Exploring the Impact of Business-to-Business Digital Co-Branding on Brand Equity and Performance using Data Analytics: An Action Research Case Study - Driving Digital Transformation within an Engineering SME

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Abstract

The exponential growth and increasing importance of digital channels in society has seen the B2B ecommerce market valued at $6.64 trillion dollars and growth is projected to continue at a rate of 18.7% CAGR until 2028 (Grandview Market Analysis Report, 2021). Despite this exponential growth, B2B brand equity strategies have not been significantly explored on digital channels. To remain competitive, B2B organisations need to leverage the various emotional and functional attributes that are fundamentally based within branding to assist in their success. Brands are said to be a cluster of both emotional and functional values that provide customers with unique experiences. Early research queried the applicability of branding to B2B organisations due to B2B purchase decisions being insensitive to brand values and driven by unemotional and rational values. However, research since the 2000's, has continually echoed the importance of brands across the B2B industry (Cassia and Magno, 2018; Guenther and Guenther, 2019). The traditional strategy for B2B organisations to gain competitive advantage were mostly focused on functional attributes such as price, delivery and the required quality. However, more recent studies demonstrate that branding can explain up to 50% of the customer's purchase decision, in comparison to price, which explains only 15% (Leek and Christodoulides, 2011; Biedenbach et al, 2015; Cassia and Magno, 2018). Reviewing this holistically, the increasingly competitive B2B landscape, the necessity of digitalisation in B2B industries and the importance of branding in purchase decisions mean that B2B organisation need to use methods to leverage competitive advantage to move into or remain in a favourable position. By furthering the understanding of how B2B co-branding on digital platforms could assist in driving brand performance improvement and brand equity, we can increase the understanding of how B2B companies can increase brand equity, which in turn can return both financial and non-financial organisational performance within the B2B industry (Cassia and Magno, 2018; Guenther and Guenther, 2019). On exploration of the current B2B branding and co-branding literature, it was evident that a gap in the research existed: the application of digital brand equity transfer strategies within B2B industries. More specifically, how co-branding strategies executed on digital platforms impact the brand equity of B2B organisations.

There are multiple reasons driving the importance of closing this research gap, firstly, the exponential growth of B2B ecommerce market means that organisations operating in the B2B market have to look at opportunities to leverage competitive advantage (Grandview Market Analysis Report, 2021). Therefore, understanding how B2B organisations are impacted by brand equity transfer on digital platforms could create a deeper understanding of the role and importance of branding within these organisations, shaping managerial decisions for performance improvement. Next, the literature demonstrates that research into brand equity transfer is predominantly situated in the B2C industry.

However, the differences between B2B and B2C organisations mean that the processes or framework cannot be assumed to be interchangeable. Limited research into brand equity transfer has focused on the impact of digital platforms. This research intends to understand the plausibility of B2B co-branding on digital platforms. By closing this gap, we hope to offer an understanding of how brand equity transfer strategies can impact overall financial and non-financial performance indicators of B2B organisations on digital platforms. Practically, this research delivers a method for B2B organisations to develop a process for co-branding implementation. By doing so, this paves a way for brand equity improvement and a reference for the development, implementation and analysis of B2B digital co-branding campaigns.

This thesis aims to achieve the above by using a longitudinal, action research case study. The action research case study used in this thesis was conducted across a 24-month period in the B2B organisation Royston Limited, which operates in the B2B diesel engineering sector. The opportunity to conduct research at Royston Limited has been presented through a Knowledge Transfer Partnership, focused on increasing Royston's e-marketing capabilities through digital co-branding. A multi-method research methodology is applied across a Preliminary stage and a following campaign implementation stage. The preliminary stage gathers data using interviews, focus groups and questionnaires that form the basis of a co-branding campaign approach for the secondary section of the methodology.

The results demonstrated that when the B2B organisation was partnered with larger organisations in a digital co-branding campaign, an improvement was identified across various Brand Equity asset categories and Brand Performance indicators. Digital co-branding when conducted with larger partners demonstrated increases in brand awareness, brand loyalty, perceived quality and demonstrated change in brand associations, leading to increased financial and non-financial performance indicators. It is argued that these results will benefit both the partner brand and the partnering brand, as co-branding campaigns should be considered to be mutually beneficial to both partners entering into the co-brand (Chiambaretto and Gurau, 2017). Positive relationships were identified when the B2B organisation was partnered with a larger brand but there was no consistency with results when digital co-branding was conducted with smaller, localised B2B partners. Positive relationships with larger clients were identified across multiple digital platforms, including search engines, websites, paid advertisement engines and the B2B social media platform LinkedIn. These outcomes contribute to the existing B2B branding literature, demonstrating that B2B digital co-branding can positively impact brand equity and brand performance, enabling the improvement of both financial and non-financial performance indicators, shaping new methods for B2B brand management. The practical nature of this research paves the way for new methods to manage and

optimise the B2B brand across digital platforms such as search engines, PPC, social media and websites by co-branding and develops a process for the implementation of such campaigns within B2B organisations. With organisations and consumers relying heavily on digital platforms in an increasingly competitive environment, this research provides important findings that can help in driving both financial and non-financial performance in B2B environments.

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Abbreviations and Definitions

B2B – Business-to-business: “*describing or involving business arrangements or trade between different businesses, rather than between businesses and the general public." (Cambridge, 2023)*

B2C – Business-to-consumer: *“describing or involving the sale of goods or services directly to customers for their own use, rather than to businesses." (Cambridge, 2023)*

PPC – Pay-per-click advertising: “*Pay-per-click advertising involves the person or company that is advertising online paying a particular amount of money every time someone opens their advertisement by clicking on it." (Cambridge, 2023)*

SME – a company, or companies considered as a group, that are neither very small nor very large*." (Cambridge, 2023)*

OEM – Original Equipment Manufacturer: “*a company that makes parts and products for other companies which sell them under their own name or use them in their own products." (Cambridge, 2023)*

SERP – Search Engine Results Position

SEO – Search Engine Optimisation

CAGR – Compound Annual Growth Rate

CTR – Click through rate

KTP – Knowledge Transfer Partnership

1. Introduction

The conception of co-branding or brand alliances has developed from the understanding of brand theory and that, "*by making a connection between the brand and other entity, consumers may form a mental association from the brand to this other entity and, consequently to any or all associations, judgements, feelings, and the like linked to that entity*" (Keller, 2013, pg. 261). Co-branding can enable organisations, in eliciting certain associations from the partner brand, to target a specific set of consumers (Priluck, 1997). Co-branding consists of two components: the deliberate combining of two brands, products, services or marketing factions and the joint presentation of these to the consumer (Grossman, 1997; Simonin and Ruth, 1998; Rao et al, 1999; Washburn et al, 2000; Leuthesser et al, 2003; Helmig et al, 2008; Fyrberg, 2008; Gammoh et al, 2010; Voss et al, 2012; Chiambaretto and Gurau, 2017). More recent research has demonstrated that positive co-branding conclusions can be driven through two different host partners, such as a brand-cultural archetype, which consists of a business host brand and an archetypical image of good fortune (Chandrasapth et al, 2022). Co-branding has increased in popularity over the past decade, with research showing significant benefits both financially and non-financially. These include (but are not limited to) the reduction of failure probabilities, (Chiambaretto and Gurau, 2017) and the improvement of corporate social responsibility or ethical positions (Senechal, Georges and Pernin, 2014), the perceived globalness and localness (Mohan, Brown, Sichtmann and Schoefer, 2018), brand image repair (Maehle and Supphellen, 2015) improved brand image or signal of product quality (Rao and Ruekert, 1994) and changing consumer perception (Washburn, Till and Priluck, 2004). The elicitation of desirable associations can assist in conditioning the target consumers to associate the brand with the favourable associations from the partner brand. This is referred to as classical conditioning and can assist in shaping consumers' perception towards the brand and, therefore, managers should carefully consider the associations of the brand they want to collaborate with (Priluck, 1997). Whilst co-branding has flourished across different brands within the marketplace, this has had limited theoretical examination (Shan et al, 2022). This limited examination is further exacerbated when referring to B2B organisations. Findings in the branding literature demonstrate that within the last decade, branding in B2B organisations has been shown to improve competitive performance, financial performance and customer loyalty, demonstrating the need for organisations to place importance on improving and maintaining their brand (Leek and Christodoulides, 2011; Biedenbach et al, 2015; Cassia and Magno, 2018). Co-branding as a brand equity transfer strategy has limited application in B2B research, unlike its B2C counterpart. Limited exploration of B2B co-branding exists within a non-digital setting and evidence of research within a digital setting is almost non-existent. Due to this limited scope of the literature, a review of the broader B2B branding literature demonstrated that B2B branding is recognized as a latecomer within the broader branding literature, particularly in comparison to its counterpart, B2C branding. However, with increasingly saturated and competitive market spaces a shift in the early 2000's drove an investigation into how B2B organisations can benefit from B2B branding. This research has gained popularity given the found impact on purchase decision making within B2B organisations (Verster et al, 2019; Guenther and Guenther, 2019). With research demonstrating the positive impact that B2B branding can have on financial performance and competitive advantage, understanding specific B2B branding strategies to leverage performance improvement is essential.

The findings of the systematic literature demonstrated that since the early 2000's B2B research has shifted to focus on how organisations within this industry can benefit from branding (Verster et al, 2019). Branding, traditionally associated more with B2C markets, was initially overlooked as an important factor within B2B markets, with organisations prioritizing functional factors such as pricing, delivery time and acceptable quality to drive sales and leverage competitive advantage (Keränen et al, 2012; Huang and Wu, 2018; Österle, Kuhn and Hensel, 2018). However, within the last decade, a growing body of literature has suggested that intangible or emotional assets such as branding can drive competitive advantage in B2B markets (Walley, Custance and Taylor, 2007; Hadjikhani and LaPlaca, 2013). Linking the above knowledge around B2B branding and the impact of branding on performance and decisions, it is evident that the B2B branding literature has demonstrated the need for organisations to place importance on improving and maintaining their brand (Leek and Christodoulides, 2011; Biedenbach et al, 2015; Cassia and Magno, 2018).

To contribute towards filling this wider gap, this thesis aims to study the impact of digital co-branding on brand equity within B2B industries, using a longitudinal, action research case study. The motivation to study this research gap derived from the Knowledge Transfer Partnership which identified the need for a B2B organisation to improve their e-marketing capabilities. Prior to the commencement of the KTP, an exploration into key opportunities was conducted. There was a high level of importance of partnerships within Royston's business model and numerous partners were globally recognisable brands. This presented the opportunity to understand if the implementation of specific branding strategies could allow Royston to leverage certain attributes from their partners. At this stage it was understood that there was a scarcity of literature within B2B co-branding, particularly in a digital setting and coupled with the pressing importance within these areas, which are demonstrated in the Literature Review, the motivation to study this gap was formed. The action research case study used in this thesis was conducted across a 24-month period in the B2B organisation Royston Limited, which operates in the B2B diesel engineering sector. The opportunity to conduct research at Royston Limited has been made available through a Knowledge Transfer Partnership, focused on increasing Royston's e-marketing capabilities through digital co-branding. The Knowledge Transfer Partnership presented the setting for the research within this thesis to take place. The partners, employees and customers of the KTP organisation assisted in constructing an action research-based case study that allowed the researcher to understand the impact of B2B digital co-branding at the same time as improving the processes within the KTP organisation. This was necessary, as a goal of the KTP was to deliver practical results, including the improvement of financial, branding and marketing key performance indicators. However, the scarcity of academic literature presented a research gap within B2B digital brand equity transfer, more precisely the phenomenon of digital co-branding within a B2B environment, which demonstrated the pressing importance of further exploration. Therefore, by implementing digital co-branding within a B2B environment through a practice-led action research case study approach, this research aims to advance the existing academic literature on digital co-branding within B2B environments, alongside the generation of practical performance improvement for the organisation. This research adopts a Critical Realist position, valuing the importance of both qualitative and quantitative data in understanding the research results. This shaped the strategies and techniques used to collect data. To achieve the practical and theoretical objectives data collection and analysis incorporated a range of quantitative and qualitative methods using a multi-method approach. Preliminary research delved into the current scenario and gaps to implement strategies and included a significant level of qualitative analysis, including interviews, questionnaires, customer journey mapping and stakeholder analysis. This shaped the way to the implementation of four digital co-branding campaigns through an iterative, cyclical process to drive continuous improvement and understand the effects of digital co-branding in a B2B environment. The four co-branding campaigns were implemented on different digital platforms, including a website, a B2B social media platform; LinkedIn, a paid advertising platform; Google AdWords and SaaS platform; Dropbox. Utilising a variety of platforms provides a comprehensive approach to Digital Transformation for Royston alongside providing an opportunity to understand B2B digital co-branding across different digital platforms.

1.1. Research Question Development

1.1.1. Research Problem

A review and analysis of the literature demonstrated that B2B branding is recognized as a latecomer within the broader branding literature, particularly in comparison to its counterpart, B2C branding. However, with increasingly saturated and competitive market spaces a shift in the early 2000's drove an investigation into how B2B organisations can benefit from B2B branding. This research has gained popularity given the found impact on purchase decision making within B2B organisations and the demonstration of the positive impact that B2B branding can have on financial performance and competitive advantage (Verster et al, 2019; Guenther and Guenther, 2019). Due to this, B2B branding has become more popular within the last decade as B2B organisations aim to find methods for leveraging competitive advantage other than the traditional functional attributes that B2B organisations have relied on (Leek and Christodoulides, 2011; Keränen et al, 2012; Biedenbach et al, 2015; Cassia and Magno, 2018; Huang and Wu, 2018; Österle, Kuhn and Hensel, 2018 Verster et al, 2019; Guenther and Guenther, 2019). This is exacerbated with the rising importance of digitalisation and the use of digital methods in B2B industries (Grandview Market Analysis Report, 2021). However, exploration into B2B branding strategies has numerous gaps within the existing literature, which if addressed, could provide insight into B2B brand management and brand equity improvement allowing us to understand specific B2B branding strategies on leveraging performance gains. Research within this area is scant and would benefit from a review compiling the existing literature and identifying where the current gaps are situated would pave the way for future research. Through mapping the existing gaps within the B2B branding literature through a systematic review, a gap in the implementation of brand equity transfer strategies in B2B organisations was identified. Co-branding is a branding strategy that utilizes the collaboration and presentation of two brands to a customer base for beneficial purposes. Co-branding research within B2B environments is limited; an initial survey of the B2B co-branding literature demonstrated a significantly limited selection of relevant literature. When adding the further dimension of 'digital' onto B2B co-branding, the current research within this area is non-existent. Whilst co-branding has increased in popularity over the past decade, with research showing significant benefits both financially and non-financially, most of the co-branding literature, in which these benefits have been identified, is based within the B2C industry, but with the fundamental differences that are demonstrated between the B2B and B2C industry, co-branding frameworks and concepts cannot be automatically interchanged with the B2B industry.

Combining these individual components, we arrive at B2B digital co-branding, a concept that is scarce across the B2B branding literature. A couple of studies within recent years have reviewed the concept of branding on B2B social media and press the importance of utilising a digital platform like social media to drive customer acquisition. With over 3 billion users in 2021, the use of social media has become an undeniably powerful tool for any business. It can assist in developing new approaches both strategically and tactically to achieve optimal levels of return on investment (Silva et al, 2020; Lopez-Lopez and Giusti, 2020). Digital platforms are unquestionably important within the B2B industry, with analysts predicting that 80% of B2B sales will be conducted via digital channels (Gartner, 2020). Therefore, to leverage competitive advantage online it is necessary for companies to identify alternative approaches that can be implemented across digital platforms. Research into the effects of co-branding across digital platforms could advance the understanding of brand equity transfer within digital branding strategies digitally and the effects of this in B2B environments. The findings from the outlined gaps have formed the research scope, objectives, and the corresponding research questions.

The literature review demonstrated significant gaps within brand equity transfer strategies and digital branding strategies, such as co-branding and digital co-branding. While these areas have been addressed within the B2C counterpart, fundamental differences between B2B and B2C organisations mean that research cannot be transferred from one to the other. These differences include the perceived importance of the balance between the rational, functional and emotional attributes of a business or product within the purchase decisions. Current gaps and various techniques acknowledged within the B2B branding literature in the last decade demonstrate that there is limited development in B2B models (Keränen et al, 2012), the methodological trends (Keränen et al, 2012; Seyedghorban et al, 2016) and the limited contextual aspects of B2B branding (Seyedghorban et al, 2016). Further to this, numerous research gaps have been identified, such as the impact of market orientation on brand equity (Anees-ur-Rehman and Johnston, 2018), the value and design of social media strategies (Cawsey and Rowley, 2015) and further exploration into how various brand alliance strategies impact B2B branding (Kalafatis et al, 2014).

The initial exploration of B2B co-branding demonstrated an almost non-existent body of literature. Co-branding as a strategy has shown if conducted successfully has a range of proven benefits including the improvement of financial metrics and leveraging of specific associations from a partner. Given the demonstratable benefits of successful brand management within B2B organisations and the influence of branding on B2B customers, understanding the impact of digital co-branding on B2B environments can develop knowledge around brand equity transfer strategies within a B2B environment. Stepping back into the broader research area a survey of the B2B branding literature was conducted and, to understand how to proceed with the research avenues, a systematic literature review was completed. Pressing issues in the B2B branding research demonstrated the need for research advances of brand equity transfer strategies and digital strategies, with emphasis on social media. Digitally, the movement from traditional B2B branding methods towards digital B2B branding methods is well noted, the impact of digitalisation on purchase decisions is cited regularly in the literature and B2B ecommerce statistics and predictions demonstrate that organisations may relinquish significant competitive advantage if they do not incorporate digital methods into their branding strategy. The research problem has been demonstrated through the lack of B2B brand equity transfer and digital strategies in existing research, alongside the demonstratable, increasing importance of branding in B2B purchase decisions and the success of digital brand equity transfer strategies within B2C settings. This defines B2B co-branding as the research problem. B2B co-branding research is limited but with a growing importance, it could helpfully advance the B2B branding literature and brand management strategies to drive competitive advantage amongst B2B organisations.

1.1.2. Research Importance

The B2B branding literature within the last decade continually stresses the increasing importance of branding in helping B2B organisations gain competitive advantage. Coupling this with the increasingly competitive landscape, the necessity of digitalisation and the importance of branding in purchase decisions means that B2B organisations have to use methods to leverage competitive advantage to move into (or remain in) a favourable position. Co-branding has demonstrated key benefits when applied in a B2C setting due to the influence of the cluster of emotional and functional attributes that branding can have on consumer decisions. Recent research has demonstrated that B2B audiences are becoming more reliant on attributes such as branding in purchase decisions (Leek and Christodoulides, 2011; Biedenbach et al, 2015; Cassia and Magno, 2018). However, the differences demonstrated between the B2B and B2C markets mean that blindly transferring practices would may not result in the same outcome.

By closing the existing research gaps, we intend to increase the theoretical understanding of B2B co-branding on digital platforms and, thus, pave the way for brand management strategies to drive competitive advantage. Almost no theoretical understanding of how B2B co-branding impacts organisations exists. However, the emerging importance of branding for customers in B2B industries means that exploration into strategies that can improve brand equity could drive enhanced performance, leading to both financial and non-financial improvements. Further to this, understanding the interactions of brand equity transfer with digital platforms is essential. Research shows the exponential growth of ecommerce and reliance on digitalisation within the B2B industry, therefore, to remain competitive in a continuously changing and more digitalised environment, it is essential that digital branding methods for B2B organisations continue to advance. By exploring the impact of digital co-branding on B2B organisations and advancing the understanding of how digital brand equity transfer can affect B2B organisations, research can provide insight into a new digital brand management strategy that has the capability of improving brand performance within B2B organisations.

1.1.3. Research Gaps

Whilst there has been a plethora of co-branding studies which have emerged over the past decade, it is evident that this is heavily leveraged towards the B2C industry. Despite some indication of an incremental increase within B2B co-branding literature, this research remains sparse and limited. The B2B branding literature demonstrates fundamental differences between these industries and, therefore, most of the existing co-branding research cannot be blindly applied to the B2B industry. This merges into the growing necessity of digitalisation and digital platforms in the B2B industry as it continues to forecast exponential growth within the area of ecommerce and, therefore, organisations operating within this space need to look to implement innovative strategies that can assist in achieving competitive advantage. Digital platforms are unquestionably important within the B2B industry, with analysts predicting that 80% of B2B sales will be conducted via digital channels (Gartner, 2020). This means that branding and strategies focusing on improving the organisations' brand could drive essential competitive advantage in an increasingly crowded market space. This demonstrates the importance of advancing the understanding of co-branding on digital platforms for the B2B industry. Further to this, understanding how the brand equity asset categories of organisations within the B2B industry are influenced by brand equity transfer strategies would advance understanding in the broader B2B branding literature. As the importance of brands continues to grow, advancing this area of research is highly important for both academic and practical purposes.

