

Creating Value for New Zealand Agri-food Exports: Moving from supply chains to value chains

Draft 3

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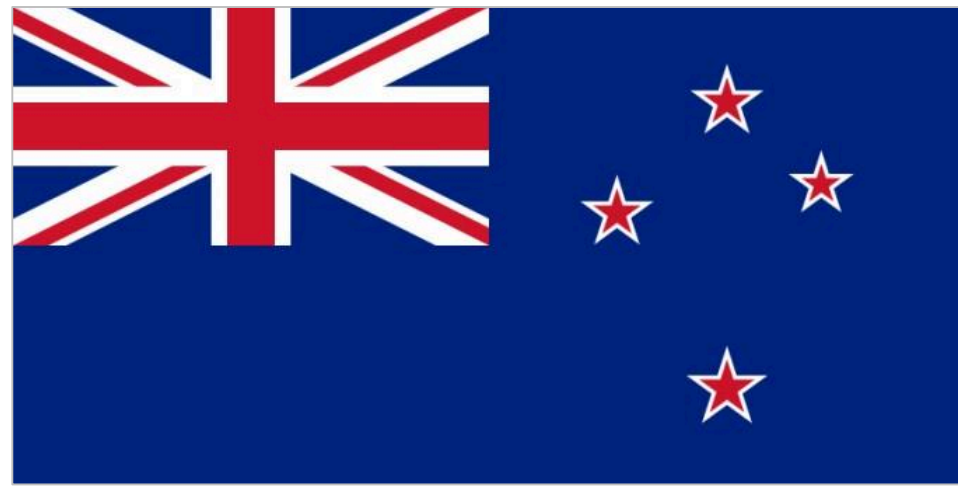


Agribusiness
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Research Unit
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Loading “Clan McDougall” with frozen meat for England, date and photographer unknown.

Source: Archives New Zealand

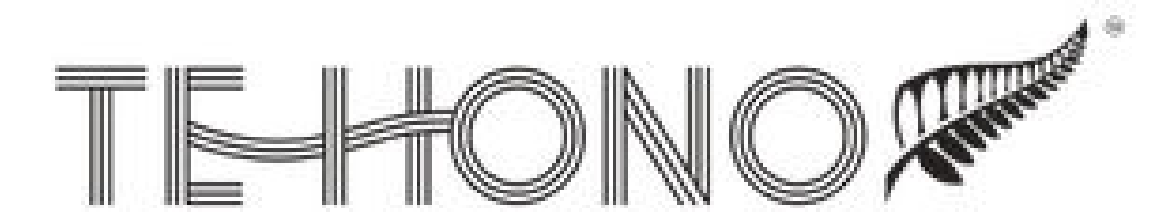


Introduction

New Zealand’s early prosperity grew out of exporting three land-based commodities to the United Kingdom: meat, dairy and wool.

Food and fibre remain very important exports. Many initiatives, including those listed on the right, are aiming to create and capture greater sustainable value from these exports.

This Research Briefing presents results of research funded by [Our Land and Water](#) National Science Challenge, which identifies nine key elements of successful agri-food value chains from New Zealand.



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Section I

From Supply Chains to Value Chains

A Traditional Supply Chain

A supply chain sets out the linkages between different economic organisations that ultimately delivers a commodity for purchase by the final consumers.

In the food and fibre sector, a traditional supply chain begins with producers delivering outputs to processors. There may be further manufacturing before exporters sell the commodity to importers. The importers sell to retailers, who sell the commodity to their consumers.

