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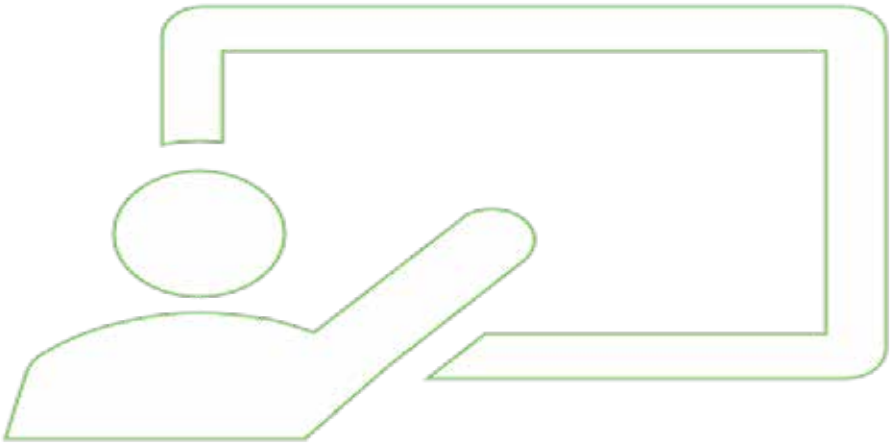

NAVIGATING THE UNKNOWN

Effective primary sector leadership for the 21st century

Sophie Malone
Kellogg Rural Leadership Programme
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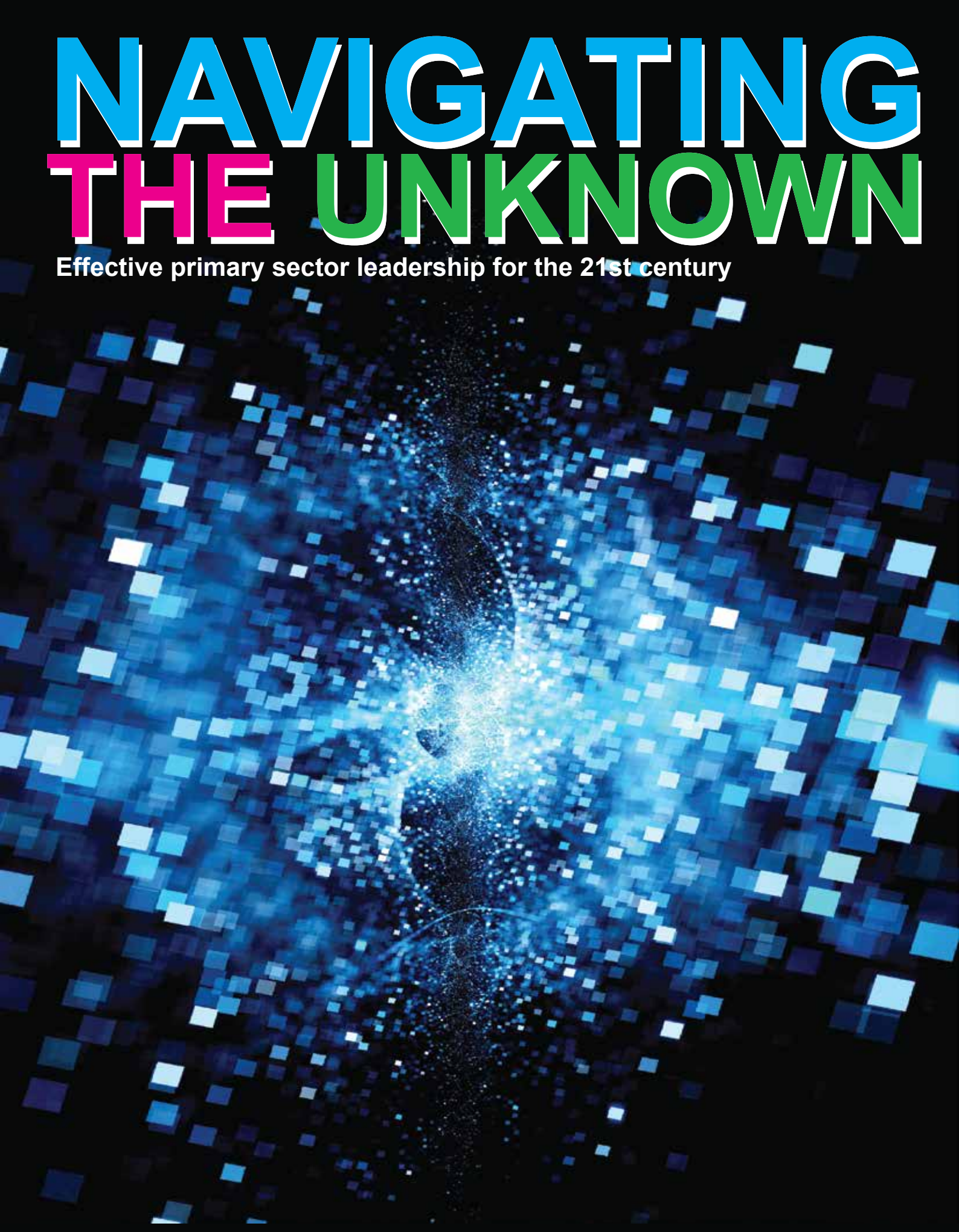

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1. Executive Summary

“The intuitive mind is a sacred gift and the rational mind is a faithful servant. We have created a society that honours the servant and has forgotten the gift” Kasanoff (2017). Although this might be a paraphrase of Albert Einstein’s work, it is a quote that has spread all across the world and is a great example of right brain intuition and left brain rationalisation.

It is no secret that traditional leadership in New Zealand’s primary sector, and many sectors for that matter, have been known to be very logical and analytical. These leaders enjoy familiar, accurate and practical ideas. These attributes stem from the left brain and allow a clear methodology of decision-making to take place. To ‘think big’ or to be creative are common attributes of right brain thinking.

For many, left brain leadership can be seen as a comfortable place. It includes statistics to guide decisions, risks are mitigated at every turn, processes are familiar and the business ticks along in a very orderly fashion. However, businesses today require fast pace changes, decisions made on gut feeling, flexibility and often going down the path of most resistance.

The fourth industrial revolution is upon us and the world stage looks completely different to five years ago. Robotics, AI, quantum computing, 3D printing, the Internet of Things (IoT) and biotechnology are all examples of this revolution. Rural leaders will need to understand, embrace and foster these innovations as they become relative to the businesses in which they lead.

While the world is changing rapidly around us, we are also dealing with a specific issue within the New Zealand primary sector. We export over 90% of our primary production, Rotherham (2016), we have a major environmental issue on our hands, partially due to intensification, our markets are about to see a wave of synthetic products that could replace the need for much of our volume and the only solution I see to this issue is a mass shift to value-add production. So, how do you create added value in this rapidly evolving context? I believe you think differently, you think like your customers and you act fast.

Given this forecast of uncertain things to come, I explore the leadership capabilities that may be needed to manage this complexity in the 21st century. My research not only explores the ‘why’ and the ‘what’, it also explores the ‘how’ and includes interesting case studies demonstrating what change might look like.

"The secret to change is to focus all of your energy, not on fighting the old, but building the new"

Socrates, Greek Philosopher

2. Acknowledgements

Dedicating time to personal growth in the form of the Kellogg Rural Leadership programme cannot be done without the support of family and friends. I had a very supportive team behind me, as well as a great workplace that allowed me the time to complete this fantastic programme.

I want to acknowledge everyone involved in the Kellogg Rural Leadership programme, I know there is a lot of hard work behind the scenes and I have thoroughly enjoyed every phase and all the learnings along the way. I will be encouraging many others to go on the journey, and I couldn't fault the quality of speakers and presenters in each phase. We are very lucky in New Zealand to have this programme for aspiring leaders in the primary sector.

To the anonymous primary sector leaders and directors that completed my survey, thank you for taking time out of your busy schedules to respond. I am always humbled by the generosity of people and a stranger's willingness to help an aspiring leader analyse their sector. I hope many of you read this research and gain an insight or two to take back into the businesses you lead.

The final group of people I would like to acknowledge are the wonderful interviewees: Alison Watters, Andy Ramsden, Jim Scully, John Brakenridge, Peter Allen and Sarah Crofoot. It was an absolute pleasure to meet and discuss the key ideas that form this research project. The level of detail you all provided and the time you dedicated to talk to me was fantastic. I hope this research does you justice and portrays you as the intuitive leaders that you are. Thank you for your time and enthusiasm, I thoroughly enjoyed every discussion.

3. Introduction

To me, as a farmer and a young agribusiness professional, the primary sector needs to gear up. We've had a good run; the markets have been there because vegetarianism was a minority and the mass majority need to eat meat for protein. Cow's milk was a huge part of our diet and, despite years of tough returns, we have always had the option of getting commodities in their most basic form into markets.

We aren't in close proximity to large markets such as the EU, so value-add and differentiation haven't really been an issue - until recently. So how are we going to react to the new world? A world full of options and alternatives, built on a foundation of ethics, social responsibility and well-being. Alternative low cost protein will feed the world; we need to feed the wealthy. Not to mention all of the other value-add opportunities outside of food production.

Change starts with mindset and, in fairness, there are some great value-add initiatives out there. We are starting to see a shift in the sector, but that shift needs to be substantial and it needs to happen fast. A leader that enjoys linear, familiar processes isn't going to provide this shift; it is unfamiliar territory and often high-risk.

The other factor here is that a traditional leader can't fathom how you would even initiate this change. They have done market research and the data tells them that people want exactly what they produce, so why is there a need to change? Often, in their eyes, why aren't their markets growing rapidly? The data tells them that should definitely be the case. Confirmation bias is great in that respect.

I believe that there is a real need for more right brain thinking in rural leadership. I don't see it as the complete answer, but by tapping into the right brain attributes a leadership philosophy should then balance out to create a more 'whole brain' thinking approach that builds an industry of excellence and creativity for future generations.

"Whole brain thinking combines non-negotiable left brain skills to solve problems with right brain skills to see those problems through a new lens" Morris (2017). We are in the computer age; all the data we require is at our fingertips but it is the right brain attributes that can turn this information into a masterpiece. In other words, whole brain thinking is a fantastic brand story backed up by science and substance.

"Organisations face challenges ranging from the next demanding phase of globalization to disruptive technological change and continued macro-economic uncertainty" Gurdjian (2014).

