these services.

Select Committee Inquiry into Banking Competition

In August 2025, Parliament’s Finance and Expenditure Select Committee released its final report: *Inquiry into Banking Competition*. The Inquiry’s main areas of focus included the state of

¹⁴⁹ Ringa Hora Services Workforce Development Council, (2024, June). Financial and Advisory Workforce Development Action Plan.



competition in banking, barriers preventing competition in banking, any possible impact of the regulatory environment on competition and efficient access to lending, rural banking, and lending to Māori asset-holders, organisations, businesses, and individuals.

The Committee recommended that:

- banks jointly adopt voluntary service standards to better meet the banking needs of Māori, like the Banking Code of Practice in Australia.
- the Government remove unnecessary anti-money-laundering compliance barriers faced by Māori land trusts and Māori organisations with multiple owners when accessing banking services.
- the Government enable further opportunities for Iwi and Māori organisations to invest as co-owners or capital providers, for example through infrastructure projects.
- banks create and offer more lending products that meet the unique needs of Māori freehold landowners.¹⁵⁰

Further, the recommendations to address barriers preventing competition in banking and impact of the regulatory environment included the following recommendation:

*“**“Broaden the “regulatory sandbox” trial** We recommend the Financial Markets Authority broaden its “regulatory sandbox” trial and explore a single licensing model to cut red tape for innovative financial service.”¹⁵¹*

While this recommendation is highly relevant to the ongoing development of initiatives like Toha Network and the ECX, the FMA would need to ensure any model or framework can accommodate, and/or be flexible enough to ensure Māori knowledge, values, customs and practices are applied to their business model. Otherwise, the risk of not addressing existing barriers to Māori providers is exacerbated.

The sandbox also provides an environment in which the FMA can test and critique its own capability to recognise, understand, and accurately interpret business models that align with a Māori worldview.

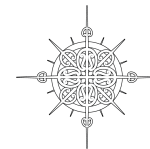
To effectively license, supervise, and monitor Māori business, and foster opportunities for increased business and product offerings the FMA must be able to authentically and credibly apply Māori cultural capabilities and worldview expertise.

Summary

The Māori economy is dynamic, diverse, and growing. Despite gains in asset growth and entrepreneurship, systemic inequities limit the full realisation of Māori economic potential. Significant barriers remain in accessing financial systems and capital, rooted in historical

¹⁵⁰ Finance and Expenditure Select Committee. (2025, August). *Final report, Inquiry into Banking Competition*. (pp. 5-6). Parliament.

¹⁵¹ Ibid. (p 5).



inequities and cultural disconnects. Persistent disparities in employment, education, and access to financial services highlight the need for structural reform.

Mana Motuhake: the Māori Economy in 2025

Māori participate in the financial system as collectives and as individuals

On a daily basis, whānau, hapū, iwi and Māori participate in the financial system through a range of structures that are also inter-related. As Tiriti partners, iwi/tribal Post-Settlement Governance Entities (PSGEs) and organisations (which include iwi health insurance, KiwiSaver and social service providers); as national Māori business entities – for example, the Federation of Māori Authorities and Te Ohu Kaimoana; national Māori social organisations such as the National Urban Māori Authority, New Zealand Māori Women’s Welfare League; and Māori Land Trusts, businesses (including importing and exporting), Māori collectives, Māori social service providers, Hapū, Marae Committees, papakāinga, as whānau, and as individuals.

Many of these structures or entities are likely to have differing governance arrangements that are collectively based, whether by whakapapa, regional or traditional rohe representation, or solely by individual votes from across all owners and/or shareholders (or a mix of collective and individual votes). It is also likely for there to be a range of non-negotiable cultural, social, economic and environmental imperatives and/or obligations that influence key decisions regarding their interactions with financial systems.

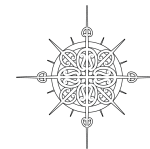
This list does not include the impact that Māori research and development has; to inform economic policy, support Māori-led enterprises, and contribute to a more equitable financial landscape for Māori communities. For example, Ngā Pae o Te Maramatanga, New Zealand's Māori Centre of Research Excellence.¹⁵²

As a collective people, all these structures create a vibrant and dynamic world within which Te Ōhanga Māori has emerged, to do business internationally.

Te Koroneihana 2025: “Ehara te Mana Motuhake i te kupu noa iho ki ahau, he ora ngā tēnei nōku” (Independence is not just a word to me, it's my life)

The Koroneihana 2025 was particularly significant as it was the first time the Māori Queen, Te Arikinui, Ngā Wai Hono I te Po, broke her silence after a year’s mourning for the passing of her father, the late Kingi Tuheitia. At 28 years of age, Ngā Wai Hono I te Po represents 54.4 percent of the Māori population who are under 30 years of age. Through her speech rang the clear voice of a new generation:

¹⁵² See website <https://maramatanga.co.nz/>



“we need to stop allowing external forces to hinder us. We need to walk a new path.”¹⁵³

A key part of this approach was Ngā Wai Hono I te Po’s announcement that the Kingitanga would host an economic summit, ‘Ōhanga ki te Ao’. It offers an opportunity to “achieve our economic aspirations independently of government in our pursuit of self-determination, sustainable futures and thriving peoples. At the summit, Māori are able to meet with global alliances who are keen to work with Māori.”

The second announcement was *Tahua Kotahitanga* - a \$30million kotahitanga fund to strengthen independence from government, with seed funding from iwi Māori entities. The fund will be a Māori-owned and controlled investment platform funded by iwi capital and co-investors.¹⁵⁴ On the third day of the Koroneihana, Tukuroirangi Morgan, Chair of Waikato-Tainui’s executive Te Arataura, carried the message of Mana Motuhake into global business, inviting the representatives from 67 countries that Māori are ready to work directly with other nations.

“Morgan said the Māori economy was the fastest growing in the country and Māori were ready to do business with other nations directly, without the “gateway” of the government.”¹⁵⁵

This initiative built on Kingi Tuheitia’s January 2024 Hui-a-motu, themed Kotahitanga (unity in shared purpose), aiming to promote mana motuhake (self-determination) and tino rangatiratanga (political self-determination). Multiple hui were held across the country to create a collective action plan and offer forums for iwi, hapū, and Māori leaders to exchange strategies and insights. Subsequent hui included one before Waitangi Day, a third hosted by Ngāti Kahungunu and a fourth by Kai Tahu. The hui reinforced three over-arching tikanga values as key themes and a way forward:

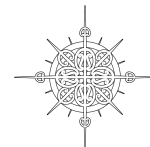
- Mana Motuhake - strengthening resolve by iwi and hapū to mobilise self-determination (political, economic, social, etc) within their own takiwā (area)
- Tino Rangatiratanga - mobilising and harnessing collective power towards localisation, including regulatory authority, and economic development
- Kotahitanga - collectivising and leveraging intent, collective economic and political power.¹⁵⁶

¹⁵³ Campbell, J. (2025, September 06). ‘The Māori Queen speaks and it’s a new, vital voice for NZ’. *TVNZ*. [Chief Correspondent].

¹⁵⁴ Cugley, M., Paterson, Te A., Kowhai, Te R. (2025, September 5). Te Arikini Kuini unveils \$30m kotahitanga fund to strengthen independence. *Te Ao Māori News*.

¹⁵⁵ Tuwhenuaroa, N. (4 September 2025) Koroneihana: Māori ready to do business with other nations directly. *RNZ*. <https://www.rnz.co.nz/news/te-manu-korihi/572099/koroneihana-maori-ready-to-do-business-with-other-nations-directly>

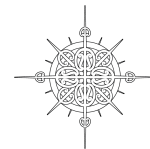
¹⁵⁶ Chapman, H. PowerPoint presentation to Executive Leadership Team, 2025



These themes and actions reflect a long tradition of Māori self-determination. For example, the Kingitanga (1858), aimed to unite Māori and prevent land loss during colonisation; while from 1892 to 1902 Te Kotahitanga, the national Māori parliament, met annually to address pan-Māori issues. The final word in this section rests with the late Manuka Henare:

“In today’s world with the re-emergence of China, India, Indonesia and the Pacific and, I would argue, the Māori economy, we are returning back to where we have always historically belonged. To be part of the world that produces over 50% to 60% of global gross domestic product.”¹⁵⁷

¹⁵⁷ Henare, M. (2012, July 24). *He Ara Whakamua, Building pathways together for the future*. New Plymouth, (Final Report). A series of hui as part of the research report by Irwin, K., Hetet, L., Maclean, S., and Potae, G. (2013) *What works with Māori? What the people said*. Families Commission.



Discussion: “Ka Pū te Ruha ka Hao te Rangatahi”

“The new net goes fishing.”

This discussion addresses the issues and challenges arising for Toha Network as a Māori Fintech provider within a Western financial framework; how Toha is bridging this gap through implementing te ao Māori values in responding to the impacts of market failure and climate change; Māori land legislation and Māori access to capital.