Reviewing the current B2B branding literature it is evident that several research gaps exist. Three specific areas have been expanded: brand equity transfer in B2B organisations, digital strategies for B2B branding and social media in B2B Branding.

Brand Equity Transfer in B2B Organisations

Various strategies have been researched in B2C markets which allow companies to benefit from transferred brand equity or positive brand spillover from another company. Co-branding research is well developed in the B2C market but application within B2B markets is less common. Evidence suggests that B2B firms can also experience the positive effects from co-branding (Kalafatis, Remizova and Singh, 2012; Mohan et al, 2018). However, this research has not been developed significantly. Future research should examine the impact of co-branding on the recognised brand equity assets. Research into co-branding has demonstrated that successfully leveraging B2B branding through brand management strategies within B2B organisations, this can improve competitive performance, financial performance and customer loyalty. This demonstrates the need for organisations to place importance on correctly improving and maintaining their brand (Leek and Christodoulides, 2011; Biedenbach et al, 2015; Cassia and Magno, 2018). Current gaps and various techniques acknowledged within B2B branding literature in the last decade demonstrate that there is limited development in B2B models (Keränen et al, 2012), the methodological trends (Keränen et al, 2012; Seyedghorban et al, 2016) and the limited contextual aspects of B2B branding (Seyedghorban et al, 2016). Further to this, numerous research gaps have been identified, such as the impact of market orientation on brand equity (Anees-ur-Rehman and Johnston, 2018), the value and design of social media strategies (Cawsey and Rowley, 2015) and further exploration into how various brand alliance strategies impact B2B branding (Kalafatis et al, 2014).

Digital Strategies for B2B Branding

Most of the B2B branding literature focuses primarily on traditional B2B elements, limiting the growing need for digital strategies to aid brand development, growth or positioning within B2B environments. Some research has touched on the digital elements within B2B branding in recent years, but more research would be necessary to further explore this research gap as this could identify the impact of digital strategies within B2B marketing. Enhancing the existing research in this area would enhance both theoretical and practical contributions, enabling B2B managers to implement digital strategies that leverage desirable benefits.

Social Media in B2B Branding

The use of social media in a B2B branding context has been under researched, as many strategies derive from recommendations on the B2C market due to the success of utilizing social media platforms in B2C environments (Kumar and Moller, 2018). Whilst some social media research has been conducted within B2B environments (Michaelidou, Siamagka and Christodoulides, 2011) this is outdated in such a rapidly growing and changing sector and does not consider the exponential growth of certain B2B social media platforms such as LinkedIn in recent years. Further exploration of new changes and aspects of specific social media strategies for B2B markets, including new digital platforms, would address this gap (Cawsey and Rowley, 2015). Advancements in this area of research would help organisations to drive the social media strategy in B2B industries and expand on the current theoretical knowledge in this area by understanding the impact of social media on B2B branding and the various platforms involved.

1.1.4. Research Aim

This research aims to advance the existing B2B branding literature by responding to the gaps acknowledged within the preceding systematic literature, specifically focusing on the B2B brand equity transfer strategies and the digital strategies gaps, address the outlined research problem by understanding how digital co-branding impacts the brand equity and brand performance of B2B organisations across various digital platforms including a B2B website, B2B social media platform and search engine advertising platform. By addressing the above, this research intends to deliver both theoretical and managerial contributions around the process of implementing digital co-branding in a B2B setting and the impact of doing so on key brand equity metrics.

1.1.5. Research Questions

The development of the research questions is an essential component of successfully answering the demonstrated research problem. Firstly, it is important to note that the research setting was based within a Knowledge Transfer Partnership programme within a marine engineering organisation operating in a B2B environment. The questions were developed whilst acknowledging the level of resource availability within the marine engineering setting, in which this research was conducted which accommodated access to both large and small partners on global and local scales to answer the overarching research aim, alongside internal resources and data platforms to facilitate the execution of the proposed research. It was important to ensure that when developing any research aim, the resources were available to conduct the research properly, for example, the researcher had access to the correct personnel, software programmes and financial requirements that were required to complete this research. Secondly, considering the literature has outlined three main components, B2B, co-branding and digital, the questions therefore need to encompass the individual components that this research intends to address as well as the combined B2B digital co-branding use. To develop questions that can holistically answer the outlined research problem and present a comprehensive conclusion that focuses on a broad perspective of B2B digital co-branding, the questions focus on various elements, including the impact of co-branding with larger and smaller partners, global and localised partners, various B2B platforms and the measurable KPI impact that this had on the business objectives. These are aligned to the theoretical framework, Aaker's brand equity, and focus predominantly on the impact on the asset categories.

Defining the research problem and the proposed aim of this thesis has assisted in the construction of the research questions, ensuring a holistic representation of B2B digital co-branding within this specific setting. Breaking down the individual elements of this research proposal, the questions attempt to comprehensively review these elements. The research is conducted predominantly on digital B2B platforms, including LinkedIn and Royston's website. The co-branding was conducted with a range of B2B organisations, including larger, global, and smaller, localised partners at both higher and lower levels in the supply chain. Each of these factors has been filtered into the individual questions and aligned with the theoretical framework to ensure that the questions focus on answering the research aim holistically. By doing this, the research aims to advance the B2B branding literature by responding to the identified gaps in the literature, including B2B brand equity transfer strategies and digital branding strategies.

From the gap in the existing B2B branding literature, a research problem was defined, the aim specified and this was categorised into three primary questions. The purpose of these questions is to close the existing gap and enhance the understanding around the impact of digital co-branding on B2B brand equity and brand performance across various platforms. Chapter 2 provides an in-depth deconstruction of each of the research questions based on the existing literature and provides detailed explanation as to the motivation to study and answer the questions outlined below.

1. What impact does the implementation of various digital co-branding strategies have on the asset categories of brand equity within a B2B organisation?
2. Can co-branding strategies drive positive brand equity transfer on B2B social media platforms. If so, how can they be used to drive optimal social media performance and how are social media KPI's impacted?
3. How can B2B organisations leverage branding strategies to achieve optimal brand equity in the modern age and improve key performance indicators (e.g., financial benefits or improved KPI's)?

The next chapter will detail the methodology for the purpose of answering the proposed questions and working towards the overall research aim.

1.1.6. Research Objectives

There are four research objectives in this thesis:

- A systematic review of the existing B2B branding literature will be conducted to identify the current gaps and propose avenues for future research.
- This research will investigate how digital co-branding campaigns, implemented in a B2B organisation, impact the asset categories of brand equity.
- This research will examine whether digital co-branding can drive positive brand equity transfer on a B2B social media platform and investigate the impact that the implementation of a digital co-branding campaign has on social media performance.
- This research will examine the influence of implementing various digital co-branding campaigns on key performance indicators, both financial and non-financial, in a B2B organisation.

1.2. Research Contributions

This study set out to explore the impact of implementing digital co-branding strategies within a B2B environment, combining the research gap of brand equity transfer strategies with the exponentially growing importance of digital platforms for the B2B industry. This allowed increased understanding of the potential impact B2B digital co-branding strategies on brand equity and practical brand performance. The findings advance the understanding and impact of digital co-branding in a B2B organization through examining how digital co-branding strategies affect brand equity transfer.

This has both academic and practical implications. Theoretically, advancing the existing literature assists the understanding of brand equity transfer between B2B organisations and if brand equity transfer occurs on digital platforms, across both globalised and localised partner entities. The findings contribute to this existing body of B2B branding literature by showing that B2B organisations can positively benefit from digital co-branding. Notable improvements were measured across four of Aaker's brand equity asset categories: brand loyalty, brand awareness, perceived quality and brand associations.

The improvements within these categories significantly drove improvements in both financial and non-financial performance indicators, increasing the B2B organisations' organic enquiry value and revenue, alongside improvements in search engine optimisation (SEO) and search engine results position (SERP). The improvement in results demonstrates that B2B organisations can leverage positive brand equity transfer from larger global organisations. There is demonstratable evidence that when a B2B organization is co-branded with an organization higher in the value chain on a digital platform, significant improvements are shown both financially and within digital measurement KPI's. However, when partnered with a localized organization lower in the value chain no conclusions or associations were identified and recommendations for further research into this are essential to draw significant conclusions.

The findings of this thesis contribute firstly by highlighting the importance of branding within B2B organisations and how brand equity transfer between B2B organisations can be facilitated and if this brand equity transfer can occur on digital platforms. This advances the understanding of how B2B firms adapt and react to digital co-branding and if digital co-branding can be used to successfully leverage and optimize brand equity. Practically, research into digital co-branding means that B2B organisations can utilize and implement strategies that can achieve changes in key performance indicators, thus elevating brand performance. This shapes managerial decision making by presenting evidence of strategies that have leveraged the positive benefits of global partners, enabling a spillover effect that creates practical financial and non-financial benefits that can be implemented in other B2B organisations.

1.3. Thesis Structure

Following the introduction, chapter 2 will present the literature review. The literature review chapter reviews the initial survey of existing literature and demonstrates a lack of research within B2B co-branding. Therefore, to understand the position of research it was necessary to explore the broader context. The findings from the literature review brought to light various research gaps that need to be addressed and the importance of addressing these for the purpose of advancing B2B literature.

This focused on B2B brand equity transfer strategies. To determine the impact of brand equity transfer through B2B co-branding strategies, Aaker's brand equity dimension framework was used as the theoretical framework for this study. A review of the framework was conducted. This paved the way for the formation of research questions surrounding co-branding within a B2B environment.

Next, the methodology (chapters 3-4) details the steps taken to address the proposed research questions and research gaps. The application of the Research Onion Model (Saunders et al, 2012) to the broader methodology at this stage will outline the overarching philosophical assumptions that shape the approaches, strategies, choices, and techniques from a theoretical perspective. Following this, the outlined theory will be discussed in reference to the practical application of the research. This will use the action research case study to describe the setting in which the research will take place, enabling the reader to further understand the implications and limitations experienced throughout the research process. The final section of the methodology will focus specifically on the four digital co-branding campaigns and their implementation.

Following the methodology chapter, the findings are presented in chapter 5. This chapter outlines the results from the preliminary research and the four individual co-branding campaigns. Given the multi-method approach, numerous techniques are used to present the data at this stage. The chapter outlines the findings from the preliminary study and then focuses specifically on the findings from the digital co-branding campaigns.

To understand the meaning of the results in relation to advancing B2B co-branding research, the following discussion chapter, accumulates the results and correlates this with the existing literature, detailing what this means for B2B co-branding. The chapter reviews what the findings from this research mean in the broader context of the literature, detailing the impact that co-branding has on brand equity transfer within a B2B environment and how this translates to a practical setting.

The research findings and contributions will be drawn together in chapter 7 to conclude this thesis. The conclusion will summarise the findings, research contributions, practical implications, and directions for future research. The limitations of the research will then be acknowledged. Finally, the Bibliography and Appendices will follow.

2. Literature Review

This chapter will review the literature surrounding the topic of co-branding. The researcher initially intended to conduct a systematic literature review on B2B co-branding, however, the literature within this area is highly limited and therefore, the broader topic of B2B branding was systematically reviewed to understand the current position of the literature and the current understanding of digital platforms and digitalisation within B2B branding. This aims to present a holistic coverage of the existing research in these areas and pave the way for future research.

2.1. Co-branding Definitions

Since the 1950's it has been documented that many consumers purchase things because of what they mean. This concept has gained attention by academics ever since. Consumption has been directly related to the construction of consumers' self-identities, which have been based around the highly symbolic nature of the items they consume (Askegaard, 2005). As organisations have focused on leveraging these attributes, research surrounding strategies such as co-branding and/or brand alliances experienced explosive growth in the 1990's, particularly as a brand management strategy within consumer markets. The origins of brand alliances are arguably rooted within various fields of research, including bundling, branding, information integration and attitude accessibility (Simonin and Ruth, 1998). The popularity of brand alliances increased as brand managers attempted to capitalize on favourable features prevalent in different brands (Levin and Levin, 2000). Literature surrounding this broader concept, such as ingredient branding, composite branding, dual branding, brand alliances or multi-brand alliances, has been acknowledged since the 1990's (Rao et al, 1996; Simonin and Ruth, 1998; Norris, 2002; Park et al, 2006). However, specific co-branding literature has only come to fruition within the last decade (Chiambaretto, 2017, pg. 107)

Co-branding or the co-branding concept referred to by various academics as ingredient branding, composite branding, dual branding, brand alliances or multi-brand alliances (Norris, 2002; Park et al, 2006; Rao et al, 1996; Simonin and Ruth, 1998) has appeared in publications since the 1990's, with specific co-branding literature only becoming popular within the last decade (Chiambaretto, 2017, pg. 107). Some academics, including Bengtsson and Servais (2005), view these concepts as specific co-branding strategies rather than alternative terminology and add to this list affinity programs, cause related marketing, co-operative marketing, co-operative advertising, and joint sales promotion (Bengtsson and Servais, 2005, pg. 707). This variation of terminology that surrounds brand alliances and co-branding has meant that no singular definition has been unanimously agreed upon or presented constantly across the literature. Some academics even suggest, "*scholars referring to co-branding strategies may actually be studying different phenomena.*" (Chiambaretto and Gurau, 2017, pg. 109). Fyrberg (2008) suggests that co-branding is a subset within the field of brand alliances, whereas other definitions within the literature regard co-branding as an alternative term for brand alliances. Chiambaretto and Gurau (2017) have outlined the variety of existing co-branding definitions in a systematic literature review of existing co-branding research, to identify the variations across the spectrum of co-branding research. The table below outlines their summary of co-branding definitions.

Table 1: Existing definitions of co-branding (Chiambaretto and Gurau, 2017, pg. 108)

Authors	Definition
Grossman (1997)	Two brands are deliberately paired with one another in a marketing context, such as advertisements, products or product placement and distribution outlets.
Simonin and Ruth (1998)	Short- or long-term association or combination of two or more individual brands, products and/or other distinctive proprietary assets.
Rao et al. (1999)	All circumstances in which two or more brands are presented jointly to the consumer.
Blackett and Boad (1999)	A form of cooperation between two or more brands with significant customer recognition in which all participants' brand names are retained.
Washburn et al. (2000)	The pairing of two or more branded products (constituent brands) to form a separate and unique product (composite brand).
Leuthesser et al. (2003)	The combination of two brands to create a single, unique product.
Bengtsson and Servais (2005)	Cooperation between two brands to create a single, unique product.
Helmig et al. (2008)	Cooperation between two or more marketable items that in one way or another connect representations of several brands.
Erevelles et al. (2008)	The strategy of presenting two or more independent brands jointly in the same product or service.
Gammoh et al. (2010)	A deliberate decision by the firm/manager to link two or more brands, communicate that linkage to consumers, and in the process achieve important goals that neither brand could achieve as effectively or efficiently independently.
Voss et al. (2012)	Market place phenomena in which the customer's evaluation of a brand, called a focal brand, is influenced by the intentional association of one or more additional, called ally, brand(s).

The definitions presented in **Table 1** demonstrate both similarities and differences when defining co-branding. All definitions demonstrate an agreement in that co-branding is the deliberate combining of two entities. However, definitions differ between whether the combined entities should be brands (Grossman, 1997; Simonin and Ruth, 1998; Rao et al, 1999; Gammoh et al, 2010; Voss et al, 2012), or products (Washburn et al, 2000; Leuthesser et al, 2003; Helmig et al, 2008) or services (Erevelles et al, 2008). The second component of the co-branding definition outlines the joint presentation of the brands or products, or service to the consumer. Both Rao et al (1999) and Gammoh et al (2010) argue that the linkage co-branding creates must be communicated or presented jointly to the consumer. These components of co-branding are relatively consistent throughout the various definitions presented in the literature; however, researchers have added various concepts to the core definition, broadening the scope of the co-branding definition.

The review of co-branding literature demonstrates that co-branding consists of two components: the deliberate combining of two brands, products, services or marketing factions and the joint presentation of these to the consumer (Grossman, 1997; Simonin and Ruth, 1998; Rao et al, 1999; Washburn et al, 2000; Leuthesser et al, 2003; Helmig et al, 2008; Fyrberg, 2008; Gammoh et al, 2010; Voss et al, 2012; Chiambaretto and Gurau, 2017).

The tendency of co-branding research has been dominated by the B2C industry, and the application of co-branding strategies within a B2B environment has only emerged in recent years and was significantly behind and sparse in comparison to its B2C counterpart. Numerous researchers have marked this as an important oversight due to the numerous and significant distinctions between B2B and B2C markets (Kuhn et al, 2008; Mohan et al, 2018). Drawing on B2B branding literature, the late emergence of research in this area may be due to the suggested importance of functional attributes for consumers in the past, in comparison to a combined approach including emotional attributes, which encompasses branding, which have been closely linked to B2C industries. Increasingly, research that has emerged over the past decade has started to demonstrate the importance of emotional attributes such as branding for B2B industries. Due to this, B2B companies are increasingly relying on emotional strategies such as co-branding or co-promotion strategies to leverage certain positive equity-related aspects of their alliances brand (Mohan et al, 2018). Initial exploration into the differential impact of brand equity within B2B co-branding was conducted through a scenario quantitative analysis within multimedia software brands examining the benefits derived from co-branding with brands holding varied levels of brand equity. The researchers demonstrated that brand equity was transferable between high and low equity brands asymmetrically whilst B2B brands operating at a similar equity level shared the benefits symmetrically. Limitations within this study are outlined and include the partially hypothetical setting that is used within the methodology and the measurement of results against a pre-defined set of benefits. Although this research provides an initial and interesting exploration on the effects of B2B co-branding on brand equity, the study's limitations and singular industry focus (outlined by the researchers) demonstrate interesting research gaps that could significantly advance the understanding of the effects of B2B co-branding on brand equity (Kalafatis et al, 2011). Further studies, including Mohan et al (2018), have explored the effects of co-branding on perceived globalness and localness within B2B brands, utilising the signalling theory framework to identify effects on buyers' quality evaluations of an unknown B2B brand when co-branded with a well-known global brand. Despite the research findings of brand globalness on decision making within B2B settings remaining inconclusive, the researchers have paved the way to explore and continue the examination of co-branding within B2B settings (Mohan et al, 2018). B2B co-branding literature continues to call for further advances on the existing research, demonstrating that significant research gaps still exist that would advance both academic and practical understanding within this subject (Kalafatis et al, 2011; Singh et al, 2016; Mohan et al, 2018).

This literature review has demonstrated that there is a plethora of co-branding literature, which has emerged over the past decade. However, the primary focus of co-branding literature has existed within the B2C industry. Despite the incremental increase of co-branding research within B2B industries or the application of co-branding on digital platforms within B2B industries, the literature remains sparse and limited. B2B branding literature demonstrates fundamental differences between these industries and, therefore, the application of most of the existing co-branding research cannot be blindly applied to the B2B industry. Due to the scarcity of B2B co-branding literature, it is important to conduct a review of the current position of the broader subject area in which it is situated. For this reason, a systematic review of B2B branding is conducted to accumulate the existing research from 2000-2021, allowing us to understand the status of the research and the existing gaps, enabling the identification of an avenue for further research directions. The following section will systematically review the current literature in which B2B co-branding is situated, this intends to review the body of literature within this study and understand the current trends, themes and research gaps. By doing so, the researcher intends to understand how B2B co-branding could enhance the current knowledge within this subject area.

2.2. A Systematic Review of B2B Branding Literature

2.2.1. Introduction

The importance of branding has long been established in business-to-consumer (B2C) markets, with less research traditionally focusing on branding within business-to-business (B2B) markets. Since the early 2000's emphasis has shifted towards investigating how B2B companies can benefit from branding (Verster et al, 2019). This shift is important as B2B markets have become increasingly competitive and saturated in recent years, and managers operating in B2B companies are seeking methods of competitive advantage (Guenther and Guenther, 2019). One such method that B2B companies are using is branding, with the aim of improving their brand image to leverage market share and increase financial importance (Viardot, 2014). Early research in B2B branding showed that branding can explain a higher proportion of decision making compared to other functional attributes such as price. Subsequent research in this area has supported these suggestions, stating that brands are valuable for B2B companies and can improve competitive performance, financial performance, and customer loyalty (Leek and Christodoulides, 2011; Biedenbach et al, 2015; Cassia and Magno, 2018). This substantiates the importance of B2B companies using their brand as a source of advantage and performance improvement in today's competitive B2B markets. Although B2B branding research has been slow to emerge, significant development has been made within the last decade. Recent research discusses various attributes that contribute to a brand's value, such as service quality (Huang et al, 2017), multiple strategic orientations (Anees-ur-Rehman and Johnston, 2018; Iyer et al, 2019) and corporate social responsibility (Yousseff et al, 2017). Other studies focus on the importance of branding in B2B companies and various brand attributes affecting a company's financial performance (Anees-ur-Rehman et al, 2017; Chang et al, 2018). Whilst significant advances have been made in B2B branding the fast-paced nature of B2B industries and their marketing platforms indicates that further exploration is needed, both theoretically and methodologically (Seyedghorban et al, 2016). Alongside this, various critiques of the current literature exist, particularly in relation to limited B2B model development (Keränen et al, 2012), the methodological trends (Keränen et al, 2012; Seyedghorban et al, 2016) and the limited contextual aspects of B2B branding referred to in the literature (Seyedghorban et al, 2016). Further to this, numerous research gaps have been identified, such as the impact of market orientation on brand equity (Anees-ur-Rehman and Johnston, 2018), the value and design of social media strategies (Cawsey and Rowley, 2015) and further exploration into how various brand alliance strategies impact B2B branding (Kalafatis et al, 2014). For these reasons, a review of the current B2B branding literature is needed.