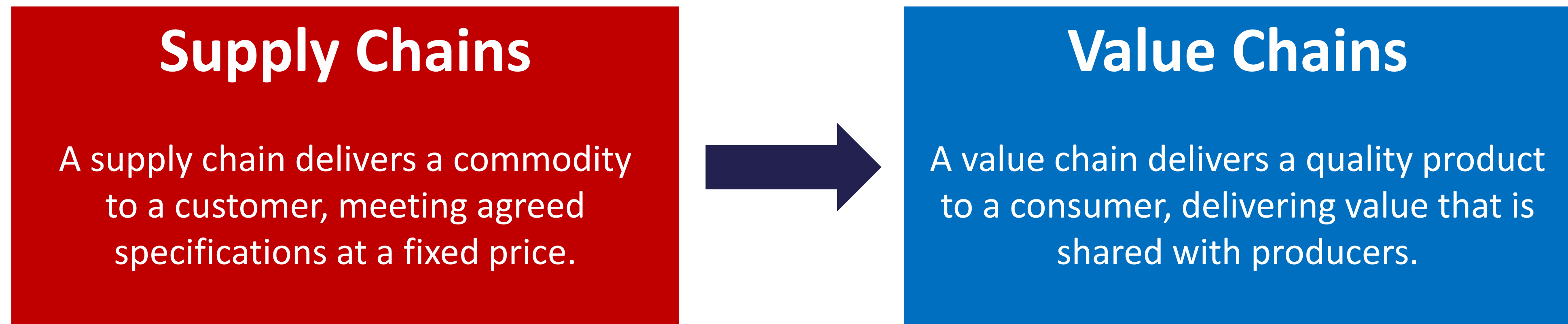
The producers, and even the exporters, may have little knowledge about the final consumers. They aim to deliver commodities efficiently to specifications set by agents with the most market power (typically the retailers who know their customers).

The arrows represent movements of the commodity along the chain to the consumer.

Producer → Processor → Manufacturer → Exporter → Importer → Retailer → Consumer

From Supply Chains to Value Chains

Creating and capturing greater value requires a transformation of supply chains into value chains.



The focus of the chain is not on the product itself, but on the value brought to the final consumers.

A Value Chain

A value chain requires flows of knowledge in both directions to create a high-value, quality product for final consumers.

In the food and fibre sector, a value chain learns what consumers value when they are making their food and fibre purchases, and it passes that knowledge back along the chain to processors and producers.

The value chain also understands all the valued attributes in its production and distribution systems, and it passes that knowledge forward along the chain to its consumers.

The arrows represent dual movements of knowledge about value along the chain, from the consumer to the producer, and from the producer to the consumer.

Producer ↔ Processor ↔ Manufacturer ↔ Exporter ↔ Importer ↔ Retailer ↔ Consumer

Section II

Food and Fibre Value Chains from New Zealand

Distant Markets

As the next slide illustrates, New Zealand is distant from the world's largest high-income markets.

This poses challenges for food and fibre value chains sourced from New Zealand.

Previous AERU research presented evidence that it is possible to deliver premium value to distant consumers by communicating product attributes such as food safety, nutritional value, social responsibility, environmental stewardship, animal welfare and cultural authenticity.

This Briefing focuses on new research to identify key characteristics of value chains that can create and share that premium value.



New Zealand's largest exports to the world*



Source: [Stats NZ](https://www.stats.govt.nz/).