This is followed by drawing on Dr K. Irwin’s framework for nation-building. The framework provides a level of analysis that presents the inter-related structural, institutional and interpersonal nature of these challenges. The report then concludes with high-level findings from Toha and the ECX’s journeys to bridge worldviews and create a fairer system that recognises and enables te ao Māori values, collective governance, and decision-making, in the finance system.

Toha Network “Business has to operate at a higher purpose than making money”

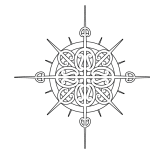
The origins of Toha can be traced to the experiences of Nathalie Whitaker, as a young whine Māori entrepreneur, highly motivated to change rigid, transactional business systems that neglect essential collective values such as whanaungatanga, kotahitanga, and manaakitanga. Nathalie developed an innovative business model focused on fostering social, cultural, economic, and environmental well-being, drawing on significant R & D, and her experience with *Givealittle*, where trust and transparency are prioritised.

Ongoing tensions between different worldviews

The interviews with Toha, ECX and Te Kautuku, describe stories occurring in the middle of a very long journey for the people of the East Coast. For example, the *Māori Affairs Act 1953*, and the *Town and Country Planning Act 1953* established restrictions on Māori land and housing that were not removed until the 1970s. Further, the interviews describe the impacts of a market shaped by Western financial logic, where te ao Māori values are invisible, and collective public good is not recognised. Te Kautuku’s story, from access to capital, to lack of financial services and infrastructure, is a continuation of these tensions.

Te Kautuku is situated in the tension between worldviews

When the land came back it was in an impoverished and indebted state. At the same time, Te Kautuku was addressing a wide range of intergenerational social and economic challenges on the Coast — including inadequate infrastructure, limited access to education and housing, lack of capital, and gaps in capability. In addition, some individuals who chose to return to their ancestral lands had been disconnected from the land and community for more than one generation.



Nevertheless, Te Kautuku refused to compromise and lease out the land. Ultimately Te Kautuku is ancestral land, it is whakapapa and identity, it is the source of whanaungatanga for all those who descend from the original owners.

As Hitchcock noted (2008)

“The importance of the whenua as the life force of Māori is the overarching principle to be considered when looking at issues of Māori land development. It is not just about developing the land for economic gain, but also for social, spiritual, and collective gain.”¹⁵⁸

Consequently, Te Kautuku management chose to diversify and to minimise their own wages from the Trust, to avoid jeopardising the land and everything that land symbolises. This decision was based on whakapapa and whanaungatanga, and on the strong desire to not further alienate whānau from their lands.

The significance of the Paikea Trail and Te Ara Tipuna

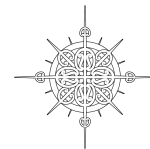
Rangi Raroa spoke of the benefits of connecting the ancestral trail of Paikea across the lands of Te Kautuku, with the development of *Te Ara Tipuna*. The Paikea Trail will enable people to walk in the footsteps of the great ancestor, Paikea, as he traversed the lands. The Trust will be establishing cabins along the trail and promoting wider tourism as part of this venture; however, this venture is about more than land use diversification.

Te Ara Tipuna, “the way of our ancestors,” is a proposed ancestral trail to provide the same thing as the Paikea Trail, but on a larger scale, for the Ngāti Porou lands around the Coast¹⁵⁹ (offering future opportunities to connect with other tribal trails, should those landowners wish to do so). *Te Ara Tipuna* is being developed as an infrastructure project to enhance connectivity, protect the environment, and celebrate cultural heritage across the rohe. The network offers accessible paths for walking, cycling, and horse riding, helping iwi, hapū, and whānau reconnect with ancestral land and share their histories. The project also aims to foster local business, create jobs, and support economic renewal in the community.¹⁶⁰ In addition to alternative land use and economic opportunities, both trails are planned to enable descendants of those alienated from their ancestral lands - through legislative, economic and/or social circumstances - to walk once more upon their ancestral lands, where the mauri of the land lies waiting.

¹⁵⁸ Hitchcock, J. (2008) Ko Ngaa Take Ture Māori Financing Māori Land Development: The Difficulties Faced by Owners of Māori Land in Accessing Finance for Development and a Framework for the Solution. In *Auckland University law review*; 14, 217.

¹⁵⁹ Te Ara Tipuna Charitable Trust. (2021). *Te Ara Tipuna Proposal Document 2021*.

¹⁶⁰ Ibid.



As Justice Williams observes:

“The idea of whanaungatanga was summarily, militarily and legally removed from the economy, from the law and the religion...but that’s not the end of the story...yet whanaungatanga still lives. That’s the extraordinary thing - after all of that - when it has been legally, economically and politically redundant for more than 100 years – yet whanaungatanga still lives and has found voice in what I call the third law of Aotearoa.”¹⁶¹

Bridging the tensions between worldviews

‘Acting collectively’ is a function and expression of whanaungatanga

Toha and ECX operationalised in the middle of a climate disaster, with Toha’s business model and data system enabling whanaungatanga - the natural desire of communities to act collectively:

“When people step forward to protect their land, their neighbours, or their community, that action creates value. If we can record that contribution in real time, it becomes visible, verifiable, and investable. This is not charity—it is capital formation” (Nathalie Whitaker).

Observations across Toha and ECX were that, should disaster impacts continue, the community may not be able to sustain such a high level of ongoing generosity on an ongoing basis, unrecognised and unsupported. The concern was that lack of support for collective action would undermine future community effort, and worse, lead to a breakdown of a community already strained to exhaustion. Toha and ECX did not want the communities of Gisborne and the East Coast to be in this position.

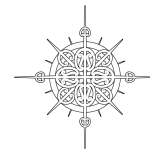
Without Toha and ECX, much community and individual work would have gone unpaid, unrecognised, unquantified and unvalued; over time this may well have worn down future efforts. Further, the AML exemption for amounts under \$1,000 was proposed by ECX not the government. It was the ECX who then took on the task of doing all AMLs to remove the burden away from each individual, however, the burden was then transferred to the ECX.

Enabling market recognition of generosity as a measurable, investable impact

Toha and the ECX navigate the tensions between te ao Māori and western financial logic, by developing a business model and digital infrastructure that draws understandings from both worldviews to develop new and innovative insights:

“Although the data technology already exists, its application so far has been shaped by Western financial logic. Toha applies it differently. By embedding

¹⁶¹ Justice Williams (2017) Address to Te Ritorito - towards whānau, hapū and iwi wellbeing



Indigenous values such as reciprocity and collective stewardship, Toha activates an economy based on trust and contribution rather than extraction. This enables markets to recognise goodness – not as a social value – but as a source of measurable, investable impact.” (Nathalie Whitaker)

Toha and ECX are doing this now. However, they are one fintech, which is why there is a need for systemic change that connects collective governance and the market:

“If being more holistic and collective is treated as more risky, then we must design systems that can connect collective governance, regulatory expectations, and market recognition. This is ‘third space’ thinking.” (Nathalie Whitaker)

Toha’s business model supports the development of ‘third space’ thinking

Toha’s innovative business model demonstrates the power of a ‘third space’ that enables new forms of exchange, providing a permanent platform for communities to organise under new market rules and within their existing eco-systems. This requires creating rules, roles and processes that enable new forms of value to be recognised. Roles such as the community navigator that ground decision-making close to the land and participating communities, are critical to ensure that representation across the eco-system is connected, accountable, and place-based.

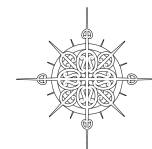
Activating the ‘third law of Aotearoa’ for the benefit of everyone

Toha’s ‘third space’ platform and digital infrastructure powered through ECX is underpinned by, and gives visibility and financial impact value to, the application of whanaungatanga – of generosity, of collective ‘goodness’ daily.

This creates new opportunities to make different investment decisions that benefit the collective good. The practical application of ‘collective good impact funding’, reflects the natural evolution and activation of what Justice Williams calls the Law of Whanaungatanga, the ‘third law of Aotearoa’.

Te Ao Māori values underpin Toha Network and the East Coast Exchange

While Toha responds to failure in the market, a deficit failure paradigm does not drive the Toha Network and ECX. Toha Network’s purpose of business is to achieve an environmental, social, cultural, human, and economic public good - which means that market failures, climate change and land-use challenges are highly impactful; and sit in a wider ethical and values context.



The interviews strongly illustrate that “mātauranga Māori (Māori epistemology), tikanga and kawa (Māori methodology) and lived expressions of ‘kia Māori’ (Māori ontology)”¹⁶² underpin the ethos of Toha Network and ECX.

The various tikanga themes (below) operate like strands in a whāriki (woven mat), of values that underpin Toha and ECX. Each has a distinct purpose, but when combined, they form a layered and adaptable framework, the significance of which may shift depending on the broader context.