It has been suggested that brands serve the same purposes in both the B2B and B2C markets through enabling customers to identify products, services and businesses whilst differentiating them from the wider competition (Kolter and Pfortsch, 2007). The context of branding has often been focused towards the B2C environments, due to the nature of purchasing decisions and customer needs. For this research, the application of B2C models has simply been transferred and applied in a B2B context, which has led to significant critique (Keränen et al, 2012; Huang and Wu, 2018). Due to this, the existing literature demonstrates that certain factors such as the nature of purchasing decisions and customer needs in the B2B and B2C markets differ significantly and this implies that a simple transference of B2C models into B2B environments is not enough (Keränen et al, 2012). Within the context of B2B environments, purchase decisions are expected to be made based on the functional ability of the product or service offering, with key factors including lowest cost, acceptable quality, delivery and availability convenience of the product or service. The customer's need for functional ability in B2B purchase decisions has often substantiated the argument for negating the need for B2B branding (Österle, Kuhn and Hensel, 2018). This argument has been offset in recent years as a growing body of literature suggests that more B2B purchasing decisions are moving away from a function-based criterion towards a focus on intangible assets for competitive advantage (Walley, Custance and

Taylor, 2007; Hadjikhani and LaPlaca, 2013). This shift from functional-based purchase decisions demonstrates the need for B2B companies to develop strategies that connect to the customer's emotional touchpoints (Brown et al, 2011; Leek and Christodoulides, 2012). As companies operate within a continuingly saturated B2B marketplace, they need to identify and implement these strategies to gain and maximise their competitive advantage. This has led to an increase in specific B2B branding research and the importance of branding in this area.

Only nine reviews were present in the included literature between 2000 and 2021, and only two reviews have been conducted specifically on B2B branding. These were published by Keränen et al. (2012) and Seyedghorban et al. (2016). Many of the other included reviews discuss B2B branding but form part of the wider branding topic. Keränen et al. (2012) state that their paper is the first systematic review of B2B branding and that it reviewed 73 relevant publications from 1973-2010. Their findings identified potential areas that have caused a delay in the advance of B2B branding research, including "*the lack of systematic theory development, the transference of consumer concepts, the dominance of quantitative research, the lack of longitudinal research and the focus on single industries"* (Keränen et al, 2012, pg. 404). Seyedghorban et al. (2016) conducted a bibliometric analysis through the analysis of 169 articles to identify four different periods of evolution for B2B branding and suggest the following trajectory could potentially research the influence that B2B branding can have on financial and economic performance: buyer perception, B2B service branding and solution branding among other areas. Although many of these areas have been addressed in more recent literature, many still need further exploration. These reviews discussed gaps in the B2B branding literature but recent advances in the use of digital platforms, B2B specific brand strategies and brand management can also be identified as areas which still need further work. It is noted that there has been a significant growth of B2B branding literature within the last few years, which means a large proportion of recent literature has not been analysed or reviewed. By conducting a review of the B2B branding literature, this systematic analysis aims to provide a comprehensive overview of the current literature, covering the literature published since the last review. This systematic review will allow for the identification of research gaps and the provision of future recommendations for research in this topic area. Despite the increasing number of articles published within B2B branding, the scope of the literature within this area is still reported to be limited in comparison to B2C branding. Recent research has demonstrated that, like B2C companies, the implementation of strategic brand-orientated processes can increase financial performance within a B2B company and enhance their competitive advantage, indicating a clear need for branding within B2B markets (Anees-ur-Rehman, 2017; Rehman et al, 2018). Various articles throughout the literature distinguish key differences between B2B and B2C markets, specifically focusing on customer differences and the purchase decision making process.

However, it is noted that the B2B branding literature is often reliant on the transference and application of B2C consumer models, demonstrating that further exploration into B2B branding is needed (Keränen et al, 2012). The limited focus on B2B branding research stems from the early understanding that purchase decisions in B2B markets were based heavily on rational and functional factors, such as cost, delivery, quality, and lead time, rather than emotional factors, such as brand image (Österle, Kuhn and Hensel, 2018). Within the last decade B2B branding has gained popularity, particularly since 2014 (Figure 1), as new research argues that these emotional and subjective factors are becoming increasingly important in the B2B purchase decision making process, meaning that companies operating in B2B industries need to encompass branding in their strategies (Brown et al, 2011; Leek and Christodoulides, 2011). Although these emotional and subjective factors have become important, these have not been explored deeply in comparison to the B2C market and there is very limited research which incorporates human values into a B2B brand (Huang and Wu, 2018). B2B branding paves the way for companies to improve financial performance and gain competitive advantage but exploration into specific B2B brand strategies is somewhat limited in comparison to B2C markets (Anees-ur-Rehman, 2017; Rehman et al, 2018). Alongside these gaps, the methodologies used within the B2B branding literature have faced criticism as the number of quantitative studies significantly outweigh the qualitative studies within this area and these quantitative studies are often cross-sectional. Therefore, previous suggestions have outlined the need to incorporate both qualitative and longitudinal methodologies into B2B branding research (Keränen et al, 2012). These limitations and previous critiques in the B2B branding literature showcase a need to review the current literature and identify future avenues of research, allowing the advancement of both theoretical and organisational contributions.

This study builds upon the previously identified research gaps within B2B branding literature and advance avenues that have had limited exploration within the B2B markets, such as the role of digital strategies, brand equity and brand management within B2B branding. An initial database overview indicates that gaps exist within this domain and recent research demonstrates the increasing importance of B2B branding in that branding has been linked to competitive advantage and improved financial performance (Cassia and Magno, 2018). This importance demonstrates a pressing need to close these gaps. A comprehensive review of the literature has not been conducted since 2016 and with the advancing role of technology and digital platforms within B2B business, branding, and the increasing frequency of published papers within this topic over the past few years, this indicates a need to review the current B2B branding literature. This review will consider the current body of the B2B branding literature systematically. The literature has been selected through a rigorous inclusion and analysis process before synthesising the findings of the reviewed studies. The findings will identify research gaps and suggestions will be made for future research directions.

2.2.2. Methodology

A systematic approach has been adopted in this review to explore and review the current B2B branding literature. Using a systematic approach reduces any potential research bias through enhancing rigor which in turn will assist in creating evidence-based results. A systematic review focuses on understanding the findings across the reviewed collection of studies in a transparent and reproducible manner aiming to enhance the broader knowledge base. Therefore, by utilising a systematic approach, this literature review intends to enhance the current B2B branding literature utilising a methodologic approach to create evidence-based findings (Tranfield et al, 2023). Numerous researchers within different areas of the business and branding literature have utilised a systematic approach including Chiambarretto and Gurau, (2017) who reviewed the body of co-branding literature. Variations in methodological process for systematic literature reviews exist, however. Tranfield et al. (2003) approach the systematic review with the aim of developing *"evidence-informed management knowledge"* (Snyder, 2019). The methodology will follow the three stages outlined by Tranfield et al. (2003), using the following structure: planning the review, conducting the review and, finally, reporting and dissemination. The following section will outline these stages and discuss how they have been applied.

2.2.2.1. Planning the Review

The initial planning stage helped in refining the topic and objectives of this systematic literature review. A preliminary overview of the B2B branding literature indicated various research gaps, particularly regarding the use of digital platforms for B2B branding such as websites, social media, and search engines, alongside B2B brand management strategies and marketing strategies. These gaps demonstrate the need for a comprehensive and systematic review of the current literature within B2B branding and provide directions for future research. Addressing these gaps would enhance both the theoretical and organizational contributions to B2B branding research. Through focusing on the research gaps directly within the B2B markets, advances on current B2B theories can be made, which in turn will drive organization B2B brand strategies, which will further enhance B2B company performance. During this stage the reviewers identified the research topic, objectives and need for this systematic review, which aided the development of the protocols used to conduct the review. These protocols are outlined in the following stage. The aim of this review was to identify key findings and trends across the B2B branding literature alongside, identifying avenues for future research. The keywords were chosen based on the topic area that we intended to explore, the term branding was chosen due to the relevance to the subject area, to minimise noise and ensure that a specific focus was maintained no alternate or complementary keywords were identified as suitable to apply. Business-to-business was also included as a term to narrow the relevance to exclude studies focused on branding within other environments. Business-to-business is commonly referred to as B2B within relevant studies, therefore, the final keyword inclusion for this systematic review refers to the B2B abbreviation. The keywords for this study are as follows "Business-to-business" OR "B2B" AND "branding."

2.2.2.2. Conducting the Review

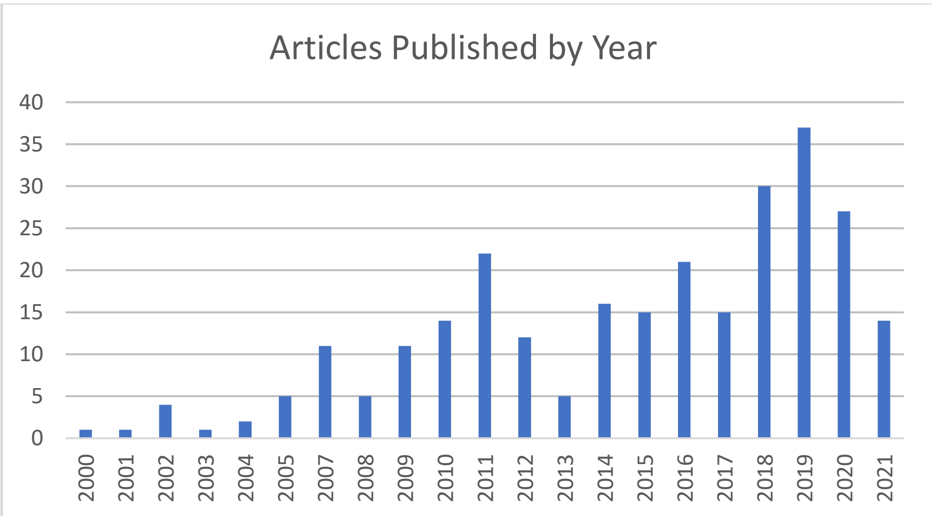
This 'Conducting the Review' stage intended to complete a systematic search to identify relevant studies based on the developed protocols. The keywords selected focused on the two main topics "branding" and "business-to-business" or its abbreviation "B2B." These keywords were selected to ensure that a comprehensive selection of studies within the B2B branding literature was returned. Various filters were applied to increase the relevance of the returned documents. The papers were limited to year parameters from 2000. An initial search demonstrated that the vast majority of relevant literature was situated since the 2000's, the aim for this research is to produce a current analysis of the B2B branding literature, therefore, to keep the literature relevant and reduce noise these year parameters were added. Further limitations include article type parameters of either article or reviews, and subject parameters of business management, economics, social sciences and decision sciences. The final parameter applied limited the returned documents to the English language. This search returned 255 documents on Scopus, in which the key search terms were present within either the title, abstract or keywords. The following step focused on the selection of the returned documents for inclusion. A double screening process was designed and conducted by the two reviewers independently of one another, the researcher and research supervisor, which aimed to gauge the relevance of the article's titles, abstracts and keywords and determine whether these should be included or excluded from the study. A double screening approach increases the reliability and transparency of article selection (Waffenschmidt et al, 2019; Mahtani et al, 2019). Articles were excluded if, for instance, despite the keywords used, they focused on the business-to-consumer (B2C) industry or had limited relevance to the key topics of this review. The articles were ranked on a scale of 0 – 2 based on their relevance (0-not relevant, 1-somewhat relevant, and 2-highly relevant) by each reviewer, based on the exclusion criteria outlined above. These were then totalled to range on a scale from 0 – 4 and any article which was ranked at either '3' or '4' was included in the review. Using a scale of 0 – 4 ensures that any included article must have been ranked highly relevant, with a score of 2 by at least one of the reviewers and a minimum rank of somewhat relevant with a score of 1 by the other reviewer. This scale allowed any 0, 1 or 2 scored articles to be excluded from the review as these did not reach the level of relevance deemed appropriate by both reviewers. Reviewing systems such as the above, are commonly used in systematic literature reviews to assist with the prioritisation and sequential exclusion of articles that lack relevance using a transparent, thorough and systematic approach (Saif-ur-Rehman et al, 2022).

From this review process 140 articles were selected for inclusion and were subject to quantitative analysis and text mining to ascertain trends, themes and connections within the titles, abstracts, and keywords. The themes derived from this quantitative analysis were reviewed and used to inform the thematic analysis agenda put forward for the discussion. Using text mining enabled the identification of recurring trends across the range of selected studies quantitatively and without bias.

2.2.2.3. Reporting and Dissemination

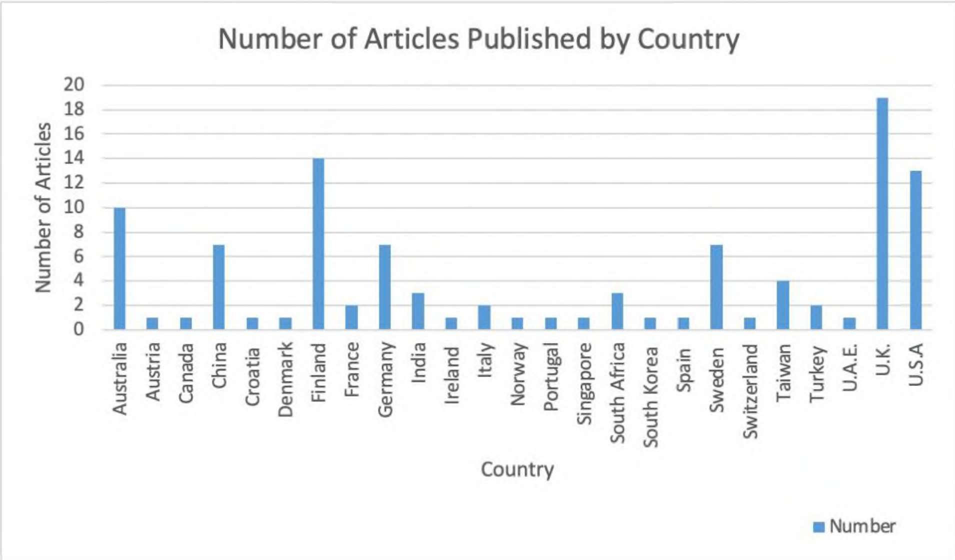
This last stage of the systematic review accumulated and reported on all the statistics and findings derived from the previous stages, as these will inform the directions of future research. The frequency analysis (**Figure 1)** of the returned 269 articles demonstrates that B2B branding has become increasingly popular within the last decade and particularly so within the past few years.

Figure 1: Chart showing article publication frequency between 2000 and 2021.



The following figure **(Figure 2)** demonstrates the number of included articles published by country. A total of 25 countries were identified. The highest number of publications derived from the United Kingdom, Finland, and the United States of America, closely followed by Australia, China, Germany, and Sweden.

Figure 2: Chart showing Article Publication Frequency between 2000 and 2019.



An exploratory survey of the literature demonstrated that across the B2B branding literature quantitative, qualitative, and mixed methodologies had been applied. Three main research methods were identified: surveys, interviews, and case studies. However, various versions of these methods exist throughout the literature. Over a third of the articles reviewed used either questionnaires or surveys in their methodology, which were administered to various stakeholders within the B2B market in different ways, including online, postal, email, on-site, self-administered and field based. Survey or questionnaire responses were mostly analysed quantitatively through statistical analyses such as structural equation modelling, ANOVA, and regression analysis. Case studies were also prominent within the methodologies of the reviewed articles, with various types of case studies presented, including singular, multiple, cross-sectional, and longitudinal. These formed a high proportion of the qualitative methodologies presented. Some of the other qualitative methodologies used included interviews, observational studies, and content analyses. The industry types examined in the studies and the type of participants varied significantly. Numerous studies focused on small-to-medium sized companies (SME's) across different countries such as Finland, China, Taiwan, India, Australia and the United Kingdom and their industry types ranged from B2B medical companies, breweries, auto-components, fruit suppliers, franchises, construction, IT, service suppliers and multiple manufacturing services. A wide range of industries, companies and company sizes were presented within the research. Due to the varieties of methodology, industry type and company type, text mining was used to extract key information across the breadth of the included literature.

A text mining analysis was conducted, and Natural Language Processing (NLP) was used to extract key information by reducing the text of the included article abstracts as much as possible through removing words without meaning. The text mining analysis enabled the identification of the primary focus across the range of included studies and presented the results in tabular form. The most popular terms **(Table 2)** and phrases **(Table 3)** were extracted and grouped and their frequencies across the range of studies were accumulated and presented. The following table (Table 2) presents the 24 most common terms throughout the literature and showcases the frequency of that term across the literature. For example, the term 'brand' was the most popular term and had a frequency of 1445, meaning it occurs within the literature 1445 times. The TF IDF (term frequency-inverse document frequency) indicates the importance of the specific term across the included articles (corpus) and is calculated using the following formula: tf-idf(t, d) = tf(t, d) * log(N/(df + 1)) (Hamdaoui, 2019). The assumption of the TF IDF is that the more occurrences of a term throughout an article the more representative it is of the content, and the more times a term appears in different articles, the less discriminating it is (WordStat). Using QDA Miner to conduct this analysis The most popular key terms include brand, B2B, firm, service and equity and the most popular phrases include brand equity, B2B brand, corporate brand, B2B B2B and service brand. A relationship analysis was then conducted to identify the most popular terms throughout the collection of included articles. The results of these can be seen in (**Table 2**). The frequency and number of cases are shown in the table alongside the TF IDF, which demonstrates the importance of the most popular phrases across the articles. Brand equity has been found to be the most popular phrase, with a frequency of 197, case percentage of 33.06% and a TD IDF score of 94.7.