This research is presented in three high level sections:

WHY do we need a change of leadership philosophy?

WHAT does this new leadership philosophy look like?

HOW do leaders put these capabilities into practice and create change?

I explore these questions and focus on leadership capabilities and methodologies that businesses can adopt to prepare for this complex new world and harness the opportunities that come with it.

4. Aims and objectives

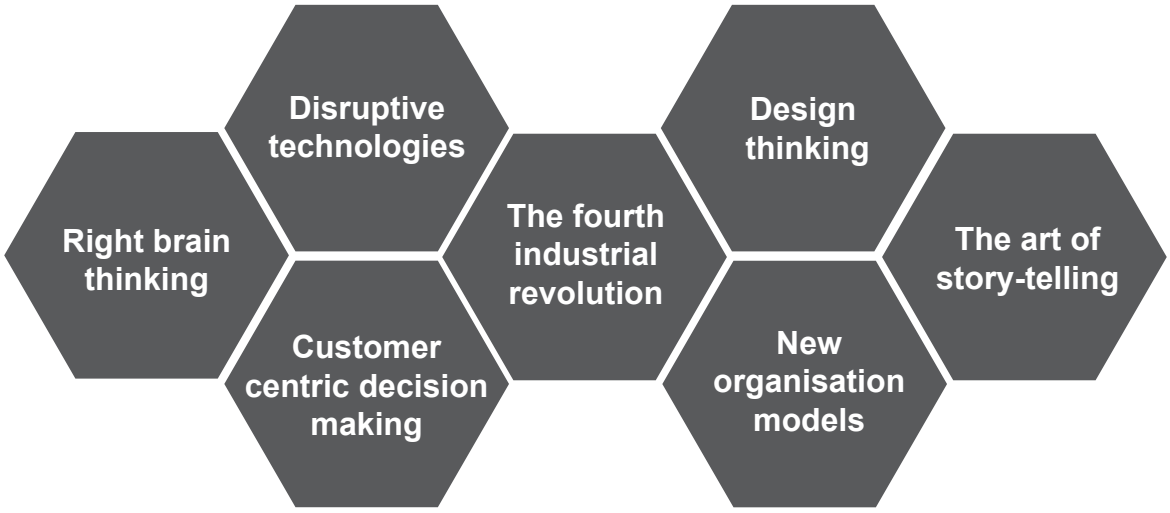
After completing my literature review and establishing key themes, the aims of this research were identified as:

- Gaining an understanding of the fourth industrial revolution and how it may impact the NZ primary sector
- Increase my awareness of disruptive technologies and understand why it is deemed disruptive
- To investigate the synthetic red meat protein market and gain an overview of what this market could mean for NZ exports
- Explore leadership capabilities that could be effective in harnessing opportunities within a complex and uncertain business landscape
- Understanding design thinking, as a tool for establishing customer perceptions, needs and emotional reasons for purchasing
- Research examples of whole brain thinking in leadership and initiatives that use non-traditional processes to create high value products
- Review an alternative organisational model and identify its relevance based 21st century leadership attributes.

Key research question:

Based on the presumed business outlook, what could effective 21st century leadership look like in the primary sector?

Areas explored in depth are:



This research is aimed at providing the primary sector with an insight into 21st century leadership capabilities and methodologies for thinking differently to create value. Therefore, I relate my findings back to explore the challenges of moving from volume to value-add and the challenges of changing a mass mindset of logical and analytical leaders to think differently in order to innovate.

5. Literature review

My initial review of the literature was formed around four key searches:

- The fourth industrial revolution
- 21st century leadership capabilities
- Disruptive Innovation
- Right brain thinking

My findings were essentially a spider web of interconnecting ideas and insights that came together to create these main ideas:

- We are in the digital age and technology is causing everything to change at a faster rate than any other time in history

The world is at an inflection point where the effect of these digital technologies will manifest with “full force” through automation and the making of “unprecedented things” Schwab (2017).

- People are looking for purpose, they make emotional decisions and are influenced by a brand's social responsibility

- Technology is enhancing the level of science in food products and food production, opening the door for proteins made without animals

- Based on the rate of change, technological advances and emotional decision making – the business landscape is complex and uncertain

- Leadership capabilities and styles that suited profit driven, mass production companies are not designed to cope with the uncertainty and complexity of the current world

"The left can grasp details. But, only the right hemisphere can see the big picture. The left handles logic, sequence, literalness, and analysis. The right takes care of synthesis, emotional expression, context, and the big context" Pink (2006).

- Constantly learning and maintaining a learning mindset is a great characteristic for leaders in uncertain times

- Information was power; the ability to place facts into context and to deliver them with emotional impact is the new power

- Constant prototyping and working closely with consumers is leading to success in high value products

- Any process that can be replicated and repeated is at risk of automation. This impacts jobs, and it also impacts strategies leading to disruptive competitors in the market.

"At a time of extreme volatility, past experience is an unreliable guide to future outcomes. Leaders must create cultures of constructive scepticism and surround themselves with people who bring multiple perspectives and have no fear of challenging the boss" Barton et al., (2012).

6. Results and Analysis

The results of my research are based on six interviews conducted with carefully selected influencers in the primary sector. Five interviews were face to face; one interview was conducted over the phone. My selection was based around the outcomes of my literature review. I assessed key themes that I wanted to discuss and then approached each person for some valuable time to discuss the subject. Not surprisingly, all interview subject matter crossed over multiple times. This reinforced the importance of each theme and the level of impact changes in the market flow on to impact businesses, based on actions of individuals. That then creates further changes to markets - it goes full circle.

My literature review also led me to an article published by Harvard Business Publishing called: Critical capabilities for a complex world, Axon et al., (2015).This article highlighted eight leadership capabilities that are particularly important in today's complex business environment. I surveyed a number of primary sector CEOs, senior managers and directors using an online tool called Survey Monkey. I received 21 responses with a mix of leadership levels. Each respondent was asked to identify how strong these capabilities were within their leadership teams, along with questions that provided an insight into their organisation model.

I used thematic analysis, Braun, V., & Clarke, V. (2006), to create themes that emerged from both the literature review and interviews. These themes became very common and form the backbone of this research project.

Figure 1.1

7. Method

The analysis and results of my research are split into the three key areas:

This processes should allow readers to gain a clear understanding of why primary sector leadership needs to change, what capabilities 21st century leaders should build on and how leaders could, equipped with these attributes, then create an industry of excellence and creativity for future generations.

8. Starting with the 'Why'

Reasons for change can be an infinite list. However, I will be exploring three areas that I see having a major impact on the New Zealand primary sector. These key ideas alone have the ability to reshape the industry, and not necessarily for the better.

"From the perspective of human history, there has never been a time of greater promise or potential peril. My concern, however, is that decision makers are too often caught in traditional, linear (and non-destructive) thinking or too absorbed by immediate concerns to think strategically about forces of disruption and innovation shaping our future" Schwab (2017).

8.1 Fourth industrial revolution

It is very clear the world is changing. We have a television personality leading the world's largest economy by GDP, we have phones that unlock using facial recognition, you can even put a virtual reality head set on and go shark diving. Yes, life has changed dramatically in the last five years.

This isn't a new concept, there have been dramatic changes many times in history, the first, second and third industrial revolutions are classic examples of this. My research has led me to understand that we are at another one of those historical junctures, the fourth industrial revolution. This revolution builds on the digital or computer revolution, which began in the 1960's and is about smart and connected machines and systems. However, this revolution is different. Everything is happening at a much faster pace than ever before, and this creates

pressure on businesses and leaders to adapt quickly in order to capture big opportunities and, ultimately, survive.

“It is the fusion of these technologies and their interaction across the physical, digital and biological domains that make the fourth industrial revolution fundamentally different from previous revolutions” Schwab (2017)

With the speed of technological advancements comes the speed of innovation, it also brings automation, which removes the diminishing returns to scale that companies previously had. Schwab (2017) provides the comparison of Detroit in 1990 with Silicon Valley in 2014. Detroit had a combined market capitalisation of $36 billion, revenues of $250 billion and 1.2 million employees. In 2014 Silicon Valley had market capitalisation of $1.09 trillion, with the same revenues of $257 billion and 10 times fewer employees (137,000).

To recap and create some context, according to Schwab (2017) the first industrial revolution started in about 1760 and continued through to about 1840. This was essentially the invention of the steam engine and construction of railroads. The result of this revolution was mechanical production.

The second revolution started in the late 19th century and largely came about by the invention of electricity and assembly line. This is continued on into the early 20th century and is the commonly known industrial revolution due to the commencement of mass production. As mentioned earlier, the third industrial revolution commenced in the 1960’s and refers to the computer or digital development, which included semiconductors, personal computing and the Internet in the 1990’s.

Schwab (2017) suggests that the fourth industrial revolution (4th IR) began at the turn of the century, which means we are already 17 years into it. However, one could argue that we have only started seeing the results of this revolution at a global level in the last 36 months. Schwab (2017) notes that “we have yet to grasp fully the speed and breadth of this new revolution. Consider the unlimited possibilities of having billions of people connected by mobile devices, giving rise to unprecedented processing power, storage capabilities and knowledge access”.

If I relate this back to the primary sector within New Zealand, companies that start to embrace the technology that the 4th IR provides will have the ability to make smart and informed decisions, use automation to fill labour gaps and up-skill people using online learning to allow opportunities many never dreamed of having.

Like many global phenomenons, New Zealand may see disruptive changes much later than the US and EU, but the world is connected now and our export markets will be exposed to scientifically advanced goods and services well before they reach our shores.

There are four major impacts of the 4th IR on businesses that Schwab (2017) identifies:

- Customer expectations are shifting
- Products are being enhanced by data, which improves asset productivity
- New partnerships are being formed as companies learn the importance of new forms of collaboration
- Operating models are being transformed into digital models

Regardless of a business's role in the NZ primary sector, there will be change. A willingness to collaborate and work together for the common goal of a resilient industry is a good start in tackling this revolution head on.

8.1.1 Mega Trends

The 4th IR consists of three main areas. These are: physical, digital and biological.

Schwab (2017) identifies the main physical manifestations as autonomous vehicles, 3D printing, advanced robotics and new materials. All of these things are deeply connected to the New Zealand primary sector. The most obvious example is the use of drones on farm and advanced robotics; however, 3D printing will also create significant change. 3D printing is the process of printing layer upon layer from a digital drawing or model and ultimately creating a physical object e.g. auto parts. Schwab (2017) explains that researchers are already working on 4D printing, which will include health related products, such as implants designed to adapt to the human body. New Zealand exports a large volume of meat to the world; 4D printing could have a significant impact on value-add meat, not just volume, as predicted with current synthetic protein products.

