CHAPMAN: TO BE OR NOT TO BE

BY

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A project report submitted to Victoria University of Wellington in fulfilment of the requirements for the degree of Master of Innovation and Commercialisation

Victoria University of Wellington

2017

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Abstract

Declining core business in the conventional beverage categories of beer and carbonated sodas has compelled companies to turn to innovation to grow their sales and profitability. The research focus of this project was to determine, through adjacent category innovation whether my new branded premium craft carbonated soda product range was a consumer relevant innovation, scalable and therefore able to sustainably enhance market growth and profitability for my project partner, DB Breweries.

A mixed methods research approach using qualitative and quantitative surveys revealed strong consumer preferences for the product to be authentic, artisanal, premium, health focussed and particularly targeted to females, older consumers and as an alternative to alcohol. These findings represented market opportunities, however, the clear-cut preference for a homespun, handcrafted, local and small batched produced product as opposed to mass machine manufactured, was an unexpected finding with significant implications for the project.

This core finding created a tension between the preference for authenticity and the original concept of leveraging my project partner's scale machine based manufacturing capacity. These findings and my advisory board's guidance reshaped the business model canvas, proposing a joint venture between Chapman (my company) and my project partner, which as an established beverage company would bring know-how and distribution with my company being the entrepreneurial, authentic, artisanal, small batch producer.

The reshaped strategy and business model shifted the adjacent category innovation from a product to a geographical perspective, with export potential to China and possibly the Muslim market. The online sales channel in China has significant export appeal with its deep retail market penetration and rapid growth, but very low current penetration in the beverage category which is forecast for significant growth. Successful export entry into China would establish a potential platform to enter segments of the global Muslim market, a commercially attractive market for premium non-alcoholic beverages.

A deeper understanding of the rapidly growing negative consumer perception of artificial sweeteners led to a further innovative opportunity emerging from this project. As a consequence of this intersectional thinking a sub-project to develop a New Zealand natural sweetener based on indigenous plants, fruits or trees commenced.

This research project has revealed the new branded premium carbonated soda product range to be a consumer relevant innovation, scalable but not as a straight forward product adjacent category innovation and with export success has the potential to significantly enhance market growth and profitability for DB Breweries.

This project is now on a trajectory to be commercialised.

Acknowledgements

I would like to acknowledge and thank both my Programme Director Dr Jenny Douché and my Supervisor Dr Jayne Krisjanous for their inspiring support, patience and expertise.

I am indebted to DB Breweries who through my internship with them opened my mind to the world of innovation and then provided me with a context for this research project.

I am incredibly grateful to the members of my advisory boards and fellow students who provided me with exceptional insights and very honest feedback.

Introduction

Project Overview

Background

During 2015 I was in the process of finalising the development of a new premium craft carbonated soda while completing my final year of a Bachelor of Commerce at Victoria University (majoring in Marketing and International Business). My intention at that time was to independently commercialise this product as an entry point into an entrepreneurial life following the completion of my undergraduate degree.

On completing my degree I interned for three months in the marketing department of DB Breweries (noted as DB in the rest of this report) working with key international brands, including an exciting project introducing a successful global brand into New Zealand market. In taking on the internship I was interested in developing a deeper understanding of the beverage market, in particular new product development, brand management, manufacturing and distribution. My objectives for the internship were to contribute to DB to the best of my ability and also to widen my perspectives on the development and commercialisation of my new premium craft carbonated soda (noted as craft soda in the rest of this report).

This internship impacted my thinking significantly, stimulating me to consider and ultimately commence a Masters of Innovation and Commercialisation at Victoria University of Wellington. The turning point for me while interning was the realisation that a deeper and wider academic experience would serve me very well as an aspiring but very inexperienced entrepreneur. DB kindly agreed to provide the context for my project as my project partner and provide support through access to industry information and support for further product development.

This project allowed me to conflate my interests with those of my project partner as this product was of great personal interest to me and was also a potential commercial response to a critical and current problem that DB has, which is the multi decade decline of the beer category (their core business) and the need for new avenues for growth to be found.

Partner Details

DB is one of the better-known companies in New Zealand with a long history dating back to 1929. W Joseph Coutts was the founder with two very strong passions, which were brewing and innovation. He developed the company with his three sons, in particular Morton Coutts (Business History Project – University of Auckland, n.d.).

Morton Coutts revolutionised the global science of brewing beer with his invention of the continuous fermentation method for brewing beer. He worked in the business for his whole life being involved until he passed away at the age of 100.

DB is now a fully owned subsidiary of the global brewing Heineken Company. Over many decades DB has established and retained a reputation for quality, innovation and sustainability.

The approval to use DB as my project partner was facilitated through their Managing Director, Mr Andy Routley. My project liaison was the Consumer Insight and Innovation Manager, Jeroen Schoorel.

Technology Involved

The technology and product development challenges faced in developing a craft soda product essentially relate to the primary ingredients. My initial focus was on a greater use of natural ingredients, but later in the development process this evolved to a complete use of natural ingredients. In this phase of the development of my prototype craft soda, which pre-dated the commencement of my project, the difficulty had been using ingredients that were exclusively natural and New Zealand sourced.

These ingredients were required to provide within the beverage 'mouth-feel,' enhanced taste, thirst-quenching nature, sharpness, aroma, 'eye appeal' and prevent the growth of micro-organisms. In a conventional carbonated soda the latter would be the role of sugar, acids, additives, flavourings (generally chemically synthesised imitations or artificial), emulsions and preservatives. In a low calorie carbonated soda, if a sugar substitute provides the sweetness it will likely contain a chemical artificial sweetener such as aspartame (Mitchell, 1990). None of these non-natural ingredients were able to be used in my product to align with my key assumptions of a desirable craft soda.

Carbonated water is the main ingredient by quantity in any carbonated soft drink and the quality of this water is critical to the overall taste and flavour. The development of leading edge products requires experimentation with new sources and techniques of water clarification and purification to eliminate the need for preservatives. In the development of this product I explored a range of potentially new alpine water sources to reinforce the New Zealand natural positioning of my craft soda along with natural filtration processes.

In the initial development of my product (prior to this project commencing) I used an implicit approach of engaging closely and iteratively with potential future consumers with the primary objective of obtaining detailed feedback in order to constantly refine the craft soda. I worked on developing three prototypes as a basis for a craft soda product range for an initial launch. This process of engagement involved a variety of future consumers in order to create an effective product appraisal process. Customer engagement is emphasised as important by Brodie, Hollebeek, Juric and Ilic (2016) who have described a number of themes as the basis of customer engagement, including the consumers shared experience with the brand and their co-creation of brand value (p. 257). To add weight to this observation, research has established that consumers' knowledge is fundamentally one of the most critical knowledge resources for any company (Rowley, Kupiec-Teahan & Leeming, 2007 p. 136).

Opportunities

Thoughtfully conceived, evidence informed and effectively implemented this project presented the potential to create a substantial opportunity for my project partner to enhance its market position and profitability. At the same time this project also presented an opportunity to facilitate new and different approaches to innovation within DB.

As the researcher this project presented a number of opportunities for me, which included but were not limited to expanding my knowledge about research, innovation, commercialisation, stakeholder engagement and the legal aspects of intellectual property and contracts. Furthermore, I had the opportunity to advance my market knowledge for my product developed in 2015 in a student flat through a professional and supportive trajectory I had not previously thought possible. This included the potential of commercialising this project in the real entrepreneurial sense.

An exceptional opportunity presented by this project was how closely I was able to engage with very successful entrepreneurs and executives at the highest level, particularly their genuine interest in my project and willingness to provide guidance, advice, support and information. An equally unique opportunity was engaging with my program director, project supervisor and my group colleagues on the Masters of Innovation and Commercialisation.

Advisory Boards

Advisory boards comprise of a group of individuals selected to provide assistance to business owners, particularly entrepreneurs with start-ups. Unlike boards of directors advisory boards do not serve as a governance function or represent shareholders or stakeholders, they simply provide advice to the entrepreneur about achieving business goals (Reiter, 2003). They are particularly useful as a sounding board for the company founder or entrepreneur as their neutral position allows them to be much more frank and direct (Reiter, 2003).

Over the course of my project I sought advice from two advisory boards. The first advisory board was composed of successful entrepreneurs and business people, that through careful use of contacts I was able to form during the course of my project. This advisory board comprised of four members (see below) operated as a virtual board with me meeting individually with each member from time to time:

• Peter Cullinane

Expertise relating to my project: co-creation of new products, innovation, commercialisation, marketing, entrepreneurship, branding and customer insight. *History:* entrepreneur (Founder of Lewis Road Creamery Ltd), Director (NZME, APN News & Media and previously SkyCity Entertainment Group) and previous COO Worldwide of Saatchi & Saatchi.

• Brian Blake

Expertise relating to my project: beverages, innovation, intellectual property, new product introduction, industry insight, customer insight and senior management.

History: retired Managing Director and Chairman of DB, Chairman Hynds, Chairman Barworks and Director Fidelity Insurance.

• Carl Carrington

Expertise relating to my project: beverages, New Zealand ingredient provenance, international, export, innovation, intellectual property, customer insight and senior management.

History: CEO Aotearoa Fisheries, previous Managing Director of Heineken Lion Australia, previous Managing Director of Swan Brewery (Australia), previous Managing Director of Vietnam Brewery, General Manager McCashin's Brewery and Malthouse and Market Manager Asia Fletcher Challenge.

• Peter Chrisp

Expertise relating to my project: innovation, intellectual property, international – Asia, export, customer insight and senior management. *History:* CEO NZTE, previously Senior Vice President Norske Skog
International (Oslo – South America, Asia, Middle East and Europe).

The experience and subject matter expertise of this advisory board was immeasurably important in filling knowledge gaps that I had and also in providing me with insights, that due to my age I had not yet been able to develop through lack of experience.

The second advisory board (BAWS Enterprises) was made up of four colleagues from the Masters of Innovation and Commercialisation, which turned out to be an extremely useful, honest and challenging sounding board for my project as it developed. Their projects were very different from mine and I found this diversity of interests, background and mindset very helpful in improving my project.

The advice and feedback that I received from my advisory boards helped me become more open-minded, in particular to new possibilities that I might not have considered myself.

Objectives of the Project

The fundamental objective of this project is to explore and elucidate the research question underlying this project framed as:

Is the development of a new branded premium craft carbonated soda product range:

- 1. A consumer relevant innovation?
- 2. Scalable as an adjacent category innovation for DB Breweries?
- 3. Able to sustainably enhance market growth and profitability for DB Breweries?

This project is a potential response to the multi-decade 2.4 per cent year-on-year decline of the beer category (Statistics New Zealand, 2014) and the need for DB to further explore viable options for market growth.

My project was established to determine the commercial potential of an adjacent category innovation (a new branded craft soda product range) and the associated investigation of its potential for commercialisation. Fundamentally this potential opportunity is an exploration to determine whether this is consumer relevant innovation, scalable and able to sustainably enhance market growth and profitability for DB.

Core to this potential opportunity is that globally the adult soft drink category (in contrast to the overall soft drink category) is expanding at 10 per cent per year related to the increasing group of consumers that have decreased their intake of alcohol or no longer drink alcohol (Nicholson, 2013).

According to Nicholson (2013) the volume of alcohol consumed per capita across major developed markets is much lower than ten years prior, with the growth of low or no-alcohol beers advancing the normalisation of non-alcoholic drinks by adults in social settings such as bars, restaurants and parties.

This product innovation is not a new invention in itself, but through research and innovation there is the opportunity to elevate the ordinary to the desirable. This innovation is at the intersection of beverage technology, authentic New Zealand ingredients, a refined understanding of consumer preferences, answering the needs of the health conscious consumer and design thinking. An interesting point has been noted by Carlgren, Elmquist and Rauth (2016a) that design thinking requires skills and capacities generally not available in most organisations, for example intuition, which is particularly important as it is only developed through experience (p. 355). This is a key reason that I assembled such an experienced entrepreneur/business advisory board.

Working with DB creates possible further opportunities for business model innovation as described by Amit and Zott (2012), because their established capacity and competency around laboratories, manufacturing, quality assurance, sales, marketing and distribution could assist in the speed of introducing the product to the market (p. 41-43).

Proposed Strategy and Business Model

Strategy

The concept of strategy from the perspective of the literature will be covered further in more detail different sections of this report. At a fundamental level, according to Govindarajan (2016) strategy cannot simply be about what a company does to ensure profitability for the following year. Rather it is about what a company needs to do about managing the balance between their current business and at the same time creating their future business (Govindarajan, 2016). While this may sound self-evident Govindarajan (2016) has pointed out that the dominant logic required to manage the performance of the current business is not the dominant logic required to create the future. This is the very reason that a mindset of innovation is so important when thinking about strategy.

Johansson (2006) described the difference between directional and intersectional ideas, which are central to strategic innovation. Not unlike Govindarajan (2016) who differentiates between linear and non-linear innovation, Johansson (2006) defines directional ideas as making refinements in expected and unsurprising ways, while intersectional ideas either small or large, are radical and surprising.

The proposed strategy is to resolve DB's current and critical core business problem by adjacent category innovation, a concept detailed further in the literature review.

My project partner has already introduced low alcohol beer, no-alcohol beer and cider to stimulate sales growth and profitability, but these product introductions are effectively linear or directional approaches. The proposed new strategy is an attempt to extend to innovation that is non-linear and intersectional, at least for a very traditional brewing company who has had beer as their core business for nearly nine decades.

Business Model

In the context of the business model, innovation is seen as a broader notion than simply having an idea, but rather as described by Adair (2007) it draws together two main "overlapping" processes which is "having new ideas and implementing them" (p. 5). The business model, which will act as the blueprint for implementation of the strategy is based on contemporary thinking about business model innovation, also detailed further in the literature review. Suffice to say it relies on the use of both a business canvas model (Osterwalder & Pigneur, 2010) and lean start-up philosophy (Blank, 2013). The business model is essentially based on leveraging DB's existing large scale, mass manufacturing, distribution and sales/marketing infrastructure to give effect to an entrepreneurial approach to product and market development.

Literature Review

According to Drucker (2002) "innovation is the specific function of entrepreneurship," emphasising that it references a mindset and activity, rather than a size of business (p. 2, 3). Furthermore, Drucker (2002) clarifies that the majority of successful innovations are the result of thoughtful and intentional exploration of opportunities to innovate (p. 2). Four domains of opportunity are defined by Drucker (2002) and that relevant to this project is "industry and market changes" (p. 3).

Research across 1,850 companies over five years undertaken by Zook and Allen (2003) revealed two conclusions highly relevant to this project. The first is that when a company "pushes out the boundaries of its core business into an space" it is more likely to achieve a sustainable economic outcome and the second is that those companies outperforming their competitors in profit develop a prescription for "expanding those boundaries in predictable, repeatable ways" (p. 67). A sobering finding from their research was that companies that launch new initiatives fail three out of four times, although those companies that understand and leverage the "learning-curve effects of repeatability" have failures at a considerably reduced rate of one in four (Zook & Allen, 2003, p. 67).

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In Zook and Allen's (2003) study, 181 adjacency moves were examined revealing six kinds of adjacencies, which were successfully employed by companies to outperform their competitors:

- expanding along the value chain (high degree of difficulty)
- growing new product and services
- using new distribution channels
- entering new geographies
- addressing new customer segments (often by modifying a proven product or technology)
- moving into the "white space" with the new business built around a strong capability (very high degree of difficulty) (p. 68-70)

This innovation was conceived as an example of the category of growing new products in this case a craft soda product range.

Entering adjacent markets can involve risk, which includes not understanding implicit costs such as acquiring new competencies and reconfiguring existing processes; potential conflicts with existing channel partners and the potential that the adjacent market may alter after your entry (Blue Canyon Partners, 2016). These possible pitfalls could easily be overlooked and the learning for my project was to be intentional about understanding their potential impact as part of the feasibility analysis.

This challenge of launching new consumer products is reinforced by Christensen, Cook and Hall (2005) who indicated that "over 90% of them fail" despite the significant marketing investment into discerning and interpreting consumer needs (p. 74). Their research revealed that to develop new brands valued by consumers, these brands need to be coupled with products that consumers value and fundamental to this is a new and different way of market segmentation, reflective of the consumers lived reality (Christensen et al., 2005, p. 76).

The iconic quote of Theodore Levitt "People don't want to buy a quarter-inch drill. They want a quarter-inch hole!" is used by Christensen et al. (2005) to reinforce this point and emphasise that while this quote appears easily understood, market segmentation continues to be dominated by metrics and features of the drill, not the hole (p. 76). This was a caution for my project to keep product development keenly focussed on consumer needs by ensuring that the practices for segmenting markets and developing brands are based on sound and defensible assumptions.

Writing in the Nielsen Innovation Series, Chogle (2012) confirmed that complex and volatile economic environments, competitive pressures, changing consumer preferences and expectations are compelling FMCG companies like DB to turn to innovation to sustainably grow profitability (p. 1). Chogle (2012) cites brand extension as an increasingly critical innovation in achieving this, essentially founded on the proposition that "a brand is not bounded to one product," but rather it has value that can migrate into different product classes (p. 1). Nielsen's Audit data is used by Chogle (2012) to demonstrate that brand stretches (expanding the product offering beyond the brand's core) are making a significant contribution to incremental sales at 38 per cent and are five times more likely to succeed compared to all product launches (p. 3-4). He refers to three types of brand stretching, unrelated category, adjacent category and format change which are fundamentally an adaptation from Kapferer's (2009) model (Chogle, 2012 p. 2). The category relevant to my project is the adjacent category with the degree of stretch being of a moderate nature. While brand stretching presents an appealing option for innovation, Kapferer (2009) points to the possibility of undesired outcomes and that brand stretching can "fail, and can even harm the brand" (p. 2).

Brand stretching is perceived to provide a "short-cut and automatic trust" based on the persona, familiarity and experience of the existing brand developed over a long period of time (Tucker, 2013). The cue for this project was to ensure the tension between leveraging the DB brand with its strengths and weaknesses or striking out with a new brand linked or separated from DB, was coherently analysed.

Once again this finding provided my project with context and an understanding that this would not simply be a risk free experiment. I learned the importance of developing a strategy and approach that differentiated between the critical experimental nature of innovation, where risk taking is essential but calculated and the thoughtless (potentially reckless) approach of not carefully and diligently thinking through potential for unintended consequences. The conclusion I reached is that not unlike the practice of medicine, a philosophy for my project should be, 'first do no harm.' This literature unfolds exciting possibilities for innovation, but these possibilities all have important limitations. According to Andrew and Sirkin (2003) notwithstanding their commitment to innovation, companies are disappointed to find the majority of new products do not generate the forecasted profitability (p. 77). This is a result of not understanding that the approach taken to commercialisation is as important as the innovation itself, which they describe as "an important difference between being innovative and being an innovative enterprise" (Andrew & Sirkin, 2003, p. 77). I used this finding to ensure I remained focused on the business model development rather than having a sole focus on product development.

The important lesson I took from the literature on innovation and commercialisation is that the judgements about which innovation approach is the most appropriate are critical, which in turn is based on a rigorous process of research.

From the perspective of innovation and commercialisation I was guided and influenced by the work of Hutchins and Muller (2012) and Blank (2013). Hutchins and Muller (2012) draw attention to "restoring learning and adaptability" to commercialisation "while also preserving efficiency and control" (p. 32). According to them commercialisation needs to be "reconceived as an assumption-driven process" based on a "diverge-converge approach" involving three elements, "explore (assumptions)", "experiment (tests)" and "synthesize (insights)" (Hutchins & Muller, 2012, p. 33). Their thinking and approach complements Blank (2013) who favours the "lean start-up approach", which favours "experimentation over elaborate planning, customer feedback over intuition, and iterative design over traditional 'big design up front' development" (p. 66).

In this context of customer feedback and iterative design, the seminal work of Vargo and Lusch (2004) is very relevant to this project through their service-centred view of exchange, which recognises that consumer are not simply users, rather they are co-producers (p. 12). As the world of commerce and marketing has evolved, interestingly it is the consumers rather than firms that are taking the lead in initiating and directing the product discourse (Vargo & Lusch, 2004 p. 14). Critically there is a shift "from tangibles and towards intangibles," where integration, relationship development and connectedness now prevail (Vargo & Lusch, 2004 p. 15). Frow, Nenonen, Payne and Storbacka (2015) revealed that although managers have shown interest in co-creation

and its consequential value, their organisations generally lack a stable process for recognising opportunities for co-production (p. 14). Furthermore, their perception of co-creation is generally narrow, essentially the generation of ideas (Frow et al, 2015 p. 14). The learning for my project was to ensure I understood the wider perspective and true meaning of co-creation.

Cragun and Sweetman (2016) in their book "Reinvention: Accelerating results in the age of disruption" emphasised the importance of taking advantage of disruptive events to speed up and advance ahead of competitors. Not unlike Blank (2013), Cragun and Sweetman (2016) highlight the critical importance of being able to pivot quickly and effectively in order to survive in the new disruptive world, something that a business model canvas approach facilitates (Osterwalder & Pigneur, 2010; Vial, 2016).

Casadesus-Masanell and Ricart (2010) described how factors such as globalisation, demographic changes, liberalised economies and advancing technology have reshaped the competitive landscape that firms operate in (p. 195). In this context Casadesus-Masanell and Ricart (2010) revealed that those firms that have best adapted best to this emerging environment are those with innovative business models (p. 195). Furthermore, Casadesus-Masanell and Ricart (2010) advanced the argument that the absence of scholarly agreement as to the distinguishing characteristics of a superior business model is in large part a result of the unclear distinction between the concepts of strategy, business models and tactics (p. 196).