Table 2: Term Frequency

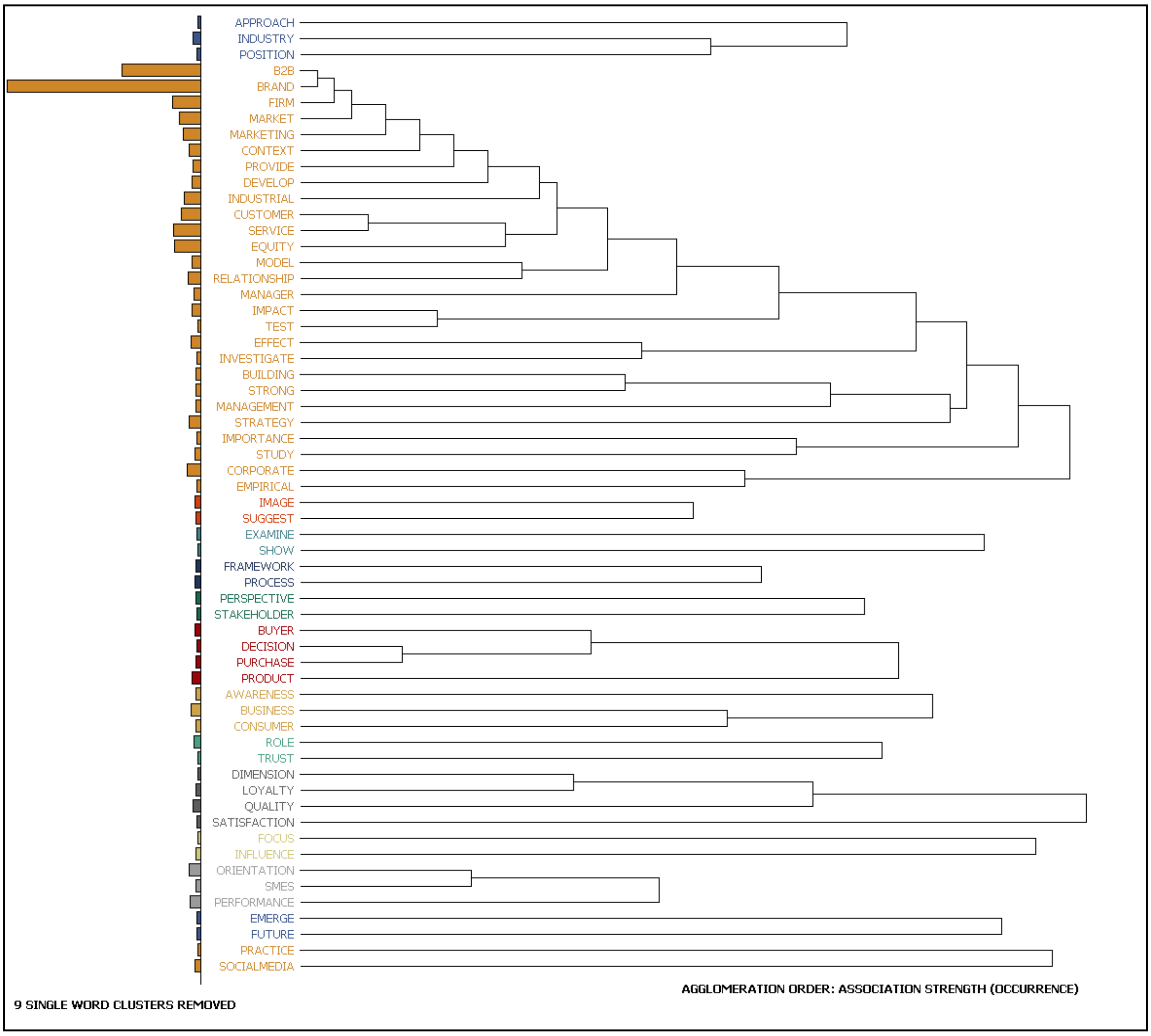
	FREQUENCY	% SHOWN	NO. CASES	TF IDF
BRAND	1445	23.17%	121	0
B2B	592	9.49%	121	0
FIRM	219	3.51%	75	45.5
SERVICE	206	3.30%	34	113.6
EQUITY	203	3.26%	40	97.6
MARKET	166	2.66%	59	51.8
CUSTOMER	155	2.49%	49	60.9
MARKETING	140	2.25%	56	46.8
INDUSTRIAL	129	2.07%	40	62
CORPORATE	109	1.75%	33	61.5
RELATIONSHIP	104	1.67%	46	43.7
STRATEGY	94	1.51%	37	48.4
ORIENTATION	92	1.48%	17	78.4
CONTEXT	91	1.46%	54	31.9
PERFORMANCE	86	1.38%	23	62
EFFECT	81	1.30%	30	49.1
BUSINESS	78	1.25%	39	38.4
PRODUCT	74	1.19%	29	45.9
MODEL	72	1.15%	40	34.6
IMPACT	71	1.14%	31	42
DEVELOP	69	1.11%	43	31
PROVIDE	67	1.07%	52	24.6
INDUSTRY	66	1.06%	34	36.4
QUALITY	66	1.06%	23	47.6

Table 3: Phrase Frequency

	FREQUENCY	NO. CASES	% CASES	TF IDF
BRAND EQUITY	197	40	33.06%	94.7
B2B BRAND	170	64	52.89%	47
CORPORATE BRAND	69	22	18.18%	51.1
B2B B2B	60	59	48.76%	18.7
SERVICE BRAND	57	15	12.40%	51.7
BRAND STRATEGY	50	21	17.36%	38
INDUSTRIAL BRAND	45	17	14.05%	38.4
BRAND ORIENTATION	44	9	7.44%	49.7
B2B MARKET	41	25	20.66%	28.1
BRAND IMAGE	41	16	13.22%	36
BRAND PERFORMANCE	40	11	9.09%	41.7
BRAND B2B	39	31	25.62%	23.1
B2B FIRM	38	21	17.36%	28.9
BRAND AWARENESS	38	19	15.70%	30.6
B2B CONTEXT	30	23	19.01%	21.6
BRAND IDENTITY	28	9	7.44%	31.6
B2B MARKETING	27	21	17.36%	20.5
EMERGE MARKET	27	7	5.79%	33.4
INDUSTRIAL BRAND EQUITY	25	7	5.79%	30.9
BRAND MANAGEMENT	23	19	15.70%	18.5
BRAND EQUITY B2B	22	14	11.57%	20.6
BRAND RELATIONSHIP	22	7	5.79%	27.2
B2B BRAND BRAND	21	21	17.36%	16
SERVICE QUALITY	20	5	4.13%	27.7

The text mining enabled a high-level perspective of analysis to take place and allowed the further exploration of the relationship between terms and identification of which terms are related. This was obtained through the computation of a co-occurrences index and the application of a hierarchical cluster analysis and multidimensional scaling. The results have been visually displayed through the dendrogram below **(Figure 3)**. The Dendrogram below is made up of popular terms on the vertical axis and the clusters formed through the clustering procedure on the horizontal axis. The terms which are visually linked at an early stage in the dendrogram represent clusters which are combined at the start of the agglomeration process and those that are not linked or do not appear together have been combined towards the end of the process (QDA Miner).

Figure 3: Dendrogram of Single Word Clusters.



A cluster analysis was conducted as a technique to reduce the data and aid the development of the topics in **(Table 4)** alongside the keywords, which fall within these topics. The cluster analysis made it possible to capture the relationship between popular terms and the categorisation of terms based on their co-occurrence or case similarity, which drove the proposed topics for the thematic analysis. Table 4 presents the topics identified and their related keywords, coherence scores (which will aid the assessment of the quality of the topics), the frequency of how many times the keyword occurred and the percentage of cases in which the keyword appears are showcased. By using a cluster analysis, a clear structure and method to organise the most important terms underneath a wider topic is developed. This ensures the thematic analysis is comprehensive (WordStat). Table 4 demonstrates the various topic phrases, extracted from the literature in relation to their frequency, coherence, and case percentages. These have been extracted using the data mining tool presenting a breakdown of key phrases which will be used for the topic selection of this systematic review. The outcomes are based on the software clustering mechanisms that were collated into one overarching topic area. This presents a more rigorous approach as no reviewer bias is included in topic selection (Onwuegbuzie et al, 2016). However, this does mean some surprising topics are identified, for example: 'consumer.' Despite reviewing B2B branding literature, the term consumer has demonstrated a high level of frequency within the B2B branding literature, this high frequency may be due to comparisons to the business-to-consumer markets or consumer orientated approaches within the analysed literature. To ensure the rigor of this review, no topics were excluded from the text mining analysis.

Table 4: Text Mining Topic Results

NO	TOPIC	KEYWORDS	COHERENCE	FREQ	% CASES
1	**LOYALTY**	LOYALTY; SERVICE; TEST; MODEL; SATISFACTION; CUSTOMER; QUALITY; DIMENSION; EQUITY; IMPACT; SHOW; BRAND EQUITY; BRAND EQUITY B2B; B2B SERVICE; B2B SERVICES; BRAND EQUITY BRAND; BRAND LOYALTY;	0.527	433	62.81%
2	**DECISION MAKING** **PURCHASE**	DECISION; PURCHASE; BUYER; MARKET; INDUSTRIAL; PRODUCT; SUGGEST; EFFECT; DECISION MAKING; INDUSTRIAL BRANDING; B2B MARKETS; B2B BRANDING;	0.475	260	61.98%
3	**CORPORATE BRAND** **STAKEHOLDER**	STAKEHOLDER; CORPORATE; FRAMEWORK; PROCESS; PERSPECTIVE; EMPIRICAL; APPROACH; IMAGE; IDENTITY; CORPORATE BRAND; CORPORATE BRANDING; BRAND IMAGE;	0.427	149	43.80%
4	**BRAND PERFORMANCE** **ORIENTATION**	ORIENTATION; SMES; PERFORMANCE; EXAMINE; STRONG; IMPACT; BRAND PERFORMANCE; BRAND ORIENTATION; B2B SMES; FINANCIAL PERFORMANCE; IMPACT BRAND; MARKET ORIENTATION; ORIENTATION BRAND; SMALL MEDIUM SIZED ENTERPRISES SMES; STRONG BRAND; SMALL MEDIUM SIZED ENTERPRISES; BUILDING STRONG;	0.416	174	32.23%
5	**TRUST**	TRUST; ROLE; PERCEPTION; PROVIDE; QUALITY; CONTEXT; CREATION; KNOWLEDGE; EFFECT; B2B CONTEXT; QUALITY BRAND; ROLE BRAND; B2B CONTEXTS; BRAND TRUST;	0.416	148	50.41%
6	**CONSUMER**	CONSUMER; B2C; BUSINESS; SOCIALMEDIA; AWARENESS; PRODUCT; IMAGE; BRAND AWARENESS; BRAND IMAGE; CONSUMER MARKETS; BUSINESS CONSUMER B2C; B2C MARKETS; BUSINESS MARKETS;	0.41	133	38.84%
7	**INDUSTRY BRAND** **POSITION**	POSITION; INDUSTRY; DEVELOP; EMERGE; APPROACH; SUPPLIER; INDUSTRY BRAND; BRAND POSITIONING; B2B B2B BRAND; B2B B2B;	0.407	112	36.36%
8	**B2B MARKETING** **INFLUENCE BRAND**	FOCUS; INFLUENCE; IDENTITY; MARKETING; PRACTICE; B2B MARKETING; INFLUENCE BRAND;	0.392	99	38.02%

9	**BRAND MANAGEMENT**	DIMENSION; MANAGEMENT; KNOWLEDGE; DEVELOPMENT; FUTURE; AWARENESS; BRAND AWARENESS; BRAND MANAGEMENT; BRAND AWARENESS BRAND; DIMENSIONS BRAND;	0.389	59	29.75%

2.3. B2B Branding Literature Review

This discussion will synthesise the findings based on the 9 selected key topics (**Table 4**) presented in the previous section and identify research gaps for the enhancement of theoretical and practical contributions to B2B branding research.

2.3.1. Brand Loyalty: Key Drivers of Brand Loyalty in B2B Companies

Brand loyalty has gained prominence in B2B branding research within the last decade, with primary focus in this area determining the key drivers of brand loyalty within a B2B environment. Various researchers have examined the factors driving stakeholder loyalty towards a brand, but these findings are not unanimous across the body of the literature and inconsistencies are reported on the many dimensions that have been suggested as drivers of brand loyalty (Biendenbach and Marrell, 2010; Cassia, Cobelli and Ugolini, 2017; Biendenbach, 2018; Nyadzay et al, 2018). These inconsistencies and the lack of generalizability of brand loyalty drivers has led to the development of research models which intend to demonstrate the factors that drive brand influence or the relationship between brand loyalty and other brand equity dimensions, such as brand awareness, brand associations and perceived quality (Biedenbach, 2012; Nyadzay et al, 2018). Across the literature, brand loyalty is commonly linked to three factors: human capital, value-added services, and company size (Biendenbach and Marrell, 2010; Cassia, Cobelli and Ugolini, 2017; Biendenbach, 2018; Nyadzay et al, 2018).

Biendenbach (2018) demonstrated how human capital impacts brand loyalty in a professional service operating setting within a B2B environment and found that the client's views of human capital and their general evaluations of perceived quality determines brand loyalty. The foundations for brand loyalty are, therefore, argued to be based on the client's views and evaluations, which are driven through receiving high quality services and having positive expectations about future experiences (Biedenbach et al, 2019). The importance of stakeholder perceptions is echoed across the literature as it is argued that they have a significant effect on how loyal customers are to the brand (Biendenbach and Marrell, 2010; Cassia, Cobelli and Ugolini, 2017; Biendenbach, 2018; Nyadzay et al, 2018). This has been indirectly built upon from other researcher perspectives, which discuss how value-added services have a positive relationship with brand loyalty, as this leads to ways to differentiate themselves from competitors through value co-creators and brand advocates, enhancing the brand loyalty, thus increasing profitability (Cassia et al, 2017; Juga et al, 2018). These service-related effects have been studied in relation to the brand image effect on brand loyalty, with both goods-related and service-related brand image reported as having a direct effect on brand loyalty. Both are mutually important in that goods help to drive customer satisfaction whilst a service-related image *"stimulates a customer's emotional commitment and increases loyalty"* (Cassia et al, 2017, pg. 728). Nyadzay et al (2018) support this through their advances on the nomological model, which specifically focuses on franchises in emerging markets, by highlighting the importance of emotional brand attachment and the perceived relationship value as driving factors for increasing brand loyalty. This positive relationship between emotional brand attachment and brand loyalty suggests that the development of effective communication channels between B2B companies' human capital and customers can help cultivate the desired behavioural outcome. This highlights the importance of communication in both customer and in-knowledge management systems to improve these driving factors (Nyadzay et al, 2018). These themes directly link to customer satisfaction. However, limitations exist within this research area in that the extent to which emotional and functional brand attributes link to customer satisfaction has not been advanced significantly, as a large proportion of earlier research details the lack of emotional brand factors considered when making B2B purchase decisions (Brown et al, 2011; Leek and Christodoulides, 2012). The exploration of the impact of customer satisfaction on brand loyalty suggests that a positive relationship exists even when competition is low within the marketplace (Huang et al, 2019). However, recent developments within the B2B branding research have explored how the size of SME's can contribute to the brand loyalty experienced by the company. The larger the SME the increased likeliness of higher brand equity, positive experiences, and brand loyalty. This assumes that larger companies can deliver brand promises due to the increased availability of resources (Rehman and Johnston, 2019). Another recent development in brand loyalty literature is the impact of brand associations. The influence of brand associations has been directly found to influence customer satisfaction, which correlates with brand loyalty. This has reiterated the emerging importance of how emotional attributes are increasingly influencing purchase decisions within the B2B industry (Susanti et al, 2020). This topic area could be further explored within the B2B markets by extending this research beyond SMEs to identify to what extent this can be applied to larger corporations or multinational corporations.

2.3.2. Decision Making: The Role of Branding within B2B Decision Making

Research on decision making in the B2B branding field has been slow to emerge. Brown et al. (2011) identify the reason for this limited research as being the objective nature of B2B buyers, which minimizes the role of any subjective influences (such as branding) playing a role in B2B decision making. However, a growing body of research indicates that branding is becoming influential in B2B purchase decisions. It is recognized that decision making within B2B firms is a complex process, as decision making includes various stakeholders and a lengthy decision-making process (Beverland, Napoli and Londgreen, 2007; Tarnovskaya and Biedenback, 2016). Within this B2B decision making process brands are recognized as an important *"tool for achieving organizational consensus among the many actors involved in the buying process"* (Beverland, Napoli and Londgreen, 2007, pg. 1082; Tarnovskaya and Biedenback, 2016). This shift in direction implies the need for exploration into how decision making affects the perceived importance of branding within B2B organisations.

Purchases within the B2B markets are often subject to a lengthy decision-making process involving highly knowledgeable professionals within the sector. This has previously led to the traditional prioritization of dedicated sales teams over brand development. However, with the development of B2B commoditized technology markets importance is shifting towards building strong brands, particularly in markets where brands are a sign of trust (Cawsey and Rowley, 2015). The decision-making process in B2B markets is often high-risk and involves high risk buying situations with significant costs and technicalities. By developing a strong brand, a B2B company can generate demand, practise premium pricing strategies, and increase power in distribution networks, ultimately impacting their perceived quality, satisfaction, and loyalty (Gomes, Fernandes and Brandao, 2016). It has been suggested that these attributes form important considerations in purchase decisions alongside the manufacturer's reputation and the buyer's own awareness and degree of loyalty (Beverland, Napoli and Londgreen, 2007). The enhancement of service quality and customer satisfaction within the B2B technology services industry has been researched by Huang, Lee, and Chen (2019). It is argued that these factors are drivers for brand loyalty and an increase in business success, which implies that they are also considered and influential in the decision-making process within B2B settings. These elements move away from the traditional B2B functional decision-making factors and demonstrate that B2B decision makers are increasingly influenced by emotional and subjective touchpoints during the decision-making process (Brown et al, 2011; Leek and Christodoulides, 2012). This shift in B2B decision making research has led to the focus of branding strategies and recommendations for B2B firms to leverage competitive advantage throughout the decision-making process. Leek and Christodoulides (2012) provide recommendations for organizations regarding their sales personnel in B2B settings, stating that if sales personnel can address the customer's emotional touchpoints alongside their functional requirements the company has the potential to differentiate itself in the decision-making process. The incorporation and communication of emotional qualities from the company's branding strategy is recommended to alleviate the buyer's perception of risk and presenting a favourable option during decision making (Leek and Christodoulides, 2012). These factors filter through to shape the internal managerial decision-making process of the company to deliver strategies which demonstrate the functional, emotional and risk averse nature through the brand (Leek and Christodoulides, 2012; Chang, Wang, and Arnett, 2018). Again, as some debate still exists surrounding the balance between functional and emotional touchpoints in the B2B branding literature, exploration into the influence of these emotional and functional touchpoints within the B2B decision making process is necessary.

2.3.3. Brand Performance

Most of the research surrounding brand performance discusses the elements which impact brand performance within B2B environments, either positively or negatively. Brand performance can be measured through different means: brand related-financial performance (Yang and Tsou, 2017; Rehman et al, 2018) and various branding constructs (Esch et al, 2006).

Rehman et al. (2018) discuss how strategic brand-orientated processes, including internal branding, brand communication, brand awareness and brand credibility, can achieve an enhanced financial performance. Within this brand performance research, Yang and Tsou (2017) have developed a model to test the link between financial performance and branding within B2B environments, enabling the identification of positive brand performance elements on financial returns for the company (Yang and Tsou, 2017; Rehman et al, 2018). Other studies have enhanced this research through identifying various attributes which, it is argued, have an impact on brand performance. Research has divided these attributes into six distinct categories: awareness, image, perceived quality, perceived value, personality, and organizational design (Feldwick, 1996; Chernatony and McDonald, 2003; Esch et al, 2006). Interestingly, brand image and brand awareness are proposed as the central attributes for marketing campaigns. However, Esch et al. (2006) established through their research that a sole focus on these two attributes was not sufficient for long term brand success. Whilst these elements have not been found to be suitable for long term success, other researchers have continued to identify the elements that contribute to improved brand performance, with various studies finding a positive relationship between brands, market orientations and brand performance. The implementation of brand strategies in multi-national corporations proves to be more difficult due to cultural differences and diversity among stakeholders at a local level (Tarnovskaya and Biedenback, 2016). A recent study demonstrated this conflict and demonstrated the necessity for aligning with an individual country's culture when entering an alliance. Due to the incorrect positioning and lack of brand alliances, the case study demonstrates how the failure of Volvo's brand acquisition in China is a recurring case for global brands entering new countries (Guo et al, 2020). This implies that brand performance is subject to and impacted by cultural differences and diversity. Therefore, recent research into B2B brand performance has centred on brand strategies that can improve on current

B2B brand performance for companies operating in the B2B markets, but further exploration is needed in this area.

Tarnovskaya and Biedenbach (2016) approach B2B branding through a company centred approach, as they argue that the core components that develop the brand value lie at the centre of the brand strategies and should be communicated by the company's marketing manager. Anees-ur-Rehman et al (2017) suggest that small to medium sized enterprises that actively develop and strengthen their brand perform significantly better in comparison to their competitors. This can be driven by several factors, which are said to relate to B2B brand performance independently and positively, including brand and market orientations with further strategic orientations coming to the forefront of branding research recently (Anees-ur-Rehman, 2017). *"Market-orientated philosophy believes that a brand can be strengthened by satisfying customers' needs, whereas brand-oriented philosophy believes that a brand can be strengthened by nurturing a distinctive and idealistic set of brand values. Thus, brand performance can be attained by both means"* (Anees-ur-Rehman, 2017, pg. 588). Building on the market orientation research, it has also been argued that brand orientation is another key factor in the positive influence of brand performance, as it *"encourages management to devote more resources to branding efforts"* (Chang et al, 2018, pg. 21). It enables management to engage stakeholders and customers directly through strategic planning, information sharing and decision making, which need to be used efficiently. This is presented by Chang et al (2018) through a value co-creation process which translates branding efforts into superior brand performance (Chang et al, 2018). Kalafatis et al. (2012) further echo this by suggesting that value creation through co-branding with a stronger partner has enabled increased brand performance through achieving improved competitive advantage, but this area of research has not been extended significantly (Das and Kumar, 2007; Kalafatis et al, 2012). From an international perspective, improving brand and financial performance in overseas locations can be influenced by various internal factors, namely the focus of developing international strategic brand management within the B2B organisation (Pyper et al, 2020). Suter et al (2020) advance the concept of international management and emphasise the importance of B2B organisations developing specific practices, strategies, and actions specifically for the individual location in which they are operating. This would entail the management of country-of-origin brands at various levels including country, industry, and firm levels (Suter et al, 2020). By developing branding strategies specifically for B2B companies, in light of the advancement of this research would be advanced in both a theoretical and organisational manner, enabling strategic B2B managerial decisions to be made.

Aside from the positive elements that influence brand performance in B2B markets, research has been conducted to identify the elements that can negatively impact the performance of a brand in different situations. It has been suggested that diversification within B2B service firms has a negative effect on brand performance. Guenthur and Guenthur (2019) indicate that less diversified B2B service firms are worth more to shareholders than highly diversified B2B firms (Guenthur and Guenthur, 2019).

