

TESTING A VALUES-CENTRED DECISION-SUPPORT TOOL FOR MĀORI AGRIBUSINESS



JOHN REID, MATTHEW ROUT, JASON MIKA, ANNE-MARIE GILLIES, DIANE
RUWHIU & SHAWN AWATERE

ORIGINALLY PUBLISHED IN: Report for Our Land and Water National Science Challenge, Report 4

This report was produced as part of the Our Land and Water National Science programme Whenua, Life, Values. The project team affiliations are:

Matthew Rout: Ngāi Tahu Research Centre

John Reid: Ngāi Tahu Research Centre

Jason Mika: School of Management, Massey University

Anne-Marie Gillies: Te Puna Ora o Mataatua

Diane Ruwhiu: Department of Management, University of Otago

Shaun Awatere: Senior Kairangahau Māori, Manaaki Whenua

PRIORITIZATION TOOL PEER REVIEW BY:

Dr Jay Whitehead, Agribusiness Group LTD

Introduction

As part of the Our Land and Water National Science Challenge Programme, the project Toitu te Whenua, Toitu te Koira, Toitu te Tikanga – Whenua, Life, Values (from here on WLV) – is focused on creating a prioritization tool for Māori land trusts and incorporation engaged in farming. The tool allows Māori agribusinesses to gauge their current levels of capacity, and prioritize actions for achieving goals. The tool was developed through a detailed literature, in-depth interviews, a quantitative survey, the development of a pilot tool, and the testing of the tool with case studies. This report provides a brief outline of the development process used for developing the tool followed by case study results.

Developing the pilot tool

A full explanation of the methods used in developing the tool can be found in reports one to three that precede this report. However, to provide a brief overview, it was first determined through a detailed literature review, in-depth interviews, and quantitative survey, that Māori agribusiness's generally hold four value-drivers that motivate action: kaitiakitanga; whai rawa; whanaungatanga; and manawhakahaere. These are outlined in Figure 1 below.

Figure 1. Māori Agribusiness Value-Drivers

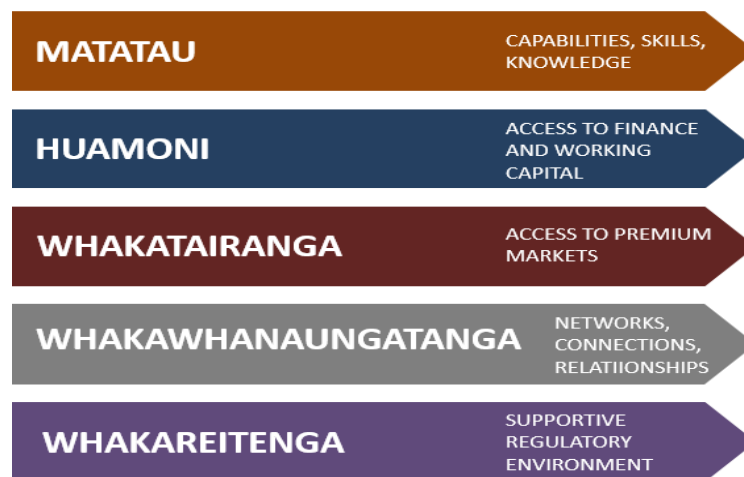


It was hypothesised in the research that the value-drivers of Māori agribusiness would likely conflict with one another. For example kaitiaki environmental and social drivers might conflict with whai rawa, or financial imperatives. However, our research showed that these value-drivers work in synergy, that is emphasis on social and environmental drivers leads to improved financial outcomes. These results can be found in Report Two. The finding made developing the prioritization tool simpler because Māori agribusinesses would not need to examine at trade-offs

between drivers in order to prioritize their goals and actions, rather they would need to analyse the levels of the agribusiness investment across kaitiakitanga; whai rawa; whanaungatanga; and manawhakahaere domains, and seek to increase investments in areas where there were deficits. For example, if there was significant emphasis on whai rawa, but little emphasis on whanaungatanga, the analysis would suggest that increasing investment in the social sphere would be warranted.

Secondly it was determined that there were five attributes that permit Māori agribusinesses to fulfil these values. We refer to these as Māori agribusiness enablers. The enablers are: matatau (knowledge and skills); huamoni (finance and working capital); whakatairanga (market access); whakawhanaungatanga (networks, relationships, and connections); and whakareitenga (supportive regulations). The enablers are outlined in Figure 2 below.

Figure 2. Enablers of Māori Agribusiness



Through identifying the key value-drivers and enablers of Māori agribusiness the research team was able to form what we refer to as a Pillars and Domains Matrix. This matrix is outlined in Figure 3 below, where the key value-drivers of Māori agribusiness appear horizontally, while the enablers appear vertically. A range of ‘enabling’ actions that will support Māori agribusiness in meeting their values appear in the intersections between values and domains.

Figure 3. The Pillar-Domain Matrix

Enabling Domains	Value Pillars			
	Kaitiakitanga	Whai Rawa	Whanaungatanga	Manawhakahaere
Matatau (Skills & Knowledge)	1a Building skills in resource management	2a Building skills in farm production and management	3a Building whanau skills in key areas of agribusiness	4a Building Trustees governing skills
Huamoni (Finance & Working Capital)	1b Investing in environmental measures	2b Investing in farm efficiency and product quality	3b Investing in whanau connections and belonging	4b Investing in specialist advice for governors in complex areas
Whakatairanga (Market Access)	1c Build environmental brand for markets	2c Establish channels to premium markets	3c Coordinate value-chain operations with other Māori farms	4c Increase governance focus on product quality
Whaka-Whanaungatanga (Networks and relationships)	1d Increase environmental efforts with neighbours	2d Maintain or improve relationships between staff	3d Increase trust and connections amongst whanau	4e Build connections and trust amongst Trustees.
Whakareitenga (Regulatory Environment)	1e Engage with regional council plans, consents, & regs	2e Proactively engage with regulatory requirements	3e Building whanau knowledge of legal structures (e.g. Māori land regulations)	4d Build Trustees understanding of legal responsibilities

The prioritization tool

The pillar-domain matrix provided the basis for the development of the prioritization tool. Although the pillar-domain matrix identifies all of the key actions that Māori agribusinesses need to take to fulfil their values, it does not determine which actions Māori agribusinesses should prioritize or take first. To understand this a tool and method needed to be developed that would enable Māori agribusiness to ascertain their current capacity across the domains or, in other words, the level of their: skills; access to finance; premium market access; relationships and networks; and ability to deal with regulatory compliance. Through identifying areas where a Māori agribusiness has high, moderate, and low capacity, it is then possible to determine priority areas where capacity needs to be developed or built.