Strategy and business model are effectively "different constructs," with strategy referring to the selection of the business model, while business model refers to the "logic of the firm, the way it operates and how it creates value for its stakeholders" (Casadesus-Masanell & Ricart, 2010 p. 196, 212; Vial, 2016). The guidance that I distilled from Casadesus-Masanell and Ricart (2010) was that making progress in the domain of innovation requires a very clear understanding of the different constructs and also the need to understand how they integrate with each other.

According to Teece (2010) a business model represents "nothing less than the organisational and financial 'architecture' of a business," which reflects the customer's needs (p. 173, 192). This work influenced my understanding of the significance of business models and the inherent connection to value for customers.

Business models as described by Magretta (2002) are "stories that explain how enterprises work" (p. 4). Magretta (2002) makes reference to Peter Drucker's perennial questions of "who is the customer?" and "what does the customer value?" and further emphasises the importance of the "underlying economic logic," which clarifies how the customer can derive value while the enterprise makes money (p. 4). Osterwalder and Pigneur (2010) elaborate from their perspective that a business model describes the "rationale of how an organization creates, delivers, and captures value" (p. 14) and acts as a "blueprint for a strategy to be implemented" (p. 15).

Without the challenges of Andrew and Sirkin (2003), Christensen et al. (2005), Hutchins and Muller (2012) and Blank (2013) I can see how easily I could have defaulted to the traditional model of being innovative (rather than being an innovative enterprise); focussing on product features (rather than consumer needs); stage-gating for efficiency and control (rather than learning and adaptability) and commencing with a business plan and slavishly adhering to it (rather than commencing with a search for a business model and framing the appropriate research questions).

Key Assumptions

The business model for my project was based on these insights being framed by research questions founded on a refined understanding of consumer needs; building the product iteratively governed by market validation and being commercially focussed.

In this project consolidating the key assumptions in a business model canvas was central to this business model approach. The business model canvas is a visual description of building blocks each made up of a number of vital research questions to be tested (Osterwalder & Pigneur, 2010 p. 14-15). The main objective of my business model canvas set up at the initiation of my project (see Figure 1) was to move me beyond product centric thinking towards business model thinking. In the context of the business model canvas and business model thinking the importance of consistent and dependable information about consumer preferences and requirements has been described by Ogawa and Piller (2006) as the "single most important area of information necessary for product development" (p. 65). Furthermore, the market validation will reveal whether the target audience is appropriate for this product, the product positioning, the value proposition and a more refined and sophisticated

understanding of the target market, all important to understanding barriers to changing consumers existing behaviours (Adams, 2010, p. 16-17).

In establishing my original business model canvas I used the nine essential building blocks described by Osterwalder and Pigneur (2010 p. 16-17).

Koy Partners	Koy Activities	Val	ue	Customer	Customer
ixcy i artificis	Key Activities	Propo	sition	Relationships	Segments
DB Breweries	Research	PRIMARY	Y:	Co-creation	Target emphasis
 industry knowhow, manufacturing and distribution infrastructure New Zealand producers certified natural, organic ingredients Natural alpine water source Artists collaborations for limited releases Internet community 	 understanding what market needs and is missing Product development trial and test flavours Branding incorporating art and culture Production Marketing/ Sales Distribution Key Resources Research and development (secret formula when developed) high quality NZ organic natural ingredients exclusive NZ alpine water source Brand Human Resources Bottling and distribution capacity IP/trademark 	Premium a drink: pro matches th of the social instance, it compromise authentic alternative alcohol or flavoured n alcohol. SECONDA Health Ber Customise - limited bottles	adult soft duct e rhythm al is not a is, but an to a nix for ARY: nefits tion edition	 social media and online reviews and feedback, participate in development of brand story, novelty experience Social media personalised highly responsive, involvement, information, customer service, recognition, activations Long term view Channels Restaurants, bars, clubs, upmarket supermarkets and retail outlets Flagship outlets Scale distribution Social networks Events 	 consumers, restaurants, bars, parties, celebrations those 'in the know', trendy and 'digital natives' people willing to spend for a premium product, status seekers those wanting to consume less alcohol at social occasions, but not feel awkward gender symmetry Flagship restaurants, bars, clubs, upmarket supermarkets and retail outlets
Cost Structure		Revenue Streams			
Research and development		Unit sale	s of packaged product		
rroduction Monkoting and have	dina				
Distribution	uing				
Distribution					

Figure 1: Key assumptions - Business model canvas for the project developed in February 2016

Project Scope

The project scope was set with a focus on the market with the research framework positioned to understand the target market for a craft soda. Taste-testing and feedback on the fully developed product prototypes had been undertaken in the pre-project product development phase and any further product development would follow once the findings of this project were available. This would be done in a consumer co-design model based on the project findings (Hatch and Schultz, 2010 p. 591) and the capacity that co-design offers to improve innovation (Frow et al, 2015 p. 63). Consequently, further product testing was considered to be outside of the project scope.

The building blocks in the business model canvas that were specifically in scope for the project were:

- value proposition
- customer segments
- key resources
- key partners
- channels
- key activities

Those building blocks in the business model canvas that were specifically out of scope, including the underlying decisions were:

- customer relationships: as discussed above this would be done in a consumer codesign model based on the project findings with the logic for this being my project partner's concern about alerting competition to this potential product range.
- cost structure: my project partner has very strict non-disclosure approach to its financial model. The lack of complexity of the product component profile of a craft soda and its similarity to the core DB products (water, ingredients, bottle/can, bottle top, label and packaging) meant with my project partner's experience, expertise and pre-existing dataset determining the cost structure would be a relatively simple process.

• revenue streams: my project partner has very strict non-disclosure approach to its financial model and has sophisticated pricing and revenue models.

If the target market for the craft soda could be clearly established then in the context of my project partner's existing infrastructure for product development co-creation, procurement, manufacturing, quality assurance, distribution, branding and sales/marketing the product would be commercially viable.

The manufacturing process for a craft soda is a lot less complex (and less time consuming) than brewing beer with the basic product elements not unlike DB's core products of beer and cider. The distribution, sales and marketing process for many elements of the value chain would be very similar to their existing product lines with some minor variation such as speciality retail stores.

The critical issue was defined as ensuring there was a viable target market for the product prototype.

Summary Structure of Project Report

The summary structure of the project report is shown in Figure 2.





Methodology

Strategy and Business Model

This is a potential adjacent category innovation and commercialisation to solve a critical and current industry problem for DB. My underlying research question relates to whether the introduction of a new branded, premium adult soft drink product range will be a scalable and consumer relevant innovation leading to market growth and profitability for DB.

Research Design

Based on the work of Easterby-Smith, Thorpe and Jackson (2015) there are four underlying key features to my research design; ontology (how I see the world and assumptions I make), epistemology (assumptions I make about the most appropriate way to investigate and about reality), methodology (the way I correlate research techniques together) and methods and techniques (those activities I undertake for data collection) (p. 46-47). I have integrated these four features to ensure a practical and workable research design (Easterby-Smith et al., 2015, p. 47).

Ontology and Epistemology

The approach selected for this project is mixed methods research (quantitative and qualitative) applied in a way in which the resulting data can be jointly revealing (Bryman, 2006a; Bryman, 2006b). It was noted by Bryman and Bell (2007) that while the epistemology and ontology of quantitative and qualitative research may be in contrast the link between the research strategy and the epistemological and ontological commitments "is not deterministic" (p. 631).

Methodology

Hammersley (1996) has offered three approaches to mixed methods research being triangulation, facilitation and complementarity. In this mixed methods research project both facilitation and triangulation have been used.

In terms of facilitation the qualitative approach has assisted the quantitative investigation and with triangulation the quantitative data has been used to corroborate the qualitative research findings (and vice versa). The benefit of this approach to mixed methods research, of collecting data on the same topic by applying different methods, is to create a deeper understanding of the underlying research question. This point is endorsed by Klein (2013) who noted that qualitative research guides in "defining the problem" and in "developing an approach to the problem" to probe more deeply and surface issues of relevance and significance.

The source data in this mixed methods research project includes:

- secondary data
- primary data in the form of a detailed qualitative electronic questionnaire
- primary data in the form of an online quantitative survey
- further secondary data in the form of industry qualitative and quantitative research reports relating to brand equity and the online sales channel in China; available research on the Muslim market and industry reports on natural beverage sweeteners

The secondary data has been located in the methodology section rather than the literature review as it is critical to the facilitation and triangulation process.

Methods and Techniques

Research Sample

Secondary data:

Reviewing available relevant industry research from my project partner, to assist in the development of the qualitative and quantitative surveys (facilitation) and also corroborate both the qualitative and quantitative survey data.

Primary data – qualitative:

The sample for the pilot interview as a basis to developing the detailed electronic qualitative questionnaire was a sub-set of my student advisory board.

The sample for the qualitative questionnaire was a non-probability sample set of 61 people across gender, age, occupation and household categories, with a target of 50 completed qualitative questionnaires. An email introduced the researcher and project to 61 people with an invitation to participate in the electronic survey, with the survey remaining open for a period of two weeks.

Primary data – quantitative:

The sample size for the quantitative survey is not able to be assessed as this was administered through an online survey inviting employees of a selected number of corporates to participate. This was a non-probability sample, although in selecting the companies every effort was made to achieve a representative sample. A target of 300 completed responses was set and the survey was open for three weeks.

Questionnaire and Survey Development

Qualitative questionnaire:

The initial step in developing the qualitative questionnaire was to undertake initial face to face interviews of a sub-set of my student advisory group and other consumers to trial the 39 qualitative questions for interpretation, as well as suitability and appropriateness for an electronic qualitative quesitonnaire. The face to face interviews were based on an indicative set of questions derived from a process of reflection on my research question, using secondary industry data for context.

This trial interview revealed no barriers to implementation of the electronic qualitative questionnaire other than minor amendments for clarity. The trial interview did not reveal question fatigue, as an underlying issue was the length of the qualitative questionnaire. An example of an amendment to the indicative qualitative questionnaire was splitting question 28 'Where would you purchase this craft soda from?' 'Where do you normally purchase these types of beverages?' 'Are you the main purchaser in your household?' into three separate questions for clarity of interpretation. Further, a numerical ranking score was introduced to consistently determine the most important features as a respondent filling in an electronic questionnaire would not have the opportunity of receiving guidance from the interviewer.

The refined electronic questionnaire comprising 37 questions was tested for ease of use and clarity of interpretation revealing the questionnaire to be useable and able to be completed with sufficient detail in less than 45 minutes. A residual concern remained as to whether respondents would simply lose interest part way through the process (due to the large number of questions) or not provide detailed enough responses. In the event no incomplete or partial responses were received and respondents answered the questions diligently and comprehensively, more often than not with much more detail than anticipated or required. A copy of the electronic questionnaire is included as Appendix 1.

Quantitative survey:

Secondary data was used to inform the qualitative questionnaire and once completed the initial data assessment was subject to a process of critical review and reflection, leading to the selection of the questions for the quantitative survey. The following questions from the qualitative questionnaire were refined to ensure more specific answers to the quantitative survey questions, which in turn would allow more accurate coding for interpretation:

Qualitative question 1b (Age): some responses were not specific enough to be accurately coded to age bands, refined in the quantitative survey (question 2) to specific age bands.

Qualitative question 1d (Type of household): the responses were limited to categories too broad and lacking in specificity, refined in the quantitative survey (question 3) to the actual number of people currently living in the household.

Qualitative question 2 (Are you an active social media user?): the responses lacked the required level of specificity, refined in the quantitative survey (question 4) to the actual number of times social media was used each day. Furthermore, the response rate for the 25-34 year age band was low at four per cent and the population for the quantitative sampling would need to ensure a greater response in this age band.

Qualitative question 5 (How often do you socialise with friends?): the question was deemed too open ended and non-specific and was refined in the quantitative survey (question 5) to a weekly or daily, with weekly identified as a numerical amount.

Qualitative question 6 (How often does this socialising include food and drink?): the question was deemed too open ended and non-specific and was refined in the quantitative survey (question 6) to percentage bands.

Qualitative question 10 (On average, how many times do you consume carbonated drinks, teas and juices in a week?): some respondents included coffee and water, which were not called for and with some responses were unclear as to whether they represented daily or weekly consumption. As a result of this, 18 responses (36 per cent) to this question in the qualitative questionnaire were deemed invalid. This question was refined for the quantitative survey (question 7) to determine numerically how many times a week respondents consumed carbonated drinks, teas or juices.

Qualitative question 22 (Would you prefer a bottle or can?): This question was refined in the quantitative survey (question 19) to allow segmentation of the response to bottle as glass or plastic.

Qualitative question 33 (Asked to rank (by using 1 - 11) natural beverage features in order of importance. A small number of respondents interpreted the question as ranking each attribute on the scale rather than ranking each of the 11 attributes from highest to lowest importance. These responses were ruled invalid. This question was refined for the quantitative survey (questions 8 to 18) to very specifically rank each attribute separately on a more simple fivepoint scale of high to low importance.

The refined quantitative survey comprising 19 questions was tested to ensure that it could be easily and consistently interpreted and was then finalised.

Data Collection

The data collection process varied based on the nature of the research (primary or secondary) and the method (qualitative or quantitative).

Further secondary data included publicly available reseach on the Muslim market and industry reports on natural beverage sweeteners. Primary qualitative data collection involved an electronic qualitative questionnaire. Potential participants for the electronic questionnaire were invited to participate by an email invitation which included the electronic questionnaire, the consent form and relevant information. Completed surveys and signed consent forms were returned by email.

Primary quantitative data was administered and collected using an online survey website SurveyMonkey (<u>www.surveymonkey.com</u>). Invitations to participate were provided to six large corporates with the objective of achieving a representative gender and demographic sample.

Data analysis

Qualitative questionnaire:

Fifty completed questionnaires received and subjected to data analysis, with the significant majority fully completed. The preliminary data analysis commenced with coding, "one of the most central processes in grounded theory," to uncover emerging patterns, themes, concepts and insights (Bryman & Bell, 2007; Patton, 2002). From a qualitative research perspective, coding is the process through which the information is stripped to its essential elements, which are then given specific labels.

The principles relating to coding have been well described by researchers on grounded theory, including a number of the important issues relating to the development of codes, some of which were very relevant to this research project (Bryman & Bell, 2007). Those issues particularly pertinent included gaining an understanding of what a specific item of data actually represented, getting to the essence of what it is that people say and determining to which general category a specific item of data related.

Based on Strauss and Corbin's (1990) work differentiating between three different types of coding practice, the practice used in coding for this research project was based mainly on open coding, but supplemented with axial coding.

The 37 qualitative questions were developed into 58 separate categories for coding purposes with nine questions being split into sub-categories for greater specificity and accuracy in coding (questions 1, 11, 13, 17, 18, 21, 27, 32, 33 – the latter was structured as question 33 a) to k) in any event). An excel spreadsheet was developed to enter all the coding information into.

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This process resulted in 39 categories being coded on a binary or numerical basis. Issues that emerged within the coding of these 39 categories revealed that two questions (question 10 and question 33) were misinterpreted by some respondents.

With regard to qualitative question 10 (On average, how many times do you consume carbonated drinks, teas and juices in a week?) 18 responses (36 per cent) were deemed invalid and excluded from the coding process. There were two respondents (four per cent) to all 11 sub-elements of question 33 (Can you please rank (by using 1 - 11) these natural beverage features in order of most important to least important?) who misinterpreted the application of the ranking process and their responses were also ruled invalid and excluded from the data analysis.

Of the 19 categories not able to be coded on a binary or numerical process, key words from the text based responses were entered into the coding spreadsheet within each category or sub-category. These key word responses were then categorised to subthemes and through a process of reflection and iteration consolidated into the main themes for progressing and interpreting this research inquiry. In this process it emerged that two questions (question 5 and question 6) had responses which were hybrid numerical/text responses.

With regard to these two qualitative questions 5 (How often do you socialise with friends?) and 6 (How often does this socialising include food and drink?) from a coding perspective the responses did not present a significant problem with the following categories being used to interpret the hybrid numerical text responses: none, occasional, moderate and frequent.



Secondary Data:

Reliability and validity

Reliability and validity refer to the repeatability and credibility of the research findings respectively (Bryman & Bell, 2007 p. 40-41).

Non-probability sampling was used for both the qualitative questionnaire and quantitative survey, noting that there are valid theoretical and practical reasons for their use. As reliability cannot be measured in non-probability sampling, the derived data was compared to survey results with available information about the population (Statistics Canada, 2013).

Limitations

One of the frequently raised limitations of qualitative methods is the prospect of subjectivity and what is identified as a deficiency of scientific precision (O'Leary, 2004). This qualitative questionnaire was a mix of open and closed questions, potentially leaving a possibility of subjectivity. A disciplined and diligent coding framework was designed to limit subjectivity of interpretation as much as possible.

To further reduce any limitation as a result of subjectivity of the qualitative questionnaire, a mixed methods research approach was employed with a quantitative survey following the qualitative questionnaire. The main advantage of quantitative methods is the implicit objectivism (Easterby, Thorpe & Jackson, 2015).

Another limitation was the decision taken to use an electronic questionnaire rather than face to face interviews. While this decision was made for practical reasons (related to accessing respondents of the appropriate demographic) it had the potential of reducing the data richness. As it turned out the respondents provided detailed responses, however, this limitation, while reduced still exists.

One of the issues faced when using a triangulation approach is the possibility of being unable to substantiate findings which surfaces the problem of how to approach inconsistent results (Bryman & Bell, 2007 p. 647). The recommended approach in this situation is to regard one of the data sets as conclusive, which in this case was the

quantitative data set, however, this can lead to subjectively favouring one set of results over another (Bryman & Bell, 2007 p. 647).

On reflection the design of the qualitative questionnaire had some minor limitations, which may impact specificity and accuracy. Qualitative question 2 (social media use) had no option of a zero response; qualitative question 5 (frequency of socialisation) had no option of a zero or greater than four times response; qualitative question 6 (socialising including food and drink) had no option of less than 10 per cent response; qualitative question 10 (frequency of consumption) had no option of zero response and qualitative questions 21, 23, 24, 27 and 37 duplicated in part similar questions.

Ethical obligations

Ethical approval for the qualitative questionnaire and quantitative survey of this research project was sought through the Human Ethics Committee of Victoria University.

The critical underlying reason for ethical approval for a study of this nature is to provide all participants to the surveys with an explicit assurance that the information they provide through their responses would be properly treated as both anonymous and confidential without any possibility of personal identification.

Ethics approval was granted under ethics approval number 0000022964.

Each research element provided for an information sheet for the study as well as a consent to participate form.

Problems faced

Through the process of enacting the methodology I experienced two particular issues.

The first was accessing secondary data, primarily industry research reports. My project partner has an extensive programme of market and product research, however, there are totally legitimate concerns about confidentiality which limited access and placed pressure on timeframes.

The second was recruitment of participants. Initially I planned to do the qualitative questionnaire by interview, however, as I attempted to recruit participants that represented a wider demographic it became apparent that I was more likely to get a

participant response representing a wider demographic base if I undertook this as an electronic questionnaire. Even with the electronic questionnaire creating a qualified list of participants to invite proved difficult and I needed to work through other people to reach the demographic profile I wanted involved in the research project. While the outcome in terms of response was at the target level, again the complexity of the recruitment process (couple with my lack of resources) put pressure on my project timeline.

Process of reflection and evolution of research methodology based on this process

In the development of the methodology for this research project, I subjected my draft design to a disciplined process of critical analysis and reflection. Through this process of reflection I was attempting to develop a deeper understanding of my options, in order to make the best judgements possible. This process of reflection turned out to be extremely important in not only finalising the methodology, but also at points in time during the implementation of the methodology.

As my research project progressed this process of reflection led to alterations to the original design, the most significant were:

- The original method called for the qualitative element to be face to face interviews, however, after reflecting on the difficulties I was having in achieving the required access to subjects, the decision was made to use an electronic questionnaire.
- To ensure that the qualitative electronic questionnaire was feasible, I first undertook a small number of face to face interviews.
- In order to develop a clear understanding of issues that arose from the qualitative and quantitative data analysis, I investigated further related secondary data. These related to brand equity, online sales in China, the Muslim market for non-alcoholic beverages and natural beverage sweeteners.

Summary

In determining the methodology the decision was taken to use a mixed methods approach to the research, using both qualitative and quantitative methods. The initial qualitative approach was to be through face-to-face interviews, however, this was later adjusted to using an electronic questionnaire. The quantitative approach was by means of an online quantitative survey. Following the methodology being reviewed, finalised and ethics approval being obtained the project progressed to the data gathering stage, with the results then to be subject to analysis. This data analysis follows in the next section under the following key sub-sections:

- Findings based on observations
- Primary data: qualitative questionnaire
- Primary date: quantitative survey
- Findings based on interpretation

Findings and Analysis

Findings Based on Observation










Primary Data: Qualitative Questionnaire

The response rate to the electronic questionnaire was 82 per cent with 50 of the 61 people invited to participate providing complete and valid responses, during a two week period. There was no further contact with non-respondents.

Demographics

The gender distribution of the respondents revealed slightly more females than males with an age distribution concentrated in the 35 to 64 age band (80 per cent of respondents). Occupational categories were concentrated within the management, professional and administrative fields with households clustered around families and couples. Slightly more than half of the respondents identified as being the main purchaser in their household and of these the significant majority were female. These demographic results are shown in Figure 6.



Figure 6: Demographic responses

Lifestyle

Almost all participants indicated a preference for variety in their life with only 12% indicating that they did not.

Respondents closely followed food and beverage trends frequently (62 per cent), slightly more than half of whom (56 per cent) regularly socialised with friends. These social activities predominately occurred outside of the home and very frequently (76 per cent) included food and drink.