2.3.4. Corporate Brand: The Role of the Corporate Brand in B2B Companies

Corporate brand identity has been defined as *"the internal perception(s) of a distinct and central idea or essence of a company"* (Tormala and Gyrd-Jones, pg. 76). Corporate brands differ from product brands as they represent the company rather than the individual product and its identity is formed based on the entirety of the company's offerings (Blomback and Axelsson, 2007). There has traditionally been extensive scepticism surrounding the importance of branding in B2B markets in the literature, potentially stemming from the lack of strategic guidance that would help develop strong brands for B2B companies. Against other business functions, it is suggested that brands hold less value in the B2B market. However, a growing body of literature indicates that branding can be important for the success in B2B companies (Hirvonen and Laukkanen, 2016). The competitive nature of the B2B business environment means that companies will use the development of a strong corporate brand as a key strategic asset in gaining competitive advantage and differentiating themselves from their competitors (Simoes, Singh and Perin, 2015). B2B companies rely on the development of a strong corporate brand to shape the perceptions of the wider network of stakeholders, rather than individual product branding (Sheth and Sinha, 2015).

"*Corporate brand should be seen as the custodian of company reputation and values,"* (Balmer, 2013; Rehman et al, 2019, pg. 745). It is suggested within B2B service brands that a corporate brand enhances the financial value of the company in comparison to branding individual B2B services. Guenthur and Guenthur (2019) suggest that a corporate brand has a significantly increased financial value of $737million for professional service firms in comparison to a tailored service brand. These recurring themes across the literature indicate the importance of corporate brands both for financial and reputational gain. The importance of the corporate brand is echoed in recent literature and merges the various components, namely brand management, relationship marketing and stakeholder management. These components directly impact brand performance, but traditionally have been perceived from a customer viewpoint. However, for corporate B2B brands research demonstrates the necessity of perceiving all stakeholder values when measuring brand performance (Pranjal and Sarkar, 2020). Further research builds upon the importance of brand relationships within the corporate brand and echo existing literature that holds this as a central component to the corporate brand but includes corporate business culture, corporate identity and personality as other influential components that can develop a successful corporate brand, which can improve brand performance for the B2B organisation (Ozdemir et al, 2020).

The development and mutual learning process of B2B corporate brands is discussed within the B2B branding literature. During the initial commencement of corporate brand creation within a B2B environment it is thought that the process is intensive and susceptible to external influences. It is also developed through the mutual learning process between a company and its stakeholders (Vallaster and Lindgreen 2011; Törmälä and Jones, 2017). This is again expressed by Simoes et al (2015), who discuss an interesting point raised in the literature regarding digital corporate brands and the elements needed to express this in a digital manner. For B2B settings, these elements for corporate brands are said to include values, personality, sustainability, heritage, and demographics, as these enable company management to both express and enhance the digital corporate brand through online platforms (Simoes et al, 2015). The communication of the elements that make up the corporate brand to the customer and stakeholder networks is essential in the development process. Blomback and Axelsson (2007) contribute to corporate brand theory and corporate communications theory by studying the impact of the corporate brand in relation to the selection of a subcontractor. This has been captured through a qualitative interview study, in which four key themes were found to capture how corporate brands appear in relation to the selection of new subcontractors: a competitive climate and stepwise selection; buyers' limited rationality; the influence of risk perception; and the impact of human characteristics in the absence of formal guidelines.

2.3.5. Trust: Are B2B Brands a signifier of Trust?

Brand building has become increasingly important in markets where consumers look to the brands as a signifier of trust. Numerous studies in the B2B literature focus on fostering B2B brand trust, as this influences how customers perceive brand reputation (Cawsey and Rowley, 2015; Taiminen and Ranaweera, 2019). *"A better brand reputation has been found to give the buyer a greater feeling of assurance of the product quality, which leads to a greater willingness to pay a price premium"* (Cawsey and Rowley, 2015, pg. 756). Strong brands are expected to create associations which foster confidence and loyalty in the consumers' minds and minimize feelings of risk (Gomes, Fernandes and Brandao, 2016). Biedenbach et al. (2019) argue that relational trust in B2B environments is based on the customer's belief that the company can fulfil its contractual agreements and assist with any problems. They suggest that this belief is founded based on past interactions, which in turn shape customer beliefs about future interactions with the B2B company. Tamine and Ranaweera (2019) also discuss customer interactions as a driver for brand trust but suggest that it develops because of customer sense making based on these various brand related interactions. These 'sense-making' interactions can derive from helpful brand actions whereby the firm aids customers with B2B brand knowledge and demonstrates a willingness to share their knowledge with customers, triggering consumers' cognitive emotional brand engagement. It is argued that brand trust triggers the consumer's cognitive emotional engagement through the ability to reveal their knowledge allowing brand trust to transfer helpful actions towards the customers whilst signalling the brand's benevolence and willingness to share this with the customer (Taiminen and Ranaweera, 2019). The development of legitimacy and credibility within the B2B industry is something many organisations have been striving towards in recent years. Given the influence of the digital environment and the level of connectivity experienced by all actors, the language portrayed by the B2B brand is hugely important in framing brand legitimacy. Firms should utilise strategies such as brand stories, narratives, and discourses to influence their position (Gustafson and Pomirleanu, 2021).

Roberts and Merrilees (2007) have also discussed the roles of responsiveness, empowerment and strong branding when signalling trust within the B2B service firm. They have demonstrated that responsiveness and empowerment are critical in the development of trust between B2B service firms and customers, but the development of a strong brand will further foster trust and aid customer retention (Roberts and Merrilees, 2007). Evidently, numerous studies investigate the elements which contribute to brand trust, which vary significantly within the B2B branding literature as it is argued that brand trust is fostered and positively impacted through brand image and brand orientations (Dludla and Dlamini, 2018) and brand sensitivity (He, Huang, and Wu, 2018). However, throughout the research the consistent repetition of strong brand and positive customer interaction demonstrates that these elements are well-researched and at the forefront of the B2B brand trust literature (Roberts and Merrilees, 2007; Cawsey and Rowley, 2015; Gomes, Fernandes and Brandao, 2016; Taiminen and Ranaweera, 2019; Biedenbach et al, 2019).

2.3.6. Consumer: Consumer experience in B2B branding

Numerous studies in B2B branding research focus on customer experience and how this experience shapes their attitudes, feelings, and purchase intentions. This experience has been studied on various occasions to investigate the impact on brand equity (Kuhn, Alpert, and Pope, 2008; Biendenbach and Marrell, 2009). Blois (2004) states that brand value must be considered from both the customer's perspective and the value to the owner: *"Unless customers perceive value in a brand, then it has no value to its owner."* (Blois, 2004, pg. 24). Various studies discuss the benefits that a positive brand image can have on consumers in the B2B industry. Consumers are prepared to pay a premium price when presented with a strong or positive brand image in B2B businesses (Beverland, Napoli and Lindgreen, 2007; Davis et al, 2008). It has been suggested that brand image has the most importance of the brand attributes from the consumer's perception as a strong brand image will enhance differentiation and become a positive influence on the consumer's purchasing behaviour

(Kuhn, Alpert, and Pope, 2008, pg. 40; Davis et al, 2008). Consumers perceive a company with a strong and positive brand image to be reliable with regards to their supplier ability (Aspara and Tikkanen, 2007). Therefore, it is in the company's interest to differentiate itself through developing a distinctive brand image which keeps the customers in the centre of their proposition (Davis et al, 2008). When the brand image is well received by consumers and the brand equity is high, consumers within the B2B markets are likely to engage in positive word-of-mouth communications (Beverland, Napoli and Lindgreen, 2007).

Both Biendenbach and Marrell (2009) and Kuhn, Alpert, and Pope (2008) present conceptual models on the impact of customer experience on brand equity in B2B settings, with Kuhn, Alpert, and Pope (2008) presenting a revised CBBE model, taking into consideration the varying dimensions for a B2B environment. The corporate brand has been used to assess the revised CBBE in the B2B setting as this has been deemed the more appropriate approach in examining brand equity. There is a greater emphasis on selling the corporate brand, including their credibility and employees rather than selling the individual product brands and their brand equity dimensions (Zaichkowsky et al, 2010). Several changes have been made from Keller's original CBBE pyramid, including 'sales force relationships' replacing 'customer feelings and 'reputation' replacing 'imagery.' These replacements have changed the focus towards intangible B2B brand assets and emphasise the importance of how customers understand *"who the company is and what it stands for, before relationships can be built" (*Zaichkowsky et al, 2010, pg. 777). However, criticisms surrounding the application of B2C models in B2B environments are present in recent literature and indicate that models need to be constructed directly for B2B markets due to the fundamental differences in B2B and B2C markets (Keränen et al, 2012). Further studies, including Biedenbach and Marrell (2009), have investigated customer impact on brand equity in B2B settings and presented a conceptual model investigating the effects that customer experience has on brand equity, specifically in B2B service settings, which shows the hierarchy and inter-relationship between the dimensions: brand awareness, brand associations, perceived quality, and brand loyalty. This research extends knowledge in the B2B context by examining the direct and indirect effects of customer experience highlighting *"the importance that a direct interaction between a customer and a service provider, and the experience formed as a result of this interaction, have on the development of B2B brand equity"* (Biedenbach and Marrell, 2009, pg. 455).

2.3.7. Industry Brand Position: Importance of Brand Positioning in B2B Industries

Brand positioning is recognized as a critical and highly influential component in corporate strategy. Until recently, this has been a relatively under-researched area in B2B branding research, but it has started to receive more interest due to the homogenization of products and services in B2B markets and the effects of brand positioning on brand performance, brand differentiation and competitive advantage (Huang and Wu, 2018; Virtsonis and Harridge-March, 2008; Iyer et al, 2019). *“Products in the B2B market often have identical physical and performance specifications, and differentiation can be hard to achieve. However, there is usually one market leader who maintains high market share, even at a premium price”* (Alexander et al, 2009, pg. 2). Brand positioning aims to occupy customers' minds through designing the firm offerings by undertaking various activities in a different way from their competitors and this can be conveyed through the marketing mix and communicated to customers through various media outlets, including the internet (Virtsonis and Harridge-March, 2008; Iyer et al, 2019).

In a highly saturated and competitive marketplace, differentiation is essential. However, strategies directly focused towards improving brand position typologies are directed towards the B2C markets and are arguably limited in their application within B2B markets. Various factors prevent the generalizability of B2C positioning strategies towards the B2B markets, including the sales led culture, the personal interactions between buyers and sellers in B2B markets and the marketing or advertising activities (Iyer et al, 2019). These brand positioning strategies should be developed through brand managers and be aligned closely with the companies' competitive strategies, as this is essential for brand transformation (Lau and Lim, 2017; Iyer et al, 2019). The implementation of these strategies in the B2B branding literature varies between goods-related and service-related contexts and can portray different meanings to customers: a goods-related brand positioning strategy is more likely to drive brand satisfaction in comparison to a service-related one. This is more likely to stimulate a customer’s emotional commitment and become a driving influence for brand loyalty (Cassia, Cobelli and Ugolini, 2017). One strategy that has been used in brand positioning strategies is corporate social responsibility (CSR). Yousseff et al (2017) have argued that CSR can be used to influence distributors’ purchase decisions as it can add to brand trustworthiness, value-added uniqueness, and loyalty (Lau and Lim, 2017). Virtsonis and Harridge-March (2008) have discussed digital positioning strategies through developing ten online brand positioning elements for B2B firms. This, however, only references a company’s website and does not extend to wider digital platforms. Digital brand positioning for B2B markets seems to have been relatively overlooked, but with the ever-growing importance of digital strategies for B2B markets research in this area should be expanded in the future (Virtsonis and Harridge-March, 2008). Recently emerging literature has built upon the existing understanding of brand management strategies and determined that different types of B2B brand types exist, achievement competencies branders, awareness competencies branders, novice competencies branders and no-competencies branders. This addition to the literature lays importance of the evolution of B2B brands and paves the way for managers to build and create strong brands and brand positions (Lin and Sui, 2020). The orientation built through these strategies is noted to correlate directly with relational performance, particularly with supplier co-branding (Chang et al, 2021).

2.3.8. B2B Marketing: Influence of B2B Marketing Strategies on B2B Companies

The differences prevalent between B2C and B2B customers and their decision-making process drives the need for alternative marketing strategies within the B2B markets, which traditionally have been overlooked. The focus on more functional benefits for B2B customers over hedonic benefits has traditionally limited the experiential marketing strategies often documented within the B2C markets (Österle, Kuhn and Hensel, 2018). Recently, however, management literature has seen an increase in marketing strategies directly shaped towards the B2B markets, with most researchers adopting Aaker's Brand Personality Framework as the theoretical basis. This has been strongly criticized, with its failure to be applied in cross-cultural settings, negating the application transference to many larger B2B companies. Unlike the B2C market, there is almost no research which bases B2B brand concepts on human values and incorporates this into the corporate brand (Huang and Wu, 2018). When discussing strategies to market B2B companies, brand innovation and orientation are continually mentioned (Leek and Christodoulides, 2012; Lau and Lim, 2018; Zheng, 2019). Innovative strategies mentioned in the literature focus on the leveraging of digital platforms and brand equity improvement strategies such as co-branding, but these are still relatively under researched areas of the current B2B branding literature and need to be advanced. Two of these researched strategies include digital social media strategies and brand equity improvement strategies (such as co-branding or co-creation), although the co-branding literature is scarce within B2B contexts and no papers discuss the possibilities of combing these two strategic elements, digital co-branding (Kalafatis, Remizova and Singh, 2012; Kumar and Moller, 2018; Mohan et al, 2018). Hsiao et al (2020), recently investigated the influence of large national fashion brands on the popularity of independent private fashion brands on social media. This study concluded that the smaller fashion brands were able to benefit from positive spillover effects, improving both the popularity and financial return. This paves the way to developing knowledge on social media marketing strategies that can assist B2B brands to leverage desirable brand components (Hsiao, 2020).

B2C markets have benefited from the rapid growth of social media platforms and have incorporated the use of these platforms into their marketing communication strategies. This growth has led some marketing research to investigate how social media strategies can be leveraged to benefit B2B firms, particularly in relation to building brand equity and familiarity around their corporate brand (Kumar and Moller, 2018). Whilst challenges exist in the implementation of social media strategies within B2B organisations, research has demonstrated that the use of social media in a B2B context can assist in improving brand value, customer segmentation and employee selection processes (Tiwary et al, 2020). Further exploration of B2B social media marketing could address the gaps in this area. This is similarly the case with co-branding strategies. In the B2B marketing literature, co-branding has been identified as a marketing strategy. Kalafatis, Remizova and Singh (2012) built upon the existing B2C co-branding literature and focused on the roles and level of brand equity versus the success of the co-branding alliance. It was found that the brands with lower brand equity benefited more when co-branded with brands with higher brand equity. This also suggests that dominant co-branding partners gain a higher proportion of functional benefits when entering a co-branding partnership (Kalafatis, Remizova and Singh, 2012). Mohan et al. (2018) discuss the use of co-branding to bridge perceived brand globalness and perceived brand localness between well-known B2B brands and less well-known B2B brands. Discussion surrounding the benefits of co-branding is limited within the B2B context, but there has been a focus on the topic of 'positive spillover', which is the leveraging of the positive brand equity elements from one brand to another brand within an alliance or co-branding strategy. This positive spillover is then communicated to the customer to demonstrate the enhanced value propositions (Mohan et al, 2018). Co-branding research is limited when applied specifically to the B2B industry and does not have any evidence of being tied to the increasing body of B2B literature, which focuses on the use of digital platforms or digital marketing strategies (Virtsonis and Harridge-March, 2008; Kalafatis, Remizova and Singh, 2012; Simoes et al, 2015; Kumar and Moller, 2018). Recent emerging literature calls for an understanding of various components including value co-creation and coopetition within digital marketing. Further research within these areas could assist in understanding the future trends of B2B branding in a digital sense, paving the way for the digitalisation of B2B relationships (Hofacker et al, 2020). Expansion on research within these domains could enhance both the theoretical and practical knowledge of marketing strategies directly focused towards the B2B markets and close the current research gap.

2.3.9. Brand Management: Factors Impacting the Management of B2B Brands

Brand building requires the necessary investment in strategic, financial, and human resources, which can be costly and time consuming but the neglect and deficiency in focus of managerial attention towards brand management can deliver suboptimal performance and lower brand value (Xie and Zheng, 2019; Guenther and Guenther, 2019). Managerial focus within B2B SME's is concentrated on the improvement of strategic orientations which enhance brand performance (Rehman and Johnston, 2019). This suggests that the development of brand orientations through managerial decision making should promote strategic entrepreneurship among managers within the company (Chang et al, 2018). The importance of brand strategy investment is repeatedly acknowledged (Blackhaus et al, 2011; Cassia and Magno, 2019), demonstrating that different brand strategies are required for different types of B2B environments, which will allow managerial decisions to ensure optimal use of marketing resources (Cassia and Magno, 2019). This is particularly quantified within the B2B service brand market (Guenther and Guenther, 2019). However, the strategic decision making within B2B environments is known for its risk averse nature. Therefore, managers need to overcome this with innovation, pro-activation, and competitive aggression (Chang et al, 2018; Reijone et al, 2015). To decrease the risk averse nature of decision making, managers should base their decisions on a clear vision or the core values of their brand and continue to behave in this manner in relation to customer requests. This means that to prevent sub-optimal performance, managers will have to ensure that they do not endlessly adapt to all customer needs but act in line with their brand vision (Rehman et al, 2017; Tarnovs et al, 2016). These decisions can lead to how customers perceive a brand, as it is suggested that brand image is manifested through customers' minds rather than unilaterally, which demonstrates one of the main bridges highlighted within the research between decision making and customer relationships (Cassia et al, 2017). The extent of this is debated within B2B environments, as Veloutous and Taylor (2012) suggest that within the B2B environment this relationship is more complex as manufacturers are found not to appreciate the human characteristics of a brand as much as customers. This means that managerial decisions need to be strategically different when dealing with varying customer types in the B2B industry (Veloutous and Taylor, 2012). This explains why a rational approach to decision making is often used rather than an emotional decision-making process (Lindgreen et al, 2010; Verster et al, 2019). However, this area of research needs expansion as Hutt and Speh (2010) (Verster et al, 2019) argue that B2B managerial decision making is not only rational but is justified emotionally. Lastly, within the brand management literature, communication efforts are discussed as a key factor, as interactions at all stakeholder levels aid the co-creation of branded experiences, which in turn develop interpersonal business relationships (Österle, Kuhn and Henseler, 2018). It is argued that these interactions establish the brand identity as brand identity is not core, distinctive and enduring, but is an outcome of brand management's response to the influences of the stakeholder's network (Tormala and Gyrd-Jones, 2017).

2.4. Directions for Future Research

The review of the B2B branding literature has made it possible to identify various gaps in the research that demonstrate areas which need to be approached in future B2B branding research. These have been focused into three core areas: B2B brand management, B2B digital branding and B2B branding strategies.

2.4.1. Brand Management

Emotional versus Functional Brand Management Strategies

Much debate centres on the level of emotional and functional touchpoints when driving brand management strategies in B2B companies (Veloutous and Taylor, 2012; Verster et al, 2019). Further research could continue the exploration of optimal B2B brand management strategies and identify the extent of the shift from functional based brand management strategies towards emotional based brand strategies within B2B markets in recent years. Research into the optimal balance of functional and emotional based brand strategies in the B2B markets would contribute to the current theoretical argument by determining whether a shift away from functional based brand strategies has occurred. Determining whether, or the extent to which, this shift has occurred would drive B2B organisational brand strategy in the future as this would enable managers to implement optimally balanced emotional or functional brand management strategies.

Human Values in B2B Brand Strategies

Unlike in the B2C markets there is currently minimal research which incorporates human values into B2B brands, given that brand values are said to originate from Schwartz's general human value system which suggests that brand "values represent abstract representations of desired end-states that guide people in their pursuit of human needs for living, including individualistic needs and collective needs" (He, Huang and Wu, 2018). By building on B2C research, the impact of human values in B2B brands could be examined further to identify whether these values improve B2B brand performance. Research into this area could emphasise how B2B brands could utilise human values in their brand strategies and the impact of this, which in turn could drive brand management decisions in B2B organisations. Theoretically, the extent to which human values have an impact has not been studied in relation to B2B industries. Future research in this area would deliver theoretical contributions for B2B brand strategies.

2.4.2. Digital Strategies

Digital Strategies for B2B Branding

Most of the literature focuses primarily on traditional B2B elements, limiting the growing need for digital strategies to aid brand development, growth or positioning within B2B environments. Some research has touched on the digital elements within B2B branding in recent years, but more research would be necessary to further explore this research gap as this could identify the impact of digital strategies within B2B marketing, particularly in various industry types and company sizes. More research in this area would enhance both theoretical and organisational contributions on the impact of digital strategies in B2B markets and enable B2B managers to implement digital strategies based on specific B2B research outcomes.