Consequently, an online tool was developed within the existing online Māori sustainability assessment application *Koburatia* (see: <https://kouratia.nz>). The tool enables Māori agribusinesses to establish an account and enter data regarding their current levels of capacity across the domains. After entering data the agribusiness is then able to generate two infographics. The first graphic

outlines their current capacity levels, while the second graphic outlines the priority areas where capacity should be built.

The tool also enables Māori agribusiness's to enter data that determines the weight the business places on each value – that is how much they value kaitiakitanga; whai rawa; whanaungatanga; and manawhakahaere in relation to each other. This weighting process changes the priority areas. For example, if kaitiakitanga (environmental) values are valued more strongly than whai rawa (financial) values then more emphasis will be placed on building capacities that improve environmental outcomes. However, the tool also allows the agribusiness to enter data that weights the values based on how the agribusiness is currently performing across each value. For example, if the agribusiness is performing very poorly from a kaitiakitanga (environmental) perspective in relation to a whai rawa (financial) perspective then more emphasis will be placed on building capacity to improve environmental outcomes. In this way the tool balances and weights values, and performance in relation to those values, to determine the priority areas where capacity needs to be built.

Data is entered into the prioritization tool through a simple 28 question multi-choice survey that is emailed to the Trustees, or Directors, of the Māori agribusiness via the Kohuratia website. The survey is outlined in Figure 4 below. The questions are grouped under each value-pillar and begin with a question asking how important they consider a value to be. A second question determines the current status of the agribusiness in relation to each value. This is followed by five more questions that gauge the business's ability to fulfil the value according to its capacity to take the enabling actions outlined in Figure 3.

Within the survey a multi-choice answer is given for each question using a simple 1 to 5 Likert scale. This 1 to 5 scale is used to weight values, weight performance in relation to those values, and identify low capacity areas where action is required¹. The lower the score in a particular capacity area the greater the need for action.

¹ For example, referring to Figure 4 below, if the value (2A) of Whai Rawa is considered important and given a score of 4.1 out of 5, it will be given a weighting of 1.22, which is 5 (total possible score) divided by 4.1 (score given). If the current status (2B) of Whai Rawa is given a score of 3, indicating that the business is operating at breakeven, the score will be given a weighting of 0.6, which is the score (3) divided by the total possible score (5). All of the answers to the capacity

Figure 4. Survey to Weight Values, Status, and Levels of Capacity				
Enabling Actions		Questions to Ascertain Capacity		Score
KAITIAKITANGA				
WEIGHTING QUESTIONS				
1A	Weighting the importance of kaitiakitanga	How important is maintaining and enhancing the mauri (health) of the farm's whenua (land) for you?	Extremely Important (5) to Not Important at all (1)	
1B	Weighting the current status of kaitiakitanga	What is the current overall mauri (health) of the farm's whenua (land)?	Strongly increasing (5) Steeply declining (1)	
GAUGING CAPACITY QUESTIONS				
1a	Building skills in resource management	Does your organisation have the skills and knowledge necessary to maintain the mauri (health) of the farm's whenua (land)?	All of the skills (5) None of the skills (1)	
1b	Investing in environmental measures	Is enough money invested in improving the farm's environmental performance (e.g. through riparian planting, surveying, training etc.)?	Strong investment (5) to No investment (1)	
1c	Build environmental brand for markets	Does your organisation communicate your farm's environmental credentials to consumers through branding or marketing to add value to your products?	Full communication (5) to No communication (1)	
1d	Increase environmental efforts with neighbours	Does your organisation work collaboratively with other farmers, shareholders or locals to maintain and increase the mauri of the whenua (land) and awa (waterways)?	Full collaboration (5) to No collaboration (1)	
1e	Engage with regional council plans, consents, & regs	Does complying with the Resource Management Act or regional plans improve the environmental performance of your farm (e.g. through reducing inputs, increasing operational efficiency, increasing outputs etc.)?	No improvement (5) to Full improvement (1)	
Description: The focus of the kaitiakitanga pillar is understanding the environmental sustainability issues across five key themes: skills and knowledge of environmental issues and strategies to improve them, access to and use of finance to improve environmental conditions, relationships within and beyond the farm, and the influences of legislation and regulation on environmental factors. The purpose of these questions is to determine how operational sustainability is impacted by the board and management's capability, whether enough money is being spent on environmental improvement strategies, if a farm's environmental credentials are being used as a means of gaining premium prices, and capacity to improve environmental				

questions will be adjusted according to these weightings. Consequently if a score of 3 is given for farm skills and knowledge (2a), this score will be adjusted by multiplying it by the value weighting (1.22) multiplied by status weighting (0.6). This is represented in the following formula: $(2a \times 1.22) \times 0.6$, which gives a score of 2.2 for 2a - skills in farm production and management. The lower the score given in a particular capacity area the greater the need for action in the area.

management through working across farms in a catchment. Ensuring that a farming operation is sustainable is a core component of tikanga Māori, and meeting or exceeding the minimum requirements can also provide a useful means of gaining premiums; however, this requires both the necessary financial capital and the knowledge and insight.