The qualitative questionnaire revealed respondents consume carbonated drinks, teas or juices regularly with 56 per cent of respondents consuming these more than five times per day. Tea and soft drinks dominated (although this question had 36% of invalid responses, which were excluded from the analysis). A wide range of well known brands were noted by respondents as their preferred brands, without any particular brand being strongly favoured across respondents. Brands that were referenced by

more than 10 per cent of respondents included Dilmah, Coca-Cola, Bundaberg, Twinings and Phoenix.

Almost all respondents (94 per cent) exercised each week with slightly less than half exercising frequently (46 per cent). Their most favoured leisure activity was exercise/sport followed by relaxation. A small majority of respondents (52 per cent) regularly read nutritional labels on food and drink products, while 28 per cent never did.

Slightly more than half of the respondents (54 per cent) were active users of social media and of these active users of social media, 70 per cent were female while only 30 per cent were male.

Perception of premium craft carbonated sodas

Respondents' primary association with a craft soda was its exclusivity with particular relevance to being handmade in small batches, taste and ingredients.

<u>Representative respondent comments</u>: "classy, posh soda" "homespun" "associated with craftsman, domestic production" "handmade, quality with heritage" "prepared to pay more, but expect product to live up to this" "natural organic ingredients."

The primary reason respondents gave for choosing to drink a craft soda was taste, less sugar and as an alternative to alcohol. The respondents favoured flavours for a craft soda were citrus (lemon and lime) and spice (predominantly ginger).

<u>Representative respondent comments</u>: "healthy, non-alcoholic alternative" "an alternative option for 'designated driver'" "I very rarely drink alcohol, so when I am out I prefer an alternative to diet coke" "the craft soda may look like a beer or wine (colour wise), so the drinker can feel part of the crowd without getting intoxicated"

When asked to describe their perception of a craft soda respondents indicated the critical elements were local production, brand image and ingredients (high quality and natural).

<u>Representative respondent comments:</u> "supporting small business owners" "I am more likely to try something locally produced" "domestic rather than imported" "at the moment everyone is all about health ingredients" "all ingredients need to be authentic" "good old fashioned natural ingredients."

The brands respondents deemed most closely matched this perception were Karma Cola, Six Barrel Soda, Phoenix and Hopt. Brand awareness of Phoenix was relatively high at 74 per cent, with Karma at 38 per cent and Six Barrel Soda at 28 per cent. Of those aware of these three brands the majority had a positive impression, which related to boutique nature, quality of ingredients and sense of exclusivity. The primary element of these brands that communicates this impression to these respondents is through packaging design – bottle (shape and colour), label (colour and font) and the type of bottle cap.

<u>Representative respondent comments:</u> "new bottle shape or size" "cool packaging" "attractive, but discrete packaging"

When asked to describe their preference for a craft soda respondents revealed their preference for a bottle (80 per cent) over a can, fruit flavours (followed by spice), low/no sugar and contemporary labels with modern, clear and readable fonts. The majority (64 per cent) wanted a craft soda to be produced in small batches by people rather than machines.

<u>Representative respondent comments</u>: "modern design concepts for labels" "simple, clean and easy to read label" "bold simple font" "colourful, trendy and summery labels"

Less than half of the respondents (44 per cent) perceived the need for a singular heroic ingredient for the craft soda to be more authentic and only 18 per cent believed this needed to be a health ingredient. Respondents ranked a number of attributes of a craft soda with natural ingredients, low sugar and full flavour deemed the most important as shown in Figure 7.



Figure 7: Ranked attributes of a premium craft carbonated soda

The optimal craft soda promotional avenues for the respondents are channel (in-store activations, sampling and feedback) and social media. Traditional media channels such as television, but particularly print and radio were rated very poorly as an appropriate promotional avenue.

When asked whether they would purchase the craft soda that they had described as having their ideal attributes, 76 per cent said they would and 14 per cent said they would not. The preferred place to purchase this craft soda from was supermarkets followed by cafés, restaurants and specialised stores. Bars, hotels, liquor stores and sports/entertainment venues were not likely locations for a purchase of a craft soda. This pattern reflected their current purchase patterns for non-alcoholic beverages.

Headline perceptions

Slightly less than half of respondents (46 per cent) felt it was important to know the nutritional value of their beverage, of these 70 per cent were female. Somewhat more than half of respondents felt it was very important to have low sugar in their beverage with female respondents at 61 per cent. Every respondent noticed a shift in themselves, friends, family and the general public in terms of becoming more aware and careful about making dietary choices.

<u>Representative respondent comments</u>: "would only purchase if sugar content was low" "delicious, but low sugar and no artificial sweeteners" "low/no sugar, exotic flavoured" "must taste good, is low in sugar and no caffeine" "little sugar or calories" "lower sugar content would help me choose" "I don't drink soda as I don't like the amount of sugar added" "while I value low sugar content, I don't accept artificial sweeteners" "no sugar, stevia or artificial sweeteners"

Primary Data: Quantitative Survey

The questions selected for the quantitative survey were derived from the critical questions in the qualitative questionnaire, many of which were refined to ensure more specific answers. A total of 348 responses were received.

Demographics

There was an almost even gender balance with an age distribution concentrated in the 25 to 64 age band (85 per cent of respondents) and the dominant household type being two or more people (93 per cent of respondents). Respondents were revealed to be active users of social media with 62 per cent of respondents reported having used social media three or more times each day. This demographic data is presented in Figure 8.





Lifestyle

Respondents socialised regularly with friends with 50 per cent socialising two or more times each week and this socialising involving food or drink on 81 per cent of occasions. This survey revealed that respondents consumed soft drinks, teas or juices regularly with 80 per cent consuming these two or more times per week and almost half (48 per cent) consuming them more than five times per week.



Figure 9: Lifestyle data

Ranking key attributes of premium craft carbonated sodas

The three attributes that ranked highest for importance were fresh tasting (mean 4.1), full flavour (mean 3.99) and low sugar (mean 3.9), with nutritional value following closely at 3.7. The three attributes that ranked the lowest were no alcohol (mean 2.64), sparkling (mean 2.36) and marketing avenue (mean 2.15). The full results for the ranking of these attributes are shown Figure 10 with the mean results revealed in Figure 11.



Figure 10: Ranking of key attributes of premium craft carbonated sodas

Figure 11: Mean results for ranking of key attributes of premium craft carbonated sodas



A preference for the craft soda in a bottle rather than a can was expressed by 93 per cent of respondents, with the majority (93 per cent) of those preferring a glass over a plastic bottle as demonstrated in Figure 12.





Findings Based on Interpretation

Secondary Data: Industry Reports

There are three possible research approaches to the interpretation of documents being qualitative content analysis, semiotics and hermeneutics, although discourse analysis has also been used to analyse documents (Bryman & Bell, 2007 p. 571). Qualitative content analysis is the prevailing method of analysis although in the domain of management and business it is used a lot less commonly than quantitative content analysis (Insch, Moore & Murphy, 1997).

Qualitative content analysis which has been used in this research project explores essential themes within the documents being analysed (Gephart, 1993) and as an approach to explore for themes within data to be examined, is pivotal to the strategy of coding (Bryman & Bell, 2007 p. 572).

Interpreting the core themes to emerge from the observed secondary market data reveals a real, present and greater opportunity for craft sodas in traditional alcohol centred instances by taking advantage of consumers' attitudes to health. This is particularly relevant to sugar where more than half of New Zealand consumers already avoid beverages with high sugar content. Perceptions that will need to be overcome include alcoholic beverages being already seen by many consumers as their sweet treat as well as consumer attitudes to artificial sweeteners. Currently almost half of New Zealander consumers are turning away from beverages with artificial sweeteners (and also artificial ingredients). Another important indicator for a developer of a craft soda is that consumers currently perceive non-alcoholic beverages to be the worst offenders with respect to high sugar content.

In the healthy lifestyle category females represent a substantial majority, with this category representing 75 per cent of the consumers who are more open to the option of a craft soda as an alternative to alcohol.

Further synthesis of the observed data reveals the critical importance for any new craft soda to have a premium perception associated with an authentic healthy and natural appeal.

Primary Data: Qualitative Questionnaire

One of the customary challenges in undertaking qualitative research is that it usually generates large quantities of data, frequently in long form text which can be difficult to analyse systematically (Bryman & Bell, 2007 pp. 579-580). In this research project, when the decision was made to undertake electronic qualitative questionnaires rather than face to face interviews, this challenge was largely overcome.

Interpreting the core themes that emerged from the observed primary qualitative data revealed the critical importance of females to the purchase of craft sodas. Across all age demographics, the substantial majority of household's primary purchasers are females who are also the most active users of social media. Females socialise more regularly than males and their socialising involves food and drink more frequently than males. Furthermore, females (particularly those over the age of 35) read nutritional labels on food and drink more frequently than males with the majority of females believing it is very important to know the nutritional value and sugar content of beverages. It is noteworthy that every respondent has noticed a shift in themselves, friends, family and general public in terms of becoming more aware and careful about making dietary choices.

A locally produced, small batched product with a commanding brand image, which could be an alternative to alcohol, reflects the market opportunity for a craft soda. This craft soda would need to have a low sugar content, ingredients that are both high quality and natural along with a full flavour resulting in a great taste. This taste pivots primarily around citrus flavours with spice also favoured, but less so. A purchasing decision would be reinforced by the craft soda presented in a designed bottle, promoted through both channel and social media. Even if a craft soda has all the ideal attributes only three quarters of consumers would purchase it.

Primary Data: Quantitative Survey

Interpreting the core themes that emerge from the observed primary quantitative data reveals a gender balance with the age distribution concentrated within the target market of a craft soda. As with the qualitative interpretation, this quantitative data reveals females socialise more regularly than males, with their socialising involving food and drink more frequently than male. Although across both genders socialising frequency with food is extremely common. Females are also more active users of social media (but not to the same degree as demonstrated in the qualitative data) as well as consumers of carbonated drinks, tea and juice.

Fresh taste, full flavour, low sugar and nutritional value were reflected as the most important attributes for a craft soda.

Triangulation of Primary and Secondary Data

Triangulation involves using more than one method or source of data in the study of social phenomena and is a metaphor borrowed from the military and the concept of navigation where many points are utilised to determine the exact location of an object (Bryman & Bell, 2007 p. 412).

Triangulation is able to be utilised within and across research strategies as a means of developing greater confidence in findings by utilising more than one method (Webb, Campbell, Schwartz and Sechrest, 1999). In this research project triangulation has been used by cross checking the results of each of the different research strategies with each other. At the point of deciding to use an electronic qualitative questionnaire rather than face to face interviews I was referred to a study conducted by Stiles (2001), which used triangulation. This work employed a multi method research design which included 51 semi-structured interviews, a questionnaire survey of 121 company secretaries and four case studies. In this research guided by the approach of Stiles (2001) project I have used an approach employing industry reports, 50 electronic qualitative questionnaires and a quantitative survey of 348 potential members of the target market.

Triangulation of the secondary data, primary qualitative data and primary quantitative data reveals close alignment. Specifically the triangulation of data underlines the following central key themes:

- small batched, artisan and locally produced
- the important role of females in the target market
- a profound shift in people being more aware and careful about dietary choices
- low sugar content in the craft soda
- natural and healthy ingredients in the craft soda
- negative perception of artificial sweeteners
- full flavour with a strong preference for citrus (lemon and/or lime)
- an alternative to alcohol
- exclusive/premium positioning
- design led bottle and label
- to be provided in a glass bottle
- the importance of social media

It is interesting that while the data in response to more general questions reveals that it is important for a craft soda to be an alcohol alternative, the ranking of attributes for a craft soda has other attributes ranking higher. These attributes are low sugar, natural ingredients, full flavour, fresh tasting and thirst quenching. This could be interpreted simply as these attributes being more important than alcohol, however, given the other data relating to being an alcohol alternative it does not necessarily mean that no alcohol is not an important attribute.

Findings Related to Key Assumptions

Core findings relating to the market and product have been mapped to initial key assumptions to reveal alignment or otherwise as shown in Figure 13. Good alignment is identified by a green dot, partial alignment by an orange dot and poor/no alignment by a red dot. The initial key assumptions are linked to their relevant business model canvas building block.

There were important additional findings not supported by triangulation because these responses were only sought in the qualitative questionnaire. The relevant findings

relate to the instances where a craft soda may be appropriate, the preferred promotional avenue and the preferred place of purchase:

- •
- optimal promotional avenues are channel (in-store activations, sampling and feedback) and social media
- preferred places of purchase are supermarkets followed by cafés, restaurants and specialised stores

Figure 13: Alignment between core findings and initial key assumptions

Core Findings	Alignment	Initial Key Assumptions	Business Model Canvas Building Block
Important role of females in target market	Gender symmetry		Customer segments
Shift in people being more aware and careful about dietary choices	•	Health benefits	Value proposition
Low sugar content in craft soda		Health benefits	Value proposition
Natural and healthy ingredients in craft soda	٠	Certified natural, New Zealand sourced organic ingredients, natural alpine water source	Key resources
Negative perception of artificial sweeteners	٠	Natural ingredients	Key resources
Full flavours with strong preference for citrus (lemon and/or lime)	•	Flavoured mix	Value proposition
Exclusive/premium positioning	٠	Target emphasis to people willing to spend for a premium product status seekers	Customer sgements
	•	Customisation – limited edition bottles	Value proposition
Design led bottle and label		Artists, collaborations for limited releases	Key partners
		Branding, incorporating art and culture	Key activities
		Brand story	Customer relationships
Alternative to alcohol	٠	Authentic alternative to alcohol	Value proposition
Small batched	•	DB with their industry know-how, manufacturing and distribution infrastructure	Key partners

	Core Findings	Alignment	Initial Key Assumptions	Business Model Canvas Building Block	
Artisan		•	DB with their industry know-how, manufacturing and distribution infrastructure	Key partners	
Locally produced		•	DB with their industry know-how, manufacturing and distribution infrastructure	Key partners	
Provided in glass bottle		٠	Nil		
Healthy lifestyle category			Target emphasis to those 'in the know,' the trendy and 'digital natives'	Customer segments	
		-	Target emphasis to consumers, restaurants, bars, parties, celebrations		
Optimal promotional avenues are channel (in-store activations, sampling and feedback) and social media			Co-creation through social media and online reviews and feedback, participation in development of brand story, novelty experience	Customer relationships	
		1	Social media through personalised highly responsive, involvement, information, customer service, recognition, activations		
			Internet community	Key Partnerships	
Supermarkets, cafes, restaurants and specialised stores as the preferred location of purchase		•	Restaurants, bars, clubs, upmarket supermarkets and retail outlets Flagship outlets Scale distribution Social networks Events	Channel	
Traditional alcohol centred instances where low or no-alcohol beverages are now perceived as appropriate			Product matches the rhythm of the social occasion	Value proposition	
Key:	Good Alignment				
	Partial Alignment				
	Poor/no alignment				

The Degree to which the Assumptions were Confirmed

The initial assumptions in the business model canvas were established in March 2016 and have been mapped to the core findings of the surveys and the process of triangulation.

Mapping the core findings to the initial key assumptions has revealed that eight core findings have got good alignment to initial key assumptions, five have partial alignment and four are not aligned.

Good Alignment

There is good alignment relating to the value proposition of health benefits, characterised by the very substantial shift in people becoming more aware and careful about their dietary choices. This relates particularly to the sugar content of beverages and the use in these drinks of natural and healthy ingredients associated with the exclusion of artificial sweeteners.

There is also good alignment between the value proposition of a craft soda acting as an authentic alternative to alcohol, which may be associated with health benefits but also social circumstances such as sober driving.

A design led craft soda aligns very well with the value proposition of customisation; key partners (artists and collaborations for limited releases); key activities (branding that incorporates art and culture) and customer relationships (development of a brand story).

The strong preference for a locally produced product expressed in the findings aligns well with my key partner who have been a New Zealand company since 1929.

The finding that the optimal promotional avenues are channel and social media align well with key building block assumptions of customer relationships (co-creation through social media and the use of social media for a personalised interactive relationship) and key partnerships (internet community).

Partial Alignment

The key assumption in the business model canvas which places a target emphasis on specific customer segments only aligns only in part with core findings of exclusive/premium positioning; to the healthy lifestyle category; the preferred place to

buy the craft soda and the traditional alcohol centred occasions where low or noalcohol beverages are now perceived as appropriate.

Poor to No Alignment

The initial key assumption relating to customer segments was that there would be gender symmetry in terms of craft sodas. However, this aligns poorly with the core finding that reveals females play a more important role in the target market compared to males.

A key assumption relating to keys partners was the importance of DB in providing the manufacturing infrastructure, which does not align at all with the clear-cut core finding that consumers expect their craft soda to be artisanal and produced in small batches.

Another strong core finding was that the product should be provided in a glass bottle, an area in which no underlying initial assumptions were made.

Making Sense of the Degree of Alignment

The original assumptions have been shown to be reasonably aligned with the core findings, but there are a number of issues that arise, some of which are very significant and others less so. A potentially fundamental issue was the very strong support for the craft soda to be homespun, artisan and small batch produced. The original concept was that this would be an adjacent category innovation for DB, who would provide the reputation, know-how and production and distribution infrastructure, connections and experience. Reconciling this mode of production mismatch was an unexpected challenge, which could prove to be very complex to resolve.

There was no original assumption related to whether the product would be in a bottle or a can. As the project progressed the working concept was to use customised, slim (small volume), architectural aluminium cans, which is not what the research findings have revealed. This is a challenge that was easily overcome and from a presentation perspective created a wider set of options.

The research finding indicating the importance of females in the target market was unexpected, but did not present a particular challenge to overcome, in fact was more of an unexpected opportunity. The partial alignments were generally more aligned than not with the partial nature being more related to matching the specificity of the assumption of the finding. No particular challenges were posed by the partial assumptions, some level of unexpected opportunity rested within the traditional alcohol centred instances where low or noalcohol beverages are now perceived as appropriate and widening the healthy lifestyle positioning of the craft soda. The original assumption was to position the craft soda reasonably strongly as a flavoured mixer with alcohol and this presented both an opportunity and a challenge.

Unexpected Challenges or Opportunities and their Exploration

Unexpected Challenges

The tension between the clear-cut preference for the homespun, handcrafted and small batched produced craft soda revealed in the research findings and my project partner's evident large scale, machine based manufacturing approach presented a very serious unexpected challenge. Part of the exploration of this unexpected challenge was to revisit the data.

In reassessing the qualitative questionnaire data the preference revealed itself in the questions relating to association with craft soda; what a premium craft soda looks like, the key association you have with existing brands of craft sodas and whether the craft soda must have an image that is small batch produced by people rather than machines. In the first three questions above there was no direct mention or lead-in relating to homespun, handcrafted, artisan, small batch production or any synonym or similar term unlike the fourth question above, which was a leading question.

Looking at the data from multiple perspectives showed that in the first three questions above the preference for artisan, small batch production is very strong and expressed widely and consistently through respondents' words such as: homespun, handmade, craftsman, domestic, boutique, handcrafted, personal, small scale and phrases such as: "not mass produced" "small scale boutique production" "artisan produced adds to authenticity and intrigue" and "homespun adds that extra touch."

The leading question showed an overwhelming preference for small scale, personal production over machine based mass production.

I consulted with the individual members of my entrepreneur/business advisory board on this issue and received virtually identical advice, which was to widen my options to include progressing as the product founder and entrepreneur with either a joint venture with DB (where they take a shareholding of less than 50 per cent and provide knowhow and access to their distribution network) or my own fully independent company. In this context DB already had an existing joint venture called the Barworks Hospitality Group, which resulted from JAG Hospitality and DB joining forces in 2008. Barworks started operating with seven gastropubs now expanded to 19 gastropubs Auckland wide. The relationship is based on the JAG Hospitality Group (the major shareholder) running the operation and DB (the minor shareholder) supplying beer and cider.

Reflecting on this important interaction with my entrepreneur/business advisory board encouraged me to consult the literature on the modes of reasoning, where most managers use one of two dominant approaches to reasoning (deductive and inductive), both linked to analytical thinking and related primarily to knowledge that exists (Leavy, 2010). According to Leavy (2010) and other design school theorists a third form of logic is required, abductive reasoning, which is essentially the logic of "what might be" (p. 9).

At this point I elected to undertake further data collection and analysis regarding the drivers of premium brand equity to determine how significant an issue the craft, artisan, small batch produced product was in this context. Brand equity is a concept conceived to indicate the real value that a brand holds (Insights Association, 2016).

On reflection the other unexpected challenges relating to the gender balance of the target market and glass bottle were easily overcome and in fact presented more of an opportunity.

Unexpected Opportunities

As described above the glass bottle and gender balance of the target market present design opportunities as well as important cues for the branding and narrative respectively.

The original assumption to position the craft soda reasonably strongly as a flavoured mixer with alcohol could be put aside as this conflicts with the healthy lifestyle positioning, although there would be nothing to prevent consumers using it as a mixer if they wished.

The compelling response for the craft soda to have a low sugar content, natural and healthy ingredients as well as the negative perception of artificial sweeteners stimulated me to think more deeply about the opportunity to place more emphasis on experimenting with natural sweeteners. In the development of my prototypes I experimented with honey as a natural sweetener (along with other important properties) and found a way to produce the product with enough sweetness, but at a colorie level of less than one third that of conventional sodas. However, as a result of the findings of this project I decided to place more emphasis and priority on alternative natural sweeteners, not only as a critical ingredient of my craft soda but as a potential commercial opportunity in itself. I expanded my new product development profile to include a specific sub-project focussed on natural sweeteners with a lower calorie profile than I could achieve with honey.

In further dialogue with members of my entrepreneur/business advisory board they all, independently of each other, suggested that now I was turning my mind to alternative options that I should think about another category of adjacent category innovation, specifically a wider or different geographic market than New Zealand (which is my project partner's primary focus). Their guidance was to look more carefully at China as a potential export market using established online sales channels. If proved to be feasible exporting to China would be contingent on establishing a successful business in New Zealand.