Social Media in B2B Branding

The use of social media in a B2B branding context has been under researched, as many strategies derive from recommendations on the B2C market due to the success of utilizing social media platforms in B2C environments (Kumar and Moller, 2018). Whilst some B2B social media research has been conducted within B2B environments (Michaelidou, Siamagka and Christodoulides, 2011) this is outdated in such a rapidly growing and changing sector and does not consider the exponential growth of certain B2B social media platforms such as LinkedIn in recent years. Further exploration of new changes and aspects of specific social media strategies for B2B markets, including new digital platforms, would advance the understanding of B2B branding within this area (Cawsey and Rowley, 2015). Advancements in this area of research would aid organisations to drive social media strategy in B2B industries and expand on the current theoretical knowledge in this area by understanding the impact of social media on B2B branding and the various platforms involved.

B2B Decision Making Influences on Digital Platforms

None of the reviewed studies discuss how branding influences B2B purchase decision making in relation to digital platforms. The factors affecting decision making in B2B markets have been widely discussed but discussion surrounding the impact of digital focused strategies on purchase decision making is non-existent. Further exploration could identify if and how digital strategies affect the purchase decision making process and key differences between branding influences on traditional B2B decision making and digital B2B decision making. This could be enhanced farther through researching the differences of digital branding influences between B2B and B2C markets. Theoretical development within this area could shape practical future strategies for B2B organisations to implement and identify the optimal elements (e.g., emotional, and functional) for customer purchase decision making.

2.4.3. B2B Brand Strategies

It is noted throughout the literature review that B2B brands are subject to risk averse decision making, which should be overcome through innovate managerial strategies. However, exploration into these innovative strategies within a B2B environment is somewhat limited (Reijone et al, 2015; Chang et al, 2018). Within the B2C markets these strategies are widely discussed and include strategies to enhance brand equity transfer, improve brand performance, awareness, and trust.

Brand Equity Transfer in B2B Markets

Various strategies have been researched in B2C markets which allow companies to benefit from transferred brand equity or positive brand spillover from another company. One of these strategies is co-branding (Kalafatis et al, 2014). Co-branding research is well developed in the B2C market but application within B2B markets is less common. Evidence suggests that B2B firms can also experience the positive effects from co-branding (Kalafatis, Remizova and Singh, 2012; Mohan et al, 2018).

However, this research has not been developed significantly. Future research should examine the various effects of co-branding on individual dimensions of brand equity such as brand awareness, brand image, brand loyalty and trust when conducting a co-branding strategy with two B2B companies or B2B and B2C companies. This should be researched from various perspectives, including the impact of a less known brand versus a well-known brand, as these factors may impact the organisational contributions.

Human Capital in B2B Branding Strategies

The lack of research surrounding human values within B2B branding indicates a research avenue in which to distinguish whether B2B brands can also benefit from utilising human capital and values within their branding strategies and whether this can increase their brand performance (Huang and Wu, 2018). This could be further explored by identifying whether utilising human capital on digital brand strategies has an impact on digital brand performance (Biendenbach, 2018). Further research on this topic would enable the advance of B2B strategies in B2B organisations and provide theoretical contributions surrounding the impact of human capital when applied directly to B2B branding.

2.4.4. Implications of findings in the context of B2B Branding

This review aimed to examine the current literature by reviewing and analysing B2B branding research systematically to provide a comprehensive overview of the current research in this area, allowing for identification of research gaps and providing directions for future research. This review of the literature is focused on enhancing the knowledge within B2B branding literature, B2B brand management and B2B brand strategies by providing an up-to-date review of the literature and viewpoints, allowing the gaps to be analysed and critiques of the current research to be identified, ultimately providing directions for future avenues. Through doing this, the aim has been to provide both theoretical and organisational contributions in B2B branding and subsequent areas of research. The literature identified several research gaps and potential areas for future research, including digital strategies for B2B branding, social media strategies for B2B branding, influences on B2B digital decision making, co-branding, and brand management specific to B2B environments. The proposed areas outlined endeavour to present directions for future research that will advance the theoretical and practical understanding of B2B branding. The identification of these research gaps demonstrates that both B2B co-branding and B2B digital co-branding are areas that require exploration. This systematic review of the B2B branding literature provides a basis on which to advance the knowledge and understanding around the gaps in three distinct areas: brand management, digital strategies and brand strategies. These three areas incorporate more granular research avenues which includes the need for further exploration into brand equity transfer strategies such as co-branding. The existing research within this area shows that B2B brands are able to benefit from co-branding effects but knowledge around the specificizes that drive this impact. The overarching findings from this review substantiate the importance of branding within B2B environments and demonstrate the importance for branding in driving purchase decisions within this area. This systematic literature review has provided a solid foundation in which the reader can understand the importance of branding within B2B environments and the need for further exploring the outlined research avenue. Therefore, the following section of this literature review will explore some of the outlined research avenues suggested in this systematic review by reviewing the current body of co-branding research and B2B digital branding research.

2.5. Co-branding

The research directions deriving from the previous systematic literature review indicate a lack of branding research amongst B2B organisations, particularly in reference to brand equity transfer strategies, digital strategies, and the utilisation of social media in B2B branding. The following section of the literature review will delve into prominent points derived from the directions for future research. Two key areas will be reviewed, firstly a review of the brand equity transfer strategy, co-branding, and the implementation of this on digital channels including social media platforms.

2.5.1. Benefits of Co-branding

The entities within the co-branding partnership attempt to construct a favourable brand image through partnering with the other entity, enabling consumers to form or carry over those positive brand associations to either brand (Korchia, 2004). The conception of co-branding or brand alliances has developed from an understanding of brand theory and that, *"by making a connection between the brand and other entity, consumers may form a mental association from the brand to this other entity and, consequently to any or all associations, judgements, feelings, and the like linked to that entity."* (Keller, 2013, pg. 261) Co-branding can assist organisations in eliciting certain associations from the partner brand to target a specific set of consumers (Priluck, 1997). The elicitation of desirable associations can assist in conditioning the target consumers to associate the brand with the favourable associations from the partner brand. This is referred to as classical conditioning and can help in shaping consumers' perception towards the brand and, therefore, managers will have to carefully consider the associations of the brand they want to collaborate with (Priluck, 1997). This has been conceptualised from cognitive theories such as Anderson and Bower's (1973) Human Associative Memory Model (Cunha et al, 2014, pg. 1286). The HAM Model has successfully been applied to the wider branding context, including brand extensions, brand performance inference making, brand image communications and brand dilution (Broniarczyk and Alba, 1994; Kardes et al, 2004; Sjodin and Torn, 2006; Pullig et al, 2006; Cunha et al, 2014). When examined against solo-branding, co-branding has shown than consumer perceptions, both functional and symbolic, were consistently higher from a non-co-branded condition (Yu et al, 2022). Co-branding can enable consumers to form *"new brand associations"* or change existing brand associations. Positive or negative brand associations directly link to how consumers perceive brands, which can significantly impact the success of a brand's entity (Keller, 2013, pg. 261). The understanding of these brand associations is rooted in cognitive and memory theories, which provide a basis for understanding the reasons why companies implement co-branding strategies. The potential for positive brand associations is a desirable trait for entities and often provide the reasoning as to why companies consider entering such co-marketing partnerships, like co-branding (Lee and Decker, 2008). Emerging research is continuing to add to the existing benefits of co-branding by demonstrating a positive relationship by the addition of co-branding in strengthening a B2B organisation's brand orientation relational performance (Chang et al, 2021).

The increasing popularity of co-branding research may be linked to the demanding competitiveness within the business world today and how companies can use co-branding to leverage growth opportunities without the steep introduction cost of new products, the reduction of failure probabilities and the "*offer of growth opportunities for both players to reach a new market."* (Lee and Decker, 2008, pg. 2). Co-branding is said to enable the leveraging of certain brand associations that impact an individual's perception of a brand, the level of value they place on brand equity and it can influence the level of interest within a certain brand (Korchia, 2004, pg. 2). By creating a link through co-branding strategies, the 'other entity' aims to create a positive association between their brand and the desirable attributes of the entity they are co-branding with, most commonly to achieve a desired gain for themselves either financially or non-financially. Previous literature has pointed out that companies most commonly pursue a co-branding strategy for financial gain but also noted that non-financial incentives are also achievable. These non-financial benefits may include (but are not limited to) the reduction of failure probabilities, (Chiambaretto and Gurau, 2017) the improvement of corporate social responsibility or ethical positions (Senechal, Georges and Pernin, 2014), the perceived globalness and localness (Mohan, Brown, Sichtmann and Schoefer, 2018), brand image repair (Maehle and Supphellen, 2015) improved brand image or signal of product quality (Rao and Ruekert, 1994) and changing consumer perception (Washburn, Till and Priluck, 2004). Recent research has called for research on co-branding to be conducted longitudinally, identifying longer term effects on brand performance and customer perception (Pinello et al, 2022). Co-branding literature has also explored the negative effects that potential partnerships can create. Researchers have demonstrated the neutral or negative effects it can have on either one or both partners. This happens when the favourable associations with one brand do not transfer to the other brand, or negative associations (for example: due to a crisis) are passed on, resulting in a negative image impairment. This can be understood further through brand equity transfer (Geylani et al, 2008; Singh et al, 2019).

Brand equity transfer within co-branding has been discussed broadly in the literature within a B2C setting. Brand equity transfer is defined as when the collaboration of brand equities in co-branding partnerships creates a spill-over effect, either positively or negatively from one brand to the other. This means that "*an attitude toward a co-branded product influences subsequent impressions of each partner's brand such that positive spill-over effects emerge*" (Suh and Park, 2009, pg. 243). Within consumer research emphasis has been focused on how the meanings of a brand can be transferred to another brand during co-branding and how the residual spillover effects occur. This research stems from the importance of symbolism in idea consumption, both functionally and emotionally (Park et al, 1996; Simonin and Ruth, 1998, Washburn et al, 2000; Askegaard and Bengtsson, 2005). This transfer of brand equity in the co-branding literature is referred to as brand spillover. Brand spillover can either be positive or negative, indicating the need for companies to select their alliances carefully to ensure that collaboration with poorly perceived brands does not create a negative spillover effect (Singh et al, 2019). Alternatively, an alliance chosen correctly can create a positive spillover effect for both parent companies as well as the co-brand.

"*When brands enter into a co-branding partnership, they bring a certain level of brand equity into the situation and these equities can be either equal (symmetry) or unequal (asymmetry)"* (Koschate-Fischer et al, 2019, pg. 761). Ideally, co-branding should be mutually beneficial to all entities involved. If one company's brand is more valuable than the other in a partnership, they should have no incentive to share through co-branding. Not only could a firm obtain no benefit from a specific partnership, a co-branding strategy implemented incorrectly could also "*result in relinquishing a competitive advantage that has been acquired at a significant cost*" (Chiambaretto and Gurau, 2017, pg. 104). Co-branding strategies in practice have been reported to occasionally have unequal benefit to the entities involved and existing examples within academic literature reflect upon instances where co-branding initiatives have caused detrimental effects to one or more of the bodies. Therefore, to achieve benefit from co-branding strategies, the selection of alliances is of paramount importance. *Considering a brand alliance between a moderate favourability host brand and a high favourability partner brand, one would expect a positive spillover of the brand alliance on a host brand to emerge because consumer evaluation of a co-branded product between these two brands becomes positive based on the cognitive response account"* (Suh and Park, 2009, pg. 243). Although organisations strive to create alliances with high quality brands, previous research shows that this may cause increased negative consequences for the host brand. Researchers have demonstrated that "*individuals who are favourably predisposed to message appeal are more persuaded by a moderate-credibility than a high* *credibility message source because individuals are not highly motivated to retrieve thoughts that are presumably positive, or the high credibility message source advocated a view that individuals initially favour*" (Suh and Park, 2009, pg. 243). Pinello et al (2022) have called for further exploration into the dimensions involved for partner selection within co-branding, suggesting that future avenues should delve into learning-related and risk-related factors.

2.5.2. Application of Co-branding in Organisations

The concept of co-branding and the wider concept of co-marketing campaigns in the academic literature has identified the positive and negative differences between co-branding partnerships from the perspective of smaller or unknown brands and larger or well-known brands, alongside a range of business models (for-profits, non-profits, public and private sectors) (Tschirhart, Christensen, Perry, 2005, pg. 68). To drive value, co-branding partnerships are normally established within a step of the partner organisation's value chain or from different industries altogether (Pinello et al, 2022). When a brand collaborates with another brand which has higher levels of brand equity it can "*improve the perceived brand equity of the co-branded product and thereby generate positive spill-over effects*" (Shen et al, 2017, pg. 174). Therefore lesser-known brands often turn to co-branding strategies with "*external entities that already possess valued associations in the hope that these desired associations will transfer to the new brand,"* (Keller, 2003; Cunha, Forehand, and Angle, 2014, pg. 1284). This is the goal for many co-branding partnerships, but both brands should mutually benefit, otherwise the larger brand has no incentive to share their brand (Chiambaretto and Gurau, 2017; Koschate-Fischer et al, 2019). However, a negative spill-over effect occurs when one of the companies in the co-branding partnership has negative effects on the other's brand equity and ultimately hurts the brand equity of the partner (Shen et al, 2017, pg. 174). This not only occurs by selecting the wrong partner but may also arise if a crisis occurs within one of the partners, weakening the brand equity of the other partner, unless they have an effective mitigation response strategy (Turan, 2022). This emphasises the importance of partner consideration when initiating a co-branding partnership, as co-branding with low quality brands can create negative spill-over, creating the opposite reaction to what was intended. Cunha et al (2014) utilise an adaptive learning perspective on how consumers evaluate a lesser-known brand and how the influence of brand spillover in co-branding affects this. Aside from this, the literature stresses the adaptive processes that may influence how consumers evaluate the heretofore-unknown brand. This has been further discussed more recently in relation to the benefits of a mass brand leveraging elements of the favourable brand equity, such as brand image, from a more luxury brand, enabling increased media coverage (Shan et al, 2022).

The application of co-branding strategies within a B2B environment has only emerged in recent years, B2B co-branding strategies are significantly behind and sparse in comparison to its B2C counterpart. Numerous researchers have marked this as an important oversight due to the numerous and significant distinctions between B2B and B2C markets (Kuhn et al, 2008; Mohan et al, 2018). Drawing on B2B branding literature, the late emergence of research in this area may be due to the suggested importance of functional attributes for consumers in the past, in comparison to emotional attributes, such as branding, which have been closely linked to B2C industries. Increasingly, research that has emerged over the past decade has started to demonstrate the importance of emotional attributes such as branding for B2B industries. Due to this, B2B companies are increasingly relying on strategies that leverage emotional attributes within the brand, such as co-branding or co-promotion strategies to leverage certain positive equity-related aspects of their alliances brand (Mohan et al, 2018). Initial exploration into the differential impact of brand equity within B2B co-branding was conducted through a scenario quantitative analysis within multimedia software brands examining the benefits derived from co-branding with brands holding varied levels of brand equity. The researchers demonstrated that brand equity was transferrable between high and low equity brands asymmetrically, whilst B2B brands operating at a similar equity level shared the benefits symmetrically. Limitations have been highlighted by the authors within this study and include the partially hypothetical setting that is used within the methodology and the measurement of results against a pre-defined set of benefits. Although this research provides an initial and interesting exploration on the effects of B2B co-branding on brand equity, the study limitations and singular industry focus demonstrate interesting research areas that if addressed and closed could significantly advance the understanding of the effects of B2B co-branding on brand equity (Kalafatis et al, 2011). Further studies, including Mohan et al (2018), have explored the effects of co-branding on perceived globalness and localness within B2B brands, utilising the Signalling Theory framework to identify effects on buyers' quality evaluations of an unknown B2B brand when co-branded with a well-known global brand. Despite the research findings of brand globalness on decision making within B2B settings remaining inconclusive, the researchers have paved the way to exploring and continuing the examination of co-branding within B2B settings (Mohan et al, 2018). B2B co-branding literature continues to call for further advance on the existing research, demonstrating that significant research gaps still exist that would advance both academic and practical understanding within this subject (Kalafatis et al, 2011; Singh et al, 2016; Mohan et al, 2018). Recent research has examined current gaps within the co-branding literature, showing that the context in which co-branding partnerships emerge is under researched and researchers have called for understanding around the managerial process in forming and implementing a co-branding partnership (Pinello et al, 2022).

2.5.3. Digital Co-branding

Research focusing on the impact of co-branding on digital platforms is limited. However, the evolution of digital technologies and the behavioural changes of both firms and customers demonstrates that advancing research in this area is necessary (Borges-Tiago et al, 2019). The influence of digital platforms, including social media and the general web is the driving factor behind the recurring recommendations within the literature to research the effects of branding strategies within a digital platform or space. An increasing range of strategies for branding has been identified in the literature; however, the concept of digital co-branding seems to be somewhat limited. Emerging studies of digital co-branding have focused primarily on social media and celebrity endorsements and are yet to expand into various industries or the effect on brand equity (Hanna and Rowley, 2015; Borges-Tiago et al, 2019; Mankevich et al, 2019; Weeks et al, 2021).

Hanna and Rowley (2015) developed the 7C's of digital strategic brand management to help managers with understanding the importance of digital spaces in this digital age. One of the 'C's' within the framework incorporates the concept of co-branding, namely, collaboration. This demonstrated that co-branding within the digital space could assist in the communication of strategic links between brands, with the aim of enhancing overall place brand equity. However, no elaboration or discussion exists that focuses on the actual effects of co-branding through digital spaces on brand equity or the dimensions of brand equity (Hanna and Rowley, 2015). Further exploring digital co-branding through celebrity endorsement on digital platforms, Mankevich et al (2019) investigate the effect on sentiment and emotional analysis through social media platforms, illuminating how digital platforms can utilize co-branding to generate consistent emotional responses (Mankevich et al, 2019). The findings demonstrated that the audience reacted positively to the digital co-branding initiative, increasing emotion and sentiment in certain settings (Mankevich et al, 2019). Digital co-branding using celebrity endorsements is echoed by a recent study from 2019, which has continued to demonstrate positive influences on brands. Borges-Tiago et al (2019) explored the effects of co-branding on the convergence of brand personality, using celebrity endorsements and an international hotel group through digital platforms such as Facebook, Twitter, and TripAdvisor. This study demonstrated that the perceived brand personality was influenced, in part, through celebrity endorsements on digital platforms (Borges-Tiago et al, 2019).

Whilst the emergence of these studies is a starting point for digital co-branding and demonstrates a promising future for digital co-branding as a strategy for organisations to leverage, it is still in its infancy. Many areas of digital co-branding still need to be explored, including digital co-branding within B2B organisations. This is due to the increasing influence that technology and digital platforms have on both organisations and consumers, which is demonstrated in the wider B2B branding literature (Graham and Mudambi, 2016).

2.5.4. Co-branding on B2B Social Media

Co-branding in the B2B social media literature is scarce, but the emerging literature surrounding the use of social media by B2B brands is demonstrating its increasing importance. *"Social media marketing capability comprises four-layered abilities: the ability to connect, engage, co-ordinate and collaborate in interaction with business exchange partners. It rests on social media's ability to create activities and resources in the interaction between the entrepreneurial firm and its B2B partners*." (Drummond et al, 2020, pg. 1250) The role of social media has changed from an information-providing platform for organisations to a networking platform used to support the organisation's marketing aims and improve consumer engagement. This move towards social media as a marketing tool has been widely adopted within B2C companies. However, until recently B2B companies had not adopted social media within their marketing strategies so readily (Dwivedi et al, 2019).

By 2021, social media platforms were projected to have over 3 billion users across the globe (Statista, 2017; Silva et al, 2020). The existing data from 2022 sets this number closer to 4.85billion, over 59% of the global population (Data Reportal, 2022). The potential reach and customer acquisition possibilities of social media have grown vastly in recent years and show little signs of slowing down (Drummond et al, 2020). It has become an undeniably powerful activity for any business, initially becoming established in B2C organisations (Lopez-Lopez and Giusti, 2020) and has more recently started to reshape marketing within B2B organisations through increased digitalization by changing the way consumers *"communicate, collaborate, consume and create"* (Drummond et al, 2020). Although the uptake of social media usage has been slow to emerge within B2B organisations, recent literature is demonstrating that this has become a growing area of interest and that using social media within B2B contexts can have significant benefits (Sundstrom and Alm, 2020). However, as social media substantially differs from other marketing channels it is imperative that organizations, particularly within the B2B industry, develop new approaches, both strategically and tactically to deal with the type of differentiation within the marketing channel of social media (Silva et al, 2020). Coupling this with the high levels of competition in the current B2B environments, organisations have to ensure that, firstly, their social media marketing strategies achieve optimal levels of return on investment (ROI) and, secondly, they achieve competitive advantage by continually optimizing their social media strategies to achieve their awareness, engagement, or conversion goals (Silva et al, 2020).