WHAI RAWA

WEIGHTING QUESTIONS

2A	Weighting the importance of whai rawa	How important is it to make as much money as possible from farming?	Extremely Important (5) to Not important (1)
2B	Weighting the current status of whai rawa	How profitable is your farm?	Extremely Profitable (5) to Making heavy losses (1)

GAUGING CAPACITY QUESTIONS

2a	Building skills in farm production and management	Does your organisation have the necessary governance, managerial and operational skills and knowledge to successfully run the farm?	All of the skills (5) None of the skills (1)
2b	Investing in farm efficiency and product quality	To what extent do you invest in improving efficiency (e.g. reducing inputs, streamlining operations) and diversifying farming operations (e.g. forest plantations, beehives, tourism ventures)?	Heavy investment (5) to No investment (1)
2c	Establish channels to premium markets	Do you have access to processors, retailers and/or markets that pay more for premium products (e.g. high quality, sustainable, ethical etc.)?	Excellent access (5) to No access (1)
2d	Maintain or improve relationships between staff	Do your farm staff have positive, trusting relationships with each other and management?	High trust (5) to Low trust (1)
2e	Proactively engage with regulatory requirements	What is the impact on profitability of complying with the Resource Management Act (e.g. planting riparian strips etc.) and the Te Ture Whenua Māori Act (e.g. communicating with shareholders)?	Highly positive (5) to Highly negative (1)

Description: The focus here is on examining the economic development factors of your farming operation across five key themes: skills and knowledge, access to and use of finance to increase efficiency or diversify operations, connections and capacity across the supply chain, relationships within and beyond the farm, and the influences of legislation and regulation on profitability. These questions will help assess the capabilities of farm management and employees in driving development, the standards of agricultural production and whether options to diversify into other areas of primary production (e.g. forestry or honey) or beyond (e.g. tourism) have been or could be taken, the market accessibility and processing capacity your farming operation is able to access, and how the RMA and Te Ture Whenua Act they help or hinder economic development. Financial stability and profitability are not just critical for the ongoing success of a farming operation but they are also essential for fulfilling the other many responsibilities Māori agribusinesses have and understanding the different constraints and opportunities in this section will set the direction of overall strategies provided by this tool.

WHANAUNGATANGA

WEIGHTING QUESTIONS

3A	Weighting the importance of whānaungatanga	How important is the whenua (land) as a place of connection, belonging, and identity?	Extremely important (5) to Not (1)
-----------	--	---	------------------------------------

			important at all (1)
3B	Weighting the current status of whānaungatanga	How connected do you think current whānau/owners feel toward the whenua?	Highly connected (5) to Not connected at all (1)
GAUGING CAPACITY QUESTIONS			
3a	Building whanau skills in key areas of agribusiness	How much effort is made to train and/or employ whānau through the business?	Full effort (5) to No effort (1)
3b	Investing in whanau connections and belonging	How much investment is made to support connections and relationships with whānau/owners (e.g. improving knowledge of whakapapa and whenua)?	Full investment (5) to No investment (1)
3c	Coordinate value-chain operations with other Māori farms	Do whānau connections help provide access to finishing farms, processors or branding and marketing opportunities (e.g. through formal or informal collectives, resource sharing etc.)?	Connections fully utilised (5) to No connections utilised (1)
3d	Increase trust and connections amongst whanau	Do the whānau/owners have positive, trusting relationships with each other and/or the Board?	Full trust (5) to No trust (1)
3e	Building whanau knowledge of legal structures (e.g. Māori land regulations)	The Te Ture Whenua Māori Act and Māori Land Court limit relationships and connections between whānau (e.g. increasing land fragmentation, grievances regarding land use etc.).	Creates cohesion (5) to creates division (1)
<p>Description: The focus of the whanaungatanga pillar is on assessing the social and community reach of farming operations across four key themes: the degree to which the operation has tried to improve the skills and knowledge of whanau; access to and use of finance to improve social and community outcomes; relationships within and between the board and shareholders; and the influences of legislation on the relationships. This analysis provides information on the ways in which farming operations encourage and enhance connections with shareholders, local community and wider whānau. Māori Trusts and Incorporations have a mandate to foster community relationships and connections but they are not just a goal in themselves. Ascertaining delivery on this area provides insight into ways in which these goals can also aid in increasing operational profitability, environmental sustainability and better governance, as ensuring shareholders, local community and wider whānau are on board with the business strategies and sustainability measures and goals makes the process of governance easier.</p>			
MANA WHAKAHAERE			
WEIGHTING QUESTIONS			
3A	Weighting the importance of mana whakahaere	How important do you think good governance (e.g. leadership, strategic vision, operational knowhow etc.) is to the success of your farm?	Extremely important (5) to Not important at all (1)
3B	Weighting the current status of manawhakahaere	How would you rate the governance of your organisation's Board?	Excellent (5) to Extremely Poor (1)
GAUGING CAPACITY QUESTIONS			
3a	Building Trustees governing skills	Does your organisation's Board have the business, technical and practical skills and knowledge to govern well?	All of the skills (5) to None of the skills (1)

3b	Investing in specialist advice for governors in complex areas	How often does your organisation hire consultants to fill skills and knowledge gaps on the Board?	Always (5) to Never (1)
3c	Increase governance focus on product quality	Does your organisation’s Board have policies and practices that add value to your products (e.g. belonging to a quality assurance scheme, direct to consumer sales, unique branding and marketing etc.)?	All necessary policies (5) to No policies (1)
3d	Build connections and trust amongst Trustees.	Are there positive connections, relationships, and trust across governors in your trust and incorporation?	Full trust (5) to No trust (1)
3e	Build Trustees understanding of legal responsibilities	To what extent do you think Te Ture Whenua Māori Act and Māori Land Court negatively impacts your ability to govern?	Full negative impact (5) to No Impact (1)
<p>Description: The focus of the mana whakahaere pillar is examining the governance of farming operations across four key themes: skills and knowledge necessary for governance, access to and use of finance to improve governance capacity, relationships within the board and how these impact governance, and the influences of legislation on governance. This provides critical information on the constraints and opportunities relating to governance of Māori trust farms. Good governance, that is the decision-making that is strategic, transparent, ethical, decisive, accountable, participatory and consensus-oriented, is vital for the economic success of a farming operation generally, but is even more critical for Māori trust farms because of the extra responsibilities and core Māori values these entities have. Good governance is vital for any Māori trust if it is to be a profitable, environmentally sustainable and socially beneficial entity.</p>			

However, in areas where capacity is low, it may be difficult for Māori agribusinesses to take action to address a capacity issue – particularly if the agribusiness has limited financial capacity. For example, if there is a lack of financial capacity to invest in improving a farm’s environmental performance (1b in Table 4) it may not be possible to take actions to address this lack of capacity. However, if there is low capacity in areas such as 3a (governing skills) or 3d (trust within governance), these could well be addressed through accessing free governance training offered by institutions such as Te Puni Kokiri, or through building connections and relationships with governing boards that operate well. In others words addressing capacity in some areas requires financial investment; however addressing capacity in other areas may not require financial investment.