The digital mega trend is more commonly known as the Internet of Things (IoT). "It's a concept of technology frameworks using sensors (fixed or mobile, or wearable on people or animals, or smartphones) that are connected and 'talk' to each other through internet cloud computing" Rue (2017). Radio frequency identification (RFID) and blockchain applications like Bitcoin are also examples of

IoT technology. Blockchain technology is essentially transactions that can be expressed in code. Schwab (2017) highlights examples of governments that are testing the technology on handling land titles and company registrations. There will be huge advances for the New Zealand primary sector, especially in areas like health and safety and biosecurity. There are plenty of New Zealand primary sector companies using this technology already and it will continue to increase.

The biological trends of the 4th IR are possibly the most remarkable due their nature and also an area requiring great caution and sound decision making. Genetics are often the foundation of primary sector products and gene sequencing has been a direct result of advances in computing power. “Scientists no longer go by trial and error; rather they test the way in which specific genetic variations generate particular traits and diseases” Schwab (2017). This technology is helping the primary sector to create value-add products and own particular intellectual property (IP).

Another advancement in the 4th IR is synthetic biology. This “customizes organisms by writing DNA” that will “have a profound and immediate impact on agriculture” Schwab (2017). Naturally this work comes with huge ethical issues and that is why we need leaders that make sound decisions, using whole brain thinking, to ensure the pros outweigh the cons.

8.1.2 Impact on jobs

The excitement of new trends, advancements in technology and biological changes can be overshadowed by a genuine concern for employment and social well-being. Automation will have an impact, so will IoT monitoring, what will be the impact of the 4th IR on jobs?

Schwab (2017) outlined two opposing camps for this dilemma. The first believe in a “happy ending in which workers displaced by technology will find new jobs, and where technology will unleash a new era of prosperity”. The other camp has a more unnerving opinion in which “it will lead to a progressive social and political Armageddon by creating technological unemployment on a massive scale”.

Schwab (2017) mentions that history implies the outcome could be somewhere in the middle. However, I see this as one of the areas in which leaders can help to influence the first scenario, and highlights the need for whole brain thinking.

I interviewed Alison Watters, a professional director within the New Zealand

primary sector. She had a very clear opinion on discussing the impact automation could have on jobs.

“You can’t ignore it. You need to work with your team early. Have the hard conversations and make sure they have time and opportunities to upskill” *Alison Watters*. She explained that she often discusses this topic with people. Alison recently sat next to a woman on a long haul flight. The woman mentioned a new innovation for the medical sector, which was a blood test box that provided lab results immediately at the bedside. This technology could have a major impact on the many staff working in laboratories globally. However, a labour gap would be formed in the data analysis space at the nurse’s stations. Effective leaders should identify these gaps and work with their laboratory staff to ensure they do have the required skill set to step into these roles as they arise.

I also interviewed Sarah Crofoot, meat and fibre policy advisor at Federated Farmers. Sarah’s thoughts were also very clear, “it's about understanding the people, theoretically they've worked for you for a little while. So it's about understanding where they might fit into a new world. It might not be with you, they're probably someone who's doing a job that’s going to be replaced by a robot. So they’re probably not going to have the skills to go and run the robot or design a robot. But you'll know enough about them as a person to guide them and say 'something like this might work'. There are certain industries that will be really at risk, and many will know it now”.

8.2 Disruptive Technologies

With increases in digital technology, there are new ideas and concepts coming to life every day. You can now identify a problem with the status quo and use technology to disrupt it by creating transparency or equality. Very large and often over-used examples would be Uber or Airbnb. Clayton M. Christensen is a professor at Harvard Business School; he established the theory of disruptive innovation in 1995. “‘Disruption’ describes a process whereby a smaller company with fewer resources is able to successfully challenge established incumbent businesses” Christensen et al., (2015). Christensen’s theory suggests that businesses often look at high-end customers for growth opportunities as they can provide high value products or services. Therefore they leave room for competition to come in at the low end of the market and improve their offering until it eventually reaches the same level as incumbents. There has been a little criticism of Christensen’s theory because some of the ‘pin up’ examples don’t fit this theory. By definition, the theory excludes the likes of Uber due to fact that

‘Uber’s strategy did not originate in low-end or new-market footholds and disruptive innovations don’t catch on with mainstream customers until quality catches up to their standards’ Christensen et al., (2015).

Uber definitely shook up the taxi industry, regardless of whether they followed Christensen’s definition of the theory of disruptive innovation. This theory is still very valid though, for the main reason that many start-ups fit the theory. Almost every primary sector service business will be impacted by disruption in some form in the near future. If businesses can identify faint signals or emerging business models, they can then apply whole brain thinking to opportunities as the incumbent and there should be a better chance of success in holding onto the market.

An example, similar to Airbnb in regards to a ‘platform’ model, is the recent Amazon acquisition of Whole Foods in America. Amazon is one of the world’s largest e-commerce sites and Whole Foods is an American supermarket chain that seeks out ‘natural and organic foods available, maintain the strictest quality standards in the industry, and have an unshakeable commitment to sustainable agriculture’ Whole Foods Market IP (2017). When the acquisition occurred, Amazon released a statement saying: “As the two companies work to integrate their business, all customers will immediately see lower prices on a selection of best-selling staples across [Whole Foods] stores” Thomas (2017).

New Zealand currently provides red meat products at a high value price point to Whole Foods. This acquisition will no doubt provide disruption to this distribution at some point in the future. However, it could also help to lift the NZ red meat profile if our brands are performing well in Whole Foods stores.

8.2.1 Synthetic proteins

A major disruptor for the New Zealand primary sector that does fit into the theory of disruptive innovation is synthetic red meat protein. Alternative options for cow’s milk have been available for many years now with the likes of coconut, soy and almond milk. An alternative to red meat however, is quickly becoming a major industry in Silicon Valley in the US. It is currently an expensive alternative, but many have identified that, based on customer uptake, it will likely enter the low end of the market with fast-food chains and essentially feeding the poor, rather than the wealthy. It could also offer new markets as some options will be ethically produced and therefore provide a protein option for vegan and vegetarian consumers.

Sarah Crofoot had recently been in the US and tasted a plant-based meat alternative in the ‘impossible burger’. Sarah’s family are farming on Castlepoint Station in the Wairarapa and originally farmed just out of New York City, so she was a great person to discuss this burger with, as she understands the consumer as well as New Zealand producers.

When asked what the plant-based burger tasted like, Sarah explained, “in a bun with salad and mayo, it tastes just like any other processed burger”. She purposely dissected it and said, “As it cooled down, it became obvious it wasn’t meat. It also tasted different when eating the pattie on its own”. The whole burger combo cost Sarah $15 USD, so this particular plant-based protein is an affordable option for Americans.

Sarah wrote an article for the National Farming Review newspaper about her experience in the US, she noted, “Some of these synthetic protein companies are backed by very wealthy investors”. At the moment, plant-based proteins are the only ones there at a commercial scale. But, cellular proteins are very much in laboratories and they will be ‘genetically meat’.

Sarah studied a company that was actually developing a machine that you could eventually have at home. There will be the ability to buy a little cell kit and then you put it in the machine and your meat grows. “If that sort of thing takes off, the whole big factory mass produced thing gets flipped on its head. So it's all about how the consumer's going to actually react to it and whether they're prepared to deal with it,” Sarah explained.

As discussed earlier, technology is increasing at a faster rate than any other time in history; so synthetic proteins will be impacting our volume markets in the very near future. This means the majority of our exports need to be in the value-add space, ideally in the next two years.

“We can't try and go head to head with them, there's no point in us trying to meet with them on price, because they're going to get really cheap. They're not there yet, they are at the height of the market now, but they'll end up being really cheap and being cheaper than us. So playing a cost commodity game with them is not going to work. It means that if we do want to stay at the premium end of the market, we need to be really authentic about what we're doing and actually make sure our systems and traceability etc. are all up to scratch” *Sarah Crofoot*.

8.3 Producer supply vs. market demand

“There is a simple unavoidable truth: no customers means that there is no business. However, historically, we have placed the majority of our focus on maximising production” KPMG (2016).

In my first job after school job in hospitality, I was told ‘the customer is always right’. When I look at most successful brands in the world I notice the product or service has been tailored to meet a specific set of consumer needs. When I look at outcomes of the 4th IR such as robotics or even companies like Uber, they are successful because they have identified a consumer need and created a platform or product to meet that need.

As we move forward into a world of constant change, we need to be closely connected to our consumers and identify ‘what is the problem they are trying to solve’ without confirmation bias based on the product the business already creates. I was recently at a conference where a farmer was discussing his experience with a meat broker in Asia. He mentioned this exact concept of New Zealand creating a product offering and then expecting the customers to buy it. The comment he made was simply “You want lamb, you want lamb, you want lamb – no. We want mutton”. In reality, I know the work behind the scenes goes a lot deeper than this and we do have many representatives in our major markets all the time.

The suggestion here is; are we listening out for what we would like to hear in those markets or do we need to be a little more creative in understanding exactly what makes our customers tick?

“In this country we are full bent on rational, orderly, this is it, let’s do all this work now, the consumers must come and buy it off us because we’ve ticked all of these boxes, but actually consumers make emotional decisions and we are really poor at working out how to capture the hearts of those consumers” *John Brakenridge*.

An area that I explore later in my research is the concept of design thinking. “Design thinking is fundamentally an exploratory process; done right, it will invariably make unexpected discoveries along the way, it would be foolish to not find out where they lead” Brown (2009). This is just one example of how our customers need to determine the products we export and services we provide. This process is significantly different from the concept of customers *telling us* what they want; it involves a lot of listening, observation and the prototyping options to take to the market.

8.3.1 Case Study: Allbirds

Allbirds is a San Francisco start-up company that produces a minimalist sneaker made of NZ merino wool. It was founded by a couple of blokes called Tim Brown (NZ) and Joey Zwillinger (US). The business creation goes like this:

“We bonded over beers and birds, and shared a dedication to asking ‘why’ and ‘what if’ a lot”, Allbirds (2017).

The company was quoted in *Time* magazine with the heading ‘The World's Most Comfortable Shoes Are Made of Super-Soft Wool,’ Vella (2016).