At this point I elected to undertake further data collection and analysis to assist in clarifying the options relating to the nature and extent of any potential future configuration of the relationship with DB. This would contribute to making evidence

based decisions about which option to progress. I also elected to commence a subproject to carry out further research on natural sweeteners for beverage use, based on using New Zealand fruits, plants and trees.



Further Data Collection and Analysis: Brand Equity

Further Data Collection and Analysis: Online Sales Channel in China

New Zealand Trade and Enterprise provided information on the China market and I was able to source further information from contacts provided by members of my advisory board. This information revealed that China is the world's largest online market and continues to grow rapidly. The characteristics of life in China and its retail infrastructure are both very conducive to online shopping. To date, although ten per cent of all retail sales are online, there has only been a small share of China's total retail sales for food and beverage online, however, that is now changing very rapidly (CAPI, 2015; CNNIC, 2016).

The number of people in mid-2015 shopping online in China was 374 million compared to 202 million in the United States, with the online shopping penetration in China at 13.5 per cent nearly double the 7.4 per cent in the United States. The growth in value of online retail sales in China in 2014 was 47.4 per cent compared to 22 per cent in Germany, 17 per cent in Canada and the United Kingdom, 15.4 per cent in the United States and 14 per cent in Japan (CNNIC, 2016).

There are a number of different factors which in combination explain the very high level of online retailing in China and its forecasted continued high growth. These include local ownership, very high population densities (an advantage for delivery logistics), cost and access to reasonable sized retail space, lack of modern retail in lower tier cities and rural areas and a belief by almost two thirds of Chinese online shoppers that prices are cheaper online than in physical stores (CNNIC, 2016). A quarter of China's online users reported buying food and beverages online in 2014, however, the penetration rate was only 1.5 per cent and this is forecast to grow to 17.5 per cent by 2025 (CNNIC, 2016). In contrast to the highly fragmented physical retail sector in China, its online shopping centre is highly concentrated and rapidly developing. Tmall dominates online shopping China followed by JD.com (leads in online retailing) and Yihaodian (smaller, but has a food and beverage focus). Tmall is effectively an online market place, whereas JD.com engages largely in direct sales (iResearch, 2014; iResearch, 2015).

Tmall and JD.com do not require foreign businesses to have a presence in China, while Yihaodian does. Counterfeiting and mislabelling are relatively widespread and difficult under Tmall but under tighter control within both JD.com and Yihaodian. Ecommerce in China has the potential to create a separation between government and business, potentially being able to "reduce market distortions, including corruption" (Martinsons, 2008 p. 353).

Further Data Collection and Analysis: Muslim Market

When members of my entrepreneur/business advisory board advised me to take a wider geographic view beyond New Zealand, their emphasis was on Asia, in particular China. Following my discussion with them and while I was looking more deeply into China as a market, I started to read about the Muslim market. According to Cheng and Low (2008) the world Muslim population is very significant at in excess of 1.4 billion, which is more than one-fifth of the world's population and is now positioned as an entire new market opportunity for innovators (p. 37). From the perspective of non-alcoholic beverages, this is now a very specific and significant market opportunity (Fareed, 2014; The Economist, 2016; Hays, 2008).

At this point I also met one of the founders of the New Zealand company Arahi, who provide a sophisticated range of alcohol free beverages targeted to non-alcohol drinkers (The Economist, 2016; Mahajan, 2013). These products are produced by cold pressing, unfermented, super premium New Zealand wine grapes with key products being Merlot juice and Sauvignon Blanc juice. The non-drinkers Arahi is targeting are those focused on their health, cutting back on alcohol, not drinking alcohol while pregnant, wanting to keep a clear head, wanting to be the sober driver and those who do not drink alcohol for religious reasons. The latter is specifically aimed at the Muslim market, which has very significant export potential.

This led me to think that China may not be the only potential export market and to consider markets like the United Arab Emirates, Malaysia and Indonesia. In this setting the concept of a homogenous Muslim market may in many ways be imprecise as efforts to target these consumers are necessarily contingent on geographical location and context.

While many Muslim consumers' lives are defined by the dietary, lifestyle and financial rules of the Islamic faith, they are far from a homogeneous consumer market. Pakistani and Bangladeshi Muslims, for instance, speak different languages, wear different styles of clothing and eat different foods. The Turkish and Kurdish Muslims who live in Germany often have very little in common other than their faith. They have less in common with the predominantly Algerian and Moroccan Muslims of France and even less with the predominantly south Asian Muslims who live in Britain. The Muslims of Malaysia, Indonesia and Bosnia differ yet again. Consequently a targeted customer segment approach would be necessary.

Key attributes for a craft soda targeted to the appropriate segments of the Muslim market would be to use only acceptable raw materials that conform to halal and haram (Lee, 2016; Bouckley, 2012, Cheng & Low, 2008). The production process would also be required to be halal and haram compliant, where halal products must not come into contact with any non-halal products during the production products (Lee, 2016; Bouckley, 2012). It may also be necessary to ensure halal and haram compliance around logistics (both storage and transportation) (Lee, 2016; Bouckley, 2012). An example of this would be the need for separate warehousing arrangements for halal raw materials.

Furthermore to appropriately position a craft soda in the Muslim market would require rebranding to use a name reflective of a Muslim identity to increase both acceptability to and confidence of the Muslim consumer (Cheng & Low, 2008 p. 43). It would also be very important to clearly characterise the actual source of all ingredients and this is where New Zealand provenance is a critical attribute. New Zealand provenance

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extends beyond the brand value of New Zealand into the area of trust as it relates to food and beverage safety. Consumers in China are concerned about the source of ingredients and place a high emphasis on the guarantee that what they are eating or drinking is authentic (CAPI, 2015). In this context New Zealand product provenance which ensures ingredients are both "traceable and verifiable" has the capacity to be a very significant and meaningful and source of product differentiation (CAPI, 2015).

Future Data Collection and Analysis: Natural Beverage Sweeteners

Honey used in the beverage industry gives manufacturers access to a range of "technical and nuanced properties" (Ropa, 2014). Beyond its capacity as a sweetener in the beverage category, honey is also used as a flavour enhancer, antioxidant and clarifying agent. Furthermore, honey has very significant marketing appeal as a sweetener with a positive consumer perspective (Ropa, 2014).

Based on honey's sugar composition it is sweeter than sugar (sucrose) and has the appealing characteristic that it can be used in smaller quantities than sugar (Graham, 2016). As a result of honey's sweetness profile manufacturers of sodas can lower the quantity of sweetener used because honey delivers more sweetness on a dry weight basis than sugar, to achieve a similar level of sweetness. This results in a product that has less calories and is therefore healthier. Honey (dependent on the type) also has the benefit of masking sour flavours and has the ability to "smooth the flavour of very acidic products such as lemon juice" (Ropa, 2014). In the development of my product I had been using honey as a natural alternative to sugar, but also to take advantage of the smoothing effect and the positive impact on mouth-feel.

More contemporary sweeteners for beverages include stevia and monk fruit. Stevia is 200-300 times sweeter than sugar and is derived from the stevia plant (a herb). The forerunners of commercial stevia have been used as a natural sweetener in certain populations for centuries, but despite this the Food and Drug Administration (FDA) in the United States has not approved whole leaf or crude stevia extracts as a food additive. This is a result mainly of research demonstrating that stevia may affect the reproductive, renal and cardiovascular systems. However, the FDA has approved refined stevia products for use as sweeteners. Interestingly products that are marked as "Stevia" are not true stevia, rather they are a highly purified extract of stevia (with a

glycaemic index of zero) and although derived from the stevia plant is highly refined. From a craft perspective, it is more natural than artificial sugars, but in itself is very different from the stevia plant grown organically and naturally and is therefore not an authentic natural product.

For interpretation purposes it is worth noting that a glycaemic index (how carbohydrates affect blood glucose levels) less than 55 is low; 56-69 is moderate and high is greater than 61. As a reference white table sugar has a glycaemic index of 80 and raw honey 30.

Monk fruit is a small round fruit traditionally grown in Southeast Asia, although it has begun to be cultivated and grown commercially in New Zealand. The extract from monk fruit is 150-200 times sweeter than sugar, contains zero carbohydrate and calories (with a glycaemic index of zero) and consequently has become an appealing alternative sweetener for manufacturers of low calorie products. The FDA recognises monk fruit extract as generally but not totally safe.

Other potential non-sugar, non-artificial sweetener opportunities that have very low glycaemic index include: agave (from the sap of a cactus plant has a glycaemic index of 15, is 1.5 times sweeter than sugar and by quantity is higher in calories than sugar); yacon (from the yacon plant, which is a South American tuber, has a glycaemic index of 1 and has half the calories of sugar) and lucuma (from the Peruvian lucuma fruit has a glycaemic index of 25 and has 85 per cent less calories than sugar).

These natural alternative sweeteners are examples of what I am pursuing with indigenous New Zealand fruits, plants and trees.

Summary

The findings and analysis section comprises a complete review of the data and data analysis including primary and secondary data as well as data subject to observation and interpretation to elicit the core findings. These core findings were compared to the initial key assumptions to determine alignment and the degree of alignment was then subject to further analysis. The resulting challenges and opportunities were subjected to further analysis and consequently additional data was collected and analysed. This additional data analysis related to brand equity, online sales in China, the Muslim market and natural beverage sweeteners. The following section focusses on the discussion, which develops an understanding of the meaning and implications of these findings to the project, set out in the following key sub-sections:

- Major findings
- Reflection on initial assumptions, what remains unknown and why
- Comparison to previous research and similar products developed within the industry
- Evidence based reflection on feasibility
- Implications of research to practice beyond specific project or industry

Discussion

Major Findings

The major findings from this research project relate primarily to the craft soda market and product findings and are:

- the importance of small batched, artisan and local production
- people becoming more aware and careful about dietary choices
- the product being required to have a low sugar content
- the product being required to contain natural and healthy ingredients
- the negative perception of artificial sweeteners
- the product as an alternative to alcohol
- the exclusive/premium positioning of the product (includes pricing)
- the design led bottle and label
- that the product be provided in a glass bottle
- the support for full flavours (fruits) with a strong preference for citrus (lemon and/or lime)
- the important role of females in the target market
- the importance of traditional alcohol centred occasions where low or no-alcohol beverages are now perceived as appropriate
- the optimal promotional avenues being channel (in-store activations, sampling and feedback) and social media (a very important communication medium with the target audience)
- the preferred places of purchase being supermarkets followed by cafés, restaurants and specialised stores

These market and product related major findings have been distilled and categorised into the following headline groupings of major findings:

- health focus (a focus on the nutritional value and sugar content in drinks in the context of more careful and thoughtful dietary choices being made)
 - sugar moderation
 - alcohol moderation

- natural healthy ingredients
- fewer ingredients
- full fruit flavours
- no artificial sweeteners
- authenticity
 - handcrafted
 - artisan
 - small batch production
 - local production
- alternative to alcohol
 - not a compromise in traditional alcohol centred social and work occasions
- branding
 - craft positioning (simplicity, passion, heritage, local, trustworthy)
 - exclusive/premium positioning (includes pricing)
 - design led glass bottle with creative labelling
- connections
 - female demographic
 - preferred promotional avenues (channel and social media)
 - preferred places of purchase (supermarkets, cafes, restaurants and specialised stores)

In determining what these findings mean for the project it is important to form a view on what it is that constitutes a craft soda, as unlike craft beer there is no formal definition of a craft soda (Lednicer, 2015). As a helpful frame of reference the Brewers Association in the United States of America defines craft beer as a product produced in small batches (six million barrels or less per annum) and made by independent brewers (Lednicer, 2015). Furthermore, according to Lednicer (2015) enthusiasts and consumers agree that a craft beer is one that is provided in a glass bottle, does not contain high-fructose corn syrup (as a sweetener), features natural (and sometimes singular) flavours and employs as few preservatives as possible. To the extent that there is any alignment on the characterisation of a craft soda it is that it is handcrafted, produced in smaller batches and uses natural ingredients (McMillan, 2014). Additionally, Jones (2014) described that as part of this aligned view craft sodas are acknowledged as demanding more personal care and attention in the production process than is practical for machine mass produced brands and also use higher quality, natural ingredients and highly designed bottles and labels. The production process, ingredient profile and design led approach, gives an authentic craft soda described by Jones (2014) as an "expensive, luxurious feel" that justifies a premium price. In the context of a design led and design thinking approach it is important to consider the work of Carlgren, Rauth and Elmquist (2016b) who describe that design thinking is more likely to be found in the intersection of elements rather than in a single isolated element (p. 53). The lesson is not to focus on a single element such as the label or bottle, but to focus on the integration of all elements.

This small batch, artisanal, design led approach using high quality natural (often organic ingredients) does increase the cost profile of a craft soda compared to conventional soda (Jones, 2014). Jones (2014), however, describes this as a "tradeoff," which allows both the producer and the retailer to charge more for a premium product with a degree of confidence that the consumer will respond by believing that the incremental cost is worth paying. In my research there was evidence that people were prepared to pay a premium for this target product, provided the product delivered to their expectations.

In order to more fully form a view on the complete meaning of these findings it is important to first reflect on the gap between the initial and updated assumptions, compare the findings to prior research and similar product development within the beverage industry and consider an evidence based reflection on feasibility. These sections follow and are then brought together in a summary fully clarifying the major findings and what they mean to the project.

Reflection on Initial Assumptions, What Remains Unknown and Why

Reflection on Initial Assumptions - reasonably well aligned

Reflecting on the initial assumptions, it is important to clarify that they were developed mainly as a result of the work I had undertaken in 2015 when developing

my prototype craft soda. At this point they were predominately implicit, but following my internship with DB over the 2015/16 summer and the commencement of my Masters of Innovation and Commercialisation they were refined for my project proposal. Consequently the initial assumptions were based on a level of experience (but not significant) and my literature review for my project proposal. Subsequent to the mapping exercise, which revealed reasonable alignment between the core findings and the initial assumptions, revisions were required relating to:

- the customer segments assumption (the importance of females as revealed in the research)
- the key partner assumption (the configuration of the relationship with DB in light of the clear-cut consumer preference revealed for an authentic craft product)
- no explicit assumption as to whether the product would be in a glass bottle or aluminium can (although initial implicit thinking was for a highly designed aluminium can), however, one of the core findings was a very strong preference for a glass bottle

As well as the revisions required there were also refinements relating to emphasis and priority to be made. The revised and refined assumptions based on the analysis of the research findings of the project are shown in an updated business model canvas shown in Figure 14 below.

Key Partners	Key Activities	Value Proposition	Customer Relationships	Customer Segments
 DB Breweries - three options (two where DB plays partnership role and one where it does not): 1. DB led adjacent category innovation introducing craft soda product range, with DB bringing: industry know-how, manufacturing, distribution, sales and marketing, infrastructure 2. DB takes less than 50 per cent stake in a joint venture company, bringing know-how and distribution to an entrepreneurial led authentic artisan, non-mass produced craft soda product range. 3. DB plays no role in a new entrepreneurial led authentic artisan, non-mass produced craft soda product range. New Zealand producers - certified natural, organic 	 Research consumer insights Product development iterative experimentation with co-creation to trial and test flavours iterative experimentation with co-creation to trial and test flavours iterative experimentation with co-creation to trial and test new approaches to sweetening that do not involve sugar or artificial sweeteners Branding incorporating narrative, art and culture Production dependent on option selected and negotiated, either through DB or new start up customised Marketing/ Sales channel and social media Distribution supermarkets, cafes, restaurants and specialised ratial stores 	Proposition Health focus - on the nutritional value and sugar content in drinks (more careful and thoughtful dietary choices) - sugar moderation - natural healthy ingredients - fewer ingredients - no artificial sweeteners - alcohol moderation Authenticity - handcrafted, artisan, small batch production - local production - Alternative to alcohol - not a compromise in traditional alcohol centred occasions Branding - craft positioning (simplicity, passion, heritage, local, trustworthy) - design led glass bottle with creative labelling	 Co-creation social media and online reviews participation and feedback in development of product and brand story novelty experience through limited edition Social media personalised, highly responsive, high involvement, information, customer service, recognition, activations Channel (supermarkets and specialised retail stores) in-store advertising in-store sampling in-store activations 	 Target emphasis consumer healthy lifestyle category those wanting to consume less alcohol at traditional alcohol centred social/work occasions importance of female demographic sustainability, local production focused consumers willing to spend more for a premium product Target emphasis channel supermarkets restaurants specialised retail stores cafes
including natural alpine water source Artists	Key Resources		Channels	
 collaborations for limited releases for activations Internet community 	Product (research and development) - secret formula not able to be protected under intellectual property, although new developments for non-artificial, non-sugar sweeteners may potentially become intellectual property covered		 Primary supermarkets specialised retail stores restaurants (food matching and activations) cafes (food matching and activations) Secondary bars and hotels 	

Figure 14: Updated business model canvas with new assumptions based on research findings

Key Partners	Key Activities	Val Propo	ue sition	Customer Relationships	Customer Segments
	by a patent				
	 ongoing research and development with high quality NZ organic, natural ingredient providers 				
	 ongoing research and development identify highest quality, exclusive NZ alpine water source 				
	Brand				
	 could be protected by a trademark 				
	Human Resources				
	 dependent on option selected and negotiated,, either through DB or new start up customised 				
	Bottling and distribution capacity				
	 dependent on option selected and negotiated,, either through DB or new start up customised 				
	IP/trademark				
	- product (sweetening component has potential for patent) and brand (for trademark)				
Cost Structure		Revenue Streams			
 Research and development, production, distribution and sales and marketing dependent on option selected and negotiated,, either with DB or new start up customised 		 Unit sales of packaged product dependent on option selected and negotiated,, either with DB or new start up customised 			

Reflecting on the revised business model canvas there are still a small but critical number of unknowns. A number of these unknowns hinge on the decision to be made about which direction to follow for the headline unknown assumption (the potential configuration of the relationship with DB, either as a full adjacent category innovation or as a minor shareholder in a joint venture or no future relationship). The unknowns, which then specifically hinge on the decision about DB's involvement, include

production, bottling and distribution capacity, human resources, cost structure and revenue streams.

Resolution of the key assumptions relating to these will require the decision about the configuration of the relationship with DB to be made, which in itself needs further research and also judgement about the strategy and business model (New Zealand focussed business or New Zealand based export business with a focus on China).

Resolving this headline unknown is central as the financial modelling including profitability cannot be fully completed until this decision is made as that modelling requires a number of assumptions to be clarified. One of the initial advantages of a full relationship with DB was taking advantage of their experience curve and economies of scale in their production, quality assurance, distribution and sales and marketing infrastructure. This would have a positive impact on margins, particularly if a model based on marginal costing was able to be agreed. In the event that the joint venture approach was selected then this would potentially alter the economics as would a purely entrepreneurial new start up.

The fundamental, underlying unknown is what decision to make about the findings of handcrafted, small batched versus mass production, discussed in the following section making comparisons to previous research and similar products developed within the industry.

Comparison to Previous Research and Similar Products Developed within the Industry

Comparing my project's findings to previous research and similar products was a really important step to create a clearer understanding of the craft soda landscape. This would also provide an evidence base to assist in the judgements about dealing with the complex issue of how best to configure the relationship with my project partner.

Previous research shows that as a result of the rising, more forceful negative health perceptions of sodas the natural craft options are becoming more appealing and commercially viable (Mintel, 2015a). According to the Mintel (2015b) report the overall (as opposed to adult) soft drink category has been in a sales decline for a number of years, primarily linked to artificial ingredients (including artificial sweetener) and high sugar content and the associated health concerns. Furthermore, the

Mintel (2015b) report forecasts the decline in sales of sodas to continue with their prediction that the diet soda segment will become increasingly damaged. This anticipated market impact is based on the result of the discovery by Di Salle et al (2013) that carbonation in the soda lessens the perception of sweetness in the brain. This study using functional magnetic resonance imaging showed that the brain was unable to differentiate the sweetness from sugar and artificial sweetener, which indicated that those consumers who specifically chose diet drinks because of their low calorie value may not actually lose weight or control their weight.

This Mintel (2015b) report identified the market opportunity for craft sodas to take advantage of the current trends around natural ingredients and negative perceptions of artificial sweeteners. Further the Mintel (2015b) report cited craft sodas as needing to bring new flavour experiences while using natural and premium ingredients. The Mintel (2015b) report did issue a caution to manufacturers of craft soda that although the health perceptions were on their side, their product would need to justify higher prices.

The Mintel (2015b) report also revealed that 57 per cent of consumers in the United States agree that the use of natural ingredients rather than artificial ingredients makes a soda healthy and 34 per cent wanted to see these drinks with these added benefits. The Mintel (2015b) report also identified that 44 per cent of those consumers who do not drink craft sodas have an interest in sampling them and giving them an opportunity.

From the perspective of being an alternative to alcohol, six out of ten consumers were in agreement that a craft soda gave them an opportunity to appreciate social occasions and was highly acceptable as a non-alcoholic alternative (Mintel, 2015a). Furthermore, if applied to the consumer segment of millennials this increases to two thirds of consumers and in the consumer group of parents increases to seven out of ten consumers (Mintel 2015b).

If you look at similar products, but in a different category, the soft drinks sales trajectory (other than the adult market) is not unlike the declining sales trajectory for the conventional macro-brewer of beer (Jones, 2014). However, internationally and also reflected strongly in New Zealand sales of craft beer have been on the rise.

The issue to be considered (which is core to my project) is that conceivably it is not the soft drinks that are actually no longer finding the same level of appeal with consumers, rather it is the way in which these drinks are being made. This particularly refers to the ingredient profile of the traditional soft drink.