The reported literature regarding the use and results of social media primarily focuses on the B2C industry and neglects the impact on B2B industries. Researchers have highlighted several reasons that may lead to the disparity between social media usage and results in these industry models. One reason suggests that this disparity has been caused by the lack of understanding of B2B specific marketing goals and how these can be achieved through digital methods (Jarvinen et al, 2012; Lopez-Lopez and Giusti, 2020). Further to this, research shows that B2B and B2C usage of social media varies significantly, in relation to the extent that social media is used, the approach taken to use it within the company and the desired outcomes. For example, within the B2B industries, social media is used as a relationship building technique, whereas in B2C industries it is primarily used as a selling strategy. Therefore, the existing literature demonstrates that strategies between the two business models are differentiated substantially, indicating a need for organisations operating within the B2B industries to identify optimal strategies suitable to their business needs and consumers (Jarvinen et al, 2012; Moore, Hopkins, and Raymond, 2013; Swani Brown and Milne 2014; Lopez-Lopez and Giusti, 2020). Within large B2C organisations, the optimization and testing of social media marketing strategies have been largely developed within recent years. Experimentation such as A/B Testing has enabled B2C organisations to work towards results which lead to higher variations or better results and ultimately work towards the company achieving their goal, whether it is awareness, engagement, or conversion (Badchikar and Bhat, 2019). Many global B2C companies, such as Amazon, Netflix and Facebook, attribute a substantial amount of their success to optimization techniques such as testing and experiments for various marketing purposes, including social media *("Our success at Amazon is a function of how many experiments we do per year, per month, per week and per day."* Jeff Bezos). Although there is almost no B2B literature that discusses the optimization of social media strategies in B2B settings, the corresponding B2C literature indicates that B2B organisations and SME's may be able to leverage success and optimize their social media strategies through experimentation and analysis, if conducted correctly (Badchikar and Bhat, 2019).

2.5.5. A/B Testing for Social Media

Organisations can refine and optimize their social media marketing strategies through A/B testing. Research surrounding the topic of A/B testing and social media is commercially sensitive and therefore scarce and due to low engagement is almost non-existent within B2B (B2B) industries. However, its popularity and importance has gained traction in recent years in large or global commercial settings, particularly within digital marketing and ecommerce (Bakshy and Frachtenberg, 2015; Pelleg et al, 2016; Saura et al, 2017; Badchikar and Bhat, 2019). Statistically designed experiments were originally established in Agricultural industries in the 20th century. In more recent years they have been developed and implemented within industrial and business settings. These statistically designed experiments consist of the identification of an outcome of interest and factors which could reasonably influence the level of response. In the context of digital media, the outcomes of interest often include engagement metrics such as 'impressions' and 'clicks' and the factors derived from the style of the posts may include features such as post length, colour, image, and title, for example (Ledolter and Swersey, 2007; Kenett and Steinberg, 2020; Navot, 2020)

In the commercial context, experiments are referred to as A/B testing to reflect the binary choice offered in screening experiments to identify key (or red) variables that can then be further tested. Commercial examples have included the Boeing interior plane design and other discrete choice consumer experiments. *"A/B testing (sometimes referred to as 'split testing' or 'bucket testing') is an evaluation method that compares two variants, the 'control' and the 'treatment', through a controlled experiment"* (Pelleg et al, 2016, pg. 6). It is a 'systematic procedure' that can identify factors that serve a purpose for, in this context, the marketing needs of an organization or factors that serve no purpose (Badchikar and Bhat, 2019, pg. 4486). A/B testing is regularly mentioned in commercial digital marketing material but due to the commercially sensitive nature of A/B testing results, research and testing conducted within corporations is unlikely to be reported or released for public use, in fear of giving away competitive advantage. Academically, however, literature within A/B testing and either 'digital marketing' or 'social media' is scarce and becomes almost non-existent when applied to organisations operating in B2B or SME industries (Saura et al, 2017). One reason the A/B testing of digital platforms may not have gained traction within SME's may be due to the difficulties of conducting A/B tests correctly, due to the interdependencies between the requests from users and host servers. These interdependencies could potentially cause the assumptions required by standard statistical tests to be violated (Bakshy and Frachtenberg, 2015). This may suggest that SME's struggle to conduct A/B testing correctly due to a lack of in-house knowledge and/or resources.

However, the advantages of testing and experimentation using methods such as A/B testing has been fundamentally praised in the success of numerous global B2C corporations such as Facebook, Netflix, and Amazon. A/B testing enables organisations to streamline their processes and, therefore, constructing new business opportunities whilst strengthening existing relationships by gaining an understanding as to which factors drive change within users (Badchikar and Bhat, 2019).

2.5.6. Digital Co-branding in B2B Organisations

This literature review has demonstrated that there is an increasing amount of co-branding literature, which has emerged over the past decade. The research demonstrates that the primary focus of co-branding literature has existed within the B2C industry. Despite the incremental increase of co-branding research within B2B industries or the application of co-branding on digital platforms within B2B industries, the literature remains sparse and limited. B2B branding literature demonstrates fundamental differences between these industries and, therefore, the application of most of the existing co-branding research cannot be blindly applied to the B2B industry. As the B2B ecommerce industry continues exponential growth, valued at $6.64 trillion dollars, and predicted to grow at 18.7%

CAGR (compound annual growth rate) until 2028, the importance of leveraging competitive strategies is paramount as competition intensity will increase (Grandview Market Analysis Report, 2021). Organisations operating in B2B settings will need to look to implement strategies that can assist in achieving competitive advantage, given that B2B branding literature suggests that emotional attributes (e.g., brand) are equally, if not more, influential than functional attributes within the purchase decision-making process. This means that branding and strategies focusing on improving the organisation's brand could be a possible leverage for achieving competitive advantage and, therefore, the exploration of research regarding co-branding on digital platforms for the B2B industry needs to be advanced. Further to this, understanding how the B2B industry is affected or influenced by brand equity transfer would advance understanding in the current co-branding literature and as the importance of brands continues to increase, advancing this area of research is highly important both for academic and practical purposes. Another evident gap in the existing literature is the concept of digital co-branding, again within the B2B industry. Digital platforms are unquestionably important within the B2B industry, with analysts predicting that 80% of B2B sales will be conducted via digital channels (Gartner, 2020). Therefore, to leverage competitive advantage online it is necessary for companies to identify alternative approaches to implement across digital platforms. Research into the effects of co-branding across digital platforms could advance the understanding of brand equity transfer within digital branding strategies and the effects of this in B2B environment.

2.5.7. Formation of Research Questions

The systematic literature review identified brand equity transfer strategies such as co-branding in B2B markets as a future research avenue, due to its limited development within this environment. Existing research in this subject area is minimal but indicates that B2B organisations are able to leverage positive effects from co-branding (Kalafatis et al, 2014). The limited application within this area is likely due to the traditional reliance on functional attributes in B2B branding literature, however, with emotional attributes having demonstrated extensive importance in B2B purchase decisions, B2B organisations are now relying on strategies that leverage these attributes within their brand.

Alongside these points, there has been pressing requirements to further develop our understanding of how B2B organisation utilise digital platforms. This is due to the evolution of digital technologies and the behavioural changes of both firms and customers and calls for advancing digital co-branding research is necessary (Borges-Tiago et al, 2019). To measure the application of B2B digital co-branding, the application of Aaker's brand equity framework has been applied, as this provides a method of measuring changes. These various details and the findings from the wider literature body have assisted in the formation of the below research question:

What impact does the implementation of various digital co-branding strategies have on the asset categories of brand equity within a B2B organisation?

Over 59% of the global population is said to use social media platforms and the continuing acquisition is showing no signs of slowing down. The extent to which social media is influencing B2B organisations is significant, with users changing the way they communicate, collaborate and consume from organisations (Silva et al, 2020; Lopez-Lopez and Giusti, 2020; Data Reportal, 2022). Social media as a B2B digital marketing platform has demonstrated various benefits including the achievement of awareness, achievement and engagement goals alongside, assisting in the achievement of competitive advantage (Silva et al, 2020). However, the literature highlighted that B2B organisations have originally used social media strategies for communication purposes, rather than brand leveraging or selling purposes.

The importance of social media platforms in modern digital methods is undeniable but the specific application of B2B branding strategies on social media has yet to be fully explored. There are numerous calls for advancing this area of literature and expand on the theoretical and practical impact this may lead to. Therefore, the research question below accumulates the importance of digital co-branding, outlined in the sections above and combines this with the pressing need to further explore B2B strategies on social media. For these reasons, the below research question has been formed:

Can co-branding strategies drive positive brand equity transfer on B2B social media platforms. If so, how can they be used to drive optimal social media performance and how are social media KPI's impacted?

The reference to practical performance improvement measurements in B2B co-branding is scarce as most literature discussing these objectives is situated in the B2C domain. Therefore, the final question intends to link the first two questions and understand how, if any changes impact the tangible or practical benefits experienced by a B2B organisation through digital co-branding. The KTP provides a unique setting to establish a process of implementing such strategies and understanding how these can shape key performance indicators both from a financial and non-financial perspective is essential. By exploring this in detail, this research looks to advance literature within the broader subject of B2B branding and determine how brand equity transfer strategies can practically impact a B2B organisation when implemented through digital channels. This last question accumulates the findings from the previous questions but instead looks through a performance perspective. These reasons assisted in the development of the final research question:

How can B2B organisations leverage branding strategies to achieve optimal brand equity in the modern age and improve key performance indicators (e.g., financial benefits or improved KPI's)?

2.5.8. Conclusion

As branding heavily incorporates many of the emotional attributes that are said to be increasingly important for purchase decisions within B2B organisations, B2B organisations have to endeavour to leverage solutions to increase their brand equity. One such concept, yet to be researched fully, is Brand Equity Transfer techniques, such as co-branding within B2B organisations. Combining this with the increasing importance of ecommerce and digital strategies, organisations within the B2B sector need to identify methods of increasing their brand equity on digital platforms. The application of digital co-branding within B2B organisations is highly relevant and important to advance understanding of how the Brand is affected through transfer strategies on digital platforms within B2B organisations.

The following chapter will review and summarise the research problem, research aim and define the research questions prior to the Methodology.

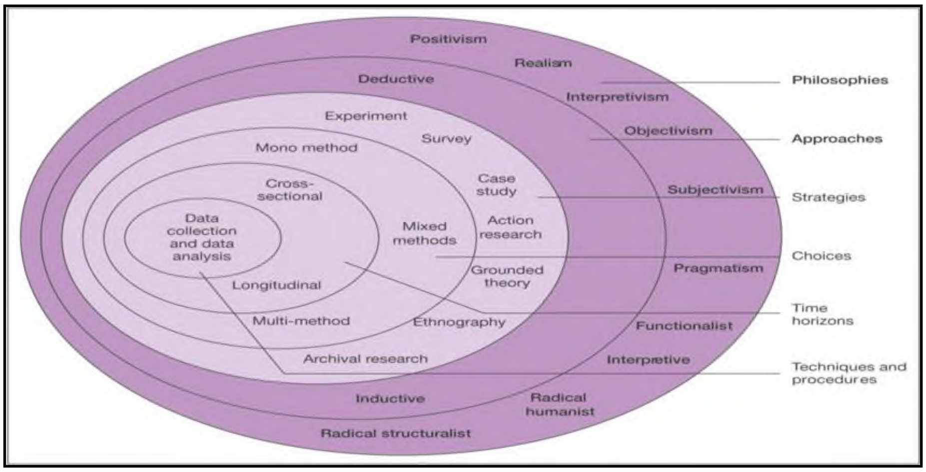
3. Methodology

The preceding chapters have provided an overview on the literature surrounding B2B branding and co-branding prior to discussing the research gap and other prerequisites of this research methodology. This chapter will present the methodology that was used to execute this multi-method action research case study, which explores the effects of digital co-branding strategies when implemented within an SME operating within the B2B industry. The primary aim of any Methodology is to ensure rigour and repeatability within the research. Therefore, this methodology used the popular 'Research Onion Model' (Saunders et al, 2012) in relation to the multi-method action research case to ensure that a comprehensive, rigorous and effective methodology is presented. This chapter is divided into three distinct parts. The first section presents an overview of the methodology using the Research Onion (Saunders et al, 2012). Following this, the second section discusses the case study in which the action research will be conducted: the Knowledge Transfer Partnership within Royston. Finally, the third section reviews the co-branding campaigns that were implemented within the action research case study.

3.1. The Research Onion

The Research Onion **(Figure 4)** developed by Saunders et al, (2012) is a popular model within business and management, which outlines the six stages of an effective methodology: research philosophy, approach, methodical choice, strategies, time horizon and techniques and procedures, visible in the diagram below (Saunders et al, 2012; Saunders & Tosey, 2013).

Figure 4: The Research Onion (Saunders et al, 2007).



The following sections focus on each of the individual stages independently before applying and justifying the selection of approach to this research.

3.2. Philosophies

3.2.1. Application of Philosophy

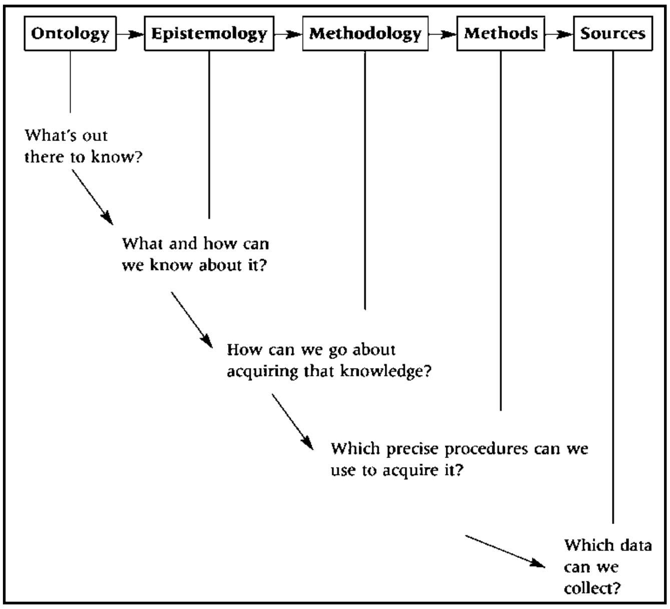
Consideration of the philosophy of research provides a foundation on which researchers can stake their research position based on their choices and decisions, which will have direct implications for the procedures, methods, and outcomes of their research. By considering the application of research philosophies, researchers can develop their perspective and present research with a clear purpose, which offers a deeper and wider contribution within the wider context (Carson et al, 2001, pg. 12). However, failure to apply (or incorrect application of) research philosophies may prevent external readers from fundamentally understanding the research, particularly if they do not hold the same philosophical position as the researcher (Grix, 2002, pg. 96). The research process is comprised of five core components: ontology, epistemology, methodology, methods, and sources. They are described as the "*building blocks of social research,"* and they hold importance for the understanding of any research (Grix, 2002, pg. 176). There is a necessity for researchers to understand ontological and epistemological assumptions, as these are the essential underpinnings, and they will help with understanding the interrelationship of key components within their research. For example: when it comes to methodology and methods, this knowledge will help to avoid confusion with regards to different approaches to theoretical debates and social phenomena and understand the philosophical positions of others whilst defending their own (Grix, 2002, pg. 176). Simply put, "*ontology is reality, epistemology is the relationship between that reality and the researcher and methodology is the technique(s) used by the researcher to discover that reality*" (Perry et al, 1999; Carson et al, 2001, pg. 15). These together create a research framework, which comprises accepted theories, methods, and ways to define data, which aim to provide solutions to model problems (Eriksson, 2007; Collis & Hussey, 2003). "*A researcher's ontological position is based on their assumptions regarding human knowledge and these assumptions will shape how the researcher will understand their research questions,"* (Saunders et al, 2012, pg. 128) and will establish how they will proceed from the research questions to the conclusions with "*clarity and constancy*" (Grix, 2002, pg. 176; Eriksson, 2007). A researcher's assumption about the world will affect their research design, data collection and data analysis (Collis & Hussey, 2003). Therefore, refraining from applying a well-fitted research philosophy to a piece of research may prevent a holistic understanding (Grix, 2006, pg. 96).

This section will discuss the various components of the research process and three well-recognised research paradigms within the social sciences, positivism, interpretivism and critical realism, to provide context to the research and justify the paradigm applied within this methodology.

3.2.2. Components of the Research Process

The interrelationship between the five core components, highlights how each component impacts the next, is shown in **Figure 5** below.

Figure 5: The interrelationship between the components of the research process



3.2.3. Positivism

Positivism is a fundamental ontology, built on the foundations of Empiricism, which was popularised in the work of French philosopher August Comte in the early 1800's (Comte, translated by Maineau, 1858; Houghton, 2011). 'The Positive Philosophy', published in 1830, details three theoretical stages that the human mind progressively passes through: the theological, the metaphysical and, finally, the positive. In the final 'positive' stage, Comte states that the human mind focuses on the study of laws, relationships, and resemblance; and it is the combination of reasoning and observation that is the means of knowledge. The "*explanation of facts is simply the establishment of a connection between single phenomena and some general facts, the number of which continually diminishes with the progress of science*" (Comte, translated by Maineau, 1858, pg. 26). Simply put, Positivism claims, "*the world exists independently of our knowledge of it*" (Houghton, 2011, pg. 1). Scientific laws are established through the study or observation of hard-facts and the relationships between these. Without such relationships a hard fact will be void of any scientific meaning (Crotty, 1998; Crossan, 2003). Lenski (1991) defines Positivism as, "*the belief that scientific knowledge must be based on, tested by, and grounded in sensory experience, directly or indirectly, and that neither intuition, logical reasoning, moral imperatives, nor divine revelation can substitute for this*" (Lenski, 1991, pg. 188). However, due to its evolutionary nature, the definition of Positivism is not unanimous across the literature, partially due to the various writers including Bacon, Comte, and also the Vienna School of thought (Gustavsson, 2007). However, numerous assumptions that are strongly associated with Positivism can allow the researcher to understand the parameters of this philosophy.

The first association is the objective/realist nature of positivism, in that it is *"based on something stable and unchangeable, a frame of reference that is the same for each and every one, where we can derive criteria for what is truth, rational or objective*" (Gustavsson, 2007, pg. 6). Secondly, it is Empirical, in that there is a need to re-test a statement, empirically to confirm the statement, creating a mostly deductive process entailing the testing of theories. The final association is quantification. This enables the explanation of complex relationships, providing a common numeric language for researchers to manage different events (Park, 1992; Carson et al, 2001; Gustavsson, 2007; Rehman and Alharthi, 2016). These assumptions explain why positivists attempt to collect data about an observable reality through conducting quantitative research independently that uses large sample sizes, highly structured methods enabling repeatability of the research, and hypotheses for verification, allowing for the generalisation and relatability between the outcomes (Carson et al, 2001; Gill and Johnson, 2010; Hasa, 2011; Edirisingha, 2012; Saunders et al, 2012). However, it is important to note that the use of quantitative approaches over qualitative approaches is not methodologically important (King et al, 1994).

For the reasons above, the application of positivism is popular within the disciplines of business and management (Saunders et al, 2012). However, positivism is not void of critique, particularly in its application to the social sciences. The following section will explore these critiques.

3.2.3.1. Critique of Positivism

Positivism is heavily critiqued and is fundamentally different from the other approaches discussed within this methodology, interpretivism and critical realism. Unlike the other approaches, positivism claims to have direct and privileged access to the real world, suggesting that a simple relationship exists that can be tested through the verification or rejection of hypotheses for absolute verification (Ackroyd and Fleetwood, 2004). The critique of the application of Positivism in social science becomes more intense as various Critical Realists state that the scientific methods of Positivism do not account for social phenomena and, therefore, the laws created are subject to criticism (Rehman and Alharthi, 2016). The negation of social constructs leads Positivists to primarily utilise quantitative methods of analysis within a highly structured methodological procedure (Hammond, 2019). This structured methodological procedure seeks to minimise bias and researcher involvement. Whilst Positivists do not necessarily see structured methodology as a criticism, researchers with other philosophical viewpoints argue that researcher involvement is often necessary when conducting research that involves the understanding of social constructs (Bhattacharjee, 2012; Rehman and Alharthi, 2016).

In relation to this research, Positivism and the application of an objective epistemological approach would not be appropriate due to the extensive importance and influence that individuals and their social constructs will hold within the research environment.

Positivism will be instrumental across these areas and assist in the construction of various methods such as questionnaires and experiments. The utilisation of statistical tools and quantitative methods will be essential in understanding the findings within this research. Whilst there is a positivist influence throughout this research, the involvement, knowledge and perception of participants and their participation of the process implementation, alongside the involvement of the researcher means that the application of a purely positivist paradigm not fully reflect the entirety of the factors influencing research. Therefore, the following section will review the Interpretivist paradigm and then the Critical Realist paradigm to understand the most appropriate paradigm to apply to this research.