Figure 1.2 Red Antler (2017)

It is a classic example of understanding the consumer– they are getting the emotional decision. Their website is a fantastic experience with a story, backed by science. The simplicity of ‘from the land of 29,221,334 sheep’ and ‘he wondered why an incredible, sustainable resource had never been used in footwear before’, Allbirds (2017).

The brand is B Corporation certified, meaning they meet the rigorous standards of social and environmental performance, accountability, and transparency. They are also part of the Soles4Souls initiative, which is an organisation that creates sustainable jobs and provides relief through the distribution of shoes and clothing around the world, Soles4Souls (2017).

“They were at 12 million US in terms of turnover, online direct selling. Next year, they percolated and tried to do something out of R&D Ag research all that sort of

stuff, then they got the R&D done overseas and it just took off within the value chain. The next year they are tracking more like 75-80 million USD by way of sales and nearly all of that is online" *John Brakenridge*.

I am a recent purchaser of *Allbirds*. They are comfortable, stylish, socially and environmentally accountable, and a brand I am proud to promote.

9. Right Brain thinking

In the 1960's a brain surgeon called Roger Sperry provided evidence for the theory that different parts of our brain account for specific actions, such as right brain being the visual part, Right Brain Thinking (2013).

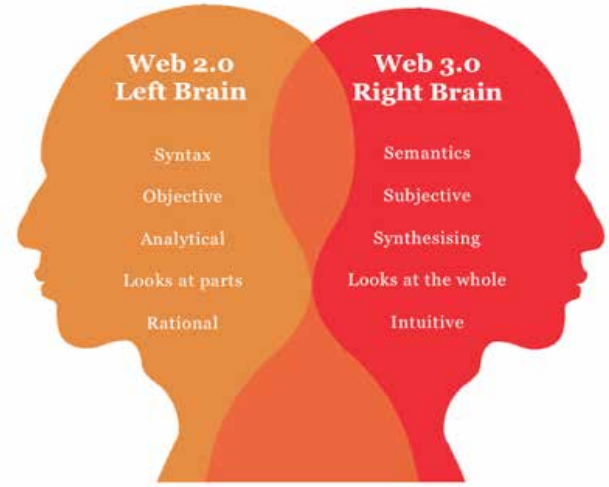


Figure 1.3

Further studies have continued to flesh out this concept, but the essential difference for this particular research is outlined in *Figure 1.3*. We do use each side of our brain every day, however, traditional leadership attributes tend to be more analytical and rational.

Basically, this means using half the resources to solve a complete problem. Pink (2006), suggests that the future belongs to 'a different kind of person, with a different kind of mind' - right-brain thinkers.

The initial thoughts around his opinion relate to the third brain attribute in *Figure 2.1* –analytical and synthesising. This is due to moving from the information age to conceptual age and the need to understand problems in their entirety.

"The left can grasp the details but only the right hemisphere can see the big picture" Pink (2006).

If I take this back to the New Zealand primary sector strategy of shifting from volume to value-add and the solution of thinking differently, thinking like our customers and acting fast, it requires the attributes of right brain to come into play and establish that big picture. In the *Allbirds* example, they have looked at the whole picture and ticked the box for a socially and environmentally responsible product that is affordable and aesthetically pleasing. Whole brain thinking can allow this level of creativity to occur.

10. Twenty-first century leadership capabilities

When I combine my newfound knowledge of the fourth industrial revolution, disruptive technologies, consumer driven markets and just the speed of change that occurs in all aspects life, I move into my overarching question:

> Based on the presumed business outlook, what could effective 21st century leadership look like in the primary sector?

This research now moves into the 'what' and then the 'how'. What would 21st century leadership capabilities look like and how might individuals and businesses evolve to move into this 'new world'?

10.1 Leading in a complex world

At the very start of this research project I was directed to an article by the team at Harvard Business Publishing that suggested we live in a VUCA world. This stands for volatile, uncertain, complex and ambiguous. Axon et al., (2015)

"Potent forces have combined to create a volatile landscape characterized by unprecedented degrees of uncertainty, ambiguity, and change" Axon et al., (2015)

This article outlined leadership research Harvard Business Publishing had undertaken and it became the backbone of my research. Without fail, the eight capabilities outlined in the article were mentioned in every interview. These capabilities fit in to three areas:

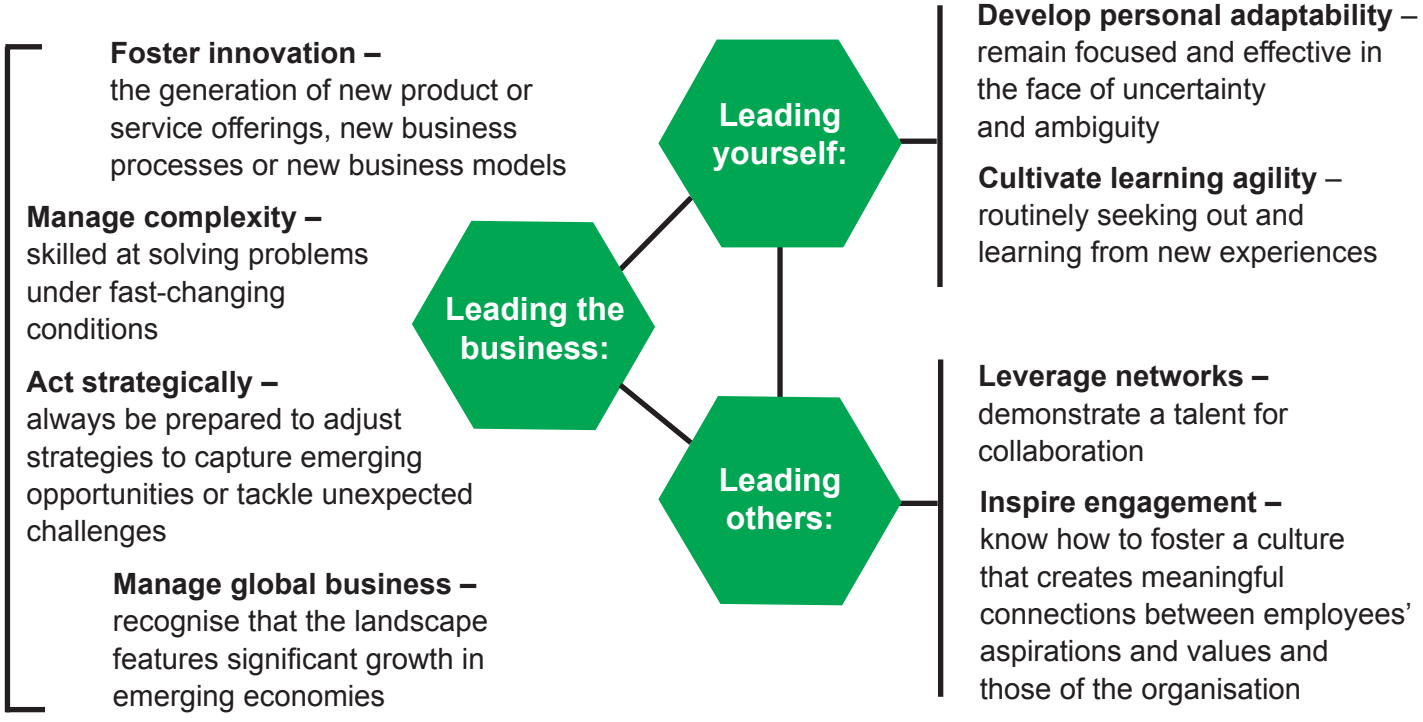


Figure 2.1, Axon et al., (2015)

10.1.2 Critical Capabilities, how do we measure up?

I decided to put these capabilities to the test in the New Zealand primary sector. I surveyed a number of primary sector senior managers, CEOs and directors, 21 responded anonymously. They we asked to describe which of the eight capabilities were strong within their senior management team:

	Manage complexity	Manage global business	Act strategically	Foster Innovation	Leverage networks	Inspire engagement	Personal adaptability	Learning agility
Not relevant	0 %	14 %	0 %	5 %	0 %	0 %	0 %	0 %
Challenging	5 %	0 %	9 %	5 %	0 %	9 %	5%	0 %
Development required	24 %	24 %	20 %	28 %	19 %	10 %	28 %	38 %
Resonates	47 %	38 %	43 %	43 %	48 %	43 %	43 %	38 %
Strong	24 %	24 %	28 %	19 %	33 %	38 %	24 %	24 %

All eight capabilities ranked reasonably high with these leaders, although some critical analysis needs to be applied here, as many of these respondents sit on their suggested senior leadership team. What was more interesting to me was that the ability to foster innovation was a weaker capability, along with personal adaptability and maintaining a learning agility.

The main assumption I had for these weaker capabilities was the simple fact that the majority of the time these leaders need to focus on the day-to-day business. This has been a running theme in my research and it does make complete sense. It is very difficult to stop and spend time on the bigger picture, because it doesn't provide immediate results and there is always a target to meet or a fire to put out.

"The challenge with your business is you've got your day-to-day as you try and move into the new world. How do you keep cash flows going, culture going, skill bases of that as you try and move them into the new world too. So it is actually really difficult," *John Brakenridge.*

However, stopping to focus on the big picture is exactly what needs to be happening due to the uncertainty that comes with disruption and 4th IR technology. Building closer connections with customers and taking the time to understand their needs doesn't fit into a one hour meeting slot.

During my interviews I asked individuals; what leadership capabilities do you see as crucial going forward? The weaker capabilities were the dominant responses from my interviewees, which highlights the need for change in the sector.

“That willingness to learn and be flexible, not like a lot of our more traditional leaders that may have got away with being really good at a particular thing and don’t necessarily have the right skill set going forward, or have never been able to successfully redo the same thing again and again” *Sarah Crofoot*.

“Agility, ability to understand your team, resilience for failure and a flexible brain. Directors should ask a lot of questions, ask management enough questions to mitigate the risk” *Alison Watters*.

10.2 Case Study: Business Torque Systems

Peter Allen, from Business Torque Systems focuses on building capability in governance. They provide a tailored learning approach that is based on seven governance practices and seven personal aptitudes:

SEVEN GOVERNANCE PRACTICES	SEVEN PERSONAL APTITUDES
1. Acting with a purpose in mind	1. Leading to inspire
2. Planning for effective governance meetings	2. Planning, for focus
3. Working with other people	3. Understanding yourself and others
4. Making right decisions	4. Managing for performance outcomes
5. Maintaining a learning orientation	5. Teaching that excites
6. Knowing what’s going on and what to do about it	6. Understanding business financials
7. Managing risks effectively	7. Directing in service of others

Business Torque systems (2016)

Their process involves the following; each board member is assessed on the seven practices and aptitudes using an online survey, which is 225 points and takes approximately 35 minutes. Peter’s own research created this assessment and the lists above. Based on thousands of meetings and interviews, Peter originally created a business development programme with a number of modules. From there he refined it to focus solely on governance, and the seven practices.