Consequently, depending upon whether a business is making a loss, breakeven, or profitable, the capacity areas for action will need to shift based upon whether financial investments are required to address capacity short-falls. To take this into account the prioritization tool also adjusts the weighted scores given to each capacity area, to arrive at a final suite of prioritized action areas. The weighting adjustments were determined based on team member experience concerning the areas of action that require financial investment to be implemented versus those that do not. These

weightings will be adjusted as the tool is refined and developed through experimentation with Māori agribusiness.

Results

The results from the survey, weighting, and aggregation process, are communicated in two infographics. The first graph, Available Resources to Give Effect to Values, shows the organisation’s available capacity to fulfil key value-drivers/pillars. The second graph identifies and ranks the key action areas where capacity needs to be developed from highest impact to lowest impact. As outlined above the ranking is ordered based on areas where action is needed and on the actual capacity of a Māori agribusiness to act based on levels of financial investment available. Below these infographics are outlined for each case study and a brief explanation provided concerning the context underpinning the results.

Case Study 1

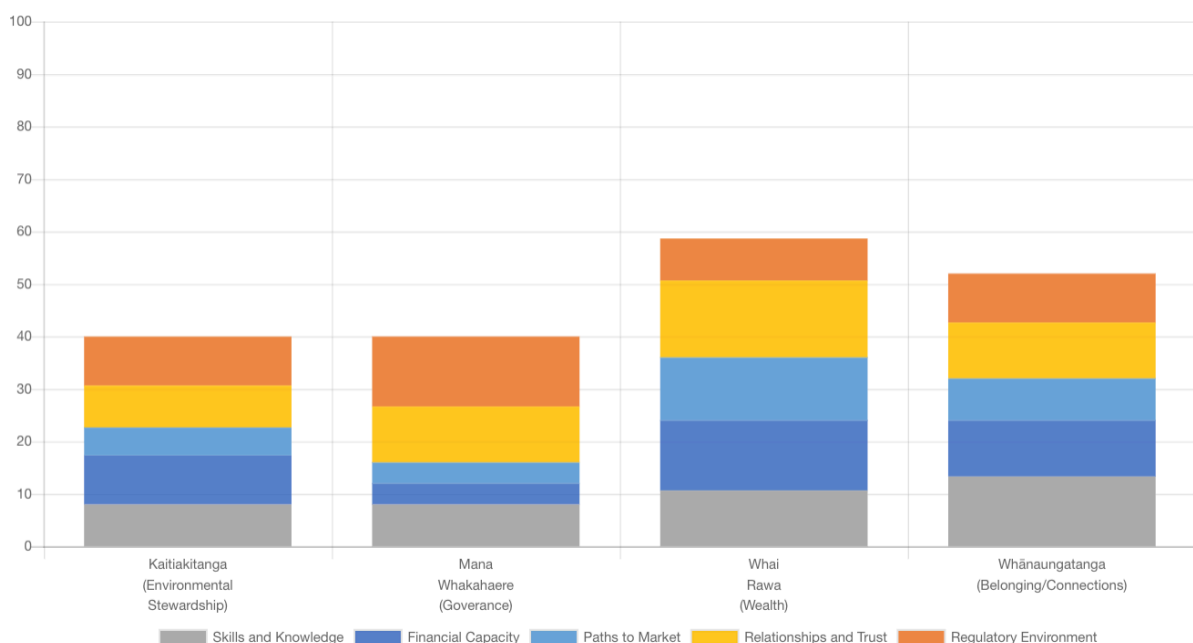
Case Study 1

Type: Ahuwhenua Māori Land Trust

Area/Land Use: 200ha cattle and sheep farm, 100ha of beech and manuka forest

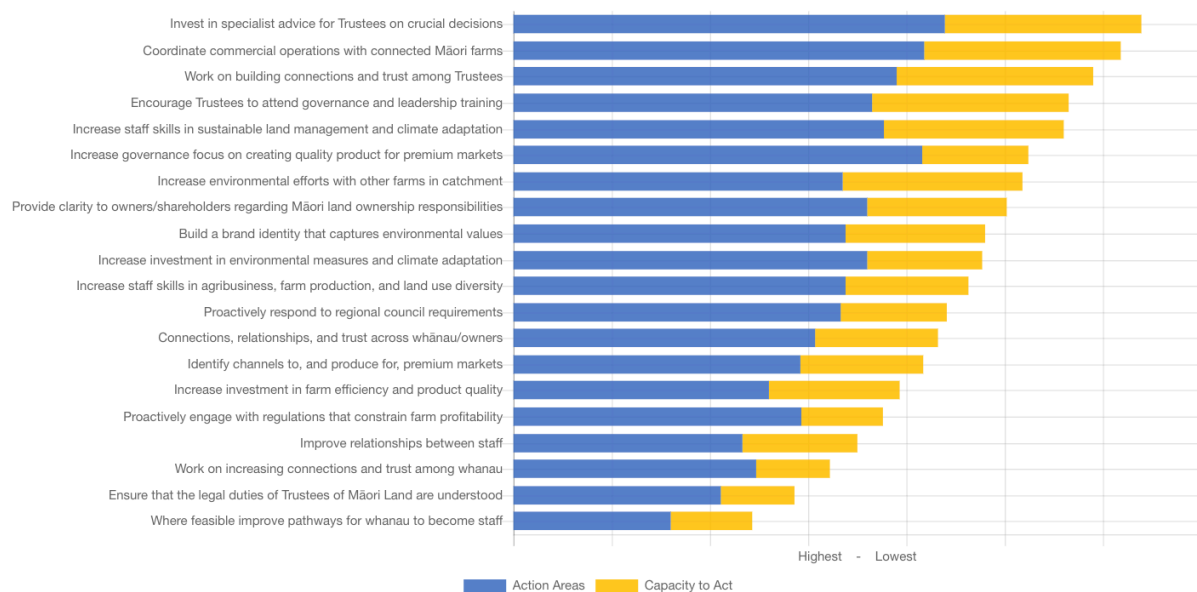
Producing: beef, lamb, beech and manuka honey