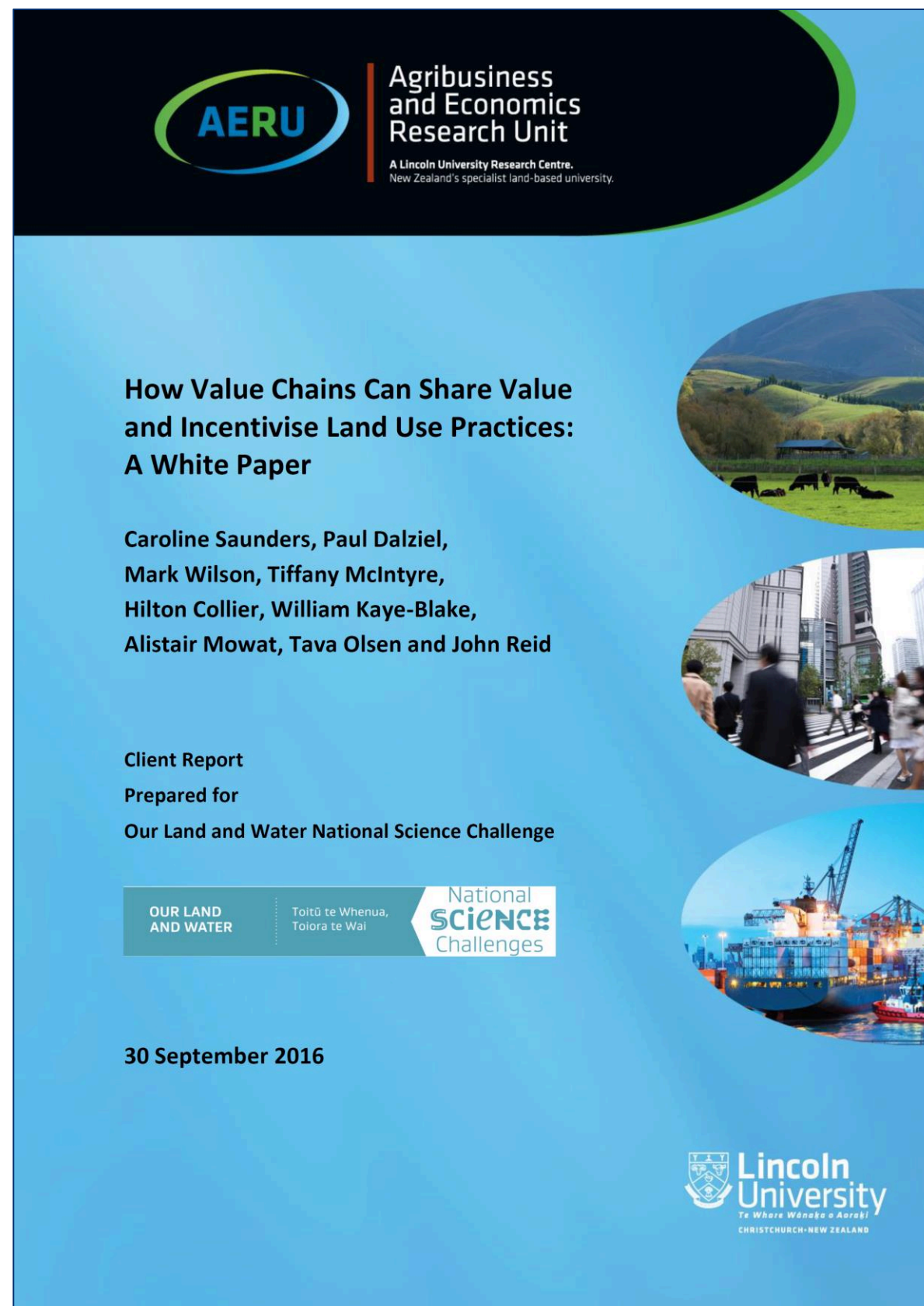
The Research Programme: Step 1

The research programme is funded by the [Our Land and Water](#) National Science Challenge.