The outcome of each assessment is treated similar to a risk assessment. The results highlight the gaps (risks) associated with the person and Peter evaluates the severity of that risk. From here, he creates a tailored programme to build capability around these risks and reduce them.

Maintaining a learning orientation

Peter's list interested me for a number of reasons. Firstly, number five on the list: *Maintaining a learning orientation*. If technology is changing faster than any other time in history, we need to continue to learn. Interestingly, Peter highlighted this practice as an area that could be significantly improved in primary sector governance.

Peter believes that 100% of his clients do not maintain a deliberate learning orientation prior to meeting with him. The common reason for this is time, and value. Many do not see the value or importance of learning new things. He often faces the comment "I am learning new things everyday".

This is a common misunderstanding between the differences in learning as you go, and dedicating time to learn something new. "A direct consequence of this is that boards can go stale," explained Peter. This capability is also known within my research as 'cultivate a learning agility' Axon et al., (2015) and plays a crucial role in all levels of leadership. In Peter's opinion, to fast-track this capability into the boardroom requires one of two options:

Option B: is to get an independent director. This isn't often possible if the person on the board that isn't willing to learn is an owner of the business or family member – as in the case of farming board structures.

Option A: is to work with an advisor (similar to Peter's business) to help each person wear the right hat in the right situation. This involves essentially re-wiring slowly using deliberate learning and continuous improvement.

Peter slowly introduces learnings at each meeting; there is a deliberate evaluation of the meeting, which is directed at how the decision-making process went, rather than what decisions were made.

This option attempts to change the value of learning and often starts with Peter's time slot at the end of the meeting (and often missed due to time constraints). Eventually, individuals identify the value and Peter's time slot is pulled to the start of each meeting. Once a director believes in the value of continuous learning, they can take it further and strengthen that capability. This method is enabling directors to think beyond the immediate and more into bigger, whole picture– a great attribute of right brain thinking.

Acting with a purpose in mind

Peter believes almost 95% of his clients are not doing this prior to his work. Again, one would assume this is an essential capability for any primary sector director.

So why would you not act with purpose? Basically, the day-to-day duties get in the way and "they are constantly working on, rather than working in" explained Peter. This directly relates to strategy and Peter believes that most of his clients do not have a strategy (other than one in the bottom draw), prior to meeting with him.

Based on my interviews, respondents suggested that it isn't uncommon to not have a 'live' strategy that is referred to regularly; this wasn't in their businesses but something they had been exposed to.

Unsurprisingly, this directly relates to buy-in. Peter said many boards have a facilitator come in and identify goals and strategic plans, but then they take those ideas away, write the strategic document and then deliver it to the business.

"This dilutes the process as it is the board's responsibility to decide on the strategic direction of the company and if they do not take full ownership of creating the strategic plan, there is less chance of buy in" he explains. This capability occurs numerous times within my research and is also referred to as 'Act Strategically' Axon et al., (2015)

Working with other people

The third under-developed attribute for the primary sector is, number three on Peter's list, *working with other people*. I assumed this would come naturally to the vast majority, but in reality this is not always the case. Boardrooms can be known for 'group think'. This is when the chairman says, "everyone in favour say aye" – and everyone responds with 'aye'. Even though many disagree internally.

Training around this practice often includes creating a safe zone. A safe zone has no 'group think' - but a safe zone isn't a cosy place. In fact, it can quite often get very uncomfortable, as everyone voices their opinion and feels safe to disagree. It is here that directors get real value out of a meeting and make better decisions. Everyone has a voice, the noisy ones learn to shut up and the quiet ones learn to speak up. Every opinion is valued. This takes real skill from the chairperson. Again, this capability is also referred to as 'to inspire engagement' Axon et al., (2015) within this research.

As part of this governance practice, an evaluation of behaviour is done at the end of meetings. Peter's method also includes the DISC analysis and the results are fundamental to this evaluation. The DISC analysis is a personality assessment based on the four quadrants shown in Figure 2.2

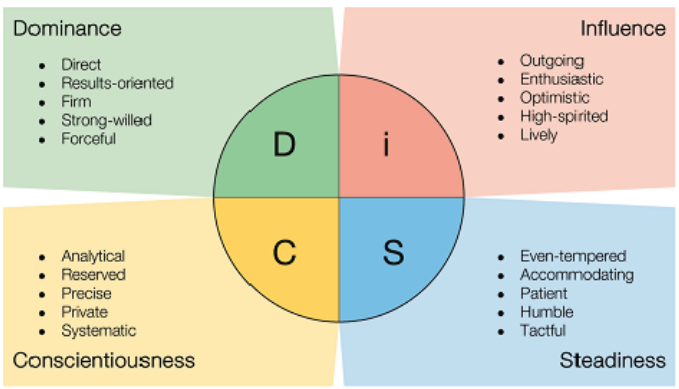


Figure 2.2: Everything DiSC (2016)

The practice of behaviour and personality evaluation is directly linked to the #3 attribute – understanding yourself and others. "You can learn a lot about director behaviour when you spend time analysing the 'fluffy stuff'" Peter explained.

This is a classic example of right brain thinking making its way into leadership. Taking the time to understand yourself and others allows empathy to be present.

Personality assessments are so readily available online, it makes perfect sense for businesses to use them regularly.

Directing in Service of Others

Another attribute that Peter wanted to highlight was 'directing in service of others'. He had an experience recently where he spoke to a director of multiple farming businesses, and received a response "I don't do the learning, I have a set of directors that do the learning and present me with the findings". Digging a little deeper, Peter found that this set of directors had no real decision-making power in the farm business, because the owner had allowed them to be directors of his advisory company only and were essentially an image rather than real part of the farm company decisions.

"As a director, it is your legal duty to act on behalf of the company, not the shareholders. This is not only a legality; it is fundamental to great governance" explained Peter.

This experience emphasises the issue at stake here. If future leaders are going to be prepared for the challenges of a rapidly changing world, they need to maintain a learning orientation and have a strong team around them that, equally, has the confidence and ability to make informed decisions. I explore organisational models later in my research, which reinforces the team aspect of 21st century leadership.

"Imagine if directors used all of their brains, how powerful that would be" *Peter Allen.*

11. Building an industry of excellence and creativity

I come to the final phase of my research now. This involves exploring how businesses that move into the new world, equipped with 21st century leaders, can be effective in creating change for the New Zealand primary sector.

When I talk about the 'new' world, I am referring to the non-traditional world where whole brain thinking occurs and innovation takes place. These leaders understand that the world is now a very uncertain place. They acknowledge the speed of change, disruption to their markets is inevitable and that thinking differently is a must in order to survive.

11.1 Design thinking

One approach to inspire innovation without looking outside the business is design thinking. It definitely stems from right brain thinking and I see it as a powerful method of change when it comes to the NZ primary sector challenge of moving from volume to value.

“Powerful, effective and broadly accessible, that can be integrated into all aspects of business and society, and that individuals and teams can use to generate breakthrough ideas that are implemented and therefore have an impact. Design thinking, offers just such an approach” Brown (2009).

So what exactly is design thinking?

My research identified it as a human-centered problem solving method based on being intuitive, recognising patterns and constructing ideas that have an emotional meaning as well as functionality. It isn’t just nice design, and it isn’t a method purely for designers. If I go back to Uber as an example of not only market disruption, but also design thinking.

Uber recognised a pattern occurring with people frustrated with the taxi service industry, they constructed an idea that put the person catching a cab in the centre of the business model. They made the experience affordable and convenient, without a need to have physical money and the ability to see how far away the vehicle was at all times. Uber met a customer need that wasn’t being met by the current market and re-designed the experience.

When discussing synthetic proteins with Sarah Crofoot, we moved into a conversation about options for the value-add space. Sarah showed me an image of a cut called the Tomahawk. It was basically a large bone and New Yorkers are paying about $50 USD/kilo in a fairly high-end shop in central New York. A friend of Sarah’s, who works in New York City and has a role that interacts with upper class New Yorkers on a regular basis, explained to her that the wealthy in New York use quite different symbols to display wealth.

The reason for this is that, in New York, nobody sees your car anymore because they are always parked underground and no one ever sees you drive up in them. So wealth is displayed in other ways, with fancy watches, or they might buy a Tomahawk cut of meat. “If you see a Tomahawk cut come out to a table, it is like ‘oh someone’s throwing a bit of cash around’” Sarah explains.

This example could be seen as the very start of design thinking. We often think of NZ meat as ‘grass-fed, full flavour’ as the selling point, where in fact that could be only part of the story. It could be more appealing to provide ‘experience’ cuts of meat to the market, meet the need to display wealth and then back fill that story with details around grass-fed, full flavour and sustainably produced. As Brown (2009) explained, “it is listening to what they don’t say”.

“I feel a lot of our stories tend to be inward looking. Here is NZ, pretty pictures and all that sort of stuff. Yeah that makes us feel good, but what are the consumer needs we are aiming to satisfy? Last year a number of us did consumer empathy work with top-end consumers in the US and asked that question. Now obviously it’s not what market research says because market research will tell you what people rationally want you to hear – not necessarily what is emotionally driving their behaviour. So that is what our design thinking was doing, emotionally driving the behaviour,” *John Brakenridge.*

11.1.1 Design thinking at the ‘C-level’

I not only see design thinking as an important approach to business challenges in the NZ primary sector, as Brown (2009) suggests it needs to occur at the ‘C’ level with CEOs, CFOs COOs etc. as an example of effective leadership in the 21st century. It comes back to the 21st century leadership capabilities and the need to allocate time to focus on the big picture. It is a mindset shift and, with implementation from the top down, change is more likely to occur.