He aha te mea nui o te ao? He tangata, he tangata, he tangata. *What is the most important thing in the world? It is people, people, people.*¹⁶³

Throughout this case study, those interviewed spoke of tikanga Māori, mātauranga Māori, and te ao Māori as underpinning Toha Network and the ECX – to ultimately benefit everyone:

“Create the market where goodness is visible and communicated. Treat Toha like it was yours” – it’s for everybody” (Nathalie Whitaker).

Tino rangatiratanga; Te Tiriti o Waitangi

Self-determination; Te Tiriti o Waitangi partnership

“Tino rangatiratanga: mō tātou, ā, mō kā uri ā muri ake nei - the ability to create and control our destiny for generations to come.”¹⁶⁴

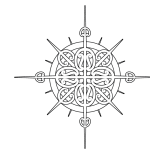
From the 1800s Māori have struggled, challenged and strategised – as individuals, whānau, hapū, iwi and wider Māori entities, to create and control our destiny for generations to come. For example, Te Kautuku has leveraged a public-private partnership with Te Puni Kōkiri and Air New Zealand. They have prioritised trusted relationships and supported communities to be active participants in decisions that affect their environment. Te Kautuku has also advanced the development of digital infrastructure governed by Indigenous Data Sovereignty principles. These actions are all expressions of tino rangatiratanga, placing the mana of human relationships above financial expediency:

“It’s also the forms of knowledge and technology that we (Tangata Whenua and Tangata Tiriti) draw on ...drawing from our different kete. I’d like to think we’re operating in that spirit of that intent of Te Tiriti, of mutually beneficial partnerships and that’s part of the way we operate” (David Hall).

¹⁶² Irwin, K., Hetet, L., Maclean, S., and Potae, G. (2013). *What works with Māori? What the people said*. Families Commission.

¹⁶³ Inspiring Communities. (n.d.). *Whakatauki Information sheet*.

¹⁶⁴ Te Rūnanga o Kai Tahu. (2019, October 7). *Tino rangatiratanga mō tātou, ā, mō kā uri ā muri ake nei*. Te Karaka.



Kotahitanga: Me uru kahikatea

*Strength through unity. The strength of the kahikatea*¹⁶⁵ (white pine) While the eye may see a grove of separate trees, the strength of the kahikatea is not to be underestimated. Underground, all the roots of the kahikatea are one interwoven system with the strength of each tree anchored in the unified root system. Like the roots of the kahikatea, the systems that Toha and the ECX have built highlight the inter-connected nature of systems, guided by the principle that strength comes from unity, ensuring that initiatives serve everyone.

“Need a national infrastructure to be built for everyone” (Ralph Chivers).

Whakapapa

Genealogy, the descent-line and identity as descended from the Papatūānuku (the Primordial Earth Mother) to tangata whenua.

As Tangata Whenua, whakapapa intimately connects people to each other; to the land; and to all living things. Activation of the connection between land reclamation, ancestral traditions, and entrepreneurship, such as the Paieka Trial, honours their enduring roles as kaitiaki of the whenua and of the ahi kaa roa (long-standing fires of occupation:

“Placenames for plants and animals are whakapapa. How far back do we have to go to unpack the whakapapa of the name which will tell us more about the place?” (Renee Raroa)

Whakawhanaungatanga: Nāu te rourou, nāku te rourou ka ora ai te iwi

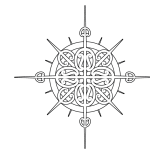
*Relationship building: with your food basket and my food basket, the people will thrive.*¹⁶⁶

Whakapapa lays the foundation for *whakawhanaungatanga*. In te ao Māori, all relationships are based on whakapapa, and through whakapapa, connection to one another. At the heart of Toha, is the high value and respect given to the collective nature of trusted relationships. To not honour the mana and significance of relationships, is to reduce them to merely a means to transact the marketplace, removing all mana, humanity and dignity from the interaction.

Whanaungatanga is inherently reciprocal and forms the foundation for building trusted relationships and partnerships, ensuring transparency, collaboration, accountability, and fairness. This principle enables the creation of public-private partnerships. Commitments made within these relationships are upheld with integrity, even if it means facing financial challenges, as demonstrated by ECX’s refusal to exploit data despite funding difficulties.

¹⁶⁵ Melbourne, H. (n.d.). *Waiata – E tū Kahikatea*. Aotearoa New Zealand Psychodrama Association.

¹⁶⁶ Inspiring Communities (n.d.). *Whakatauki Information sheet*.



Manaakitanga: Manaaki whenua, manaaki tāngata, haere whakamua

*If we care for/respect/ look after the land, and each other, the future will also be protected.*¹⁶⁷

Toha and ECX are focused on moving the region away from damaging, extractive short-term land management towards regenerative practices, especially in areas prone to erosion. Toha and ECX are harnessing the power of community alongside key funders; to provide more incentives to shift land use from pines and traditional agriculture. Central to their approach is the respect for relationships (mana) and ensuring that decisions reflect a balance of environmental, cultural, social, economic, values: manaakitanga.

*“It’s just about those investors and forestry companies taking less profit than they have, and more about **relative profit**, rather than a choice between profitable and unprofitable” (David Hall).*

Kaitiaki; kaitiakitanga: Tiakina te wao nui a Tāne, hei orange mōu

*‘Look after the great forest of Tane, and in turn it will look after you.’*¹⁶⁸

A kaitiaki can be a guardian—either a spiritual being or an individual—responsible for caring for all aspects of the environment and its relationships. Their role is to protect the mauri (life essence) of the environment. Toha, ECX, and Te Kautuku focus on supporting and verifying the shift from extractive land use practices to restoring the mauri of original ecosystems, ensuring the wellbeing of both land and people for the future:

“If the system is intact in its authenticity and complexity, that’s how we know we’ve been good kaitiaki. Utu. (to ensure reciprocity) Whakapapa. Whanaungatanga. This helps ensure benefits flow in the right ways” (Nathalie Whitaker).

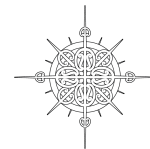
Utu: repayment, reciprocity, restoration of balance. Utu helps restore balance.

For example, in traditional Māori society, utu is related to the *law of muru*. When muru was enacted to restore balance, there was a ritual taking of goods or resources, to compensate for a wrongdoing and restore mana.

These values and ethics underpin Toha’s data infrastructure. These principles are put into practice in several ways. Examples include Māori-led partnerships and community-centred decision-making. They also involve unified systems designed for collective benefit and digital smart contracts, which give individuals greater control over their data. Finally, there is a strong emphasis on trusted relationships and care for both people and the environment. Through ECX,

¹⁶⁷ Wakatū Incorporation. (n.d.). Wai Water. Wakatū Incorporation.

¹⁶⁸ Green Party NZ. (2018, June 4). Pukapuka lungs – Tiakina te Wao Nui a Tāne hei orange mōu. Look after the great forest for your wellbeing. Facebook.



data driven decision-making, transparency and trust help to ensure people and communities have a measure of control over their lives.

Market failure, climate change, and land-use challenges

*“Toha is building a system where Māori can participate across all forms of capital – environmental, cultural, social, economic, natural, land access and knowledge”
(Nathalie Whitaker).*

Cherry and Cheung, in their RBNZ report on Māori access to capital,¹⁶⁹ cite the NSW government's definition of market failure as a situation where markets do not allocate resources efficiently, potentially justifying government intervention. Drawing on the NSW definitions,¹⁷⁰ the paper includes the following types of market failure:

- market concentration: such as monopolies
- a public good: where there is little market incentive to either provide or purchase the good, (leading to under-provision of a public good)
- externalities -where a market transaction between two parties can impact (positively or negatively) on other parties not part of the transaction
- information asymmetry: where some parties in a market have superior information and leverage it for their own benefit
- information failure - incomplete contracts: these occur when uncertainty and complexity make it difficult for parties to form agreements, resulting in fewer contracts and under-provision in the market; when both parties lack enough details for a good result.¹⁷¹

Toha identified Incomplete Contracts and/or policy coordination barriers

For Toha Network, Incomplete Contracts arise when parties struggle to establish contracts because it is too difficult to anticipate and address every possible future scenario, or when parties are hesitant to make necessary investments before an agreement is reached due to uncertainty.¹⁷² This is further impacted through policy coordination or regulatory failure, where conflicting and/or unplanned impacts arise through the interaction between policies.

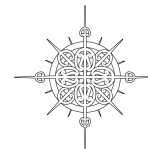
Furthermore, the current reality is a lack of accessible contracts for nature-based initiatives, kaitiakitanga, stewardship, and related activities, as well as insufficient mechanisms for

¹⁶⁹ Cherry, R., and Cheung, C. (2025, May 14). Māori Access to Capital – Market Failures. In *Bulletin*, 8(44). Reserve Bank of New Zealand.

¹⁷⁰ New South Wales Government. (2017). *Market failure guide A guide to categorising market failures for government policy development and evaluation*.

¹⁷¹ Cherry, R., and Cheung, C. (2025, May 14). (p.25).