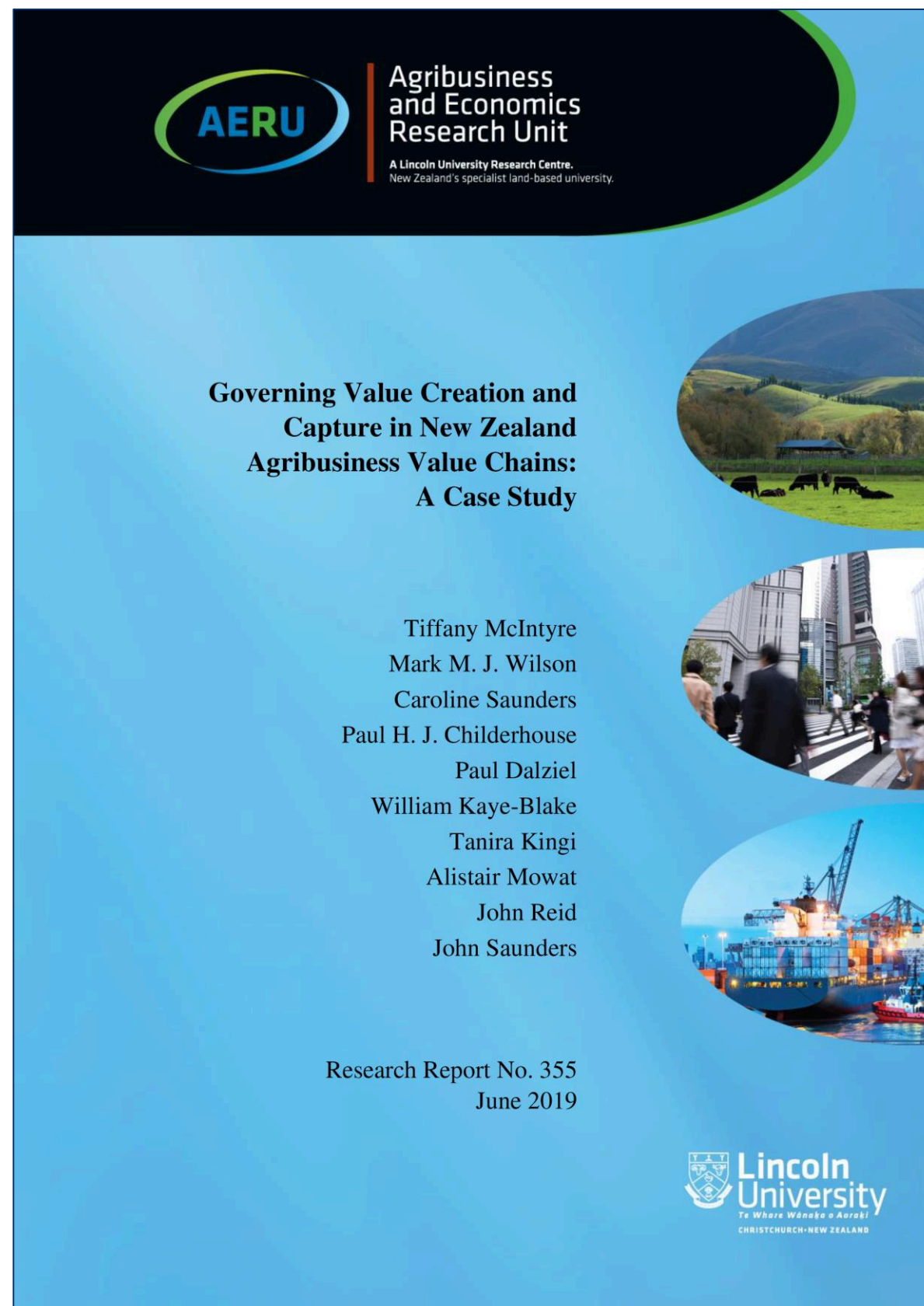
It began in 2016 with a commissioned White Paper that summarised the state of knowledge on how value chains can share value and incentivise land-use practices.

It provided evidence that collaborative value chains targeted at premium consumer segments can increase returns to New Zealand producers, processors and manufacturers.

This is achieved by profiling attributes of the country's production systems that consumers value.



The Research Programme: Step 2



The second phase ran between January 2017 and June 2019. It was called Integrating Value Chains.

There is a dedicated [page](#) on the Our Land and Water website.

The research team examined five existing value chains to identify characteristics associated with a successful chain.

This project provided tailored research for Beef+Lamb NZ, as it developed a New Zealand red meat profile for international markets, [Taste Pure Nature](#).

The project delivered a situational analysis [report](#) for the Primary Sector Council as the Council prepared its [Fit for a Better World](#) vision.