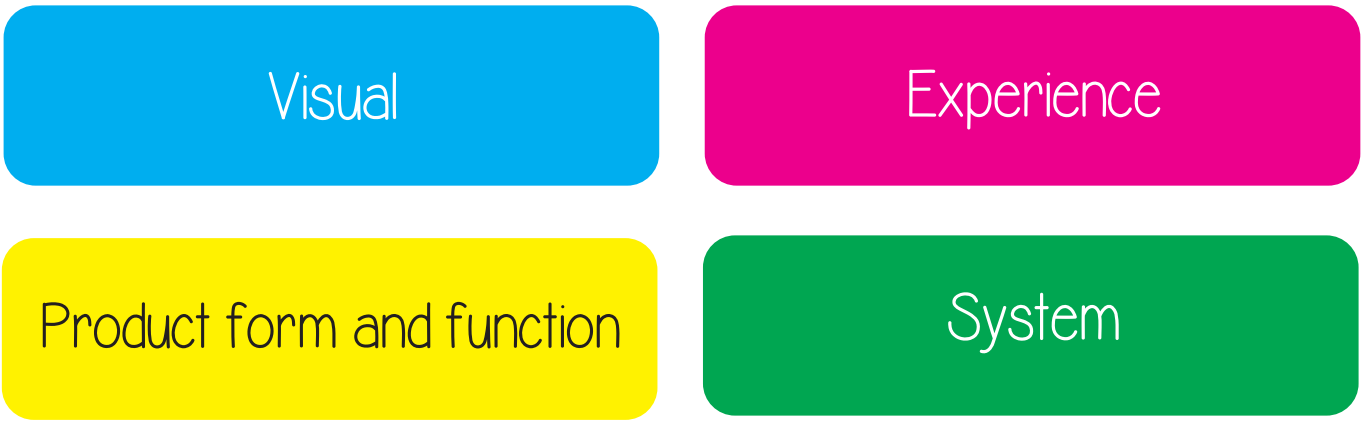
I met with Jim Scully, founding partner and managing director of ThinkPlace NZ, which is a strategic design consultancy that works with leaders to create new and better futures. We discussed the idea of design thinking at a ‘C’ level.

“There also needs to be a clear line of sight from practitioners to senior management in regards to buy in. This is because design thinking often occurs at middle management level, to ‘do the doing’ but it needs to be supported by senior leaders, so they can actually allow time to step away from the day-to-day”, *Jim Scully*.

It is similar to many methods in businesses. If there is no buy in or mindset shift from senior management, the change cannot occur. Going back to the eight capabilities for a VUCA world, if a leader has personal adaptability, learning agility, can foster innovation and act strategically – they should have the ability to adopt the mindset of design thinking, which can be used as a strategy to managing complexity and manage global business.

There is an acknowledgement by my interviewees that effective leadership for the 21st century is starting to take shape. But we do have a long way to go.

Jim Scully explained that there are four areas of design thinking:



Credit: Originally presented by Prof Richard Buchanan, Case Weston Reserve University.

"The [NZ] primary sector needs a combination of all four, but largely it needs system change" *Jim Scully*.

The reason for this system change was echoed in other interviews as well. Because of our traditional analytical and left brain leadership, there isn't a lot of detail around the common goal. According to Ministry for Primary Industries (MPI) our ambition is described as "New Zealand is the most trusted source of high value natural products in the world" Industries, M. F. (2017). My problem with this ambition is that I believe a lot of that trust is being built in silos as individual brands, rather than coming together and refining that ambition by detailing our unique contribution as an exporter to our markets and our customers as a whole.

"It is like the quote: Weak and scattered thoughts leads to weak and scattered force" *Jim Scully.*

Design thinking enables research to be done around emotional behaviour, we can then establish why customers are willing to pay a high price, what is their interpretation of 'trusted', what measures would ensure that our protein remains trusted for longer and probably establish detail about our offering that makes it even more powerful in the marketplace.

"We have for too long, tried to do everything rationally, paint-by-numbers, our CRI's, everything is just linear – if we do this, then this is how it will work, the markets are going to come," *John Brakenridge.*

11.1.2 Case Study: Beef + Lamb New Zealand

Beef + Lamb New Zealand (B+LNZ) have used the services of ThinkPlace NZ to complete an independent review of market development activities. The purpose of this project was to better understand how to help farmers get the most from export markets.

> **"ThinkPlace worked with B+L NZ to develop the strategy and action plan though radical cross-sector collaboration, with design thinking at its heart. We brought to the table the co-design of intent, strategy, and programmes to deliver on the strategy's ambitious goals."**
>
> ***ThinkPlace NZ (2017)***

Farmers have noticed the changes from B+LNZ in recent times. Their website also provides plenty of information relating to export markets. ThinkPlace is still working with B+LNZ to roll out the project and it is great to see the industry body embracing design thinking and moving into the new world.

12. Storytelling with substance

One of the common traits of a right brain creative thinker is the ability to create a fantastic story. When it comes to top brands and experiences, most of them have a great story to tell and portray that story well.

During my interviews, I asked the question:

Nowadays, just about every fact you could ever want to know is instantly available online. So the term 'information is power' is rapidly changing to 'the ability to place facts into context and to deliver them with emotional impact (storytelling) is power' – would you agree?

Naturally the answer was “yes”, but there was also the discussion that it needed to be backed up by science or substance. Allbirds again reinforce this statement, they produce a good-looking shoe with a great story, but they also have the science of wool and the substance of social responsibility sitting in behind that story.

“People want the story, but in reality there needs to be substance behind the story as well. Design thinking provides real life quotes, real case studies to give the story authenticity - give them new eyes. We are seeing a shift from the ‘why’ to the ‘how’, but leaders who get it lack the space to explore and be courageous” *Jim Scully*.

I find the synthetic protein market interesting in this way. Many of the companies have great stories to tell the market, backed up by substance of ethical and sustainable practices, and some of them don’t even have a commercial product yet.

“It's a matter of making sure our stories are really robust in the social media and the millennial age, I think that has had a huge impact. Stories we might have been able to tell 20 years ago, without the science backing them up” *Sarah Crofoot*.

12.1 Case Study: Te Hono

Te Hono is a growing group of New Zealand agribusiness leaders who are exploring new ways of thinking and doing. Te Hono comes from a greater concept, which is Hono Tangata, Hono Whenua, Hono ki te ao – strengthening relationships by linking to the land and connecting to the world, Te Hono (2017). This initiative is business-led, government enabled.

“Te Hono is where businesses get together and we say ‘hey this world’s changing’, how do we adapt, what can we do and how might we be able to find some logical collaboration and how can we share learnings?” *John Brakenridge.*

Te Hono includes a five-day primary sector bootcamp every year at Stanford University.

I was fortunate enough to go through the Te Hono model in detail with the founder of the initiative, John Brakenridge. Te Hono is a great example of a way to change from the old model (traditional linear thinking) to the new model (right brain attributes, whole brain thinking). The primary sector model shift is from volume to value-add.

“As part of that, NZ needs to become an exemplar environmentally, economically and socially in terms of part of that change. We are the new company, if you like, we are the start-up country. We are the youngest country out there” *John Brakenridge.*

In 2017, Te Hono initiated Project Leapfrog at the national summit.

Figure 3.1: Te Hono (2017)

The project has eight inflection points that need to be explored and understood in order to move the primary sector forward. John Brakenridge believes that you cannot have one without the other and this relates to storytelling with substance. To design very high-value products, you need to be an exemplar in a number of areas. John explained that the project is 80% action, with capability and trust forming the base.

When I look at the work Te Hono is doing in regards to building an industry of excellence and creativity, it covers off all of the critical capabilities.

Critical capability		Some examples
Manage complexity	✓	Stanford Bootcamp 2017, design challenge with presentation on day five. Inflection point: business structures and disruption
Manage global business	✓	Inflection points: Disruption and positioning, experiences and substance, business structures
Act strategically	✓	Inflection points: R&D innovation, productivity and technology, as well as disruption and environment and water
Foster innovation	✓	Inflection points: R&D innovation, productivity and technology, as well as disruption
Leverage networks	✓	Te Hono Stanford Bootcamp and CEO summit
Inspire engagement	✓	Inflection point: Education and talent
Personal adaptability	✓	Inflection points: Disruption and positioning, experiences and substance
Learning agility	✓	Inflection points: Market sophistication, education and talent, social structures

"Coming into psychology, people are finding something and, within all of us, when we find something we want to tell someone about it, and social media enables us to do that. If you can then backfill that story with the story that it has a natural story because people then buy something but then there is a post-cognitive dissonance – why have I done it? That's when they often look for the decisions as to why they did it. Oh and hey, by the way, here is the environmental story that goes with it" *John Brakenridge*.

"Te Hono type work is the key. Take people out of day-to-day and give them time to focus on big picture. Put value into this" *Jim Scully.*

12.2 Case Study: Headwaters

Headwaters is a New Zealand business made up of like-minded, progressive farmers that are responsive to consumer and scientific developments. They believe that the future lies in working together to achieve breakthrough goals, not short-term or individualistic thinking.

I was fortunate to discuss Headwaters in detail with the founder, Andy Ramsden. This business is another example of 21st century leadership behaviour. It has been 10 years in the making but farmers are seeing the results and reaping the rewards of their belief in a story backed by science and substance.

The Headwaters model is complete from farmer to market. They own their IP and focus on specific genetics to lift the fatty acid profile, particularly omega 3 in their sheep meat. The company has a 50:50 joint venture with a processor, to take that meat in and market it.

“The reason Alliance can do this is because they’ve got a dedicated supply of a very technical R&D programme to create a different science-based product. So they can then get on, knowing that is coming, and participate in the R&D to create that product. They can then, with confidence, start to invest in raising the value proposition in the market” *Andy Ramsden.*

I found Andy a great example of whole brain thinking, because he takes it one step further back than many other value-add examples. Andy explained to me that his model starts with genetics because then you are going right back to the beginning. To have a differentiating product, you need to understand what consumers want from the product, what unique benefits can the business provide to reach that high price? Owning the IP or at least understanding the genetic benefits can then help processors and exporters to create a story that is supported by science and enter the premium markets.

“You don’t actually see other models like Headwaters at the moment. There are other supply models but they don’t own the genetics. These supply stories are a good effort in terms of trying to improve value, but it isn’t starting where it starts, which is genetics. It has just taken whatever has thrown its hand and amalgamated it with a story. So that’s not going to achieve the big step in value that we need” *Andy Ramsden*.

Genetics is admittedly a difficult area to change. Yes, it is slower than other decisions farmers make in terms of spending money to grow, but there is an immense amount of trust involved in changing the sheep genetics of a farm to suit market demand. Genetics is also a complex topic and there are a lot of unknowns for the average farmer. I can understand the challenges Headwaters must have faced to build enough confidence to create buy-in from farmers to build the brand.