¹⁷² David Hall, 15 October 2025, email to Kahukore Baker.



contracting knowledge sharing, including the protection and recognition of Indigenous intellectual property.¹⁷³

This means much environmental work remains unpaid and unsupported, since there are limited straightforward avenues for compensating or receiving payment for these efforts, even when funding is available. In addition, Indigenous and other forms of knowledge are often used without proper benefit sharing, as there are few practical systems for formalising and asserting consent-based control over knowledge.

As David Hall identified:

“The Toha marketplace is a system of contracts (including digitally enabled smart contracts) which address the market failure [of incomplete contracts], which give market participants the tools to transact effectively, and to exercise their authority to control how data and knowledge is used and reused by other parties.”¹⁷⁴

Toha experience climate change barriers “consistent with market failure”

In addition to the above market barriers, the Climate Change Commission, in its first package of advice to the New Zealand Government,¹⁷⁵ identified a range of barriers to low emissions that were also consistent with market failure discussion. In addition to the above, further barriers were identified (but not limited to):

Uncertainty about future emissions prices

When emissions prices are volatile, this makes investing in reducing emissions riskier, which means households and businesses may underinvest.

Split incentives

This refers to where the person who pays for an action is not the one who will benefit from that action and therefore lacks the incentive to act.

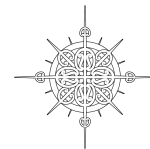
Bounded rationality and myopia

Businesses and individuals do not always based decisions on an economically rational optimisation of costs because of limited time and resources, and therefore an overreliance on rules of thumb or routines, or a discounting of future costs and benefits.

¹⁷³ Ibid.

¹⁷⁴ Ibid.

¹⁷⁵ Climate Change Commission (2021) *Ināia Tonu Nei: a low emissions future for Aotearoa: advice to the New Zealand government on its first three emissions budgets and direction for its emissions reduction plan 2022–2025*. (pp. 216–217). He Pou a Rangi Climate Change Commission.



Infrastructure lock-in

The options for reducing emissions can be constrained by available infrastructure, because the long life and long lead-in time of fixed infrastructure can result in an unresponsiveness or inelasticity to price signals.

Network externalities

This refers to when the benefits to an individual from using a product depend on how many others are also using the product in question. For example, promoting charging infrastructure for EVs may depend upon a critical mass of EV users.

Policy coordination or regulatory failure

Market failures that result from poorly designed market rules, or negative interactions between overlapping policies.

As an environmental Māori Fintech, the identification of climate change as a market failure is highly relevant. For example, in 2014 the Grantham Research Institute on Climate Change and the Environment (which is part of the London School of Economics and Political Science), identified that climate change is associated with several market failures.¹⁷⁶ Further, Zhu (2025) identified that climate change imposes long-term costs that are not reflected in the market, “making it a classic case of negative externalities and market failure.”¹⁷⁷

Urgent land use transformation and market failures in climate response

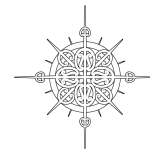
In April 2025, it was reported that in Tairāwhiti, the Transition Advisory Group (TAG) had identified approximately 60,000 to 100,000 hectares of at-risk land that needs to shift to alternative land use such as continuous forest cover.¹⁷⁸ This is where models like the public-private partnership between Toha, Air New Zealand and Te Kautuku, can support this shift. However, the ETS currently incentivises pine planting over indigenous forests, even as increased weather events cause erosion and loss of high-country land. This short-sighted incentive will only lead to further downstream impacts.

The East Coast region and Gisborne are facing this failure now, impacted by other market failures, such as decisions that have the effect of locking multiple-owned Māori land out of investment opportunities. The impact of poor land-use decisions was highlighted in Cyclone Bola, where high-country land previously cleared for agriculture, suffered heavy erosion. One of the responses was to plant pine trees. As is now evident, the continual planting of pine is contributing to the problem. The fact that many plantations are on increasingly unstable land,

¹⁷⁶ Bowen, A., Dietz, S., Hicks, N. (2014, March 21). *Why do economists describe climate change as a market failure?*

¹⁷⁷ Zhu, F. (2025). Market Failure: Understanding the Limits of Free Markets. *Global Media Journal*, 23:73.

¹⁷⁸ Cook, A. (11 April 2025). Tairāwhiti to replant 100,000 hectares of forestry and pasture with bush, but at whose cost? *RNZ*.



means it is no longer possible to fell them, further escalating the risk of slash and continuous damage to infrastructure, communities and livelihoods.

The urgent need to respond to climate change has been expressed in many regional, national and international fora, for example, the UN Biodiversity Conference, He Pou a Rangi – the NZ Climate Change Commission, the Office of the Auditor-General New Zealand, and the Ministerial Inquiry into Land Use.

Ministerial Inquiry into Land Uses in Tairāwhiti and Wairoa

In May 2023, the Ministerial Inquiry released ‘Outrage to optimism.’¹⁷⁹ The report Foreword by the panel (Hon Hekia Parata, Matt McCloy and Dave Brash), stated:

“Papatuanuku is battered and bleeding, Ranginui a fury, and Tane Mahuta bent and breaking. Sedimentation from more than a thousand untreated gullies, trees, logs and slash off hills that should never be plantation planted or clear felled, waterways choked with debris flows, riverbeds aggraded, coastlines suffocated and dangerous, roads and bridges unfit, unpassable, and many broken.

Ngāti Porou tangata whenua, the people of this land, are in peril, at risk of becoming homeless and landless. We saw and listened to their grief, exhaustion, fear – of the next storm, of the next rain, and for the future. We felt called to urgent action.

We are not a third world country. We heard from experts that the situation is perilous – the time to act is now. In their estimation we have 5 – 10 years to turn this environmental disaster around. To urgently reset the future of Ngāti Porou, and the whole of Tairāwhiti.”¹⁸⁰

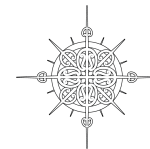
ECX creating “a true opportunity not to be missed by the government”

The MILU report highlights the importance of Toha and ECX to the region, emphasising how their innovative system-level approach brings large-scale funding directly to the frontline and motivates climate action. The report recognised that that ECX, established by Toha to support these initiatives, offers a way for investors to channel funding directly to frontline projects, equipping communities with the resources needed to achieve their goals and ambitions. In particular they noted that:

“The ECX can be a valuable new platform to help meet the needs of Māori landowners in this region. We consider that the harmonious complementarity of

¹⁷⁹ Parata, H., McCloy, M., and Brash, D. (2023, May). *Outrage to optimism: Report into land uses associated with the mobilisation of woody debris (including forestry slash) and sediment in Tairāwhiti/Gisborne District and Wairoa District*. Ministerial Inquiry into Land Uses in Tairāwhiti and Wairoa.

¹⁸⁰ Ibid.



biodiversity and commercial activities, the ownership and stewardship by indigenous people in and of their ancestral lands, and the high value bespoke environmental practices will appeal to potential biodiversity investors that the ECX is focused on attracting.”¹⁸¹

In doing so, it positions the region as a leader in sustainable, inclusive and impactful investment, benefitting investors, the government, Māori landowners, and the wider environment alike:

“The Government’s funding/investment into Māori land could then be leveraged to deliver the level and sustainability of development funding Māori land. The convergence of interests here, and at this time, is a true opportunity, not to be missed by the Government.”¹⁸²

The significance of ‘place-based’ in regional development

In 2019, the OECD regional development working paper *Indigenous economic development and well-being in a place-based context*, identified that one of the significant challenges in all OECD countries was the disconnect between regional and indigenous economies, calling for place-based initiatives as a way forward.¹⁸³

The paper identified that indigenous businesses are often connected to broader goals that go beyond making a profit. These goals include preserving indigenous languages and culture and improving living and economic conditions on ancestral lands. The paper also noted that opportunities for indigenous businesses to form partnerships or connect with the local economy are influenced by the specific characteristics and size of the regional economic landscape.¹⁸⁴ In 2025, OECD identified the need for “cutting edge evaluation tools to better inform and understand the impact of place-based policies place-based policies.”¹⁸⁵

Toha and ECX enable place-based regional and environmental development

The Toha and ECX model, and digital infrastructure, respond to these challenges at bespoke place-based levels, while also providing strong data for monitoring and evaluation by funders. For example, Fig. 2 demonstrates where each activity for disaster response is identified and mapped to place, its contributor, the number of action points accumulated, and verification status. In this example, the Raroa Whānau Trust spent 103 hours removing debris and digging silt.

¹⁸¹ Ibid.

¹⁸² Ibid. (p.27).

¹⁸³ OECD. (2019, April 10). *Indigenous economic development and well-being in a place-based context* (Working Paper). OECD Publishing.

¹⁸⁴ Ibid. (p.10).

¹⁸⁵ OECD (2025, May 19). *Place-Based Policies for the Future*. OECD Regional Development Studies. OECD Publishing.