The Research Programme: Step 3

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GEOGRAPHY MATTERS FOR SMALL ADVANCED ECONOMIES: IMPLICATIONS FOR ECONOMIC STRATEGY

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ABSTRACT: New Zealand is a small advanced economy in the South Pacific Ocean. Policy advisors often compare New Zealand's economic performance with those of other successful small advanced economies. These comparisons generally recognise that New Zealand is uniquely distant from the world's largest and highest-income markets. Nevertheless, it has become commonplace for policy advisors to say "Geography is not destiny: New Zealand can do better". This paper draws on standard regional economic development analysis to conclude that geography matters for economic strategies. It draws on endogenous growth theory to explain how the properties of knowledge mean that knowledge can sustain increasing returns to scale and hence productivity growth. The paper draws on that theory to introduce a mission-oriented innovation research programme that has contributed to creating and capturing greater value from New Zealand food and fibre exports.

KEYWORDS: Aggregate productivity, endogenous growth, geographical remoteness, knowledge economics, small advanced economies.

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The final phase was called Rewarding Sustainable Practices. It ran between August 2019 and June 2022.

Again a dedicated [page](#) exists on the Our Land and Water website.

The research team worked with four private sector enterprises who were engaged in creating a new value chain for a land-based product sourced from New Zealand.

The purpose was to test the list of characteristics of successful value chains from Step 2, and to explore if there were any further characteristics that had been missed.

This work produced a final list of nine key characteristics.

Section III

The Nine Key Characteristics

The Characteristics at a Glance

1.	Collective values
2.	Consumer focus
3.	Product quality
4.	Chain leadership
5.	Value co-creation
6.	Information
7.	Incentives
8.	Scale
9.	Risk

1. Collective values

One of the most important insights to emerge from this research is the role of *collective values* as a binding attribute in sustaining value chains.

An authentic commitment to collective values encourages collaboration along a chain, both to create value and to solve challenges that might emerge.

This commitment to collective values can also be an important aspect of value chain governance, reducing the need for tightly specified contracts in advance.

In all the case studies, the research team saw evidence of collective values being an important element of the value chain and a foundation for the product brand.

In some cases, values are expressed in posters on a workplace wall, or codified in public documents on websites, helping to protect the brand narrative of the chain.

For the Māori enterprise value chains, there can be explicit commitment to values such as *kaitiakitanga*, *hihiko*, *whanaungatanga*, *rangatiratanga*, *manaakitanga* and *pono*.

2. Consumer focus

The price final consumers are willing to pay drives all value in the value chain.

Accurate knowledge about consumers must be shared with all members of the chain to ensure value is created and captured:

What market segment do we target?

What product qualities do they value?

- Taste and other physical attributes?
- Sustainability and other credence attributes?

What words do they use for these qualities?

Who are the key market influencers?

The case studies in the research all put considerable effort into understanding the values of their final consumers.

- Consumer surveys
- Focus group discussions
- Taste tests
- Recording feedback on web-based platforms
- Interviewing chefs in restaurants

An important element was to create a clear understanding of the target consumers who valued the quality attributes of the product.

3. Product quality

Product quality is particularly critical in chains dealing with food products, since food safety and emotional or cultural connections to food are large concerns.

Generally, consumers are willing to pay a premium only if they judge the product to be high quality.

Quality judgements involve a range of factors. If one of the factors is missing (or if a product claim is thought to be dishonest), then the consumer may dismiss a product as low quality.

All the case studies paid very careful attention to quality control, including the validation of all product claims.

Product quality standards are ultimately set by consumers, even if mediated by industry or government regulation.

For Māori producers in the case studies, the authenticity of product claims was enforced by commitment to cultural values practised and respected for generations.

Some chains set strict standards for product quality throughout the value chain.

4. Chain leadership

The research identified three elements to leadership in a value chain.

1. **Chain Champion:** The actor who drives the development of the chain, especially when it first enters the market.
2. **Chain Leader:** The member of the chain that drives the chain's unique features creating value for the final consumers.
3. **Power holder:** The member of the chain that holds strategic assets or knowledge that allow it to exercise market power.

Because the case studies were consumer focused value chains, the power holder was typically the retailer closest to consumers.

Nevertheless, typically the chain champion and leader were closer to producers, based on knowing the product's qualities.