Andy explained that the initial buy-in from farmers was literally that, capital. They were asked to pay a certain amount per ewe and there wasn't even a breeding programme yet. That money was used to start the R&D and away they went. I personally find this a phenomenal story and Andy acknowledged the amount of time spent with each potential shareholder and the trust that was built from day one. He noted that they delivered exactly what they set out to do, and still are.

These farmers are now in a better position, in regards to returns, than many other coarse wool farmers throughout New Zealand. This model was an outcome of thinking differently, creating a story backed by science, identifying a global opportunity, acting strategically and fostering innovation. This is an excellent case study for 21st century leadership capabilities in action.

13. Organisational structures

This area of my research relates to businesses as a whole. The reason I mention this is because leading in the 21st century is more about leading with others, than leading as an individual. As discussed earlier, leadership capabilities that require us to think of the big picture are often difficult to uphold due to the demands of business as usual (BAU). But there is also another reason for this weakness and it is related to the command and control mentality, which is ingrained in our leadership.

Many of my interviewees discussed how traditional leadership is still very much the main type of leadership in the NZ primary sector. When I talk about traditional leadership, I am referring to the typical hierarchy that consists of top down management and decision-making: CEO, managers and workers. This list shown in *Figure 4* details what traditional leadership looks like, versus an alternative that was prominent in my research.

TRADITIONAL		COLLABORATIVE	
Top down	Linear thinking	Self-governing	Systems thinking
Few make decisions	Programs & products	Broad participation	Process
Unilateral action	Charisma	Guide & coordinate process	Vision
Win or shift power	Persuasive	Build relationships	Empathetic
Group falls apart if leader leaves		Group continues when leader leaves	

Figure 3.2: J. (2015)

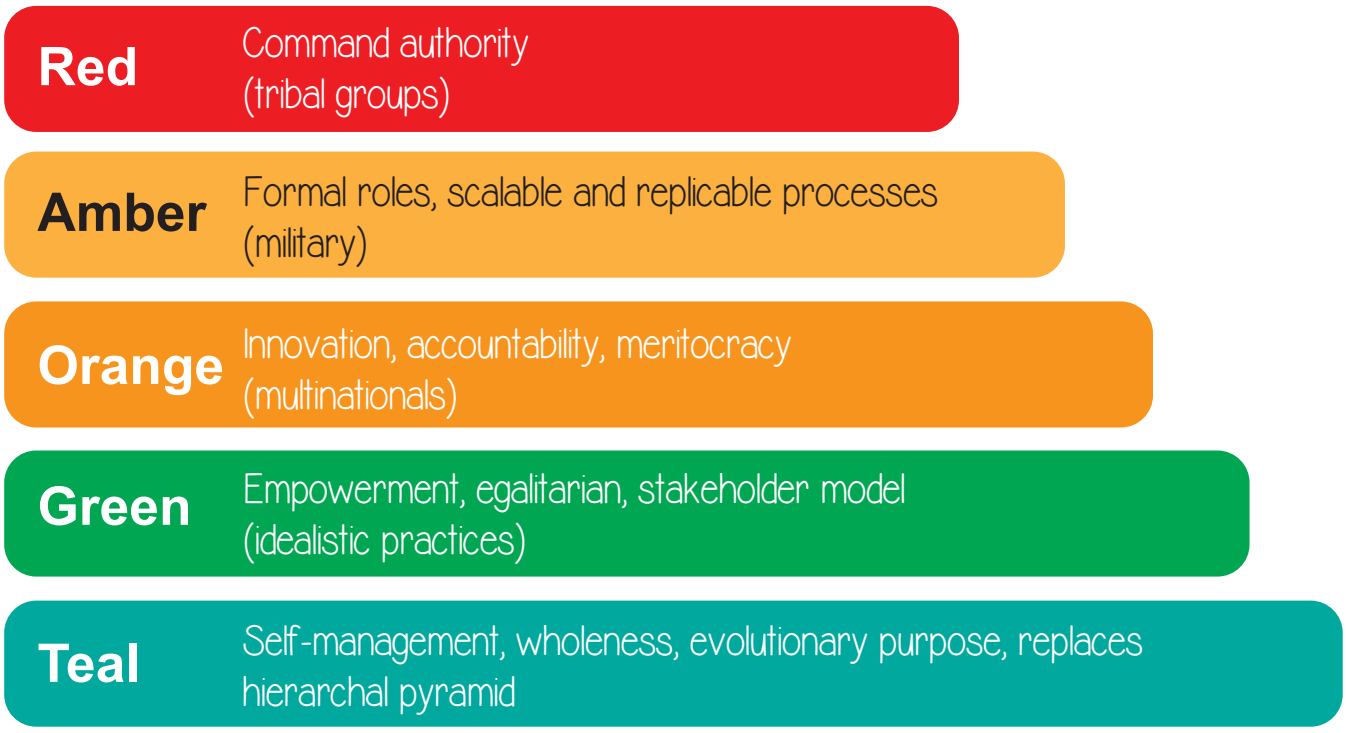
"To be a good leader you must focus on the task at hand. Go with the flow and understand what gets your team out of bed in the morning. Based on the leadership at the moment, about 40% aren't doing this and still require a linear line to a solution" *Alison Watters*.

13.1 Teal organisations

I believe many of the critical capabilities highlighted as important to performing in a VUCA world, would require a different type of leadership to be effective. Laloux (2016) discusses a business model for the next generation of organisations called the evolutionary model, or teal organisations, based on the philosopher Ken Wilber's coloured stages of history.

"We have been through the tribal age, the age of agriculture, the scientific/industrial age, and so forth. Every stage has brought a breakthrough in terms of technology and the means of subsistence, the power structures that rule society, the religious or spiritual outlook, and many other factors. We happen to be in one of these transition periods" Laloux (2016).

Laloux (2016) outlines different organisational models throughout history and relates each one to a colour:



In my survey to primary sector senior managers, CEOs and directors, I listed a set of organisational characteristics (without the colour titles) and asked them to highlight which one best described their business. The characteristics were muddled to avoid respondents skewing the results. Again, 21 responded anonymously. The results were as follows:

Red	Highly reactive, short-term focus	**0%**
Amber	Formal with stable and replicable processes	**20%**
Orange	Innovative with many objectives focused on profit and growth	**40%**
Green	Strong focus on culture and employee motivation	**45%**
Teal	Very agile, largely made up of self-managed teams	**15%**

My hypothesis was that the majority would fit into the orange category, so I was surprised with the number that identified as 'green'. These results reinforce to me that primary sector is moving in the right direction, but we still have a little way to go.

The concept of a teal organisation is interesting to me. It reflects a 'tech start up' in my opinion and actually goes beyond the concept of any workforce I've been exposed to. One example that Laloux (2016) provided was a Dutch company called *Buurtzorg*. This is a not-for-profit company with 9000 staff that provides a community nursing service.

It was born out of frustration with the 'orange' model, which included processes to improve economies of scale, cost reductions and more patients per nurse, per day. The outcomes of these processes were bad patient experiences, rushed procedures, bad staff morale, conflict of values etc. Buurtzorg was established as a self-organised team of 10-12 nurses, with no manager, that focused on the fundamentals of community nursing. They had specific clients so they began to know a good day from a bad, they built neighbour connections to create a safer environment and network of support, took the time to have a cup of tea– the list goes on.

The result was a success story. It is a model that, in 2009 Ernest and Young reported, uses less than 40% of the hours prescribed by the doctor, 30% of all hospital intakes are avoided and the company saves the Dutch social security system hundreds of million euros every year, Laloux (2016).

The three breakthroughs of a teal organisation actually fit perfectly with a VUCA world and reflect 21st century leadership capabilities.

Breakthrough 1: Self-management

Teal organisations do not function with hierarchal pyramids. Instead they work in a system of distributed authority and collective intelligence.

“When complexity increases, the pyramid breaks down. The few people at the top, however smart they are, don’t have enough bandwidth to grasp and deal with all the complexity” Laloux (2016).

Breakthrough 2: Wholeness

Professional identity has, in many cases, created a ‘mask’ that people wear when they are at work. It is quite common for people to say, “I know him personally and he is completely different outside of work”. Laloux (2016) discusses the concept that if everyone were the same person at work and at home, it would create a level of vibrancy and aliveness.

To me, this relates to self-awareness and I relate it to the discussion I had with Peter Allen from Business Torque Systems, about the aptitude ‘working with yourself and others’. It removes the group think and allows everyone to understand what makes him or her tick. The critical capability that could be applied here is: Inspire engagement – know how to foster a culture that creates meaningful connections between employees’ aspirations and values and those of the organisation, Axon (2015).

Breakthrough 3: Evolutionary purpose

“What if we stop trying to force the future into existence? What if instead we simply dance with what wants to emerge?” Laloux (2016)

This breakthrough relates directly to two of the critical capabilities:

- Act strategically – always be prepared to adjust strategies to capture emerging opportunities or tackle unexpected challenges
- Foster innovation – the generation of new product or service offerings, new business processes or new business models

Axon (2015)

Teal organisations see the business a living organism, rather than a machine. So rather than trying to predict and force a future with a long-term concrete strategy, they listen to where the organisation wants to go and guide it there. It is essentially changing from a model based on firm assumptions to a customer centric sense-and-respond strategy.

13.2 Team of teams

Retired army general Stanley McChrystal, wrote the book Team of Teams: New Rules of Engagement for A Complex World. McChrystal was commander of the joint special operations for the US military during the fight against Al Qaeda (AQ) in Iraq and he discusses the classic command and control mentality and how the challenges of the 21st century put huge pressure on management structures, decision-making and strategy during his time in Iraq.

“The twenty-first century is more connected, faster paced, and less predictable than previous eras. Though we encountered this shift on the battlefield, similar changes are affecting almost every sector of society” McChrystal (2015).

It is an interesting combination of ideas that McChrystal (2015) is discussing. The idea of the military, a textbook ‘amber’ organisation working in a similar way to a ‘teal’ organisation. The reason for this is the acknowledgement that the world has changed from ‘complicated to complex’ and fundamentally these are different. McCrystal (2015) explains that a complicated problem requires great effort, but ultimately yielded to prediction, whereas a complex problem is vastly less predictable, despite increased abilities to track and measure. He notes that unpredictability requires a new approach as models based on planning and prediction are incompatible.