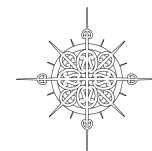
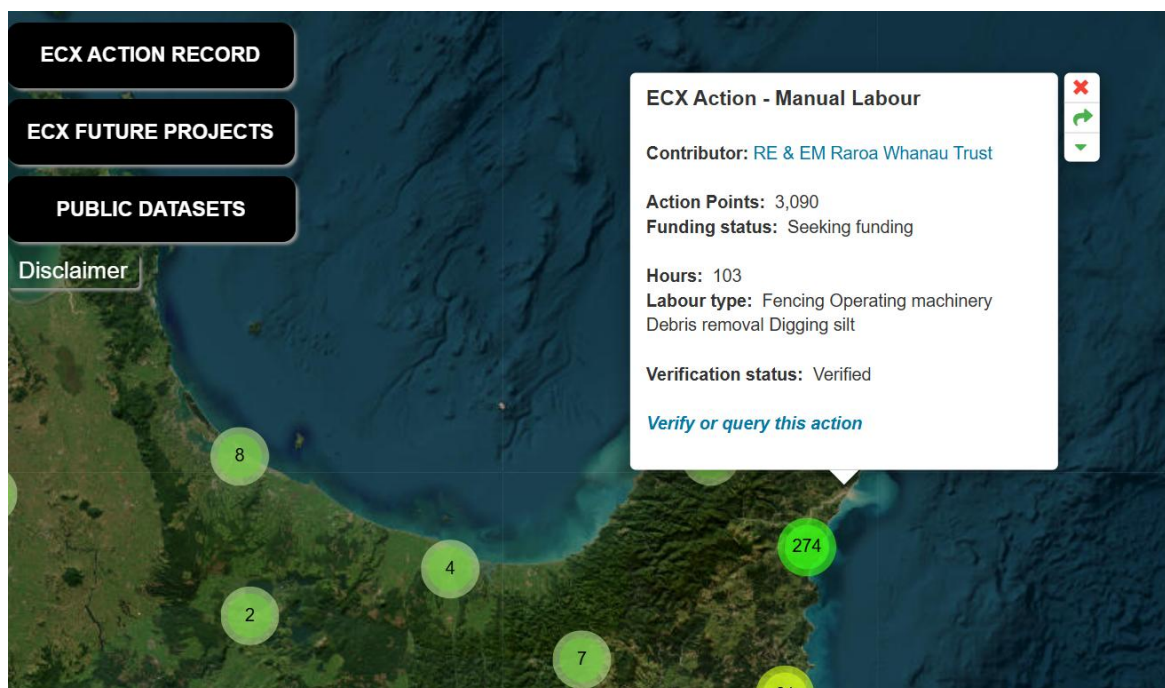


Fig 2 East Coast Exchange impact map: (see <https://ecxregistry.toha.nz/impact-map>)



(Screenshot provided by Renee Raroa)

Disaster response challenges, market failures and insights

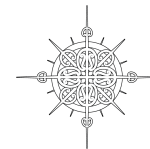
Invisible labour underpins existing disaster recovery response

Much of the voluntary disaster response work is often unrecorded, which means it is unpaid and its value not recognised. Further, existing funding mechanisms are slow, lack transparency, and lack accurate and real-time data about what is really happening for the frontline in disaster response.

This often results in unmet need and costs being carried by individuals, whānau and communities; with the real priorities of the community often invisible and excluded from centralised planning and funding. Additionally, for those individuals who do not want to claim for “things we just do,” there is no alternative process available to value or account for their generosity. This means the true value and cost of collective and localised disaster recovery response, remains unknown.

ECX makes voluntary work visible and verifies impacts

The intensive R&D carried out by Toha meant that when the cyclone struck, Toha could stand up the ECX in a matter of days. Through ECX, funding shifts from “give me money and I will plant trees” to evidence-based and verified support. The ECX infrastructure ensures payments for



verified work are made directly to frontline workers. Further, individuals can contribute their verified work reimbursements to a collective entity, should they choose to do so.

Anti-Money Laundering (AML) declarations required for each individual payout

During the disaster response resulting from Cyclone Gabrielle, for every amount paid out, everybody was required to complete AML declarations. ECX applied for, and was granted, a Ministerial exemption for amounts under \$1,000.00, including exemptions for schools, marae and charities. However, it was ECX that initiated the idea of an exemption in the first place, with funding taking a long time to come through. ECX completed all the AML requirements necessary for each person, which slowed down their processes in making disaster response payments. For ECX the risk remains that the costs may outweigh the benefits.

The experience of the ECX in disaster response highlights the need for an intermediary to make the process less burdensome for the individual. However, transferring simply the individual burden to ECX is not an efficient use of resources. This means developing AML processes that can respond to the collective role played by a trusted intermediary.

Other challenges are the potential tax implications of transactions. For example, if a person loads their time and value for certain activities, and elects to have the payout go to a collective instead, will IRD still see that as an individual income; and if they do; are individuals on a benefit going to be impacted when they are receiving no actual payment?

AML issues also arise in registering multiple-owned lands in the ETS

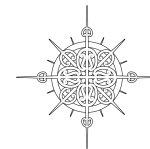
The process for Te Kautuku to access the market is slowed by the inability of the existing system to cater to a collective governance model. At present this means that all trustees participate in a lengthy registration. Significant delays can arise as AML systems do not accommodate common Māori name variations. This can lead to mismatches between legal documents and everyday names, particularly among older generations who may have a legal English name; but use their Māori name daily.

Māori land development challenges, market failures and insights

Information failure, including omission of owner expertise, leads to incorrect modelling

The impact of Māori Affairs committing to develop Te Kautuku and then withdrawing, provides an example of market failure with far-reaching impacts into the 21st century.

The decision to withdraw from a significant commitment, was directly related to the wrong financial model being used to determine profitability. The process was led by Māori Affairs and owner expertise and representation was excluded. This led to assumptions the model that applied to the flat land of the Hawkes Bay, could also be applied to the hill country of the East Coast, with no thought given to critical differences in topography and suitable land use.



The land that was returned after Māori Affairs withdrew, had been stripped of native forests, making it prone to erosion and vulnerable to significant weather events. During this period, the 1984 Labour Government also raised the Rural Bank interest rate to market rates, a determination made after the original commitment was made to Te Kautuku Trust.

The omission of local knowledge and expertise from financial modelling and management revealed a paternalistic approach by Māori Affairs which ultimately resulted in harm to Māori landowners that has proven intergenerational. This was also evident in the East Coast grape growing project, where management operated without input or expertise from local landowners — a major concern voiced by Apirana Mahuika at the venture's outset:

"A prominent farmer in the area and East Coast identity, Apirana Mahuika, said that although the development of the land for grape harvesting is excellent for intensive land usage, he was dismayed that the State, vis-à-vis the Māori Affairs Department, were actually running the show."

*"My view is the owners are not getting their dues," said Mahuika. "They own the land and therefore should have a say in the administration and running of their land; it's as simple as that. They should be on the management as of right."*¹⁸⁶

These proved to be prophetic words. During the implementation of the 'vine-pull' policy, other vineyards, many of whom had been involved in grape growing since the 1970s, took the opportunity to use their compensation to replant in better varieties.¹⁸⁷ By contrast, the owners in Tikitiki were not afforded either the information or the opportunity to make such a decision. Consequently, the East Coast wine industry for Māori never eventuated.

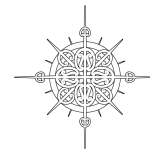
Te ao Māori and the wider context of market failure

Toha and ECX are addressing several legislative, regulatory, policy and process challenges that contribute either directly or indirectly to market failure for whānau, hapū, iwi, and Māori. These are amplified through environmental challenges and the barriers that exist for Māori regarding access to capital. Related societal costs are not accounted for, especially in areas like the East Coast and Gisborne, where poor land use and events such as Cyclone Bola have had long-term negative impacts on land and communities.

As Williams observed at a national level, intergenerational social and cultural impacts cannot be solved by either Treaty partner on their own. Only by working together as partners, can the Crown and Māori develop new and innovative ways of being, that are founded in relationships and the 'centrality of kinship.'

¹⁸⁶ Ramanos, M. (1985, April 01). The grapes of joy at Tikitiki. *Tu Tangata*, Issue 23 (p 5).