It is not only entrepreneurial start-ups that are engaging in the craft soda market to take advantage of the perceived potential, significant incumbents such as PepsiCo (manufacturers of Pepsi, 7-Up and Mountain Dew) are doing so as well. PepsiCo tentatively entered the craft market in 2014 through Caleb's Kola (using kola nut extract and cane sugar) and more recently in 2016 through the introduction of the Stubborn product range, emphasising the use of quality ingredients and flavours (Jones, 2014; Kell, 2016a).

Through the Stubborn range PepsiCo is attempting to address some of the key category trends by using fair trade-certified cane sugar with stevia producing a product with a calorie content of 33 to 40 per cent less than a traditional sugar based Pepsi drink (Kell, 2016a). My perspective is that PepsiCo is more interested in attracting lost consumers back to the carbonated soda category rather than presenting an authentic craft alternative. This in itself raises issues for me about mingling a craft product with an established large scale manufacturing and marketing organisation, such as DB. PepsiCo also has an 1893 soda line, which on the surface is targeted to the craft soda market and contains kola nut extract and some natural ingredients. However, its design and marketing approach appears strongly orientated to the mixer market and the whole sense of the product and positioning is that PepsiCo is targeting the millennial culture of cocktails and the current mixology culture (Schultz, 2016). This product appears to blur the boundaries between alcohol and craft sodas, which is interesting as one of my original value propositions in my March 2016 business model canvas was that my craft soda would be used as a flavour mix for alcohol. In the light of my research findings and those of others, I now sense that this blurring is in point of fact a negative rather than a positive association for a craft soda.

Another massive global soft drink company, Coca-Cola has also been active in the craft soda field having created a craft soda division and in 2015 acquired two well-known and established brands (Lednicer 2015). Coca-Cola has positioned both these brands, which are Blue Sky and Hansen's Natural as craft sodas. Blue Sky sodas use

natural cane sugar as a sweetener, contain no caffeine and use natural flavours (such as ginger), however, are still high in calories other than their diet soda, which is sweetened by stevia. Hansen's Natural sodas claim to be authentic using cane sugar for sweetening and natural flavours for their original range. These sodas are still high in calories other than their diet range, which uses the artificial sweetener sucralose. These products would not meet the consumer requirements for a craft soda as revealed in my research project. It is also perplexing to have a craft soda labelled as a diet soda and sweetened with an artificial sweetener, given the significance of the negative perception of these sweeteners in the market place. Once again, much like PepsiCo the impression is gained that Coca-Cola is using these product ranges to appeal to those customers that they have lost and also perhaps to new demographics to which these new product lines are heavily marketed.

There is the very real potential for craft soft drinks to stimulate the market interest that craft beers have, however, to effectively do this they will need to replicate the key attributes from the craft beer segment being the artisanal heritage, matching and equalling the taste experience (resulting from premium local natural ingredients and unique flavours) and level of quality that only a small-batch production can achieve (Mintel, 2015a). The forecast is that craft sodas will likely follow the path of the craft beer, where consumers have typically sought out products from local, artisanal, smaller and authentic brewers and gradually turned away the big and even iconic brands (Mintel, 2015a).

In the United States the smaller local, artisanal craft soda companies such as Appalachian Brewing Company have realised very significant distribution opportunities with large scale companies such as Wal-Mart, which expands their product availability beyond smaller supermarkets and speciality retail stores (McMillan, 2014). Appalachian product line comprises root beers, birch beer and ginger beer and these are all brewed in small batches using quality natural ingredients with the only ingredient that is not natural being sodium benzoate, a preservative to prevent fermentation (McMillan, 2014). A particular approach that Appalachian has is around product provenance aligning with consumers wanting to increasingly know where products in their food and drink originate from, which links to their core message that "we support local producers, local business and the local economy" (McMillan, 2014).

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There are also lessons to be learnt by the craft soda segment about non-alcoholic alternatives from the non-alcoholic beer market which is experiencing strong demand in places such as Europe and Japan. By way of example, in Spain 60 per cent of Spanish beer buyers had purchased a non-alcoholic beer, while in Germany non-alcoholic beer now accounts for 19 per cent of new beer launches comparing to only 11 per cent four years ago (Australian Food News, 2015). In Britain, traditionally viewed as a place where real beer has very deep rooted support, one in seven British beer buyers actually bought non-alcoholic beer and interestingly this rose to 26 per cent in the 18-24 year age band (Australian Food News, 2015). The potential for non-alcoholic beer is not only among the more health conscious in Europe (mainly women and old male consumers), but also in Muslim dominated regions posing as a potential significant competitor to craft sodas (Australian Food News, 2015). This is because a zero alcohol beer, much like a craft soda, can easily be consumed in social and work related situations where people do not want to drink alcohol.

Australians are drinking less alcohol then any time in the previous decade and a half, primarily due to the continued decline in beer consumption (parallel to the New Zealand experience), which presents an opportunity for non-alcoholic beer as well as craft soft drinks (Australian Food News, 2015).

When considering the non-alcoholic positioning option it is always worth remembering the introduction of Clayton's in Australia and New Zealand in the 1970's and 1980's. Clayton's was a non-carbonated, non-alcoholic brand which was designed and packaged to resemble a bottle of whiskey and was famously promoted as "the drink you have when you're not having a drink," which at the time was linked to alcohol being a major contributor to the high road death and injury toll at that time (Shepheard, 2009). As it turned out the launch of Clayton's was an overwhelming failure, however, the word Clayton's itself effectively became colloquial speech meaning a compromise that satisfies no one. The Clayton's story is a valuable reminder that timing of product introduction is very important, as no entrepreneur wants to launch a product that everyone remembers, but that no one wants to buy.

Further to the positioning of a craft soda as an alcohol alternative (from a health and social perspective) it is important to keep in mind that this is not simple, self-evident positioning



Evidence Based Reflection on Feasibility

These research findings have identified both opportunities and barriers to be considered. Fortunately the opportunities that have emerged outnumber the barriers which are limited. I will deal with the opportunities first.

Opportunities

The opportunities that have been identified in this research project can be categorised into those with commercial, product development, customer segment, brand and connection imperatives. These categories are linked to the specific opportunity, the evidence base for feasibility, an assessment of feasibility and next steps as shown in Figure 15.

Imperative	Opportunity	Evidence (does not include that provided by this research project – includes evidence from other sources)	Feasibility (rank: 1 very feasible to 5 feasibility seriously in doubt)	Next steps
	Wider geographic export focus on China	 Large rapidly growing online market (China Customer Roadmap, 2016) Online conducive to retail sales (China Customer Roadmap, 2016) Online shopping penetration double USA (CNNIC, 2016) Two-thirds of China's online shoppers believe prices are cheaper (CNNIC, 2016) Market penetration of food and beverages is low and forecast to increase significantly (CNNIC, 2016) 	Rank: 3.25 As a start-up this would be a significant feasibility challenge. The feasibility challenge would be reduced by first establishing a successful test market in New Zealand. At the same time consumer insight research into the China export market could be undertaken to determine feasibility.	 Clarify configuration with DB Develop test market in New Zealand Advance consumer insight research in China Establish relationships with China Test entry into the China market.
Commercial	Wider geographic export focus on the Muslim market	 The Muslim market is a significant market for non-alcoholic beverages (Fareed, 2014; The Economist, 2016; Hays, 2008). Specific beverages from NZ targeted to non-alcohol drinkers who want to experience a quality drink that is special, served in a fine glass from a sophisticated well designed bottle (The Economist, 2016; Mahajan, 2013). Key attributes for a craft soda targeted to the appropriate segments of the Muslim market would be to use only acceptable raw materials that conform to halal and haram (Lee, 2016; Bouckley, 2012). 	Rank: 3.75 There would need to be very significant ground covered in developing an understanding of consumer insights and the way in which this market operated. Would make sense to follow on a successful exporting entry into China.	 Develop deeper understanding of Muslim market\ Advance consumer insight research into the Muslim market Test entry into this market within the New Zeeland context Dependent on results of China export market, consider entering Muslim market
	Local, artisanal, small batched production linked to a brand narrative.	 In the absence of a formal definition, craft soda is small batch produced, handcrafted by independent brewers, in glass bottle and uses natural ingredients (McMillan, 2014) Learnings about key attributes from and sales trajectory of craft beer segment (Mintel, 2015a) These producers are starting to realise larger scale distribution opportunities (McMillan, 2014) Small batch production with natural ingredients results in superior quality than mass production (Jones, 2014) Production process, ingredient profile, design led approach and branding justify price premium (Jones, 2014) 	Rank: 1.25 Once configuration with DB was resolved this is feasible. There would be a learning curve about scaling up.	 Clarify configuration with DB Resolve funding Travel and gain international experience in craft beverage production Commence small scale production Once small scale production is successful, scale up

Figure 15: Matrix of commercial imperative, opportunity, evidence, feasibility and next steps

Imperative	Opportunity	Evidence (does not include that provided by this research project – includes evidence from other sources)	Feasibility (rank: 1 very feasible to 5 feasibility seriously in doubt)	Next steps
	Exclusive premium positioning (including price premium)	 Production process, ingredient profile, design led approach and branding justify price premium (Jones, 2014) 	<u>Rank: 1</u> Feasible.	1. Develop design led branding based on working Chapman brand.
Branding	Design led glass bottle and label linked to a brand narrative	 Enthusiasts and consumers agree that craft beverages should be provided in glass bottle (Lednicer, 2015) Should be provided in finely labelled bottles (Jones, 2014) 	<u>Rank: 1</u> Feasible.	1. Develop design led branding based on working Chapman brand.
	Emphasis on females in the target market		<u>Rank: 1</u> Feasible.	1. Develop as part of customer segmentation strategy
Customer segment	Traditional alcohol centred occasions where craft soda is an appropriate, no compromise alternative	 Consumers are drinking less alcohol than any time in the previous 15 years (Australian Food News, 2015) As a reference non-alcoholic beer sales are growing significantly (Australian Food News, 2015) The potential for non-alcoholic drinks is on the health conscious and also Muslim dominated regions (Australian Food News, 2015) Six out of ten consumers agreed that craft soda was a highly acceptable non-alcoholic alternative at social occasions (Mintel, 2015a) 	<u>Rank: 1</u> Feasible.	 Develop as part of customer segmentation strategy
	Healthy lifestyle category with sugar and alcohol moderation and careful dietary choices	- Conventional carbonated soda sales in decline, primarily linked to artificial ingredients and high sugar content, linked to health concerns (Mintel, 2015b)	<u>Rank: 1</u> Feasible.	1. Develop as part of customer segmentation strategy
	Natural focus with natural, organic, healthy ingredients with no artificial sweeteners, colourings and preservatives	 Discovery that the brain is unable to differentiate sweetness from sugar and artificial sweetener and therefore artificial sweeteners may not result in weight reduction (Di Salle et al, 2013) Craft carbonated sodas taking advantage of current trends around natural ingredients and negative perception of artificial sweeteners (Mintel, 2015b) 	<u>Rank: 1</u> Feasible.	1. Develop as part of customer segmentation strategy

Imperative	Opportunity	Evidence (does not include that provided by this research project – includes evidence from other sources)	Feasibility (rank: 1 very feasible to 5 feasibility seriously in doubt)	Next steps
	Ingredient profile with low sugar and natural ingredients	Craft carbonated sodas taking advantage of current trends around natural ingredients and negative perception of artificial sweeteners (Mintel, 2015b)	<u>Rank: 1</u> Feasible.	1. Finalise product development through co-creation process
	Full citrus flavours		<u>Rank: 1</u> Feasible.	1. Finalise product development through co-creation process
Product Development	No artificial sweeteners	Discovery that brain is unable to differentiate sweetness from sugar and artificial sweetener and therefore artificial sweeteners may not result in weight reduction (Di Salle et al, 2013)	Rank: 1 Feasible. In parallel continue work on developing alternative natural sweetening agent from indigenous New Zealand plants, trees or fruits.	 Finalise product development through co-creation process Consider forming a relationship with a University and/or Iwi/Pacifica to develop natural sweetening agent from indigenous New Zealand plants, trees or fruits.
	Channel and social media as promotional avenues		<u>Rank: 1</u> Feasible.	1. Develop as part of marketing plan.
Connections	Supermarkets, cafés, restaurants and specialised stores as preferred places of purchase	Artisanal, small batch craft soda producers in the USA realising large scale distribution opportunities in supermarkets (McMillan, 2014)	Rank: 1 For cafes, restaurants and specialised stores. Rank: 3 For supermarkets because	 Develop as part of marketing and distribution plan.
			of the difficulty and/or cast of access	

Barriers

The primary barrier identified is the perceived critical importance of the craft soda being homespun, artisan, local and produced in small batches. For the new branded craft soda product range to reveal itself as authentic and build credibility with its consumer base, one of the conclusions reached is that the original conception of leveraging the primarily automated, mass manufacturing capacity of DB would be in conflict with consumers perception of a craft soda.

This has a significant bearing on critical decisions about any potential configuration of the relationship with DB. At face value the data does not present the straight forward product adjacent category innovation with DB as a feasible option, if the product is to genuinely be a craft product. If this option is excluded then of the two options remaining (joint venture and pure start-up) the joint venture option is the most appealing as it brings those attributes and experiences (know-how, food safety, quality and distribution) of DB that would be time consuming, expensive and challenging for an entrepreneurial start-up to easily achieve.

On reflection the joint venture would bring the key strengths of the entrepreneur and key strengths of DB together in a way that could overcome this barrier.

Implications of Research to Practice beyond Specific Project or Industry

The main implication of these research findings to practice beyond this project or the beverage industry is the critical importance of uncovering what it is that the customer truly values. This reinforces the point made by Blank (2013) and Osterwalder and Pigneur (2010) to be business model centric not simply product centric. Ramanujam, and Tacke (2016) have advanced the argument that those product innovators who achieved the most success commence with a very clear understanding what it is that the consumer values and also what those consumers are willing to pay for what they value. The approach suggested by Ramanujam and Tacke (2016) is that the product should be developed around these factors rather than the other way. Ramanujam, and Tacke (2016) quote alarming statistics about the majority of new products failing, for a variety of reasons, however, their view is that "the root of all innovation evil" is the not putting the consumers "willingness to pay for a new product at the very core of product design."

The critical finding in this research project about the importance and value consumers place on the authenticity of a craft product is a very important lesson across all sectors. Unless organisations address this issue with integrity, they are unlikely to be able to sustainably charge a premium price and the use of craft (what consumer's value) will ultimately be seen to simply be a marketing ploy.

Summary

In this section the major findings are clarified and further reflection is undertaken as to what remains unknown, why and its importance. The business model canvas is updated with new assumptions based on the research findings and prior research and similar products developed within the industry are reviewed. This section also includes an evidence based reflection on feasibility based on a matrix of the commercial imperatives, opportunities, evidence, feasibility and next steps. This information is synthesised as the basis for the recommendations section (Business Case), which follows. The recommendations section, which is set out in the four key sub-sections below, consolidates the findings and recommendations into a concise report, designed for the project partner or a future investor audience:

- Business model design
- Market validation and development
- Product validation and development
- Resource requirements and returns

Recommendations (Business Case)

Business Model Design

In order to clearly define the business model for my craft soda product range the literature relevant to innovation (including adjacent category innovation and brand stretching), product development, current industry trends (relating to craft sodas and similar category products), commercialisation, strategy and business models was reviewed.

The options and opportunities for product development and commercialisation were subject to intense discussion, scrutiny and debate with my two advisory boards. I was also in dialogue with my project partner, particularly around product prototype refinement, market trends and consumer insights.

Beverage industry market and product data, which not only formed an important element of the data analysis and findings also assisted in the facilitation of both the qualitative questionnaire and quantitative survey. The data derived from the questionnaire and survey was triangulated with the secondary data (industry reports and publicly available research) to provide the basis for the core findings of this project.

Goals and Vision for the Project

Background

This project was initiated in early 2015 when I was in the process of finalising the development of a new premium craft carbonated soda (craft soda) in my student flat while completing my Commerce Degree at Victoria University. My intention at that time was to complete an Honours Degree (majoring in Marketing) and then independently commercialise this product as an entry point into an entrepreneurial life.

At the completion of my degree I interned for three months in the marketing department of DB Breweries (DB) working with international brands. I was interested in developing a deeper understanding of the beverage market to widen my perspectives in relation to the development and commercialisation of my new craft soda. While undertaking my internship the embedded language, culture and practice of innovation at DB inspired me to consider and ultimately commence a Masters of Innovation and Commercialisation at Victoria University of Wellington, rather than follow my prior plans of undertaking a Honours Degree. DB agreed to provide context for my Master's project.

While undertaking my internship I became familiar with the important impact of the multi-decade 2.4 per cent year-on-year decline of the beer category on DB and the wider brewing industry (Statistics New Zealand, 2014). I also came to clearly understand the need for DB and like companies to further explore viable options for market growth.

At the point of forming this project I realised that I could conflate my interests with those of DB. Not only was I already planning to commercialise this craft soda range product range, but it could also be a potential commercial response to DB's critical and current problem - the multi decade decline of its core business and the need to find new avenues for growth.

Vision

The vision for this project was to commercialise my new branded craft soda product range and in doing so assist DB by contributing to the resolution of its current and critical commercial problem of its declining core business.

<u>Goals</u>

- 1. To determine whether a craft soda project range was a consumer relevant innovation.
- 2. To investigate the potential for commercialisation (scalability, sustainability and profitability) of the craft soda product range.
- 3. To determine if this was a feasible adjacent category innovation for DB.

In order to advance these goals I applied the latest innovation and commercialisation thinking and practice to the adjacent category of craft sodas to assess the significance of this market opportunity for DB (and if relevant how to frame that opportunity in a way appealing to them).

Assessment of Opportunities and Constraints for Development and Commercialisation

Opportunities (context)

The contextual opportunity for the development and commercialisation of this craft soda product range corresponds to the global expansion of the <u>adult</u> soft drink category. This category is experiencing growth of ten per cent per year, which is strongly related to the rapidly increasing health conscious consumer category who are moderating their alcohol intake or in fact no longer drinking alcohol (Nicholson, 2013). Supporting this potential opportunity is the projection that the volume of alcohol to be consumed per capita across major developed markets will be much lower than previously (Nicholson, 2013). A significant related factor is the growth of low or no-alcohol beers, which are advancing the normalisation of non-alcoholic drinks by adults in social settings such as bars, restaurants and parties.

Opportunities (project)

The opportunities identified in this project have been categorised into those with commercial, customer segment, product development, branding and connection imperatives. Each of these has been assessed in the context of the evidence base for feasibility and the nature of the feasibility.

Commercial:

The commercial opportunities relate to both the mode of production and a wider geographic export focus (China primarily and possibly the Muslim market).

To develop a credible and sustainable market positioning this research project has underscored the critical importance of the production process for the craft soda product range to be handcrafted by local, artisanal independents rather than macromass manufacturers (McMillan, 2014). Fundamentally, authentic local, small batched, personal production with natural, organic ingredients is perceived to provide superior quality than can be achieved by machine based mass production (Jones, 2014). Importantly this artisanal production process utilising both the appropriate ingredient profile and design led product approach justifies a premium price (Jones, 2014). While not all directly translatable, there are profound lessons for the market development of a craft soda product range from the more established experiences of the craft beer segment (Mintel, 2015a). Understanding the importance of the mode of production to the consumer is critical and strongly influences the potential configuration of the relationship with DB.

This approach is likely to limit the market potential and the future sustainability of the craft soda product range as the health messaging about the negative perception of sugar, artificial sweeteners, artificial ingredients and excessive alcohol intake becomes more forceful and persuasive.

If the adjacent category innovation option is deemed unviable, then for any relationship between myself and DB to be possible the most practical commercial opportunity, viewed through the lens of sustainable sales growth and profitability, is a joint venture This approach combining the established know-how and distribution capacity of DB with the authenticity of a handcrafted, independent entrepreneurial start-up has real potential.

A further commercial opportunity that has emerged from this project is the potential for a wider geographic market focus beyond New Zealand, particularly China. This would leverage the existing reputation of the New Zealand brand and food products in China, particularly the established value of New Zealand product provenance. In China the online sales channel is very conducive to retail sales with two-thirds of China's online shoppers believing online prices are cheaper. Furthermore, the online market in China is growing very rapidly and already has a market penetration double that of the United States of America (CNNIC, 2016). The market penetration in the beverage category is currently very low and is forecast to increase very significantly (CNNIC, 2016), which is an opportunity.

An additional commercial opportunity to be explored (if feasibility can be demonstrated) following successful establishment of an export market in China is the Muslim market, an attractive market for the sale of non-alcoholic beverages.

In the event that agreement on the configuration of the structural relationship with DB is able to be reached and resolved, feasibility is then more of an issue for the handcrafted, independent entrepreneurial start-up. Feasibility is considered to be somewhat less than a moderate challenge with the key element being the learning curve relating to scaling craft up production from the product development base. To overcome this challenge I am travelling to Europe where I will base myself in

Berlin for some months to immerse myself in craft production to enhance my experience as Europe is at the centre of craft beverage innovation. Funding the production venture is also an obvious feasibility issue, but this has been resolved and is addressed later in this report.

The feasibility challenge around entering a wider geographic market through export would be a more significant challenge, which would be reduced by first establishing a successful test market in New Zealand, while concurrently undertaking consumer insight research into the China export market. Part of this research would be to determine the branding and positioning, which may not be completely transferable from the New Zealand branding and positioning.

Entering the Muslim export market would be an even more of a feasibility challenge as there would need to be very significant ground covered in developing an understanding of consumer insights and the way in which this market operated. If feasible, it would be logical to enter this market following a successful export entry into China. Once again, branding and positioning would need to be tailored to the market and based on consumer insight research.