Case Study 1, Graph 1 – Available Resources to Give Effect to Values:



The farm demonstrated moderate to low levels of capacity across pillars. Generally there were weak pathways to market, apart from within the Whai Rawa pillar, where diversification of farming operations into premium market honey production resulted in a more robust score. The Trust also demonstrated low to moderate levels of connection and trust, due to internal whanau divisions and tensions. Generally speaking, the regulatory environment was only a low to moderate constraint on the agribusiness.

Case Study 1, Graph Two – Priority Areas for Action:



The assessment determined that the Trust should: prioritise governance training to overcome division and build capacity; work with other landowners to build scale; contract in specialist advice to support decision-making. These actions were primarily directed at improving governance function and farm productivity. Secondly, the assessment determined that effort should be placed into environmental initiatives.

Case Study 2

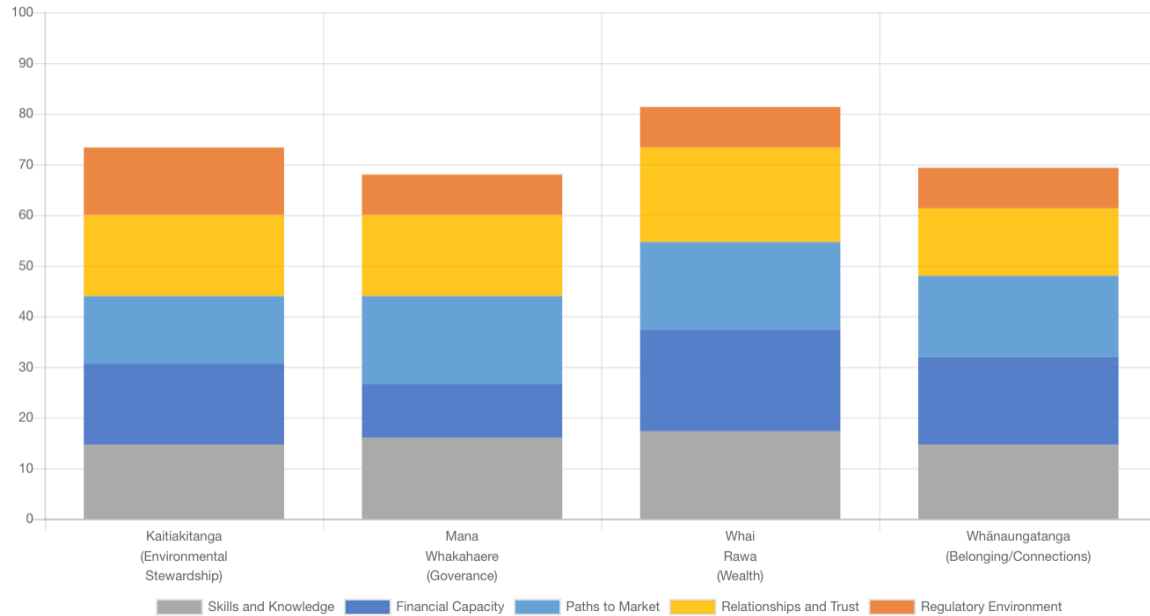
Case Study 2

Type: Māori Land Incorporation

Area/Land Use: 250ha dairy farm, 150ha pine forest, tourism

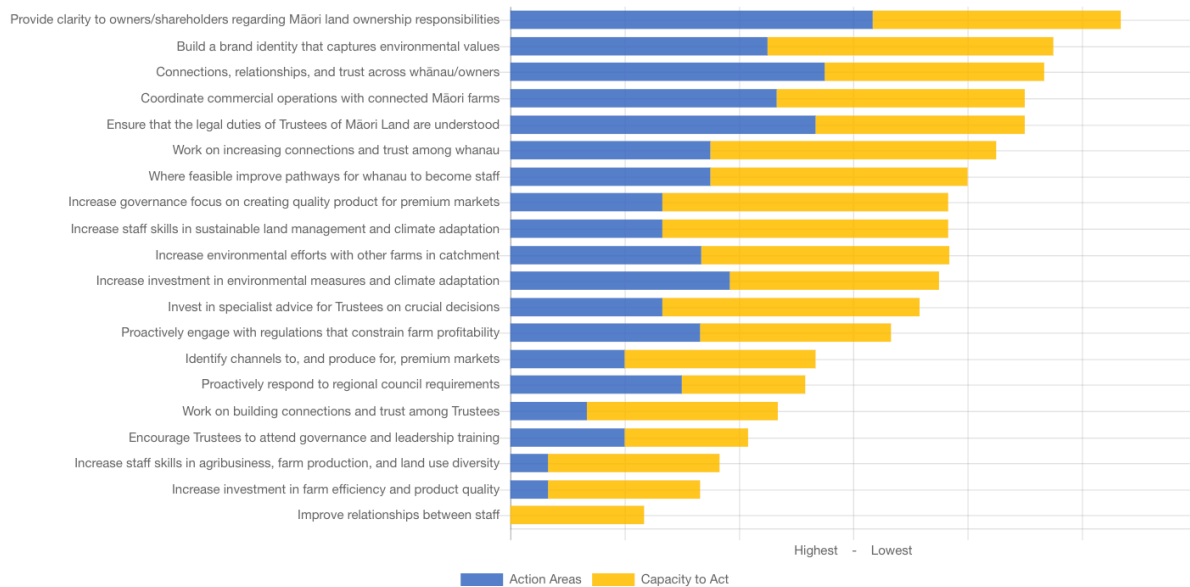
Producing: dairy, timber, tours

Case Study 2, Graph 1 – Available Resources to Give Effect to Values:



This farm is a peak performer, showing high resource levels across all the pillars, with Whai Rawa a stand-out pillar. Financial capacity appeared as the most significant component of the Whai Rawa score. Regarding the five capacity areas it was weakest in regulatory environment, though this is relative, given overall high levels of capacity. Perhaps most importantly the Trust demonstrated strong capacity in terms of networks, relationships, and trust (apart from the whānaungatanga pillar). The lower score in the Mana Whakahaere for financial capacity indicates they do not use specialists to fill skill and knowledge gaps when needed. This gap may be explained by the high level of skills and knowledge already existing on the board; however may also demonstrate a risk should the business contemplate, or enter more complex or difficult forms of production.

Case Study 2, Graph Two – Priority Areas for Action:



In regards to capacity the case study scored lowest in the pillars of mana whakahaere and whanaungatanga; albeit from a well-performing position. In terms of mana whakahaere this is due to low scores in capacity to address, or deal with, tenure issues associated with Māori land. Consequently the highest priority area for action focused on upskilling landowner and trustee knowledge of the Te Ture Whenua Māori Act. In terms of whānaungatanga the farm scored lower in regards to trust, relationships, and connections between owners. Consequently, this was highlighted as an area for priority action. In addition a low score was achieved in terms of branding that captures the farm’s positive environmental performance. Consequently prioritizing environmental brand development was suggested. The lowest priority areas for action were those that involved increasing farm efficiency, product quality, management and staff efficiency, and trust building. This was because the farm already exhibited significant capacity in these areas, which shifted focus onto areas where less capacity was evident.

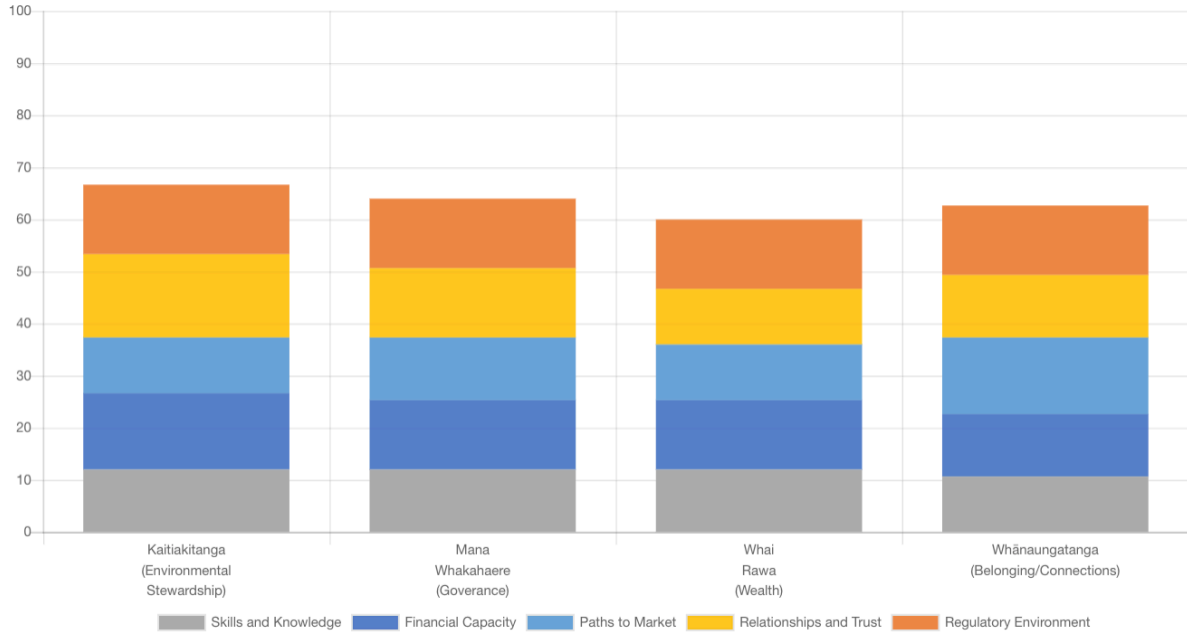
Case Study 3

Type: Māori Land Trust

Area/Land Use: 750ha cattle and sheep

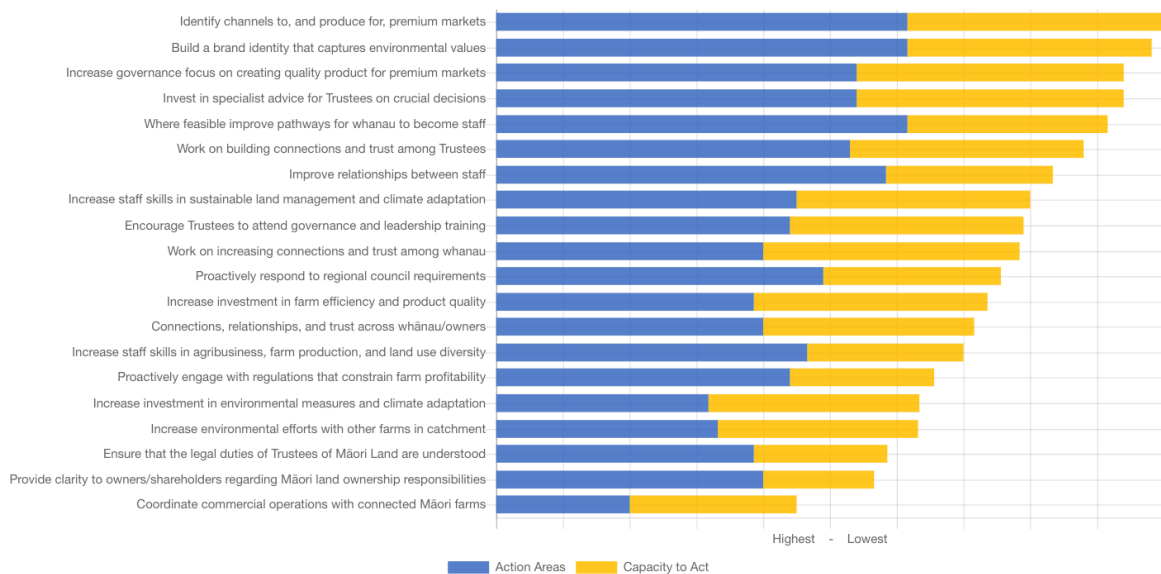
Producing: beef, lamb and wool.