¹⁸⁷ Marlborough Wine Aotearoa New Zealand. (2023). *Wine Timeline 50 - years 1973 – 2023*. <https://www.marlboroughwinenz.com/winetimeline/tag/1980s>

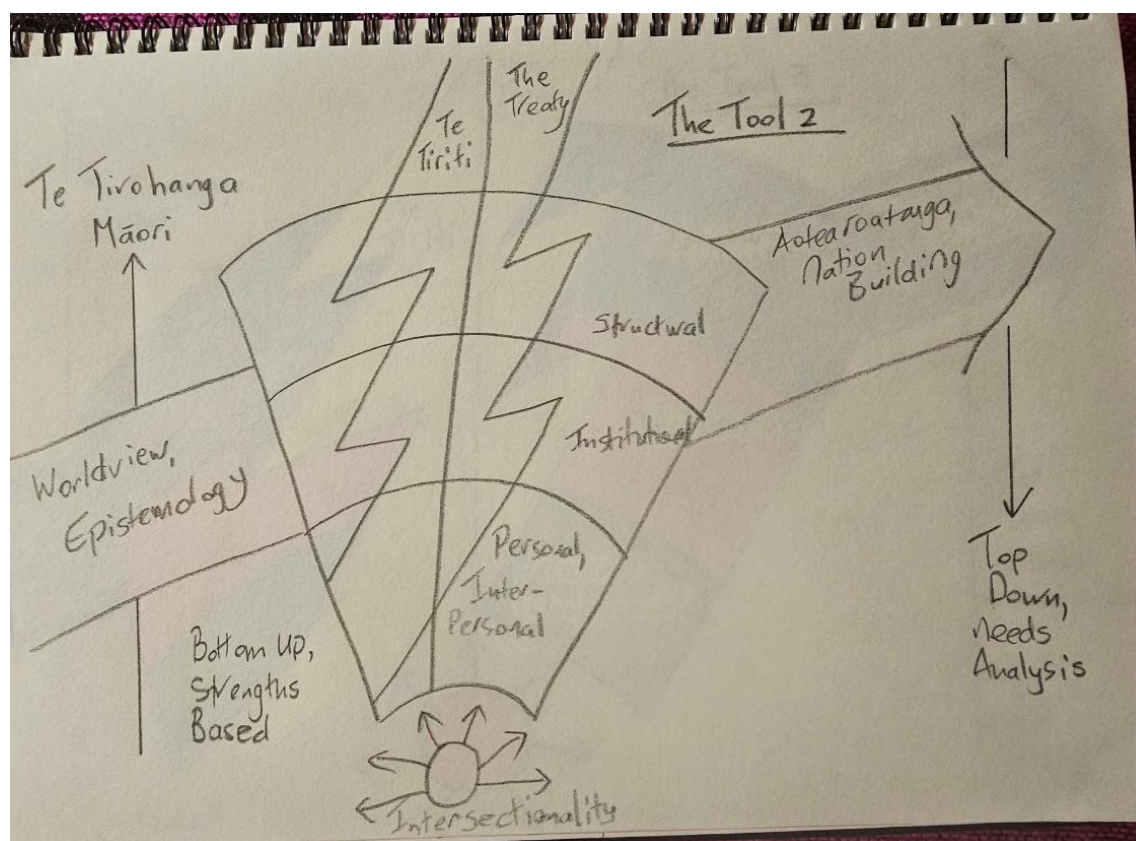


To understand the significance of the wider context where Māori also engage as te tiriti partners, this report adopts Dr Irwin's *Framework to Interpret Aotearoa tangā, Nation Building*. Dr Irwin's research has focussed on nation-building between te tiriti partners for many years.

The following conceptual framework interprets the Tiriti o Waitangi partnership across three levels of analysis to provide a tool towards nation-building: structural (the machinery of government); institutional (the central and local government institutions that implement the machinery of government); and the interpersonal level (all New Zealanders).

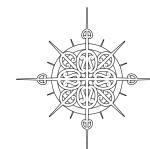
Through te tiriti partnership, the Māori worldview (strengths-based and ground up) engages at the structural machinery of government level, to then flow through to the institutions; then the interpersonal level, where the impact of implementing policies, is felt.

Figure 3: A Framework to Interpret Aotearoa tangā, Nation Building¹⁸⁸



This level of analysis is helpful to understand the inter-related structural, institutional and interpersonal nature of these challenges and barriers. It highlights that the interpersonal impacts

¹⁸⁸ Irwin, K.G. (2025) *The Papatūānuku Paradigm, A Gender Analysis Toolkit from a Te Ao Māori Lens*. Commissioned by The Coalition to End Women's Homelessness. Wellington: Kathie Irwin and Associates and the Coalition to End Women's Homelessness.

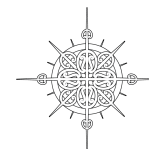


of market failure have their origins at the structural and institutional level, which are inter-related. The level of analysis identifies where the machinery of government impacts or influences the market (directly or indirectly), resulting in several barriers and related market failures for whānau, hapū, iwi and Māori.

Many of these barriers reflect a lack of alignment with, or support for, Māori values, collective decision-making, and holistic approaches. These challenges frequently result in Māori knowledge being overlooked; limited access to capital for Māori; exclusion from investment opportunities and increased economic and social marginalisation of Māori communities.

Figure 4: Te Aotearoa tanga: challenges and related market failure impacts

Level of analysis	Barriers/challenges	Related market failure
Structural	Dominance of western financial logic in market theory and development.	Māori knowledge and expertise are not visible in financial systems; significant information failure occurs; the value of holistic systems is unrealised, and NZ's economy is impacted.
	Legislation: e.g. TTWM Act.	Legal constraints lead to limited Māori access to capital and credit access. Legal barriers contribute to downstream effects where investments in alternative social and environmental ventures are discouraged. Te ao Māori collective values and consensus decision-making are not supported. Māori landowners and communities are locked out of investment and regeneration opportunities.
	Policies e.g. ETS.	Deforestation of pre-1990 exotic forests, returned to Māori in Treaty settlements is very costly due to carbon liabilities. This results in a disproportionate impact on Māori.
Institutional	Reliance on third party delivery in the absence of collective participation.	Collective inputs and shared decision-making not enabled.
	Institutional rigidity; lack of collaboration; low levels of trust in community decision-makers.	Key data or information is missing from decision-making. Misalignment between policies and community needs occurs, with the lack of flexibility for, and trust in, community decision-makers creating further inefficiencies, and increased loss of trust by community.



	Inflexible climate change and disaster response funding processes.	Voluntary work is unrecognised, undervalued, and real-time and accurate data is unknown.
	Siloed information leads to poor “risk” & “profitability” models e.g. incentivising pine trees.	Inadequate information and data lead to inefficient risk and profitability models and invisibility of economic, cultural, social, and environmental benefits and risks. Incomplete contracts frequently arise. Over-reliance on conventional climate ‘solutions’ leads to further risk.
	Siloed digital infrastructure.	Financial and digital exclusion of Māori, and isolated rural communities. Increased loss of opportunity, innovation, and economic, social and environmental benefits.
	Regulatory processes burdensome and inefficient e.g. AML.	Impacts on collective entities mean the cost of compliance may outweigh the benefit.
Interpersonal (resulting from structural & institutional impacts).	Lack of access to capital.	Increased economic and social exclusion of Māori individuals and communities leads to increased financial pressure on whānau and communities.
	Low levels of financial literacy.	Depopulation of small rural communities and loss of vital skills and human capital.
	Increasing mistrust in government and the financial system.	Financial literacy gap increases vulnerability to riskier alternatives.

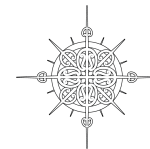
Figure 4 shows how the machinery of government has an overarching influence – directly and indirectly – on the structural, institutional and interpersonal challenges and barriers in the market for Māori. However, it can also provide opportunities to leverage change in institutional settings.

Leveraging digital technology to address structural and institutional barriers

In 2009, Dr Irwin noted:

“Our history is as replete with broken promises as any other. The Treaty partners have challenged, contested, negotiated, mediated and settled their way into the third millennium. We have not always got it right in this country. But history will show that there have been major investments in an upward trajectory of social change.”¹⁸⁹

¹⁸⁹ Families Commission. (2010). *Whānau Strategic Framework 2009 – 2012*. Families Commission. Wellington.



With new developments in data technology, Aotearoa NZ is now well-placed to take another step on this trajectory, by supporting the emergence of new systems that can identify and invest in the value created by local communities. Further, we can do so, confident that as a nation we have the knowledge and technology to develop, test, and implement innovative solutions, enabled by different institutional arrangements.

However, such innovations need to be supported through structural and institutional settings that enable and scale up these developments (see next section *Findings, and insights towards bridging worldviews*).

Discussion: summary

At the outset we sought to understand Toha's experience as a Māori Fintech in their pre-licensing context. We wanted to understand the barriers, challenges and potential interdependencies, solutions and opportunities that existed for them. We also sought to understand the role of te ao Māori values in Toha Network's business model and ways of working and the context and circumstances that led Te Kautuku to become Toha Network's pilot project.

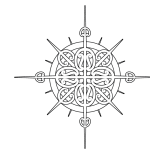
In summary, Toha's participation as a Māori Fintech reveals a complex web of inter-dependencies, barriers, challenges, and opportunities. Toha Network was established in response to enduring cultural, legislative, and systemic barriers that have historically limited Māori participation in the financial system. Toha is creating a nature-positive, values-driven business model that supports inclusive prosperity and environmental stewardship.