Customer segment opportunities:

The customer segment opportunities are centred on the expanding healthy lifestyle category (sugar and alcohol moderation), the natural focus (natural, organic ingredients with no artificial sweeteners), traditional alcohol centred instances (craft soda as an appropriate, no compromise alternative) and the importance of females (the dominant purchasers) in the target market.

alcohol intake is at a 15 year low

(Australian Food News, 2015) and 60 per cent of consumers agree that a craft soda is a highly acceptable non-alcoholic alternative at traditional social instances (Mintel, 2015a).

The recent discovery that the brain is unable to differentiate the sweetness from sugar and artificial sweetener has added to the growing negative perception of

artificial sweeteners, as now there is evidence that these may not actually result in weight control or reduction (Di Salle et al, 2013).

The opportunities relating to customer segment have feasibility challenges, which are limited and easily overcome.

Product development opportunities:

The product development opportunities relate to the ingredient profile taking advantage of the current trends centred on natural ingredients and the negative perception of artificial sweeteners (Mintel, 2015b). The compelling response for the craft soda to have a low sugar content, natural and healthy ingredients linked to the negative sentiment about artificial sweeteners creates an opportunity to place more emphasis on experimenting with natural sweeteners.

In the development of my prototype craft soda product range completed prior to this project, I experimented with and used honey as a natural sweetener (along with other important properties), but as a result of the findings of this project I decided to place more emphasis and priority on alternative natural sweeteners, not only as a critical element of my product development but as a potential innovative commercial opportunity in itself. I have expanded my new product development profile to include a specific sub-project focussed on natural sweeteners with a lower calorie profile than honey. Seelig (2013) in writing about how reframing a problem can ultimately unlock innovation, talks about the art of reframing requiring situations to be looked at from many different perspectives, which in turn takes effort, attention and practice. In everyday practice this is easier said than done and has been a critical learning from this research project.

I have started to search for potential natural sweetening agents from indigenous New Zealand plants, trees or fruits. By way of parallel examples, monk fruit (primarily grown in South East Asia) is an effective no calorie sweetener and the cactus derived agave has a very low glycaemic index and is much is much sweeter than sugar by quantity. Yacon (derived from a South American tuber) and lucuma (derived from the Peruvian lucuma fruit) are both lower in calories then sugar and also have low glycaemic indices. This is an area in where a joint venture with DB and their product development and laboratory know-how can accelerate progress. I am already considering possible relationships with a University or Iwi/Pacifica group to work on the development of a potential new natural sweetener, which fits well with the writings of Bessant, Oberg and Trifilova (2014) on framing problems in radical innovation, who stress the importance of opening research and development to a wider range of external players (p. 1291).

The opportunities relating to product development of the craft soda are entirely feasible, as I have already developed the product range, which favourably aligns with the consumers ideal set of attributes revealed in this research project.

However, the development of a new artificial sweetener is very challenging from a feasibility perspective.

Branding:

The branding opportunities link to an exclusive and premium positioning as well as a design led glass bottle (250ml) and label strongly linked to an engaging brand narrative around the notion of natural. This opportunity taps into consumers and enthusiast's agreement that craft beverages should be presented in glass bottles (Lednicer, 2015) and that these bottles should be finely labelled (Jones 2014).

The opportunities relating to branding have very limited feasibility challenges, which are easily overcome.

Connections:

These opportunities relate to the promotional avenues for the craft soda product range as well as the consumers preferred place of purchase. The preferred promotional avenues are in-store (activations, sampling and advertising) and social media. Artisanal, small batched craft soda producers have traditionally focused their distribution through cafes, restaurants and specialised stores. However, in recent times craft soda producers in the United States of America have started to realise larger scale distribution opportunities in supermarket chains (McMillan, 2014).

From a feasibility perspective the entry barriers for in-store promotion and social media are relatively low, however, access to supermarkets has been (at least until recently) a very much more significant feasibility hurdle. DB has strong relationships and experience in negotiating and achieving access to supermarkets.

Constraints

There are no critical frictions that this project faces, however, there are the typical challenges that any new start up faces. The new product development process is not overly complicated from a technological point of view and other than food safety and consumer protection regulations the beverage sector that is not highly regulated. Working with DB will undoubtedly allow the start-up to commence higher up the experience curve than if it was to be established from the ground-up.

Funding for any entrepreneurial start-up is likely to be the major constraint faced, although in my development phase, through my entrepreneur/business advisory board I have already elicited interest from potential investors for start-up funding.

From a philosophical point of view there is evidence that good entrepreneurs use their lack of resources to their advantage, in particular constraints on funding compel entrepreneurs to seek creative solutions as they do not have the option of "throwing money at the problem" (Schonthal, 2015).

Assumptions that have been Well Tested

The business model for my project was based on insights being framed by the research questions, founded on developing a refined understanding of consumer needs.

Business models are effectively stories that clarify the underlying logic of how companies work (Magretta, 2002) and act as blueprints for strategy to be implemented (Osterwalder & Pigneur, 2010). In this project the business model approach was to consolidate the key assumptions in a business model canvas (Osterwalder & Pigneur, 2010 p. 14-15) with the objective of moving beyond product centric thinking towards business model thinking.

My initial assumptions were established in March 2016 and these were subject to testing through the primary and secondary data analysis. This process of testing the assumptions revealed reasonably good, but incomplete alignment between them and

the core research findings of this project. This process also revealed that the initial business model canvas assumptions were insufficiently detailed, nor specific enough. Further revisions and refinements of the assumptions relating to content, emphasis and priority were required based on my research findings.

These fresh assumptions were consolidated into an updated business model canvas shown as Figure 16. This updated business model canvas required further critical analysis and reflection prior to making the final recommendations, particularly relating to the options around the configuration of the relationship with DB. The assumptions in the updated business model canvas that were <u>revised</u> from the initial business model canvas are shown in red text, while those where the changes are <u>refinements or the provision of greater detail</u> are shown in green.

Key Partners	Key Activities	Value Proposition	Customer Relationships	Customer Segments
 DB Breweries – three potential options (two where DB plays partnership role and one where it does not): 1. DB led adjacent category innovation introducing craft soda product range, with DB bringing: industry know-how, manufacturing, distribution, sales and marketing, infrastructure 2. DB takes less than 50 per cent stake in NewCo, bringing know-how and distribution to an entrepreneurial led authentic artisan, non-mass produced craft soda product range. 3. DB plays no role in a new entrepreneurial led authentic artisan, non-mass produced craft soda product range. 	 Research consumer insights Product development iterative experimentation with co-creation to trial and test flavours iterative experimentation with co-creation to trial and test flavours iterative experimentation with co-creation to trial and test not involve sugar or artificial sweeteners Branding incorporating narrative, art and culture Production dependent on option selected and negotiated, either through DB or new start up customised Marketing/ Sales channel and social media 	 Health focus - on the nutritional value and sugar content in drinks (more careful and thoughtful dietary choices) sugar moderation natural healthy ingredients fewer ingredients no artificial sweeteners alcohol moderation Authenticity handcrafted, artisan, small batch production local production Alternative to alcohol centred occasions Branding craft positioning (simplicity, passion, heritage, local, trustworthy) design led glass bottle with creative labelling 	 Co-creation social media and online reviews participation and feedback in development of product and brand story novelty experience through limited edition Social media personalised, highly responsive, high involvement, information, customer service, recognition, activations Channel (supermarkets and specialised retail stores) in-store advertising in-store sampling in-store activations 	 Target emphasis consumer healthy lifestyle category those wanting to consume less alcohol at traditional alcohol centred social/work occasions importance of female demographic sustainability, local production focused consumers willing to spend more for a premium product Target emphasis channel supermarkets restaurants specialised retail stores cafes

Figure 16: Updated business model canvas – based on project research findings and analysis

Key Partners	Key Activities	Value Proposition	Customer Relationships	Customer Segments
Key Partners New Zealand producers - certified natural, organic ingredients including natural alpine water source Artists - collaborations for limited releases for activations Internet community	Key Activities Distribution - supermarkets, cafes, restaurants and specialised retail stores Key Resources Product (research and development) - secret formula not able to be protected under intellectual property, although new developments for non-artificial, programmed	Proposition	Relationships Relationships Channels Primary - supermarkets - specialised retail stores - restaurants (food matching and activations) - cafes (food matching and activations)	Segments
	 non-sugar sweeteners may potentially become intellectual property covered by a patent ongoing research and development with high quality NZ organic, natural ingredient providers ongoing research and development identify highest quality, exclusive NZ alpine water source Brand 		matching and activations) Secondary - bars and hotels	
	by a trademark Human Resources - dependent on option selected and negotiated, either through DB or new start up customised Bottling and distribution capacity - dependent on option selected and negotiated, either through DB or new start up customised			

Key Partners	Key Activities	Value Proposition		Customer Relationships	Customer Segments
	 IP/trademark product (sweetening component has potential for patent) and brand (for trademark) 				
Cost Structure				Revenue Stre	ams
 Research and development, production, distribution and sales and marketing dependent on option selected and negotiated, either with DB or new start up customised 			Unit sales of - depender DB or ne	of packaged product at on option selected and r w start up customised	negotiated, either with
Key: Red text identifies significant changes from the initial business model canvas (Figure 1) Green text identifies refinements or the provision of greater detail from the initial business model canvas (Figure 1)					

Reflecting on the updated business model canvas reveals a small but critical number of unknowns, which hinge on the decision to be made about the headline unknown assumption which is the potential configuration of the relationship with DB. The options are full adjacent category innovation, DB as a minor shareholder in a joint venture or a straight entrepreneurial start-up with no relationship with DB. Further unknowns, which specifically pivot on the decision about DB's involvement, are production, bottling and distribution, human resources, cost structure and revenue streams.

The decision about the potential relationship with DB in itself was subject to further research and judgement about both the strategy and business model. Should this be a New Zealand focussed business (as originally intended) or a New Zealand based export business with a focus on China and potentially elements of the global Muslim market. If export was to become a core part of the operating model, this may require DB to reconfigure part of its own operating model.

Resolution of this headline issue was also central to the financial model, which could not be fully completed until this decision was made, as the financial model itself requires clear assumptions. One of the initial advantages of the adjacent category innovation model was taking advantage of the experience curve and economies of scale (from a margin perspective) that exist in DB's production, quality assurance, distribution, sales and marketing infrastructure. However, from a product price perspective the joint venture and entrepreneurial options with their premium craft positioning would be able to support the greatest price premium.

The critical judgement to be made was whether to progress with the handcrafted, small batched production approach or the mass production approach. Once that judgement had been taken, there were only two options under consideration for configuring the potential relationship with DB, which were the joint venture and entrepreneurial start-up options.



Evidence-based recommendations on the most appropriate business model

After reflecting on the research findings I consulted with my entrepreneur/business advisory board on this issue. Based on their guidance I decided to focus on the options of either a joint venture or an entrepreneurial start-up. For the joint venture option a company would (subject to successful negotiation) be formed between myself and DB where DB would take a shareholding of less than 50 per cent and provide the knowhow and distribution network.

In this context DB already has an existing joint venture called the Barworks Hospitality Group, which resulted from JAG Hospitality and DB joining forces in 2008. Barworks commenced operations with seven gastropubs in Auckland, which has now expanded to 19 gastropubs operating across Auckland. The relationship is based on the JAG Hospitality Group taking the operational responsibility with DB supplying beer and cider. This joint venture has been enduring and creates a positive environment for negotiating a joint venture with DB based on the business model that follows.

Recommendations for the business model

- 1. Joint venture (NewCo) between my company Chapman and DB to manufacture and distribute an authentic, artisanal, premium craft carbonated soda product range.
- 2. Chapman to be the majority shareholder and DB to be the minority shareholder. Chapman as an entrepreneurial led, authentic, artisanal, small batched producer of a local premium craft carbonated soda product range will establish the production facility for the premium craft carbonated soda product range in New Zealand. Chapman's specific responsibilities to include:
 - product development
 - procurement of the ingredient components of the product
 - development and procurement of the labels for the product
 - bottling and packaging
 - branding
 - marketing
 - social media
 - activations
 - in store promotions
 - relationships with key partners, customers, channel (except supermarkets)
 - the China market
 - the Muslim market
- 3. DB as an established beverage company will provide know-how and distribution. DB specific responsibilities to include:
 - procurement of non-ingredient components (bottle, caps and packaging)
 - food safety including the relationship with the regulator
 - quality assurance
 - legal including IP and trademarks

- distribution including warehousing
- relationships with channel (supermarkets)
- 4. Joint Chapman and DB responsibilities to include:
 - natural sweetener research and development
 - market research
 - customer insights
- 5. The joint venture to investigate through research the feasibility for exporting the craft soda product range to China using online sales as their channel and if established successsfully, research the feasibility of an appropriate global Muslim market as a potential target market.

The assumptions based on the recommendations above were then consolidated into the final business model canvas shown in Figure 17. This final business model canvas represents the final operating model and clarifies the assumptions that underlie the recommendation to proceed with the joint venture option as well as those assumptions relating to the selection of the option for the configuration of the relationship with D. These include production, human resources, bottling and distribution capacity, cost structure and revenue streams. The changes from the updated business model canvas to the final business model canvas are shown in Figure 17 in red text.

Key Partners	Key Activities	Value Proposition	Customer Relationships	Customer Segments
DB Breweries - Joint venture (NewCo) between Chapman and DB (Chapman the majority shareholder and DB the minority shareholder). Chapman as an entrepreneurial led, authentic, artisan, small batched producer of a local craft soda product range will have the following responsibilities: - product development - procurement of the ingredient components of the product - development and procurement of the labels for the product - bottling and packaging - branding - marketing - social media - activations - in store promotions - relationships with key partners, customers, channel (except supermarkets) - the China market DB as an established beverage company will bring know-how and distribution, with the following responsi	 Research consumer insights Product development iterative experimentation with co-creation to trial and test flavours iterative experimentation with co-creation to trial and test flavours iterative experimentation with co-creation to trial and test new approaches to sweetening that do not involve sugar or artificial sweeteners Branding incorporating narrative, art and culture Production craft, local, small batched and artisanal responsibility of Chapman Marketing/ Sales channel and social media Distribution supermarkets, cafes, restaurants and specialised retail stores responsibility of Chapman other than supermarkets, which is responsibility of DB 	 Proposition Health conscious focus - on the <i>nutritional value</i> <i>and sugar content in</i> <i>drinks (more careful</i> <i>and thoughful</i> <i>dietary choices</i>) sugar moderation natural healthy ingredients fewer ingredients alcohol not a compromise in traditional alcohol centred occasions pregnancy wanting to keep a clear mind sober driver religious beliefs Authenticity handcrafted, artisan, small batch production local production not mass produced Branding craft positioning (simplicity, passion, heritage, local, trustworthy) design led glass bottle with creative labelling 	 Kelationships Co-creation social media and online reviews participation and feedback in development of product and brand story novelty experience through limited editions Social media personalised, highly responsive, high involvement, information, customer service, recognition, activations Channel (supermarkets and specialised retail stores) in-store advertising in-store sampling in-store activations 	Segments Target emphasis consumer - healthy lifestyle category - those consumers wanting to reduce alcohol intake at traditional alcohol centred social/work occasions - those consumers not drinking alcohol due to pregnancy, wanting to keep a clear mind, sober driver and religious beliefs - importance of female demographic - sustainability, local production focused consumers - those - those - sustainability, local production focused consumers - those - those - supermarkets - restaurants - supermarkets - supermarkets - cafes
 (bottle; caps and packaging) food safety including the relationship with the regulator quality assurance legal including IP and trademarks distribution including warehousing relationships with channel (supermarkets) Joint responsibilities: natural sweetener research and development market research customer insights 	Key Resources Product (research and development) - secret formula not able to be protected under intellectual property, although new developments for non-artificial, non- sugar sweeteners may potentially become intellectual property covered by a patent		Channels Primary - supermarkets - specialised retail stores - restaurants (food matching and activations) - cafes (food matching and activations) Secondary - bars and hotels	

Figure 17: Final business model canvas – based on recommendations

Chapman and DB to fund their own responsibilities and share the costs of their joint responsibilities on a pro-rata basis according to shareholding. New Zealand producers - certified natural, organic ingredients including natural alpine water source Artists - collaborations for limited releases for activations Internet community	 ongoing research and development with high quality NZ organic, natural ingredient providers ongoing research and development to identify highest quality, exclusive NZ alpine water source Brand could be protected by a trademark Human Resources Chapman and DB have own staff to deliver on their responsibilities Bottling and distribution capacity Chapman and DB have own staff to deliver on their responsibilities Bottling and distribution capacity Chapman and DB have own staff to deliver on their responsibilities IP/trademark product (sweetening component has potential for patent) and brand (for trademark) 				
Cost Structure			Revenue Streams		
 Research and development, production, distribution and sales and marketing DB requires cost structure modelling to be kept confidential A craft soda is not a complex product and the product development, production and distribution are not overly complicated The ingredient profile of a product is made up of water (94%), natural, organic fruit flavours and honey (as the natural sweetener) The non-ingredient profile of a product is made up of a glass bottle, bottle cap and a label The packaging is cardboard able to be re-cycled Chapman is an entrepreneurial start up with a very low cost structure, but is not a scale procurer of the ingredient elements of the product DB is a scale procurer of the non-ingredient elements of the product; has sophisticated distribution infrastructure with very good economies of scale and has state of the art quality assurance and food safety infrastructure resulting in a very competitive product cost profile 			Unit sales of pa - The craft sod - The critical e financial moo - The revenue a test marketing through a gro retailing store	ackaged product a commands a good prid lement of the revenue m lelling is the number of assumptions are to be te g period of six months p up of highly regarded sp es and gastro-pubs in Au	ce premium nodel and overall units sold sted by a defined notentially targeted pecialist food tekland

Market Validation and Development

I used industry market research and competitor analysis and also data derived from publicly available research to create a deeper understanding of the market and possibilities for market development for my craft soda product range.

The most significant source of information for validating the market and understanding the opportunities for market development was derived from the data acquired from my qualitative questionnaire and quantitative survey.

Making sense of the market and the market opportunities was assisted by consultation, debate and dialogue with my advisory boards, industry and subject matter experts and discussions with legal advisors and related market participants, who I was fortunate to be introduced to through my entrepreneur/business advisory board members.

A compelling and recurring theme that intersected all of the various elements of the market validation was the rising, more forceful negative health perceptions of carbonated sodas and alcoholic drinks, associated with an emerging concern about mass manufacturing with the natural craft options becoming more appealing and commercially viable (Mintel, 2015a).

The target market and how and where product/s could add value

The initial geographic target is New Zealand, although in time the China export market presents an opportunity of significant potential. Johnson and Tellis (2008) have researched the factors that determine successful market entry into China and unpredictably have revealed that when exporting into emerging markets smaller companies are more successful than larger (p. 10). This finding is thought to relate to the agility and speed of smaller companies as well as their inclination to collect information directly themselves (Johnson & Tellis, 2008 p. 10). This observation of Johnson and Tellis (2008) is a positive cue for this particular project.

If an export platform can successfully be created in China then it could be extended to defined elements of the Muslim market (United Arab Emirates, Malaysia and Indonesia in particular). The export potential dramatically widens the opportunity for this craft soda product range as the combined populations of China, United Arab Emirates, Malaysia and Indonesia are 1.69 billion people compared to the current New Zealand population of 4.59 million.

The consumer target market is focussed primarily on the healthy lifestyle category, those consumers wanting to drink less alcohol at traditional alcohol centred social and work instances and those consumers not drinking alcohol. The craft soda product range is an alternative to alcohol, in particular beer (including low and no alcohol beer), cider and wine. It is also an alternative depending on the occasion and overarching need to energy drinks, traditional carbonated sodas, juice, tea, coffee and bottled water.

Further specific elements of the target market include the female demographic (more frequently the household purchaser and also more active on social media), consumers willing to spend more for a premium product and those consumers focused on sustainability and local production.



Market segments related to beverage occasions



Market segments relating to beverage ingredients

Public health strategies and government social marketing around obesity prevention has highlighted sugar as a key ingredient to moderate or avoid in order to achieve better health outcomes. This relates particularly to chronic diseases such as diabetes and high blood pressure, which are at what public health experts describe as epidemic proportions. Research shows that consumers find cutting sugar out of their food is more difficult than cutting back on sugar through drinks, with the worst sugar offenders being seen to be fizzy drinks, energy drinks and juices. A further target market relates to the slowly developing preference for drinks that taste less sweet, particularly in the juice and carbonated soft drinks categories, which opens up possibilities for different and unique tastes such as bitter, salty, tangy and the like.

It is becoming more important to be able to target the market segment that has an interest in understanding the nutritional value in drinks including sugar. The percentage of New Zealand consumers who now avoid beverages with high sugar content has reached 57 per cent. When it comes to sweetness a growing consumer segment is not only targeting sugar with a negative perception, but also artificial sweeteners and ingredients, with 45 per cent of New Zealand consumers now seeking to avoid these in their beverages.

There is also a consumer segment that is increasingly looking for signals that convey that ingredients are authentic and natural. This customer segment wants fewer ingredients in their beverages, with the ingredients being recognisable and not interfered with by processing. They do not want their product to be mass-produced, which they perceive diminishes the nutritional value of ingredients. Furthermore, they wish the naturalness to extend to the packaging and have a very strong preference for sustainability and local production.

The health conscious, natural and sustainable market segments are unwilling to compromise on product quality and are consequently willing to pay a price premium.

Market segments relating to craft positioning

The target markets perception of a craft positioning has been demonstrated by my research to be strongly held. This perception has strong expectations about delivery around authenticity, quality and taste. Critical features for this market segment are that the craft soda has real ingredients and that there is an unquestionable sense that personal care has been taken in the production of the product. Central to this is the fact that the product is not mass produced, which this market segment believes diminishes the quality. Their expectation is that the product is locally produced in small batches using a traditional process and with a sense that there is a particular person behind the process. A craft positioning for this market segment also includes design led minimalist styling with seals, stamps or signatures denoting the artisan quality.