Case Study 3, Graph 1 – Available Resources to Give Effect to Values:



This farm performed well across all four pillars, positioning itself as a mid-to-high performer, with Kaitiakitanga as its strongest pillar. While the farm scored well on Kaitiakitanga over all, the weakest area of capacity was paths to market, which was consistently weak across all four pillars. This indicates that the farm did not have access to premium markets, or products that such markets are seeking. The farm also scored quite low on skills and knowledge across all four pillars. It was strongest in regulatory environment – most likely due to its focus on low-intensity production.

Case Study 3, Graph Two – Priority Areas for Action:



The key priorities areas for action are all focused on pathways to market, with the first three all focused on how to access premium markets. The emphasis on pathways to market emerges

because the farm is performing reasonably well in terms of productivity and environment which results in a shift of focus onto gaining access to premium markets to improve bottom lines.

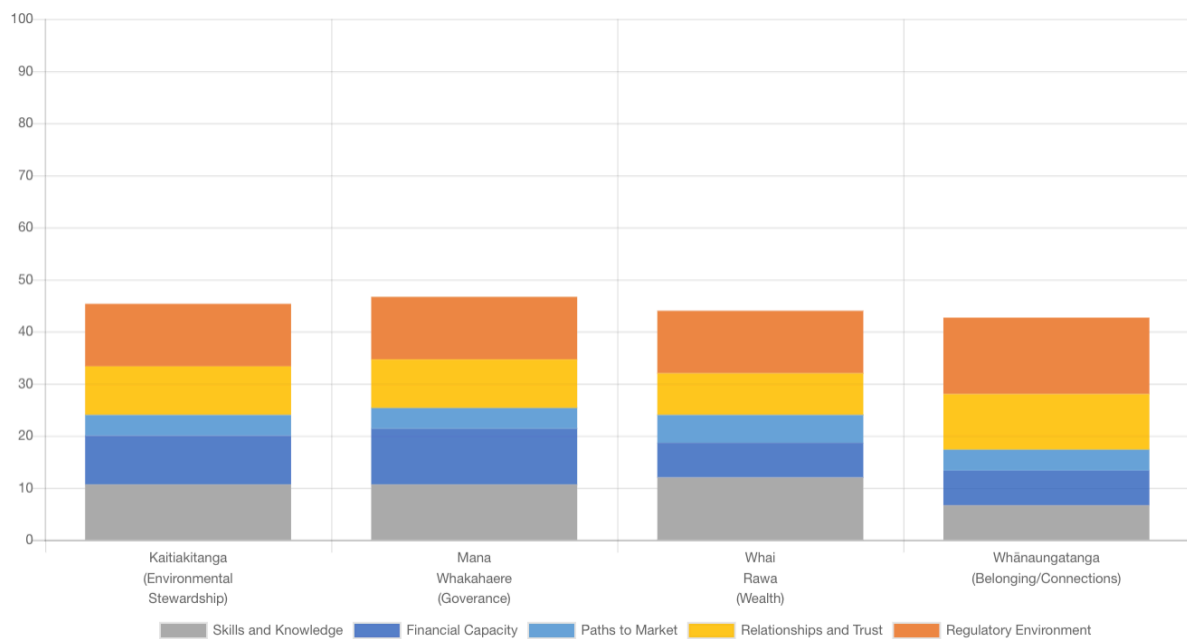
Case Study 4

Type: Māori Land Trust

Area/Land Use: 1500ha sheep

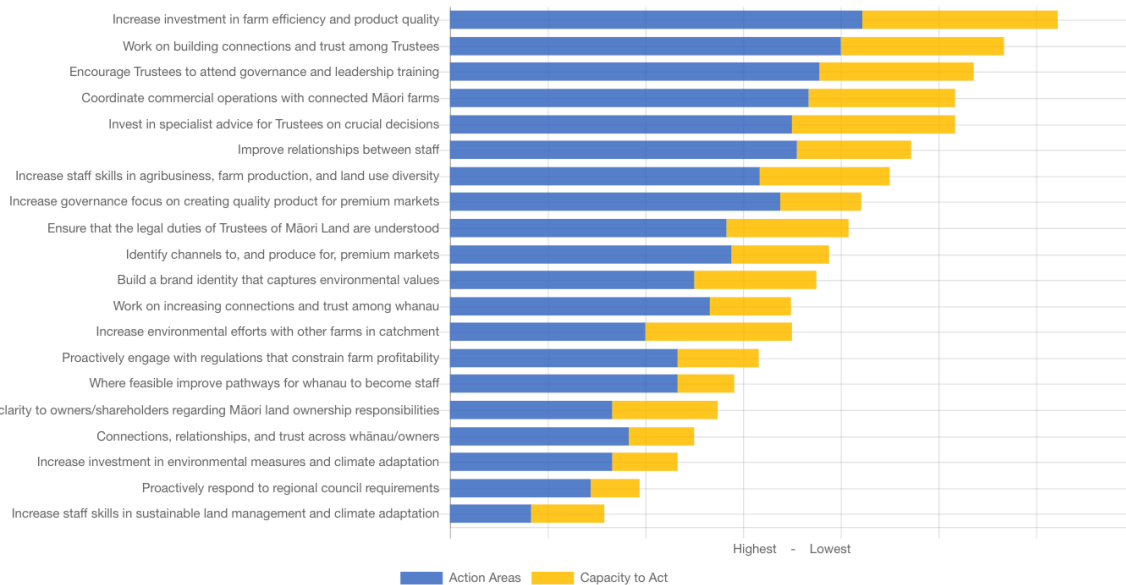
Producing: lamb and wool

Case Study 4, Graph 1 – Available Resources to Give Effect to Values:



This farm was relatively even across the pillars, with Mana Whakahaere scoring slightly higher than the others. However it is a low-to-mid capacity farm. It had the greatest resources in skills and knowledge and regulatory environment, but scored poorly in areas related to productivity, profit, and paths to market.