McCrystal (2015) discusses the concept of a ‘hands off’ leader. The traditional approach of top down control in the military is no longer the most effective structure. Increases in technology provide leaders with a wealth of opportunities, data and information. However, due to the speed of change, leaders need to empower

individuals and teams closest to the problem to execute operations in order to take advantage of opportunities and close down threats. This also relates to the overarching concept which is changing from command to team.

McCrystal (2015) outlines many of the ideas I have explored in 21st century leader critical capabilites, as well as reinforcing how teal organisations can be really effective. He mentions the Basic Underwater Demolition/SEAL training (BUD/S) training course, which has been specifically designed to be impossible to survive by executing orders individually. “It is about developing trust and the ability to adapt within a small group” McCrystal (2015). The formula being that strong relationships are vital for success and when operating in truley complex environments, adaptive precision is key.

In AQ, traditional hierarchy was replaced with a dispersed network of teams	Teal organisations
A culture of discipline and repeatable processes was no longer sufficient	Critical capabilities - act strategically, cultivate a learning agility
Technology has created complexity and a fast paced world	Critical capability - manage complexity
Developing resilience and learning how to reconfigure to confront the unknown is essential	Critical capabilities - manage complexity, develop a personal adaptability
Moving from command to team, with the fundamentals being trust and bottom-up solutions	Teal organisations
Task force size teams are adaptable, but are confined by broader commands. “Team of teams” is an organisational structure in which relationships between teams are similar to that of individuals within a team, built on a foundation of trust and purpose	Critical capability - foster innovation Teal organisations
Complex problems required a system change	Design thinking, system change. Critical capability - manage complexity
Cooperation across silos would be necessary for success.	Critical capabilities - leverage networks and inspire engagement

“Technology had been both the cause of our challenge and a tool for our success. But it was the culture change in the organisation that allowed the Task Force to use it properly” McCrystal (2015).

14. Conclusion

The outlook for the New Zealand primary sector is as positive as we as an industry want to make it. The business landscape and composition of export markets is unknown, complex and volatile and our leadership philosophy needs to change to perform well in the 21st century.

The fourth industrial revolution will not only test a leader's ability to keep up, it will also test decision-making, innovation, collaboration and even morals. It is the revolution that challenges consumer morals and ethics as well. It presents the global market with more artificial alternatives than ever before and delivers them in sound bite snippets through the voice of social media.

This era is built on a foundation of consumer choice and perception. Businesses must serve up exactly what the consumer wants, before they even know they want it. Emotional decisions drive purchasing decisions, social responsibility backs it up and the old model of creating a product to then find the market, simply won't survive.

Everything is going to change - attitudes, attributes, business models and consumer markets. A 21st century leader should facilitate rather than lead, they should collaborate and foster innovation. Using right brain attributes to give a problem 'fresh eyes' is the key to strong future leadership, along with constantly learning and up-skilling to understand that each challenge will need a different approach.

The New Zealand primary sector isn't at the start of this leadership transformation, there are great initiatives out there that are creating the change we need to survive as an industry. What we need now is to gear up and change the mass leadership philosophy to a more 'whole brain' approach and build an industry of excellence and creativity for future generations.

15. Recommendations

The main recommendations from my research is:

- The way we solved problems in previous years are not likely to be as effective due to the complexity of the business landscape going forward.

- The eight capabilities from, Axon et al., (2015), are very achievable for most primary sector leaders. Focus on building up one capability at a time and seek methodologies or consultants that can help to achieve this.

- The innovation and technology that will develop during the fourth industrial revolution is phenomenal. Understanding how businesses could be disrupted and how organisations need to adapt and be agile is an important part of business strategy going forward.

- Above all all, maintain a learning orientation. The world is constantly changing, it is important to understand how others have tackled challenges, how organisation structures have evolved and what consumer trends are developing.

16. Limitations

The changes occurring in the business landscape today are infinite. A major theme that will impact 21st century leadership is the generation of millennials. There are many examples of changes to leadership due to millennial behaviour in the workplace. They require a different approach and the characteristics can range in each scenario. I will continue further research into this area for my own personal understanding, outside of this project.

Organisational models are also another area for further research. Teal organisations and the team of teams approach are both interesting concepts for change to the organisational model. I am sure there are many other changes to the model that would be worth investigating at a later date.

The third area of research that was out of scope for this project is the concept of innovation vs. BAU. There are many companies in the New Zealand primary sector that need to innovate and ‘think like a start-up’, but it is really difficult to do in a well-established business. Further research will also be done in this area for my own understanding.

17. References

Allbirds Wool Runners Launch to Take on Shoe Giants. (n.d.). Retrieved September 15, 2017, from http://time.com/4243338/allbirds-wool-runners

Axon, L., Friedman, E., & Jordon, K. (2015, July). LEADING NOW: Critical capabilities for a complex world. Harvard Business Publishing Corporate Learning. Retrieved July 24, 2017, from http://www.harvardbusiness.org/sites/default/files/19309_CL_LeadershipCap_Paper_July2015_0.pdf

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative research in psychology, 3(2), 77-101. Retrieved July 14, 2017.

Brown, T., & Katz, B. (2011). Change by design: how design thinking transforms organizations and inspires innovation. New York, NY: Harper Business.

Christensen, C. M. (2016). The innovators dilemma: when new technologies cause great firms to fail. Boston: Harvard Business Review Press.

Company Info. (n.d.). Retrieved September 15, 2017, from http://www.wholefoodsmarket.com/company-info

Dela Rue, B. (n.d.). The internet of Things: Wireless internet for the 100 hectare farm office. Retrieved September 16, 2017, from https://www.stuff.co.nz/business/farming/discovery/93589338/The-internet-of-Things-Wireless-internet-for-the-100-hectare-farm-office

Dominic Barton, Andrew Grant, and Michelle Horn. (n.d.). Leading in the 21st century. Retrieved August 04, 2017, from https://www.mckinsey.com/global-themes/leadership/leading-in-the-21st-century

Everything DiSC. (n.d.). Retrieved August 05, 2017, from http://au.wiley.com/WileyCDA/Brand/id-43.html

Get Up and Go. (n.d.). Retrieved September 15, 2017, from https://redantler.com/work/allbirds

Headwaters. (2017). Retrieved October 01, 2017, from http://headwaters.nz/

Hamerlinck, J. (2015, January 14). Traditional Versus Collaborative Leadership. Retrieved August 15, 2017, from https://leadingdifferently.com/2015/01/14/traditional-versus-collaborative-leadership/

Industries, M. F. (2017, September 09). Our strategy. Retrieved October 4, 2017, from https://www.mpi.govt.nz/about-mpi/our-strategy/

Kasanoff, B. (2017, April 12). Intuition Is The Highest Form Of Intelligence. Retrieved August 4, 2017, from https://www.forbes.com/sites/brucekasanoff/2017/02/21/intuition-is-the-highest-form-of-intelligence/#560d8e453860

KPMG. (2017). Agribusiness Agenda 2017: The recipe for action. Auckland, New Zealand: KPMG New Zealand.

Laloux, F. (2014). Reinventing organizations: a guide to creating organizations inspired by the next stage of human consciousness. Brussels, Belgium: Nelson Parker.

M. Christensen, C., E. Raynor, M., & McDonald, R. (2016, December 19). What Is Disruptive Innovation? Retrieved July 26, 2017, from https://hbr.org/2015/12/what-is-disruptive-innovation

Make Better Decisions. (n.d.). Retrieved August 23, 2017, from http://www.businesstorque.co.nz/

McChrystal, S. A., Collins, T., Silverman, D., & Fussell, C. (2015). Team of teams: new rules of engagement for a complex world. NY, NY: Portfolio/Penguin.

Morris, A. (2017, March). The Whole Story. Retrieved August 14, 2017, from http://www.mccormick.northwestern.edu/magazine/spring-2017/the-whole-story.html

Our Background & Beginnings. (n.d.). Retrieved September 18, 2017, from https://www.tehono.co.nz/about-us

O'Toole, C. B. (n.d.). An incumbent's guide to digital disruption. Retrieved September 03, 2017, from https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/an-incumbents-guide-to-digital-disruption

Our Story. (n.d.). Retrieved September 15, 2017, from https://www.allbirds.co.nz/pages/our-story

Pierre Gurdjian, Thomas Halbeisen, and Kevin Lane. (n.d.). Why leadership-development programs fail. Retrieved August 15, 2017, from https://www.mckinsey.com/global-themes/leadership/why-leadership-development-programs-fail

Pink, D. H. (2006). A whole new mind: how to thrive in the new conceptual age. London: Cyan.

Project Leapfrog. (n.d.). Retrieved September 18, 2017, from https://www.tehono.co.nz/project-leapfrog

Right Brain Thinking. (n.d.). Retrieved August 11, 2017, from http://startupplays.blogspot.co.nz/2013/09/right-brain-thinking.html

Rotherham, F. (2016, May 16). NZ primary sector needs story to sell globally, trade envoy Petersen says. Retrieved September 12, 2017, from https://www.nbr.co.nz/article/nz-primary-sector-needs-story-sell-globally-trade-envoy-petersen-says-b-189096

Schwab, K. (2017). The fourth industrial revolution. New York: Crown Business.

Soles4souls. (2017). Retrieved September 15, 2017, from https://soles4souls.org/

ThinkPlace (2017, March 08). Radical cross-sector collaboration unites red meat sector. Retrieved September 18, 2017, from https://www.thinkplace.co.nz/work/radical-cross-sector-collaboration-unites-red-meat-sector

Thomas, L. (2017, August 24). Amazon says Whole Foods deal will close Monday, with discounts to begin then. Retrieved September 18, 2017, from https://www.cnbc.com/2017/08/24/amazon-says-whole-foods-deal-will-close-monday-prime-customers-to-immediately-get-discounts.html

18. Appendix A

Interviewees:

Andy Ramsden
Director and Manager of Farming Operations for Lanaco. Founder of Headwaters New Zealand Ltd.

Alison Watters
Livestock Improvement Corporation – Director. AsureQuality NZ – Director. Nga Tawa Diocesan School Board – Board member. Member NZ IOD. Fonterra Governance development Programme graduate.

Jim Scully
Founding Partner and Managing Director of ThinkPlace NZ.

John Brakenridge
CEO of The New Zealand Merino Company. Founder of Te Hono initiative.

Peter Allen
Owner and Director of Business Torque Systems Ltd.

Sarah Crofoot
Policy Advisor Meat & Fibre and Environment for Federated Farmers of New Zealand Incorporated.