Market segments relating to those who do not drink alcohol

The non-alcohol drinking market segment includes a number of sub-segments, one of which is those focused on their health, which is not the exact parallel of the health conscious category discussed previously. The segment focused on their health includes those cutting back on alcohol for a wide variety of health reasons from alcohol being incompatible with medications they are taking on one hand to alcohol aggravating an underlying health issue on the other.

Other market sub-segments include those not drinking alcohol while pregnant to ensure their unborn baby is not impacted by alcohol; those wanting to keep a clear head for work, sporting or recreational reasons; those acting as the sober driver and those who do not drink alcohol for religious reasons. The latter is a potentially very significant market segment by virtue of population numbers and is essentially targeted to the Muslim market, which has very significant export potential.

How the market's problem is currently being solved

For context, in the beverage market there has been a multi-decade 2.4 per cent year-onyear decline of the beer category in New Zealand (Statistics New Zealand, 2014), paralleled by a decline of the beer category of 3.5% in China, 2.5% in Brazil and 7.7% in Russia (Kell, 2016b). The significance of these declines is underscored by that the latter three nations ranking amongst the top five in terms of global alcoholic beverage consumption (Kelly, 2016b). The overall (but not adult) carbonated soft drink category has also faced several years of sales decline (Mintel, 2015b).

The market currently has a wide range of beverage choices in both the alcohol and non-alcohol beverage categories; however, the market's problem is the growing negative perception of alcohol, sugar, artificial sweeteners and artificial ingredients, which are impacting sales in both categories. The market has received increasingly forceful and persuasive messaging from governments, public health authorities, research agencies, the health professions and the popular press linking alcohol, high sugar content, artificial sweeteners and artificial ingredients to health concerns, such as obesity, diabetes, liver disease and certain cancers (Mintel, 2015b). Essentially the market's problem is a growing awareness of the need to moderate the intake of both alcohol and sugar. To address the market's problem at an early stage when the concerns were more about the cosmetic issues of being overweight, rather than the more contemporary health issues the product innovations were low or no calorie carbonated sodas, which were initially very well received. However, first concerns about the safety of artificial sweeteners emerged followed by the more recent findings calling their efficacy into question, which collectively are forecast to increasingly damage the diet carbonated soda segment (Mintel, 2015b). This relatively recent discovery that carbonation in soda lessens the perception of sweetness in the brain and that the brain was unable to differentiate the sweetness from sugar and artificial sweetener (Di Salle et al, 2013) is particularly damaging as those consumers who specifically choose diet drinks because of their low calorie value may not actually lose weight or control their weight (Di Salle et al, 2013).

From the perspective of the alcohol category the market's problem has begun to be addressed by the successful introduction of low to no alcohol beers and the relaunch of the cider category. The growth of low or no-alcohol beers has advanced the normalisation of non-alcoholic drinks by adults in traditional alcohol centred instances (Nicholson, 2013), which is an opportunity for craft sodas. This opportunity as an alternative to alcohol has been underscored by the findings that six out of ten consumers were in agreement that a craft soda gave them an opportunity to appreciate social occasions, with it being regarded as a highly appropriate non-alcoholic alternative (Mintel, 2015a). Furthermore, if this finding is applied specifically to the market segment of parents then seven out of ten find a craft soda a highly appropriate alternative to alcohol in social occasions (Mintel 2015b).

There are valid and relevant lessons to be learnt by the craft soda segment about nonalcoholic alternatives from the non-alcoholic beer market which is experiencing strong demand in places such as Europe and Japan. The potential for non-alcoholic beer is not only among the more health conscious in Europe (mainly women and older male consumers), but also in Muslim dominated regions (Australian Food News, 2015).

Australians are drinking less alcohol then any time in the previous decade and a half, primarily due to the continued decline in beer consumption (paralleling the New Zealand experience), which presents an opportunity for non-alcoholic beer as well as premium craft carbonated soft drinks (Australian Food News, 2015).

When considering the non-alcoholic positioning as a mechanism to help solve the market's problem it is always worth remembering the introduction of Clayton's in Australia and New Zealand in the 1970's and 1980's. Clayton's was a non-carbonated, non-alcoholic brand which was designed and packaged to resemble a bottle of whiskey and was famously promoted as "the drink you have when you're not having a drink," which at the time was linked to alcohol being a major contributor to the high road death and injury toll at that time (Shepheard, 2009). As it turned out the launch of Clayton's was an overwhelming failure, however, the word Clayton's itself effectively became colloquial speech meaning a compromise that satisfies no one. The Clayton's story is a valuable reminder that timing of product introduction is very important, as no entrepreneur wants to launch a product that everyone remembers, but that no one wants to buy.

Further to the positioning of a craft soda as an alcohol alternative (from a health and social perspective) and a good way to solve the market's problem, it is important to keep in mind that this is not simple, self-evident positioning due to the fact that alcohol for a significant number of people is their sweet treat when it comes to sugar and calories.

When it comes to positioning craft sodas against fizzy drinks, juices and energy drinks (to solve the market's problem of concern about high sugar content), because these are seen as the worst offenders with regard to high sugar the challenge may not be as steep, but is still not to be underestimated.

While the market has an established problem with the beverage ingredients of alcohol, sugar content and artificial sweeteners the market also has a negative perception of artificial ingredients other than artificial sweeteners. This is supported by the market research finding that 57 per cent of consumers in the United States agree that the use of natural ingredients rather than artificial ingredients makes a carbonated soft drink healthy and 34 per cent wanted to see these drinks with these added benefits (Mintel, 2015b). Resolving this problem for the market relates to using natural, organic, healthy ingredients manufactured by a process which retains the goodness and nutritional benefits of the ingredients. It is important that the ingredients are not only natural but also that their provenance can be specifically identified.

This links to a further problem the market has which is that it is not simply that carbonated soft drinks are no longer finding the same level of appeal with consumers, rather it is the way in which these drinks are being made. There is the very real potential for premium craft carbonated soft drinks to stimulate the market interest that craft beers have, however, to effectively do this they will need to replicate the key attributes from the craft beer segment being the artisanal heritage, the taste experience (resulting from premium local natural ingredients and unique flavours) and level of quality that only a small-batch production can achieve (Mintel, 2015a). The forecast is that craft sodas will likely follow the path of the craft beer, where consumers have typically sought out products from local, artisanal, smaller and authentic brewers and gradually turned away the big and even iconic brands (Mintel, 2015a).

The market has experienced a problem with finding access to craft soda drinks due to their limited distribution, generally through cafés, restaurants and speciality retail stores. This market problem is beginning to be addressed by smaller local, artisanal craft soda companies such as Appalachian Brewing Company (United States of America) realising very significant distribution opportunities with large scale companies such as Wal-Mart, expanding their product availability beyond smaller supermarkets and speciality retail stores (McMillan, 2014).

The barriers to changing the market's existing behaviours

While market perceptions have definitely shifted considerably, creating a much more favourable market environment for a non-alcoholic beverage with low sugar content and natural ingredients, there still remain significant barriers to changing the market's existing behaviours.

The reality is that the large, global beverage companies (beer, cider, carbonated soft drinks, energy drinks and juice) have significant and often very long-term brand awareness and presence. This brand awareness is supported by very large marketing budgets (across traditional and digital media), sophisticated marketing capacity, wide-ranging sponsorship of sports and events and deeply embedded distribution networks with wide-reach.

Even though the public health messages are evidence based, the capacity and inventiveness of the government and research agencies health promotion messaging is

frequently no match for the promotional messaging of the large, global beverage companies.

The tension in the market between the contrasting messages of the large, global beverage companies and the public health agencies creates confusion in the mind of the consumer. Certainly the more discerning consumers, particularly those who are older and female are more receptive to the messages distributed from the public health agencies, as opposed to the younger and male demographic.

If you examine the research more deeply, the following examples reveal the issues that are faced in attempting to alter consumers' behaviours:



The barriers that need to be overcome to alter the market's existing behaviour are fundamentally messaging and distribution and include:

- An alternative choice product such as a craft soda product range positioning its product messaging in a way that is creative, fun, appealing and attention-grabbing, but fundamentally supports the clear evidence about the negative aspects of alcohol, high sugar content, artificial ingredients (including sweeteners).
- To achieve wider and more deeply embedded distribution for the alternative choice product such as a craft soda product range.

The market's reaction to proposed product and how the product could be positioned in the market and distributed

The craft soda product range in this project is not a unique product, however, the ingredient components, the narrative and design led branding has the capacity to turn the 'ordinary into the extraordinary.' The narrative of innovation according to Bessant, Trifilova and Alexander (2015) is not always well articulated and an entrepreneur's ability to make ideas "explicit and engaging" needs more than business planning, it needs storytelling. Through the product development phase, which commenced in 2015 in a student flat there has been a positive response to the product as it has moved through its various iterations.

This project's research findings have underscored the importance of the key elements of this craft soda product range as shown in Figure 19.

Ingredients	Design	Process
 fruit flavours (primarily citrus) herb flavours spice flavours (in development) low sugar content all ingredients natural, organic, high quality and sourced locally no artificial sweetener (organic honey as the sweetener) no artificial ingredients no alcohol 	 designed glass bottle creative labelling colourful labels readable font on labels clear nutritional information 	 artisanal personal small batched identifiable owner and producer local

Figure 19: Key elements of premium craft carbonated soda

The product prototype developed fits the ingredient profile but there is more work to do on the design now that the research findings are in. This will be completed through a process of co-design with potential consumers to ensure all the findings of this project are fully implemented.

Ultimately it is the positioning and distribution of the craft soda product range that will be critical to its success.

Market positioning

The overarching market positioning of the craft soda product range is as an exciting, yet healthy and natural alternative to conventional carbonated sodas (including low calorie or diet sodas), fruit carbonated sodas, juice, beer, low alcohol beer, no alcohol

beer, cider, tea and coffee. The value proposition of the craft soda product range that supports the market position includes:

Health conscious focus

This positioning targets those consumers who make more careful and thoughtful dietary choices and place a high value on understanding the nutritional value and sugar content in their beverages. In particular they have a focus on sugar moderation, few and natural ingredients, no artificial sweeteners and are also focussed on alcohol moderation.

Alternative to alcohol

This positioning targets those who are interested in an alcohol alternative in traditional alcohol centred instances, but do not want to make a compromise by choosing a product that does not have high brand equity. The alternative to alcohol positioning also targets those who are pregnant, wanting to keep a clear mind for work, sport or recreation, sober drivers and those whose religious beliefs preclude alcohol intake.

Authenticity

This positioning targets those who value a handcrafted, artisan, local, small batch produced product. This consumer segment has a preference not to choose carbonated are mass produced sodas as they place a premium on the quality that can be achieved only in small batch production.

Branding

The branding through simplicity and heritage supports the authentic, natural and premium positioning of the craft soda product range.

Distribution

Distribution is a very significant challenge for an entrepreneurial beverage start up. The joint venture with DB would overcome a significant part of the distribution challenge, particularly the expensive logistical aspect.

In terms of the responsibilities of the joint venture Chapman will take responsibility for access to cafes, restaurants and specialised retail stores with DB taking responsibility for access to supermarkets. The product range will commence with a test-marketing period of six months to more fully determine market reaction, further enhance product development and test and define revenue assumptions. The test market will target comprise a group of specialized retail stores and the gastro-pubs in in Auckland.

Following careful assessment of the results of the test-marketing period a wider product launch will occur.

Product Validation and Development

My product was developed prior to the commencement of this project and the research was designed to understand much more deeply the preferred product attributes to determine whether the developed product was aligned (or not) to these findings.

The background literature relating to the underlying technology of beverage production and developments in beverage manufacturing, particularly as it relates to craft manufacture was reviewed to determine any new developments that could be helpful to the further development of my craft soda product range.

The decision was made to move to a product finalisation co-design process with consumers as a lead into a test marketing period once the project was completed and there was a clear understanding of consumers preferred product attributes. van Kleef, van Trijp and Luning (2004) emphasised that no matter the source of new product development (new technology or new market opportunities), the consumer is the "ultimate judge" when it comes to successful products (p. 182). They as well as other writers on this subject further noted the importance of consumer research being carried out during all stages of the new product development process (van Kleef et al, 2004 p. 182; Costa & Jongen, 2006 p. 460-461), which I have done in the development of this craft soda product range.

A sub-project relating to the development of a New Zealand based (plant, fruit, tree) natural sweetening alternative to honey was commenced. Relationship development to take this opportunity forward in a more timely way with Iwi and/or Universities/Crown Research Institutes is pending.

If the product/s work as intended

The product had been extensively tested and well accepted during its pre-project development. Its ingredient profile aligns with the research findings and the product range will be refined through a co-design process with consumers over a 120-day period in the lead up to the test-marketing period.

The development, testing and regulatory process/s

During the 120-day period the product range will be subject to all the required quality assurance processes to ensure it meets all the requirements of the food safety and consumer protection legislation and regulation. This is an area where my project partner has the underlying infrastructure, deep expertise, experience and relationships.

If the product/s can be manufactured and at what cost

The product can be manufactured and in the development process has been manufactured, but not at scale. The scaling up of manufacturing will be a challenge as a result of having to ensure that the new equipment required (which is able to accommodate greater volume) is properly tested and does not alter the flavour profile of the final product.

I am travelling to Berlin to spend some time gaining hands-on experience in the artisanal, craft production as Europe is at the centre of beverage innovation, particularly in the craft arena.

I will be working on finalising the product range of five different flavours and learning how an artisanal manufacturing process can be successfully scaled up.

To ensure continuity of supply through the test-marketing period a sufficient inventory buffer will be built up prior to the test-marketing period to cover at least two months additional inventory, as a precaution in the event any manufacturing problems arising.

The cost of manufacturing the product

My project partner requires cost structure modelling to be kept confidential, but would not progress if the cost structure did not meet their corporate margin requirements.

A craft soda is not a complex product and the product development, production and distribution are not overly complicated, particularly as my project partner is a scale procurer of the non-ingredient elements of the product; has sophisticated distribution
infrastructure with very good economies of scale and has state of the art quality assurance and food safety infrastructure, which is a major contribution to a very competitive product cost profile of the product.

The ingredient profile of the product is made up of water (94%), natural, organic fruit flavours and honey (as the natural sweetener), with the non-ingredient profile of the product comprising a glass bottle, bottle cap and a label. The external packaging is cardboard able to be re-cycled. None of these ingredients are very specialised, scarce or particularly expensive.

Chapman as an entrepreneurial start up will have a very low cost structure, but is not a scale procurer of the ingredient elements of the product.

As a consequence of the joint venture arrangements the product can be produced at a competitive cost profile, which will become more competitive when a certain scale of small batched production is reached.

If the IP can be protected

The ingredient recipe of a carbonated soda cannot be protected by copyright, but if there is a unique technique to the manufacturing process that may be able to be protected. This is not the case with this craft soda, however, if successful in developing a new natural sweetener that or the process/technique to produce it may well be able to be protected by a patent.

The brand name and logo can be trademarked and that process is in preparation.

The features that the product/s need and why

The product features needed are:

- small batched, artisan and locally produced to address a consumer expectation for true craft production as opposed to a mass machine produced product
- low sugar content to address one of the most compelling findings of the research, which is the consumer desire for a low sugar beverage
- natural, organic and healthy ingredients to address the increasing consumer desire to exclude artificial ingredients from their diet and also to promote product quality
- absence of artificial sweeteners to address the increasing negative perception

consumers hold of artificial sweeteners from both a safety and weight control perspective

- full flavours with a strong preference for citrus (lemon and/or lime) to address a consumer preference expressed in the research
- design led glass bottle and label to address a consumer preference expressed in the research
- no alcohol to address a consumer preference expressed in the research for a no compromise alternative to alcohol in traditional alcohol centred instances

The consumer research revealed that consumers were prepared to pay a price premium if the product included all of these features

Resource Requirements and Returns

Developing a deeper understanding of resource requirements and potential returns was a conversation mainly with my entrepreneur/business advisory board. At the initiation of this project my project partner indicated interest in the outcome of this project, provided a feasible option was identified. If this project was to move forward they would need to commit resources, however, only on a commercial basis and would need to share information relating to product cost profiling, margins, pricing and financial modelling, however, all of this would need to be under the strictest confidence.

The skills that are required in the team

The division of the responsibilities between my company and my project partner defines the skills that will be required to deliver on this project. As a large-scale beverage company my project partner has a wide range of in-house skills that the team producing the craft soda range will require. The significant benefit of the joint venture approach is that my project partner can bring many of the required skills to the joint venture. As this will be a comparatively small-scale start-up their staff will be allocating only part of their time to this project (over time this may to change depending on how the project scales up).

The skills that would be required from DB include:

- procurement non-ingredient components
- food safety legal, regulatory and scientific

- quality assurance compliance and scientific
- legal intellectual property, trademarks, distribution agreements
- transport components and products
- warehousing non-ingredient components and products
- logistics in support of the test marketing and later a wider distribution network
- access negotiation supermarkets
- research and development joint research for New Zealand indigenous natural sweetener

The skills that would be required from Chapman as a small entrepreneurial start-up include:

- product development
- procurement ingredient components and labels
- product production bottling and packaging
- marketing and advertising brand story, digital media, activations
- relationships key customers, channel (except supermarkets), ingredient providers
- negotiation key partners, key customers, channel, investors, banks
- research and development joint research for New Zealand indigenous natural sweetener
- customer insights joint consumer market research including China market and potentially the Muslim market

The development and manufacturing process and equipment that is required

In terms of the development and manufacturing process of a craft soda the ingredient profile is critical.

Ingredient profile for development and manufacturing process

The primary ingredient of the craft soda is carbonated water which represents 94 per cent of the ingredient profile of the soda. The water is sourced from an exclusive New Zealand alpine source and is pure and natural. The carbon dioxide from the carbonation process results in the sparkling nature of the soda, adds 'bite' to the taste and also acts a mild preservative. As an inert, non-toxic, relatively inexpensive and easy to liquefy gas, carbon dioxide is distinctively suitable for this type of soft drink.

The sweetener is the next main ingredient in carbonated sodas and is conventionally sugar or artificial sweeteners, neither of which are part of the ingredient profile of this project's product. In this project's product the sweetening is provided by organic, local New Zealand honey. Sugar does not only provide the sweetness but also adds a body to the beverage, heightening the 'mouth-feel' which is important to consumer enjoyment. Furthermore sugar is also used to balance the flavours and acids, which in the development of this product through trial and error has been achieved by the use of honey.

Citrus fruit flavours play an important part in this project's product range and assist in the balance of sweetness, tartness and acidity (these act as a mild preservative). Conventional sodas have other additives to enhance taste, 'mouth-feel', appearance and aroma, most of which are artificial. Furthermore, emulsions and saponins are usually added to enhance 'eye-appeal' and a foaming head. Neither emulsions nor saponins are part of the ingredient profile of this project's product. The balance of the natural fruit flavours and honey through trial and error have been able to achieve these characteristics.

To ensure the product meets food safety requirements by inhibiting the growth of microorganisms, only natural additives have been used ensuring the artificial free ingredient profile of this product.

The manufacturing process

The steps involved in the manufacturing process include:

Clarifying the water

Critical to the success of a carbonated soda is the water quality, requiring all suspended particles, organic matter and bacteria to be removed in order to ensure the best taste and colour. The water used in this project's product is pure artesian water provided by being bottled at source. Nonetheless the water is still subject to a process of coagulation and filtration but not chlorination, to ensure that no artificial ingredients or chemicals are used as any part of the manufacturing process. The coagulation process absorbs suspended particles, making them larger and consequently more easily trapped by the filtration process. It is critical to maintain the exact pH level during this process and natural lime is used in this project to achieve this.

Filtering the water

Once the water is clarified it is passed through a filtration process to remove any finer particles. The clarified and filtered water is then passed through a carbon filter and a vacuum pump de-aerates the water before it passes into a dosing station for ingredient mixing.

Mixing the ingredients

The honey and flavours are pumped into the ingredient dosing station in a programmed sequence based on their compatibility. The ingredients are then transferred into batch tanks where they are carefully mixed to ensure that too much agitation does not occur, as this may result in unwanted aeration. The added ingredients are sterilised in the tanks by flash pasteurisation (fruit flavours must be pasteurised), which involves quickly heating and cooling the mixture.

The prepared water and ingredients are carefully combined by a relatively sophisticated machine called a proportioner, which essentially controls the flow rates and ratios of the liquids to ensure the specificity of the ingredient profile.

The containers are then subject to pressurisation with carbon dioxide to prevent any aeration of the mixture.

Carbonation

Carbonisation is applied to the product at this point (although it is possible to do so at an earlier stage). Temperature control of the liquid at this point is very important as carbon dioxide's solubility will increase as the temperature of the liquid decreases. Many carbonators are equipped with their own cooling systems. The carbon dioxide pressure is dependent on the type of soda and the correct pressure for this product was determined by trial and error. At this point the product is slightly over-pressured with carbon dioxide to assist in the transfer of the product into storage tanks and ultimately for filling.

Filling and packaging

The finished product is transferred into bottles at high flow rates and the containers are immediately sealed with pressure-resistant caps. In this manufacturing process the filling is undertaken by a manually operated filling machine, rather than an automated filling machine.

As carbonated sodas are generally cooled during the manufacturing process, they must be brought to room temperature prior to application of the label to prevent condensation from potentially damaging the labels. This is achieved by spraying the bottles with warm water and drying them. Following which labels are fixed.

The finished bottled and labelled products are then manually packed into cartons ready for distribution.