This was particularly evident in the Māori enterprises studies in the research, where Māori *mātauranga* and *tikanga* were key elements in the value proposition.

The case studies were very focused on protecting the integrity of their brand.

5. Value co-creation

A feature of some value chains is that creation of new value requires collaboration by different parts of the value chain.

A retailer might identify an opportunity that requires changed behaviour by processors, or a producer might identify an opportunity requiring different marketing by retailers.

Co-creation might be a *purposeful* element of a chain (that is, intentionally designed in the governance of the chain), or it might be *associative* (that is, derived from day-to-day operational improvements).

All the case studies recognised benefits of value co-creation.

In some cases, partners along a value chain were chosen because of their ability to participate in value co-creation.

This could include the choice of retailer based on the retailer's knowledge of a particular market segment.

In one case study, the design of a new product involved close interactions among the producer, manufacturer and overseas retailer.

6. Information

A global value chain from New Zealand producers to overseas consumers can be lengthy, involving several links in the chain and diverse cultures.

This means a value chain needs to work out how information about producers is shared forward along the chain, and how information about consumers is shared backward along the chain.

These information flows are what turns a supply chain into a value chain.

The case studies all valued face-to-face or *kanohi ki te kanohi* relationships for bringing together value chain members.

On-line platforms and emails were also useful for direct communication and for distributing market oriented information.

Cultural and bilingual skills (including knowledge of Māori cultural values in some of the case studies) can be critical.

Some chains enter into formal certification schemes audited by the industry or by an independent third party.

7. Incentives

A market oriented value chain needs to ensure that product qualities valued by final consumers are protected at every link in the value chain.

This means ensuring that incentives faced by each actor in the chain are aligned to the product qualities valued by consumers.

If environmental stewardship is a factor, for example, then incentives for producers, processors, distributors and retailers must be aligned to support environmental claims made to final consumers.

In some of the case studies, incentive alignment were achieved through contracts with risk and reward sharing clauses.

In other case studies, the value chain was made up of firms with a trusted commitment to shared values (see Attribute 1), which can achieve the same outcome.

Incentives for producers are particularly important if the desired product attributes (such as environmental stewardship) involve extra production costs.

8. Scale

An important management decision is the scale of the value chain, since this is reflected in the level of investment in items such as processing plant and retail network.

High volume market entry might capture economies of scale (and so reduce average costs) while low volume market entry can focus on a specific niche market.

This decision is particularly important for a new value chain, since it can take time to establish a visible market presence and to develop awareness of a new brand.

In the four case studies of new value chains, the question of scale was a major consideration.

Issues raised included:

- the minimum market demand needed for a financial business proposition;
- the impact that introducing a new product would have on the economics of scale of other products manufactured by the firm;
- concerns that increased volume would harm the artisan qualities of the product.

9. Risk

Primary sector producers face challenges related to continuity of supply:

- Seasonal limitations
- Adverse weather events
- Environmental constraints
- Biosecurity threats

This creates issues of resilience and adaptability for agri-food value chains.

These issues are particularly important for value chains where consumers or retailers put great weight on assured supply.

The case studies reported experience of these challenges, which could be periods of great stress and heavy workloads.

The variety and uncertainty of the different challenges make formal risk plans difficult.

Instead, an ability to be resilient and adaptable in a crisis is a key aspect to sustaining a successful value chain.

The case studies reported that shared values among participants in the chain are helpful in fostering resilience and finding solutions to a serious challenge.

Section IV

Conclusion

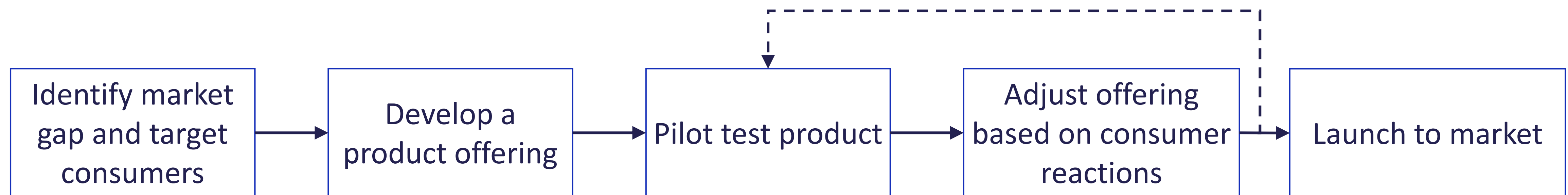
Conclusion: What does this mean?