Case Study 4, Graph Two – Priority Areas for Action:



As a low-to-mid performing farm highest priority actions are focused on increasing productivity and profitability through building knowledge and skills, and through improving relationships and trust amongst governors. Essentially the prioritization tool orientates this farm onto actions that will improve its financial performance and decision-making before other actions that may be less pressing, such as market access or increasing investments in environmental measures.

User feedback

The user feedback was generally positive in that the tool introduced a novel way about thinking about the management of Māori collectively owned farms and, in particular, provided some critical insight into the way in which actions might be prioritized. The emphasis on identifying current capacity and of building the structures for fulfilling mana whakahaere and whanaungatanga structures resonated strongly. Furthermore, placing kaitiakitanga and whanaungatanga value-drivers at the forefront of business thinking was well received. However, there was constructive critical feedback falling under four categories:

- **Conceptual clarity:** The presentation of information, based upon the underlying matrix concept, required more explanation than what could be offered in the simple online prioritization tool within Kohuratia. The development of learning tutorials was suggested to upskill potential users. Further, it was felt that the tool might be best used to upskill consultants, that could then use it as part of capability building process with Māori land trusts and to support decisions that embodied key Māori values.

- Terminology: Some Trustees struggled with terminology and thought of it as too difficult or complex for lay people. While part of this was due to the bilingual nature of the tool, most of the issues emerged out of the more technical agribusiness jargon that was used. It was suggested that more time be spent tailoring the terminology, and developing the technology to meet the needs of different cohorts. Another suggestion was that the tool include some form of glossary or had pop ups available that defined key terms.
- Generality versus specificity: Māori agribusinesses are involved in many different sectors, such as dairy, horticulture, beef and lamb, and honey. The categories established in the matrix model, in terms of capacity areas for action, were very general and lacked the specificity that some considered necessary for their particular sector. This suggested that there was room for the tool to be more specifically tailored for particular sectors and contexts.
- The web-design: Some users had problems with user-interface finding it less intuitive than they had anticipated. This issue had already been identified by the team, and the somewhat ‘clunky’ nature of the application was really an issue of attempting to develop a sophisticated tool on a very small budget. Despite this limitation most users managed to navigate themselves and generate results. Following a similar theme to previous comments, more time training and capability building to use the tool would be necessary.

Overall users felt that the tool represented their current capacity reasonably well and zeroed in on key areas where building capacity was important. They also mentioned that not only was the tool useful as a means of specifically assessing their agribusiness on the specific questions asked in the survey but that it also provided them with a new way of looking at the wider issues.

Conclusion

Based on a series of investigations it was concluded that Māori agribusiness’s hold four value-drivers that motivate action: kaitiakitanga; whai rawa; whanaungatanga; and manawhakahaere. These value-drivers work in synergy with investment in social, environmental, and governance pillars all leading to increases in wealth. It was also concluded from the investigation that five domains enable Māori agribusiness’s to fulfil their values. These enablers are: matatau (knowledge and skills); huamoni (finance and working capital); whakatairanga (market access); whakawhanaungatanga (networks, relationships, and connections); and whakareitenga (supportive regulations).

Together the enablers and value-drivers creates a pillar-domain matrix (see Figure 1) from which 20 key enabling actions for Māori agribusiness are determined: building skills in resource management; building skills in farm production; building whanau employment skills in agribusiness; building trustee governing skills; investing in environmental and climate adaptation measures; investing in farm efficiency and product quality; investing in whanau connections and belonging; investing in specialist advice for governors; building sustainability and indigenous brands; establishing channels to premium markets; coordinating value-chain operations with other Māori farms; increasing governance focus on product quality; increasing environmental efforts with neighbouring farms in catchment; maintaining or improving relationships between staff; increasing trust and connections amongst whanau; building connections and trust amongst trustees; engaging with regional council concerning plans, consents, and regulations; proactively meeting or exceeding RMA regulatory requirements; building whanau knowledge of Māori land regulations; and building trustee understanding of legal responsibilities. Māori agribusiness that take these actions have a high likelihood of fulfilling their values; however such businesses vary in their capacity to take these actions, with some possessing strong capacity in some areas, and little capacity in others.

The prioritization tool, developed within the online application Kohuratia, allows Māori agribusinesses to rank the level of capacity they have across different action areas, then prioritize actions based on level of importance. The case study testing of the application showed that lower capacity Māori agribusinesses were directed into undertaking actions focussed on improving their improving governance function skills, trust, and farm productivity. Conversely, higher capacity Māori agribusinesses were focussed toward addressing harder to address and/or more specific problems such as regulatory challenges as opposed to technical and production capabilities where performance was already high. The moderate performing case study was directed toward actions focussed on building technical skills, investing in production, accessing premium markets, and environmental measures. Although the number of case studies is small, the results suggest a continuum of Māori agribusinesses from at the lower capacity end focusing in on governance, practical skills, and relationships, through to moderate capacity focused on productivity, through to high capacity focussed on premium markets and dealing with more challenging innovative tasks.

In terms of the user-friendliness of the prioritization tool, the general feedback was positive, however changes were suggested related to: providing tutorials to improve conceptual clarity of the underlying concepts underpinning the technology; improving terminology to meet the needs

of lay people; improving the granularity of the tool so that it provides more sector-specific insights; and making the user-interface more intuitive.