Equipment required for manufacturing process:

- Clarification machines
- Ingredient dosing machines
- Mixing and blending units
- Ingredient dissolving machines
- Homogeniser
- Pasteurisers
- Carbonator
- Heat exchange/treatment machines
- Storage units
- Rinser, filler and capper
- Labelling machine
- Packing machine

The funding that is needed and why and how can it be obtained

As part of the joint venture agreement both companies are to fund their own responsibilities and share the costs of their joint responsibilities on a pro-rate basis according to shareholding. DB as a large scale established beverage company would provide its resources by leveraging existing resources, infrastructure and economies of scale.

Chapman on the other hand, as an entrepreneurial start-up will require start-up capital primarily for establishing the small batched production facility (mainly equipment) and also for working capital to support ongoing product development, procurement, inventory, branding and marketing. Negotiations with three interested investors have resulted in start-up capital to fund the establishment of a small batch production facility (mainly equipment as this agreement provides free use of an existing suitable building for a period of 18 months), working capital to complete the development and support branding and marketing through the test marketing period. Two of the interested investors will make another assessment towards the latter part of the test period and in the event it is successful will consider further investment, potentially sequential at that time. The third investor is investing in the start-up capital fund only.

One of these two investors is prepared to make a significant investment to support an export move into China if that proved feasible by further market research.

The funding that has been secured is an exchange for a shareholding in Chapman.

The timeline for all activities

As I am completing this project I am relocating temporarily to Germany to develop artisanal experience and expertise under the guidance of highly experienced artisans producing craft beer and craft premium carbonated sodas. The experience I have is all self-taught and before embarking on production I need to learn from people who have substantive experience. The initial plan is to spend February through April 2017 gaining this experience. Timing is vital as all the elements in the timeline of activity (Figure 20) are based on the test marketing commencing in November 2017 to take advantage of the summer, festive period and holiday period.

Concurrent with gaining the artisan production experience is the completion of the proposal to DB to form the joint venture, a key part of which is finalising the definitive financial model. Once completed, the proposal will be presented to DB, mid-April 2017.

Following an opportunity for DB to analyse and reflect on the proposal, including providing feedback the process of final commercial negotiation of the joint venture will take place during May 2017 and provided terms can be agreed the proposal could be formally signed in the first half of July 2017. Concurrent with the process of negotiating the joint venture agreement, Chapman will finalise its own funding arrangements, which will require already agreed verbal arrangements to be formed into legal contracts.

In parallel to moving the proposal through completion to agreement, the craft soda product range will be finalised by mid-July 2017, which I will commence in Germany and complete in New Zealand. The basis of this will be through a consumer co-design process, in preparation for the launch of the test marketing period.

The natural, New Zealand indigenous sweetener research will also run in parallel and continue through the test marketing period to the initial launch of full operations in June 2018 and possibly beyond.

The test market will commence in November 2017 and will run over the summer break. The feasibility investigation into the China export potential will commence shortly after the initiation of the test market and dependent on the outcome of this feasibility study a full business case will be developed. Following completion of this business case (if feasibility is proven) the investigation of the Muslim market potential will commence.

The complete timeline of activities is shown in Figure 20.

Figure 20: Timeline of the development activities of the premium craft carbonated soda range

	Fe Ap	b17 r17	May 2017	Ju 20	ne 17	July 2017	Aug 2017	Sept 2017	Oct 2017	Nov Apr	17 18	May 2018	June 2018
Artisan craft production experience in Germany to develop capability													
Complete proposal for DB Breweries													
Present proposal and seek feedback													
Negotiate joint venture agreement													
Finalise Chapman funding arrangements													
Sign joint venture arrangements if negotiation successful													
Finalise premium craft soda product range					<u>.</u>								
Natural sweetener research and development													
Establish/trial artisan production facility													
Commence production for test market													
Test market													
Evaluate China export potential													
Evaluate test market													
Commence normal operations													

Summary

This section reflects on the business model and provides an updated business model canvas (based on the project's research findings), as a basis for making the judgement on the final recommendations. The final set of recommendations is determined leading to the final business model canvas being completed. Market and product validation and development are reflected on as are the required resources and returns. This section concludes with a timeline of the development activities of this premium craft carbonated soda product range, which then leads to conclusion - the final section.

Conclusion

The vision for this project was, through innovation to commercialise a new premium craft carbonated soda product range that I developed in a student flat in 2015 while completing my Bachelor of Commerce at Victoria University. At that time I had planned to use this product range as an entry point to entrepreneurial life following (or concurrent with) the completion of an Honours Degree (majoring in Marketing).

Following my internship in the marketing department of DB in the summer break after my degree completion, my mindset and approach altered as a result of experiencing the culture of innovation at DB, which led me to commence the Masters of Innovation and Commercialisation at Victoria University.

While at DB I became focussed on the multi-decade decline of the beer category and its impact on their core business, with a need for DB to explore viable options for market growth. By conflating my interests in a craft soda product range with their current and critical business problem, I developed my project with the following underlying research question:

Is the development of a new branded premium craft carbonated soda product range?

- 1. A consumer relevant innovation?
- 2. Scalable as an adjacent category innovation for DB?
- 3. Able to sustainably enhance market growth and profitability for DB?

In determining the commercial potential of a product adjacent category innovation and its associated commercial potential for DB, the project was established to explore the business model design, undertake a market and product validation and assessment of development opportunities and give consideration to resource requirements and potential returns.

The research method selected to answer the questions posed was mixed methods research (qualitative and quantitative) employing both facilitation and triangulation. The source data in this mixed methods research approach included:

• secondary data in the form of industry market and product research

- primary data in the form of a qualitative electronic questionnaire (50 responses)
- primary data in the form of an online quantitative survey (348 responses)
- further secondary data in the form of industry research reports relating to brand equity and the online sales channel in China; publicly available research on the Muslim market and industry reports on natural beverage sweeteners.

Key essence of research findings

The major market and product related findings from the research project were distilled and categorised into five headline groups:

<u>Authenticity</u> - the product to be artisan handcrafted in small batches as well as being locally produced.

<u>Health focus</u> - a focus on the nutritional value and sugar content in drinks in the context of more careful and thoughtful dietary choices being made, emphasising sugar and alcohol moderation; fewer, natural and healthy ingredients; full fruit flavours and no artificial sweeteners.

<u>Alternative to alcohol</u> - not a compromise in traditional alcohol centred social and work instances, as well as for those not drinking alcohol as a result of generally cutting back on alcohol, not drinking alcohol while pregnant, wanting to keep a clear head (for work, sport and recreation), wanting to be the sober driver and those who do not drink alcohol for religious reason.

<u>Branding</u> - expressed through a craft positioning (including heritage, simplicity, being local and trustworthy), an exclusive/premium positioning (including premium pricing) and design led glass bottle with clear labelling.

<u>Connections</u> - the importance of the female demographic in particular, but also the older demographic; preferred promotional avenues (channel and social media) and preferred places of purchase (supermarkets, cafes, restaurants and specialised stores).

Key implications for the project

The most fundamental and unexpected implication for the project was the clear-cut consumer preference for the craft soda product range to be homespun, artisan, local and produced in small batches. The underlying reason for this perception is not only related to the current more intangible appeal of craft industries. Rather it also relates very specifically to tangible aspects such as quality (consumers perceive that mass machine manufacturing degrades even the most natural ingredients), trust (the use of natural ingredients and processes, ingredient provenance) and sustainability (environmental).

In this context, consumers perceive that an artisanal production process for a craft soda product range that uses the appropriate ingredient profile (low sugar; natural, organic, locally sourced ingredients; full fruit flavours and excludes artificial ingredients, including sweeteners, colourings and preservatives) and design led product approach, justifies a price premium which they are willing to pay.

The original concept was that this would be a product adjacent category innovation for DB, who would provide the reputation, know-how, production and distribution infrastructure, connections and experience. This core research finding from the project created an unexpected and complex tension between the consumers' preference for the homespun, handcrafted and small batched produced craft soda and DB's evident large scale, machine based manufacturing approach.

The strength and consistency of this finding and its implication were so unexpected and significant that the data was revisited to ensure this was an accurate representation. Interestingly, the questions that resulted in responses describing a preference for artisan, small batch production were mainly questions relating to consumer associations with craft sodas, questions eliciting consumer's descriptions of premium craft sodas and key associations consumers have with existing brands of craft sodas. These were not leading questions and made no mention of the mode of production, with the descriptions about the mode of production coming spontaneously from consumers.

In this further review, the results from the research finding were reinforced by secondary data industry reports identifying that one of the key consumer expectations of a craft beverage was authenticity described as a traditional, not mass produced process with a sense there is a person behind the process, who is skilled and experienced in producing small amounts of high quality product. Furthermore, discerning consumers are starting to regard craft beverages the way they think about

food, searching for artisanal and local (even hyper-local) and craft products needs an operating model that aligns with the way consumers are changing (Donaldson, 2017).

At that point and time I consulted with my entrepreneur/business advisory board on this issue and their guidance was to widen my options by considering either a joint venture or my own separate and independent start-up company. They also introduced the idea of not dispensing entirely with the notion of adjacent category innovation and exploring geographical adjacent category innovation rather than product adjacent category innovation. Specifically they raised the opportunity of retail online sales in China as an appealing export opportunity for a New Zealand based company with a product that could leverage New Zealand's brand, New Zealand's reputation for natural food and beverage products and New Zealand's product provenance.

In the context of the joint venture option, DB already has an existing, successful joint venture example called Barworks, formed in 2008 and operates 19 gastropubs across Auckland, which could provide a sound frame of reference.

Before making a final decision on the option to be selected as the basis for configuring any potential relationship with my project partner, I updated my initial business model canvas following the research findings and also undertook further data collection and analysis regarding the drivers of premium brand equity to determine how significant an issue the craft, artisan, small batch produced product was in this context. This data analysis was important in consolidating the synthesis of all of the data and making a decision to propose the joint venture as the option to move forward with.

This joint venture would have Chapman (my company) as an entrepreneurial led authentic, artisan, small batch producer of a local craft soda project and DB as an established beverage company bringing know-how (procurement of non-ingredient components, food safety, quality assurance, legal) and distribution (logistics, warehousing and access to supermarkets). The other key implications from the research findings presented opportunities rather than challenges, for both the market and product positioning of the craft soda product range. In particular, customer segment opportunities are centred on the expanding health lifestyle category (sugar and alcohol moderation), the natural focus category (natural, organic ingredients with no artificial sweeteners), the no compromise alternative to alcohol segment and the importance of females (the dominant purchasers) in the target market. The product ingredient profile preferred by consumers aligned with my prototype craft soda product range.

Two of the opportunities identified through this project were unexpected and have significant innovation and commercialisation potential. The first opportunity relates to the shift from a <u>product</u> adjacent category innovation angle to a <u>geographical</u> adjacent category innovation perspective (export potential to China and possibly the Muslim market).

The online sales channel opportunity in China has significant appeal as it is growing rapidly with deep market penetration, however, the market penetration in the beverage category is currently very low and forecast for significant growth. Entry barriers into the online sales channel in China, while not low are less complex than other channels. A successful export entry into China would establish a platform to enter segments of the global Muslim market which is a commercially attractive market for the sale of quality, premium non-alcoholic beverages.

The second relates to the opportunity that emerged as a result of the rapidly growing negative perception of artificial sweeteners in beverages (now including stevia). The idea that emerged was to develop a New Zealand natural sweetener based on indigenous plants, fruits or trees emerged as a result of researching natural sweeteners other than honey (the sweetener in my craft soda product range). There are examples of natural sweeteners such as monk fruit, agave, yacon and lucuma none of which have ideal attributes. The development of a natural sweetener has now been established as a sub-project with potential partners identified as Iwi, Universities and Crown Research Institutes.

In terms of the research question this project has identified that the development of a new branded craft soda product range:

- 1. Is a consumer relevant innovation.
- 2. Is not scalable as a straightforward <u>product</u> adjacent category innovation for DB due to a clear-cut consumer preference for authentic artisanal small batch craft production. However, a joint venture between DB and Chapman has the potential to create a viable and commercially successful premium craft carbonated product range in New Zealand, and through innovation it is still possible for this product range to be commercially scalable by <u>geographical</u> adjacent category innovation through export to China and potentially the Muslim market.
- 3. A successful premium craft carbonated soda product range in New Zealand would contribute to market growth and profitability for DB, but not at the scale required. However, success in exporting to China and potentially the Muslim market could significantly enhance market growth and profitability for DB.

This project is set to continue and as I am completing this project, being entirely selftaught in the art of beverage production, I am relocating temporarily to Germany to develop artisanal experience and expertise under the guidance of highly experienced artisans producing craft beer and craft premium carbonated sodas. While I am gaining this experience I will be concurrently finalising the definitive financial model in order to complete the proposal to DB to form the joint venture, with an aim for it to be signed in July 2017, subject to commercial agreement to the joint venture being able to be reached.

All the elements in the timeline of activity are based on ensuring that the test marketing period of six months, commences in November 2017 to take advantage of the summer, festive period and holiday period, which is the peak period of purchasing soft drinks.

In parallel to moving the proposal through, the craft soda product range will be finalised by mid-July 2017, which I will commence in Germany and complete in New Zealand. The basis of this will be through a consumer co-design process, in preparation for the launch of the test marketing period. The natural, New Zealand indigenous sweetener research will also run in parallel and continue through the test marketing period to the initial launch of full operations in June 2018 and depending on progress possibly beyond.

The test market will commence in November 2017 and will run over the summer break. The feasibility investigation into the China export potential will commence shortly after the initiation of the test market and dependent on the outcome of this feasibility study a full business case will be developed. Following completion of this business case the investigation of the Muslim market potential will commence.

Innovation is not just having an idea - it is an overlapping concept between having an idea and implementing it. Success is never guaranteed, but in the words of the greatest ice-hockey player Wayne Gretzky, "How many goals did you score from the shots you never took?"

Chapman is to be.

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Appendices

Appendix 1: Qualitative Electronic Questionnaire

Appendix 2: Quantitative Electronic Survey

Appendix 3: Indicative Chapman Bottle Label (the basis for the next step in cocreation)

Appendix 1: Qualitative Electronic Questionnaire

QUESTIONS:

LIFESTYLE:

1a.	Gender:	
1b.	Age:	
1c.	Occupation:	
1d.	Type of household:	
2.	Are you an active social media user?	
3.	How often do you exercise during the week?	
4.	What are your three favourite leisure activities?	
5.	How often do you socialise with friends?	
6.	How often does this socialising include food and drink?	
7.	Is the majority of this socialising at home or elsewhere?	
8.	Do you like variety in your life?	
9.	Do you pay any attention to food and beverage trends?	
10.	On average, how many times do you consume carbonated drinks, teas and juices in a week?	
11.	What are the main types and brands that you use regularly? Why?	
12.	Do you read the nutritional labels on food and drink products?	

GENERAL:

13.	What do you associate with craft soda? How does it make you feel?	
14.	What would be a reason to drink a craft soda over other options available to you (wine, beer, spirits, other carbonated soft drinks, juices, teas)?	
15.	What does a premium craft soda look like to you? What makes it brand premium in your view? Is it ingredients, expertise, recipe, exclusivity, heritage, provenance, age, imported or domestic, the ingredient produce maker, playing on wine cues?	
16.	What other brands would be closest to what you are talking about?	
17.	What are your favourite premium soda flavours? What is it about those sodas you like - taste, colour, packaging and experience?	
18.	How do you feel about Phoenix, Six Barrel Soda, Karma Cola?	
19.	What are the key associations you have with these brands?	
20.	What is it about the way they look that communicates this?	

21.	What flavour ideas and label designs appeal to you?	
22.	Would you prefer a bottle or can?	
23.	What designs, colours, trim or font do you have a preference for?	
24.	What would be your perfect craft soda?	
25.	What promotional avenue would reach you the best for a craft soda?	
26.	What about a craft soda would excite or appeal to you?	
27.	If there was such a craft soda would you purchase it and why or why not?	
28.	Where would you purchase this craft soda from?	
29.	Where do you normally purchase these types of beverages?	
30.	Are you the main purchaser in your household?	
31.	Do you believe that craft soda must have an image that is small batch produced by people rather than machines?	
32.	Do you perceive that a singular hero ingredient makes a beverage more authentic? Does this need to be a health ingredient?	
33.	Can you please rank (by using 1 – 11) these natural beverage features in order of most important to least important?	
	33a. superior quality	
	33b. low in calories	
	33c. low in added sugar	
	33d. natural/no artificial ingredients	
	33e. very hydrating	
	33f. full flavour	
	33g. sparkling	
	33h. fresh tasting	
	33i. thirst quenching	
	33j. without alcohol	
	33k. easy to drink	
34.	How important is it to know the nutritional value in you beverage?	
35.	How important to you is having low sugar in your beverage?	
36.	Would you say you are noticing a shift in yourself, friends, family and the general public of becoming more aware and careful about making dietary choices?	
37.	What would your ideal new non-alcoholic drink be?	

THANK YOU VERY MUCH FOR YOUR TIME, IT IS MOST APPRECIATED.

Appendix 2: Quantitative Electronic Survey

Chapman Beverages Survey

1.	What is your gender?
\bigcirc	Female
\bigcirc	Male
2	What is your ago?
2.	what is your age:
0	18 to 24
0	25 to 34
0	35 to 44
0	45 to 54
0	55 to 64
0	65 to 74
\bigcirc	75 or older
3.	How many people currently live in your household?
\bigcirc	1
\bigcirc	2
\bigcirc	3
\bigcirc	4
\bigcirc	5+
4.	How often do you use social media each day?
\bigcirc	1-2
\bigcirc	3-4
\overline{O}	5+
0	
5.	How often do you socialise with friends?
\bigcirc	once a week
\bigcirc	two-four times a week
\bigcirc	almost every day
6.	How often does this socialising involve food or drink?
\bigcirc	10%-20%
0	30%-40%
0	50%-60%
0	70%-100%
-	

On average drinks, teas	e, how many ti s and juices in	mes a week do y a week?	ou consume ca	rbonated
once				
twice				
three times				
four times				
more than f	ive times			
On a scale when choos	of 1 (low) – 5 (sing beverages	high), how impo ?	rtant is the ma	rketing avenue
one	two	three	four	five
\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
On a scale of company of	of 1 (low) – 5 (perates transp	high), how impo arently with the	ortant is it that a ir product and	a beverage production?
one	two	three	Tour	live
0	0	0	0	0
On a scale of beverage co	of 1 (low) – 5 (ompany promo	high), how impo otes sustainable	ortant is it that a practices?	a premium
one	two	three	four	five
\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
On a scale of beverage co	of 1 (low) – 5 (ompany produ	high), how impo oct has a nutritio	rtant is it that a nal value?	a premium
one	two	three	four	five
\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
On a scale obeverage is	of 1 (low) – 5 (low in calorie	high), how impo s?	ortant is it that :	a premium
one	two	three	four	tive
0	0	0	0	0
On a scale obverage is	of 1 (low) – 5 (low in calorie	high), how impo s?	ortant is it that a	a premium
			2	~
one	two	three	four	five
one	two	three	four	five
one On a scale o beverage is	two Of 1 (low) – 5 (sparkling?	three	four	a premium
one On a scale of beverage is one	two of 1 (low) – 5 (sparkling? two	three high), how impo	four	a premium
	On average once twice three times four times more than find one one On a scale of one On a scale of one	On average, how many fidrinks, teas and juices in once twice three times four times more than five times On a scale of 1 (low) - 5 (when choosing beverages) one two On a scale of 1 (low) - 5 (company operates transpone) one two On a scale of 1 (low) - 5 (company operates transpone) one two On a scale of 1 (low) - 5 (company operates transpone) one two On a scale of 1 (low) - 5 (company operates transpone) one two On a scale of 1 (low) - 5 (company operates transpone) one two On a scale of 1 (low) - 5 (company operates transpone) one two On a scale of 1 (low) - 5 (company operates transpone) one two On a scale of 1 (low) - 5 (company operates transpone) one two On a scale of 1 (low) - 5 (company operates transpone) one two On a scale of 1 (low) - 5 (company operates transpone) one two On a scale of 1 (low) - 5 (company operates transpone) one two On a scale of 1 (low) - 5 (company operates transpone) one two On a scale of 1 (low) - 5 (company operates transpone) one two On a scale of 1 (low) - 5 (company operates transpone)	On average, how many times a week do y drinks, teas and juices in a week? once twice three times four times more than five times On a scale of 1 (low) – 5 (high), how importance of the provided o	On average, how many times a week do you consume cat drinks, teas and juices in a week? once twice three times four times more than five times On a scale of 1 (low) – 5 (high), how important is the mark when choosing beverages? one two one two On a scale of 1 (low) – 5 (high), how important is it that a company operates transparently with their product and one one two On a scale of 1 (low) – 5 (high), how important is it that a company operates transparently with their product and one On a scale of 1 (low) – 5 (high), how important is it that a company operates transparently with their product and one On a scale of 1 (low) – 5 (high), how important is it that a beverage company promotes sustainable practices? one two On a scale of 1 (low) – 5 (high), how important is it that a beverage company product has a nutritional value? one two On a scale of 1 (low) – 5 (high), how important is it that a beverage is low in calories? one two On a scale of 1 (low) – 5 (high), how important is it that a beverage is low in calories?

15.	On a scale of 1 (low) – 5 (high), how important is it that a premium
	beverage is thirst quenching?

one	two	three	four	five
\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc

16. On a scale of 1 (low) – 5 (high), how important is it that a premium beverage is full in flavour?

one	two	three	four	five
\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc

17. On a scale of 1 (low) – 5 (high), how important is it that a premium beverage is fresh tasting?

one	two	three	four	five
\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc

18. On a scale of 1 (low) – 5 (high), how important is it that a premium beverage is low in added sugar?

one	two	three	four	five
\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc

- 19. Would you prefer a premium craft soda in a bottle or a can?
- glass bottle
- aluminium can
- plastic bottle

Appendix 3: Indicative Chapman Bottle Label (the basis for the next step in co-creation)







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