Establishing a value chain is more than developing a product and getting it to market.

- Collective values expressed in a value chain can create value, solve challenges and contribute to good governance.
- The value chain brings together a focus on the consumer and a focus on product quality (as understood by the consumer).
- Value chain leadership, value co-creation, information sharing and incentive alignment can help integrate the value chain and reduce conflicts among members.
- Issues of scale and risk must be resolved early in the chain design.

Conclusion: What does this mean?

A basic linear process for getting a new product to market may look something like this:



This process is much more complex in reality, since each of these actions requires several decisions, many hours and significant investment of resources.

Consideration of the key characteristics described in this study may help managers navigate this difficult process.

Apendix

Further Resources

AERU Data Portal

AERU Data Portal

Kia ora tātou katoa.

Since 2012, the AERU has been undertaking original research on international consumers of New Zealand food and beverage products. The research programmes have included **Maximising Export Returns** (2012-2016), funded by Ministry of Business, Innovation and Employment (MBIE); **Integrating Value Chains** (2017-2019), funded by the Our Land and Water National Science Challenge; and **Unlocking Export Prosperity** (2019-2024), funded by Ministry of Business, Innovation and Employment (MBIE).

As part of these research programmes, the AERU has published a series of online tools through which the results can be explored more deeply. Please click on the links below to use our online tools.

Note: These tools are best viewed on a desktop computer.

Unlocking Export Prosperity (2019-2021)



Consumer preference and behaviour data regarding **alternative protein** products in the **UK** (2020).



Consumer preference and behaviour data regarding **alternative protein** products in **California, USA** (2020).



Consumer preference and behaviour data regarding **apple** products in **California, USA** (2020).



Consumer preference and behaviour data regarding **beef** products in **Beijing, China** (2019).



Consumer preference and behaviour data regarding **beef** products in **United Arab Emirates** (2019).



Consumer preference and behaviour data regarding **kiwifruit** in **Japan** (2019).



Consumer preference and behaviour data regarding **lamb** products in the **UK**, before (2019) and during (2020) the COVID-19 pandemic.



Consumer preference and behaviour data regarding **UHT milk** products in **Beijing, China** (2020).



Consumer preference and behaviour data regarding **wine** products (**sauvignon blanc**) in the **USA** (**New York and Texas**) (2019).

Results from the global consumer surveys are published on the AERU website at:

aeru.co.nz/data

The data portal allows the user to focus on subsets of the survey samples using characteristics of age, education level gender, household make-up and type of area.

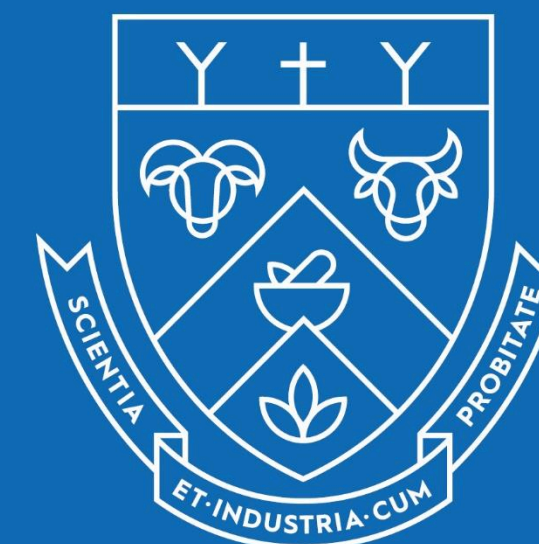
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