The context that led Te Kautuku to work with Toha Network as a pilot

Te Kautuku's journey towards Toha Network begins in the legislative and regulatory forces that have shaped the cultural, economic, social, and environmental wellbeing of East Coast Māori landowners and their communities, from the 19th century to the 21st Century. This was compounded by Ngāti Porou's contribution to the war effort, that had a devastating and ongoing impact on the whānau and hapū of many small rural communities. These impacts are further magnified by government policies and interventions that created conditions whereby East Coast Māori landowners today, have few choices but to lease out their land to others.

By supporting inter-related initiatives such as biodiversity payments, erosion control, and diversified revenue streams, Toha enables Māori landowners like Te Kautuku to navigate regulatory hurdles, unlock new incentives, and build a land-based economy that reflects both environmental stewardship and community well-being. The pilot project is a proactive step towards overcoming entrenched systemic challenges. It demonstrates the innovative use of digital infrastructure to support the growth of new relational, regional, and land-based ecosystems, in partnership with Te Kautuku. As Rangi Raroa stated:

"Without Toha, Te Kautuku would be in the same position as other land blocks, forced to lease out for grazing, further alienating the whānau from their ancestral lands".



“To this present day we are still debt-free (other than seasonal debt) and our 'name is still on the gate’.”

The role of te ao Māori values within the Toha Network

This case study highlights how the collective strength of whānau, hapū, iwi and community became a catalyst for generating and sustaining economic opportunity, made possible through the involvement of a connected third party (Toha Network and ECX).

Te ao Māori values play a central role in shaping the Toha Network’s philosophy and approach. Toha and ECX actively incorporate Māori principles into governance and operational models. This fosters inclusive participation and empowers Māori landowners to utilise their existing knowledge, resources, networks, and practices to collaborate more effectively.

The context and background for the development of Toha Network

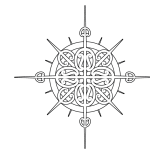
The origins of Toha Network lie in historic, contemporary and systemic barriers, and related market failure barriers to Māori participation as Māori in the finance system. Toha Network has emerged in response to these challenges, grounded in values that are embodied in the ‘Economy of Mana’—where economic activity is measured by inclusive prosperity, spiritual connection, and collective wellbeing—in contrast with profit-centric financial systems. To do so, Toha has had to build a whole new business model and data infrastructure.

This innovation extends beyond simply creating new business products or developing unique business models. Instead, Toha and ECX are fundamentally rethinking and redesigning the entire system — encompassing the market, regulatory frameworks, community interactions and digital infrastructure — so that all parts work together more harmoniously. This holistic ecosystem approach considers how different elements such as legislation, cultural values, environmental stewardship, and collective well-being can be integrated to create a financial environment that better supports Māori aspirations and inclusive prosperity.

In designing a new form of community exchange, new forms of value arise that need to be recognised. As a result of these experiences, Toha discovered that the inclusion of a ‘third space’ or platform was critical for communities to be able to organise under new market rules.

Potential inter-dependencies, challenges and opportunities

Interdependencies arise from the need to balance the application of traditional Māori values and collective ownership models with mainstream financial practices. This has created complexities for Māori providers and consumers needing to access funding, manage assets, or establish business models that are conducive to a Māori worldview, as conventional financial institutions have been unable, or too slow, to recognise and accommodate te ao Māori approaches. This has created complexities for Māori providers and consumers to access funding, manage assets, or establish business models that are conducive to a Māori worldview.



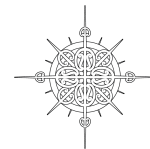
Toha has experienced these challenges as well as the difficulties common to early-stage, impact-driven start-ups, such as limited resources, capacity constraints, and the difficulty of clearly communicating their value proposition to regulators, investors, and customers.

Market failure and other barriers

This is further compounded by a range of barriers that impact the market for Māori. These range from structural, legislative, and policy regulations, to institutional challenges such as disaster responsiveness, regulatory processes, and siloed infrastructure processes. These challenges contribute to negative impacts at the interpersonal level, for example access to capital, potential loss of control over personal data, and market exclusion. The siloed regulatory, and Māori Land Court processes which only exist for Māori landowners, make compliance an exceedingly complex and slow process, often taking years to progress. This inefficiency is incompatible with growth, hindering Māori landowners from leveraging collectively held assets.

Toha's response to some of the impacts of market failure, has been to establish a digitally enabled smart contract, which safeguards data, by enabling market participants to exercise their authority over how data and knowledge are managed, shared, and accessed by others. For example, individuals had the ability to load their own claims in real-time, choose whether to pass on their payments, and to see on a map of the region where all their work was making a difference. All of these factors helped people to have ownership over, and feel connected to, the disaster response and their contribution to it.

Further opportunities exist for Toha to unlock and 'stack' new revenue streams — such as biodiversity payments, erosion control, and forest-based food production — to build a more resilient and diversified land economy. By collecting impact data and advocating for market rules that align with public interest, Toha is helping shift the market and related policies, towards changes that support Māori aspirations inclusive of environmental sustainability.



Findings, and insights towards bridging worldviews

Te Tiriti o Waitangi is foundational in addressing and overcoming barriers

Te Tiriti o Waitangi plays a foundational role in addressing and overcoming structural, legislative, policy, institutional, and interpersonal barriers.

It provides a framework for collaborative problem-solving and shared decision-making between Māori and the Crown. By honouring the Treaty partnership, there is potential to redesign financial systems, policies, and institutions to be more inclusive, equitable, and reflective of te ao Māori values. Te Tiriti o Waitangi provides a practical framework for ensuring Māori knowledge and expertise are visible and valued in the financial system, collective participation is enabled, and that sustainable economic and social outcomes for all individuals and communities in Aotearoa New Zealand are supported.

Te ao Māori values and digital infrastructure enable new innovations

Toha Network has had to address three over-arching themes that are complex and interwoven: investment for Māori land; climate change and regeneration; and the overarching issue of a marketplace, shaped by Western financial logic, that does not make visible te ao Māori values and collective decision-making.

Applying te ao Māori values redefines barriers as challenges to be overcome

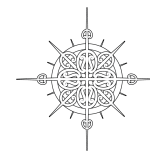
By embedding te ao Māori principles, fostering innovative partnerships, and embedding Māori Data Sovereignty into their business model, Toha enables Māori landowners to overcome regulatory challenges, diversify land-based revenue, and assert self-determination, while advocating for broader market reforms that recognise collective benefits.

Recognising the effectiveness of collective processes

Consensus-building processes and their inherent value are often overlooked, creating barriers to collective participation in the market. To enhance Māori participation in the finance market, regulation needs to evolve to better accommodate collective participation, and te ao Māori values that drive decision-making, innovation and entrepreneurship. Financial innovations designed for collective outcomes need a regulatory framework that appropriately considers relevant motivations and risks.

Regional and relational ecosystems reduce regulatory complexity

This case study reveals that replicated processes can create unnecessary, inequitable regulatory complexity, with administrative burdens on whānau, hapū, iwi and collectively owned Māori entities (for example AML requirements). In contrast, Toha Network is promoting an ecosystem



approach, where regulatory and administrative processes are improved by recognising the collective involvement of communities.

Instead of focusing solely on individuals, the system acknowledges group participation and ensures that the roles people play – often across several organisations within the same region – are properly identified and verified. This helps to streamline compliance, fosters collaboration, and reflects the interconnected nature of community activities, making regulatory oversight more effective and meaningful for all involved.

Toha Network and ECX model and digital infrastructure enables:

Benefits to Māori that exceed investment returns

Toha Network represents a paradigm shift. Through new digital infrastructure, Toha Network is redefining barriers and failures as challenges to be overcome through enabling markets to recognise te ao Māori values such as *whanaungatanga*, *kaitiakitanga*, *manaakitanga*, *utu*, *mana*, and *community generosity* – not as social values – but as ‘sources of measurable, investable impact.’¹⁹⁰

New pathways to access capital on multiple-owned land

A significant step forward is that Toha’s digital infrastructure enables separation of the data, and its value, from the ownership of the land from which the data is gathered. The concept of data being used as collateral rather than land, aligns with te ao Māori values and is potentially significant for addressing barriers for Māori access to capital. How this works can be seen in the example with Air New Zealand and Te Kautuku.

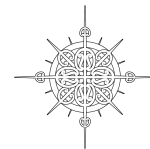
Te Kautuku and Air New Zealand

Kaimahi at Te Kautuku make a pledge to undertake nature-based work and to collect associated data. The data is collected via data templates that the East Coast Exchange has co-developed with Toha Network. When pledged activities are undertaken and milestones are met, the proceeds from sales of MAHI (digital tokens) are disbursed to Te Kautuku. In this pilot, *kaitiakitanga* is activated and linked to systems where environmental work supports ecological and financial goals, and links to global environmental directions.

Opportunities for less extractive land use

As an economic value, data provides an alternative means of funding that is not reliant on extracting the land’s resources to fund development, as the value lies in the data, not the resource extracted. Indeed, extractive and/or unsustainable environmental practices that deplete natural resources, may be another type of risk to the value of the data as a growing income stream.

¹⁹⁰ Interview with Nathalie Whitaker, 30 April 2025



Opportunities to redefine risk

Not only does the separation of data from land ownership provide Māori landowners with the potential opportunity to finance development without jeopardising their land, it frees the ownership of multiple-owned Māori land from the burden of immediate classification as a risk. Further, it affords communities greater control.

Communities to ‘stack’ separate units of value

Further, this innovation enables communities to capitalise the value of the original data asset through “stacking,” which allows for separate verification and investment for individual environmental benefits. For instance, planting native cover supports carbon sequestration, biodiversity, wildlife restoration, and water quality—each of which can be claimed as an investable asset.

The development of ‘third space’ thinking

Innovative applications of data can power the growth of new platforms to enable new forms of exchange, providing a permanent platform for communities to organise under new market rules. Designing a new form of community exchange has meant creating new rules that enable new forms of value to be recognised, such as the role of the community navigator.

A navigator is essential in bridging systems and worldviews

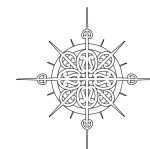
The community navigator role is essential in building trust with the community and to act on behalf of whānau and hapū in navigating financial and regulatory systems. Navigators ground decision-making close to the land, ensuring representation is connected, accountable, and place-based. The navigator demystifies processes, infrastructures, regulatory and legislative complexities and requirements, while translating between Māori and Western worldviews:

“A navigator needs to have a foot in both worlds to build the bridge. The resourcing is inequitable, a constant push to bring worldviews together in the dataspace, which is at the middle of the design” (Renee Raroa).

Navigators interact with officials, systems, and organisations, quickly learn new information, and share it effectively. They understand their whānau, hapū, iwi, and community, picking up on subtle communication cues. For example, during the disaster response, the navigator reassured hesitant individuals that the data system was independent and would not share personal details.

Working with the FMA

Toha Network is an example of how the active application of a Māori worldview is inherent to the design and delivery of a Māori business model, with benefits to Māori and non-Māori. Māori values are inextricable drivers, determinants and definitions of their success.



Low-value exemptions and innovations like the sandbox model are instrumental

The Chair of ECX identified the FMA's sandbox trial, as instrumental in enabling businesses to access guidance and low-value exemptions in a controlled environment to test new innovations, without immediately facing the full burden of established regulations. Further, Parliament's Finance and Expenditure Select Committee inquiry into banking competition,¹⁹¹ identified FMA's regulatory sandbox trial as a key innovation. The Committee's recommendations to address barriers preventing competition in banking and impact of the regulatory environment included the following recommendation:

***"Broaden the "regulatory sandbox" trial** We recommend the Financial Markets Authority broaden its "regulatory sandbox" trial and explore a single licensing model to cut red tape for innovative financial service."*¹⁹²

While this recommendation is highly relevant to the ongoing development of initiatives like Toha Network and the ECX, the FMA would need to ensure any model can accommodate and ensure that Māori knowledge, values, customs and practices are applied to Māori business models. Otherwise, existing barriers to Māori providers will remain unaddressed, and additional ones will likely be created.

The sandbox also provides an environment in which the FMA can test and critique its own capability to recognise, understand, and accurately interpret business models that align with a Māori worldview. To effectively license, supervise, and monitor Māori business, and foster opportunities for increased business and product offerings, the FMA must be able to authentically and credibly apply Māori cultural capabilities and worldview expertise.

Structural and institutional challenges and market failure

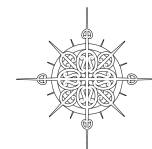
A dominance of 'Western financial logic' in market theory and development

Western worldview dominance in New Zealand's financial and government systems shapes legislation and policies that limit Māori access to capital and credit and restrict Māori innovation and investment. Institutional rigidity contributes to siloed data. This affects data quality, creates information gaps, and undermines contract completeness and regulatory compliance. It also causes misalignment between policy settings, growth drivers, and the needs of consumers and providers.

The interpersonal impacts of these barriers contribute to increased economic and social exclusion of Māori providers and consumers, leading to increased financial pressure on whānau and communities. The resulting lack of opportunity in rural Māori communities contributes to

¹⁹¹ Finance and Expenditure Select Committee (August 2025). *Final report, Inquiry into Banking Competition*. (pp. 5-6). Parliament.

¹⁹² Ibid (p 5)



their depopulation and loss of vital skills and human capital, with the financial literacy gap increasing vulnerability to riskier alternatives.

Despite efforts to address some of these barriers — such as legal reforms (Te Ture Whenua Māori Act 1993, Anti-Money Laundering and Countering Financing of Terrorism Act 2009) and targeted initiatives to improve Māori access to finance and support Māori businesses — further focussed effort is required to address these barriers and enable Māori providers to innovate and operate effectively in New Zealand's financial markets.

Towards giving effect to insights that bridge worldviews and market frameworks

While there are significant and systemic structural and institutional barriers, improved digital infrastructure creates opportunities for markets to develop in ways that acknowledge and reward the positive contributions of communities. Nevertheless, for these advancements to succeed and expand, they need to be supported through structural and institutional settings that enable and scale up these developments. For example:

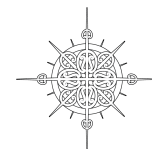
Recognising the public good aspects of digital public infrastructure and initiatives like Toha such as environmental sustainability, technology spinoffs, community self-sufficiency, strengthened regional eco-systems that produce collective, long-term benefits, and value-added trade in primary sector exports, warrant support and regulatory relief to improve viability and to increase offerings, scalability and impact.

Addressing regulatory challenges to enable markets to recognise collective actions as 'sources of measurable, investable impact'¹⁹³ for collective value, and to support the sustainable growth of digital infrastructure initiatives.

Promoting the adoption and expansion of innovative models such as the FMA regulatory sandbox and strengthening collaboration between start-ups like Toha and regulatory authorities, will provide regulatory flexibility and reduce compliance burdens to enter the market, especially in disaster response scenarios. This includes working with regulators and the Māori Land Court to streamline AML and other compliance requirements, to avoid stifling innovation and entrepreneurship, particularly for Māori landowners and collective or community-led initiatives.

Establishing data standards that define how collective participation is recorded and reported, to reflect Māori concepts of collectivisation, and support fair engagement in financial markets. For example, a data standard that recognises Māori collectivisation – defining how collective participation is recorded and reported — so that Māori contribution

¹⁹³ Interview with Nathalie Whitaker, 30 April 2025.



is visible and valued in the market. Collective engagement and participation foster holistic and place-based financial innovation and economic development.

Implementing Indigenous Data Sovereignty principles in developing the above data standards that make te ao Māori values and knowledge visible and valued in financial markets, such as standards for recording and reporting Māori collectivisation and collaborative decision-making.

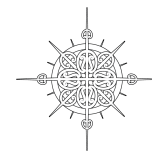
Fostering third space thought leadership and platforms to enable fair interaction between communities, government, and capital by ensuring secure and transparent data flows and leveraging trust. Transparent data-sharing fosters collective participation and enables accurate recognition of value added to the eco-system.

Designing systems that accommodate consensus-based governance and reduce unnecessary administrative burdens on collective structures, such as hapū and iwi, but also Māori landowners, trusts and legislated entities such as Post Settlement Governance Entities (PSGE's). Policy justifications should consider the role of Te Tiriti and Tikanga Māori to empower regulated and trusted intermediaries to fulfil regulatory requirements on behalf of collectives, ensuring collective governance and authority is not eroded.

Promoting the development of comprehensive strategies for scaling digital infrastructure and Indigenous Data Sovereignty initiatives that ensure robust local control and oversight. This includes investing in the expansion of local data centres and decentralised storage solutions to meet growing demand and enhance community trust.

“If being more holistic and collective is treated as more risky, then we must design systems that can connect collective governance, regulatory expectations, and market recognition. This is ‘third space’ thinking.”

(Nathalie Whitaker)



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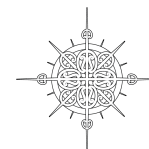
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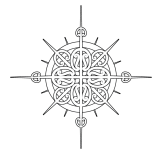
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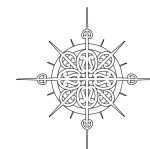
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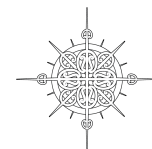
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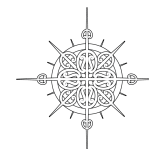
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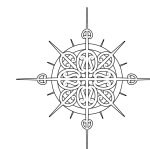
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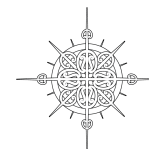
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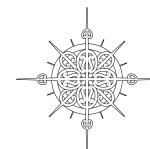
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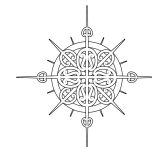
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