3.2.4. Interpretivism

Interpretivism opposes Positivism. It was "*developed as a critique of positivism but from a subjectivist perspective*" (Saunders et al, 2019, pg. 148). It derives from the Greek word 'hermeneuein', which means to 'interpret' and emerged in the late 20th Century, formed from various strands of philosophical and sociological thought, including hermeneutics, phenomenology, and symbolic interactionism (McKenna et al, 2010; Crotty, 1998; Saunders et al, 2012). The concept of interpretivism has been shaped from numerous qualitative approaches and is often described as an overarching umbrella term for alternatives such as phenomenology, constructivism, and naturalistic research (Fisher, 2004). Interpretivism avoids the rigidities of the Positivist approach, instead attempting to understand reality through a participant's perspective using a personal process (Carson et al, 2001) (Belk, 2006). "*Interpretivism argues that human beings and their social worlds cannot be studied in the same way as physical phenomena, and that therefore social sciences research needs to be different from natural sciences research rather than trying to emulate the latter*" (Saunders et al, 2019, pg. 149). Unlike Positivism, Interpretivism does not seek to separate the objective reality and the researcher, and holds an epistemological viewpoint that reality is constituted through the lived experiences of subjectivity and is, therefore, not objective. Further to this, Interpretivists do not seek certainty through data but create "*defensible knowledge claims",* where the researcher will address potential implications, limitations, and bias within their research (Sandberg; Weber, 2004). This changes the type of data and the data collection method that the researcher will use. The Interpretivist Paradigm is mostly associated with unique, individual, and qualitative aspects, often dictating the type of methods used in conducting research, moving away from the quantifiable and empirical phenomena often associated with Positivism (Crotty, 1998). This, therefore, links Interpretivism with inductive research, as it purposefully attempts to generate new, enhanced understanding of the social constructs and contexts (Saunders et al, 2019).

3.2.4.1. Critique of Interpretivism

Interpretivism is critiqued by Positivists for denying a scientific view of their study, as interpretivism believes that the objective reality is formed through social constructs and, therefore, outcomes of interpretivist studies are said to prevent generalisations (Grey, 2013; Uduma and Waribugo, 2015; Helmi and Pius, 2020). Many arguments surrounding Interpretivism focus on the roles of objectivity and subjectivity alongside the lack of resulting laws or generalisations. Wainwright and Forbes (2000, pg.268) outline three major flaws within the interpretivist paradigm:

> *"1) The collapse of ontology into epistemology*
>
> *2) The overemphasis on agency and the neglect of structure*
>
> *3) The slide into anarchistic relativism, while interpretivists argue understanding is the key realists reply that this move simply replaces thin explanation with thick description*."

These points are echoed throughout the literature. By adopting a purely interpretivist approach, researchers are said to negate the importance of material change and actual happenings to individuals, without incorporation of their interpretation of those changes or events (Sayer, 2000). These interpretations prevent the verification of assumptions and arguably welcome bias into the research process due to the negation of scientific method (Clarke, 2009). Further critique derives from the critical realist literature, which critiques interpretivism more sympathetically than Positivism. Whilst critical realists agree that interpretive understanding is essential, causal explanation should not be wholly excluded (Sayer, 2000). Therefore, the following section will review the middle approach between Positivism and Interpretivism, Critical Realism.

3.2.5. Critical Realism

Critical Realism is often described as the middle approach or hybrid approach between Positivism and Interpretivism and is also a prominent paradigm in business and management research (Zachariadis et al, 2013). This meta-theory has been developed by multiple theorists and philosophers but most prominently Indo-British Philosopher Roy Bhasker (Gorski, 2013). Like other research paradigms, Critical Realists are not united in a singular definition, framework, set of beliefs or methodology but widely agree that Critical Realism is "*concerned with the nature of causation, agency, structure and relations, and the implicit or explicit ontologies we are operating with"* (Archer et al, 2016). Although there is no unitary agreement on the definitions of Critical Realism, 8 basic assumptions have been outlined in the research and are widely agreed upon, enabling the researcher to understand the parameters of Critical Realism and the applicability of this theory to their research. These assumptions are:

"1. The world exists independently of our knowledge of it.

2. Our knowledge of the world is fallible and theory laden.

3. Knowledge develops neither wholly continuously…nor discontinuously.

4. There is necessity in the world; objects whether natural or social necessarily have particular powers or ways of acting and particular susceptibilities.

5. The world is differentiated and stratified, consisting of events, and objects, which can generate events.

6. Social phenomena such as actions, texts and institutions are concept dependent.

7. Science or the production of any kind of knowledge is a social practice.

8. Social science must be critical of its object."

(Adapted from Sayer, 1992; Easton, 2010, pg. 5)

These assumptions create the bridge between Positivism and Interpretivism, understanding that whilst causal explanation, justification and verification of assumptions are important, it is also equally important to incorporate interpretation and criticism of the assumptions (Sayer, 2000).

3.2.5.1. Critique of Critical Realism

Many critiques of Critical Realism are like those faced in the interpretivism paradigm, including the failure to meet an acceptable level of objectivity and void their research of bias (Bhattacharjee, 2012; Hammond, 2019). Although Critical Realism does not strive to reach an absolute verification, Positivists fail to agree that a suitable level of objectivity can be met within a Critical Realist paradigm. There are several contributory factors preventing Critical Realism from attaining an acceptable level of objectivity (from a Positivist perception) (Hammond, 2019). Firstly, like Interpretivism, a major critique within Critical Realism is the potential bias caused by the participatory involvement of the researcher, often in qualitative research methods (Bhattacharjee, 2012). Unlike other paradigms, Critical Realism lacks the clarity and fails to provide a methodological framework for research to be conducted through, although this is strongly argued against with Critical Realists stating that Critical Realism is versatile in its application of various methodological frameworks (Sayer, 2000; Bhattacharjee, 2012; Rehman and Alharthi, 2016; Hammond, 2019).

3.2.6. Justification of Critical Realism as Philosophical Application

Participants, knowledge, and external influences are critical components within this action research project in bridging the gap between practice and theory to improve processes by enacting change in the practical environment. It must consider the social constructs that may shape the reality of individuals and will include the involvement of the researcher over a significant period. Learning from and enacting change within these critical components intends to scrutinise and challenge the current structures in place in the company (Edwards et al, 2014). It intends to generate new knowledge and not rely solely on the testing or verification of statements to identify an absolute truth (Gustavsson, 2007). It relies on the application and direction of the researcher, who are embedded in the research setting over a significant period, meaning that the research and the researcher will not be separate entities. Many Positivists may argue that this level of interdependency approach will include bias.

The application of various positivist methods combined with the essential participant knowledge and perspectives means that utilising a bridged approach between Positivism and Interpretivism is essential. This research cannot isolate and soley rely on positivistic approaches but at the same time cannot reject these to only rely on interpretivist approaches. In this multi-method approach, the combination of qualitative methods including interviews, focus groups and questionnaires were an important aspect in understanding the participants' perceptions. For these reasons, there is a clear bridge between the need for elements of both Positivist and Interpretivist paradigms and, therefore, the application of Critical Realism to this research is appropriate.

3.3. Inductive Approach

3.3.1. Inductive

"Inductive reasoning is a type of thinking that involves identifying patterns in a data set to reach conclusions and build theories. When researchers use an inductive approach, they are attempting to build their theory or conceptual framework from the data they collect" (Hair et al, 2019, pg. 306). This approach is associated with qualitative research and the development of hypotheses rather than hypothesis testing. Inductive reasoning focuses on establishing a generalised position through observation of data or facts, which results in new theories or concepts (Adams et al, 2014) (Saunders et al, 2019) (Hair et al, 2019).

Hair et al, (2019, pg. 306) outline four situations where a qualitative research and inductive reasoning approach is necessary:

1. *When little is known about a research problem or opportunity*
2. *Where previous research only partially on incompletely explains the research question*
3. *When current knowledge involves subconscious, psychological or cultural material that is not accessible using surveys or experiments*
4. *If the primary purpose of the research is to propose new ideas and hypotheses that can eventually be tested with quantitative research*

Utilising an inductive approach will enable the enhancement of knowledge within a subject area where research can be developed (Saunders et al, 2012).

3.3.2. Deductive

Deductive reasoning is an opposite research approach that primarily focuses on testing existing theories and hypotheses and is therefore predominantly associated with quantitative research. Deduction is popular in situations where laws that predict the occurrence of specific phenomena and permit control govern the basis of explanation (Saunders et al, 2019). Deductive reasoning enables empirical observation of conceptual and theoretical structures that moves interactions from the general to specific (Collis et al, 2003).

3.3.3. Abductive

An abductive reasoning approach bridges inductive and deductive reasoning approaches. It enables the researcher to modify an existing theory through data collection and subsequent testing of further data. This approach supports the generation or modification of theory by *"generalising from the interactions between the specific and the general"* (Saunders et al, 2012, pg. 153).

3.3.4. Justification for Inductive Approach

This methodology presents a single-case research design of a marine engineering organisation, with the aim of exploring theories and concepts to create a generalised explanation. The specificity of this research means an inductive approach will be adopted (Marschan-Piekkari and Welch, 2004). The intention of this research is to advance ideas and theories in relation to B2B co-branding. This discovery orientation is directly associated with qualitative research (Hair et al, 2019). The adoption of an inductive approach in this research is necessary. Firstly, the literature review demonstrates limited existing knowledge surrounding the research topic, with no previous research addressing the topic directly. Most of the research existing within the wider topic area has not used a Qualitative Approach. This would not enable the incorporation of the human and cultural components that are essential to this research. Lastly, the aim of the research focuses on the exploration and proposition of new concepts surrounding B2B digital co-branding. The under-development of research within this subject and the necessity to build new theories and concepts means that the application of Inductive Reasoning is the only suitable approach (Adams et al, 2014; Hair et al, 2019).

3.4. Action Research

Action research as a term was first used in 1944 by social psychologist Kurt Lewin, who attempted to create organisational change within a manufacturing plant. Lewin believed that the involvement of the employees of the manufacturing plant within the process would improve their productivity, enabling the creation of solutions, enactment of change and development of theory (Berkley-Thomas, 2003; O'Leary, 2004; Whitehead and McNiff, 2006; Shani and Coghlan, 2019). However, the origins of action research have been traced back to Aristotle, who outlined that there are "*multiple ways of knowing, including what we might call the primacy of practical (techne) and cultivation cycles of action and reflection (praxis)"* (Bradbury-Huang, 2015, pg. 5). Although a consensus accepts that action research bridges both social theory and practice, a single definition of action research is not unanimously agreed upon as many people hold different perspectives of action research and its role (Berkley-Thomas, 2003). Generally, action research can be described as a practical form of enquiry that can be used to investigate, evaluate, and improve a current situation, workplace, or process (Coghlan and Shani, 2016; McNiff, 2017). It combines research with practical action to improve both practice and theory building (Nielsen, 2014). Shani and Coghlan (2019) discuss the purpose of action research as "*the creation of areas for collaborative learning and the design, enactment, and evaluation of liberating actions through combining action and reflection in ongoing cycles of co-generative knowledge"* (Shani and Coghalan, 2019, pg. 3).

Since 1944, action research has become increasingly popular in many diverse industries, business functions and disciplines across the globe, including the application to business and management (Coghlan and Shani, 2016; McNiff, 2017; Shani and Coghlan, 2019). Within the realms of business and management, action research has been defined as, "*an emergent and iterative process of inquiry that is designed to develop solutions to real organizational problems through a participative and collaborative approach, which uses different forms of knowledge, and which will have implications for participants and the organization beyond the research project."* (Saunders et al, 2012, pg.183) Action research presents itself in the form of strategies, practical tasks, and structured organisational systems (Shani and Coghlan, 2019).

3.4.1. Characteristics of action research

The characteristics of action research differ significantly from those of traditional research methods. Action research places extensive importance on the values base of practice but extends beyond professional practice, combining both research and knowledge creation in the process. Action research combines the knowledge of numerous individuals that are working together to solve a practical problem. It is therefore never solitary and uses a cyclical process incorporating critical feedback and modifying the process to continually optimise practice. Collaboration and participation from a variety of stakeholders both internally and externally of the practical setting is essential when conducting action research (McNiff and Whitehead, 2010; Saunders et al, 2012; McNiff, 2017; Shani and Coghlan, 2019). To discuss these characteristics, numerous researchers have presented various frameworks and models. Saunders et al (2019) discuss these characteristics in five principles: purpose, process, participation, knowledge, and implications. The following sections will discuss these principles individually to provide a comprehensive overview of the action research methodology.

3.4.1.1. Purpose

"The purpose of an AR strategy is to promote organizational learning to produce practical outcomes through identifying issues, planning action, taking action and evaluating action" (Saunders et al, 2019, pg. 202).

Action research has emerged as an important research method in the application and development of theories to improve practice, becoming increasingly popular with many professional practitioners (Guthrie 2010; Saunders et al, 2012; Stringer, 2013). This increasing popularity is likely due to the use of action research in developing solutions to practical problems faced within workplaces, particularly problems that are rooted in the complex interactions between participants and their realities (Koshy et al, 2010; Stringer, 2013). Although much of the literature surrounding action research focuses on practical action, more recent literature emphasises that action research should be about knowledge-in-action or research-in-action rather than research-about-action (Bradbury-Huang, 2015; Saunders et al, 2019).

3.4.1.2. Process

"The process of action research is both emergent and iterative. An action research strategy commences within a specific context and with a research question but because it works through several stages or iterations the focus of the question may change as research develops" (Saunders et al, 2019, pg. 203).

O'Leary (2004) discusses the various processes involved in action research. Firstly, it addresses practical problems. Action research usually commences with the identification of a problem within a practical setting and the attempt to rectify these problems through creating and implementing solutions. It also generates knowledge. The solutions implemented in the practical setting are generated through the production of knowledge, which enacts change, and this change creates a further production of knowledge. It enacts change; the process of action research is different in that the enaction of change is immediate. Once knowledge is produced it is implemented in the practical setting with the key focus of creating change and driving solutions for the identified practical problems. It is participatory. Action research brings together various stakeholders including academic researchers and practitioners and works in tandem with each other, which is uncommon in most other research methods. Finally, it is a cyclical process. As knowledge is produced, it enacts change, which produces further knowledge. This cyclical process is continued until an appropriate level of solution is achieved (O'Leary, 2004; Koshy, 2005, pg. 28).

3.4.1.3. Participation

"Participation is a critical component of action research…action research is a social process in which an action researcher works with members in an organisation, as a facilitator and teacher, to improve the situation for these participants and their organisation" (Saunders et al, 2019, pg. 203). Participation is said to be a defining component within action research and involves interpersonal relationships between the researchers and the researched, blurring the traditional roles of scientific research (Arieli and Friedman, 2009). This participation can often see research participants conduct functional activities within the research process, which traditionally would have only been carried out by the researcher (Arieli and Friedman, 2009). The participatory nature of action research has been praised for its democratic nature, enabling both researchers and participants to join together and work towards solving a problem (Kindan et al, 2007). However, this participatory nature is not void of criticism. Concerns about participation include striving for collective consensus, potential participation marginalisation alongside, added stress through increased responsibilities (Kindan et al, 2007; McNiff, 2017). Participation can assist in increased understanding of the environment. However, careful consideration must be taken to prevent problems within the participatory roles. This will be examined in the latter sections of this Methodology Chapter (McNiff, 2017; Saunders et al, 2019).

3.4.1.4. Knowledge

"*action research will not only be informed by abstract theoretical knowledge, known as propositional knowledge, but also by participants' everyday lived experiences (their experiential knowledge) and knowing-in-action (knowledge that comes from practical application)"* (Saunders et al, 2019, pg. 204).

These three types of knowledge provide a comprehensive and collaborative knowledge approach, which constructs and effectively informs the action research process, combining the realities of the participants, shaping the outcomes of action research to be developmental, educational, and empowering (Jupp, 2006; Reason, 2006; Saunders et al, 2012). Propositional knowledge, also described as theoretical knowledge, is the underlying knowledge used to drive the action research. This type of knowledge collaborates with the other knowledge types to aid the iterative nature of the action research process. Experiential knowledge is based on the life experiences both internally and externally of the organisation. This combines with their preunderstanding knowledge. This is the participants' knowledge in their area of expertise (Ballantyne, 2004; Saunders et al, 2012). Although these knowledge types are the driving factor for action research, other researchers argue that it is the interrogation and deconstruction of these that enables the researcher to understand the underlying roots, social constructs, and dialect of the situation (McNiff and Whitehead, 2010). *"Knowledge of practice is a highly rigorous and often problematic process because it means interrogating what we* *are doing, beginning with our values and logics."* (McNiff and Whitehead, 2019, pg. 21) By the participants in action research interrogating their thinking, they begin to deconstruct their normal or traditional ways of thinking. This can often be a destabilising experience for many individuals and is often a difficulty faced within action research. This deconstruction often involves decentring, which involves participants understanding that they must be aware of not centring themselves or their own views but understand and respect other participants' views by incorporating *"critical reflexivity (awareness of how one thinks) and dialectical reflexivity "(awareness of the wider social, cultural, political, economic, and other forces that influence how one thinks)." (*Winter, 1989; McNiff and Whitehead, 2010, pg. 22) This helps drive the demand for higher-level questioning, focusing on and emphasising the need for interesting and important questions to be asked. By demanding higher-order questioning, the researchers question the underlying assumptions that have formed the current practices and social situations. This deconstruction through higher-order questioning can be done at various levels: first, second and third-order questioning. By doing this, action research can develop a critical perspective, which can 'unearth' important underlying issues. This process of interrogation, deconstruction, and decentring to improve processes ultimately has tangible consequences for others. These consequences can be both positive and negative and may often incur difficult decisions or discomfort for those involved in the process. This, therefore, makes action research intentionally political. The unearthing of issues and involvement in politically contested scenarios means that the various participants involved in action research are held responsible for their actions. Action researchers drive change based on their knowledge and values, they need to conduct rigorous evaluation checks to justify their actions and influence in the process to ensure other participants are benefiting from the decisions they make. Finally, action research has the potential to contribute to both social and cultural transformation. This is often deemed to be the most powerful aspect of action research for researchers and practitioners. By enacting change and developing new knowledge in a continuous cycle, they can start to influence new social and cultural norms by influencing the thought process of other participants involved in the action research (McNiff and Whitehead, 2010).

3.4.1.5. Implications

"Action research also has implications beyond the research project. Participants in an organisation where action research takes place are likely to have their expectations about the future and involvement in decision making raised. There are also likely to be consequences for organisational development and culture change" (Saunders et al, 2012, pg. 204).

The participative and stringent nature of action research leads to a potentially high number of implications both ethically and organisationally. Ethically, the application of action research in an organisational setting and the request/necessity of participation means that participants are likely to have their daily tasks and workload affected: without careful concern or management by the researcher this may lead to excessive stress and people being overwhelmed (Saunders et al, 2012). To avoid such implications the researcher needs to be cautious to adapt to the organisational culture, which may have formed the participants' beliefs, traditions, and histories. Failure to acknowledge or adapt to this may not only have ethical implications but extend to hindering the improvement process and failure to improve what the action research set out to do (Kates and Robertson, 2004; Saunders et al, 2012; Gray, 2019).

3.5. Case Study and Multi-Method Approach

"A case study strategy has the capacity to generate insights from intensive and in-depth research into the study of a phenomenon in its real-life context, leading to rich empirical descriptions and the development of theory" (Saunders et al, 2019, pg. 197).

The action research will be conducted using a case study. Using an action research case study for this co-branding research will enable the in-depth inquiry of Royston within their real-life environment; this makes Royston (an organisation) the case within this research (Saunders et al, 2019). Studying the organisation and the implemented process aimed at creating change within the setting can improve the understanding of the dynamics of the environment and the interactions. This understanding can assist in the development of theory, and therefore, be suitable for an inductive study in the generation or advancement of theory. However, literature also suggests the use of case studies for both descriptive and explanatory purposes creates a suitable option for researchers to conduct deductive research (Saunders et al, 2019).

For this case study, the research will aim to explore the phenomenon of digital co-branding within a B2B setting. The researcher will conduct a longitudinal study over the course of 3-years, working solely with marine engineering experts, Royston Limited. Within the case study, an action research approach will enable the collection of detailed data within a real-life participatory setting to generate the development of digital co-branding in a B2B environment inductively. A single case will be used, to examine the effect of this phenomenon within a unique and specific setting over a long period. This single case approach is the most appropriate due to the nature of this Knowledge Transfer Partnership and the depth of involvement necessary from the researcher, organisation, and participants. The researcher will be involved and work within the organisation for the duration of the research to conduct an in-depth longitudinal and inductive action research case study, with the aim of generating new theory within B2B digital co-branding.

3.5.1. Multi-Method Research Approach

The methodological approach of research is dependent on the researcher's philosophical foundations and is formed through their ontological and epistemological stance. The ontological differences between Positivist and Interpretivist paradigms presents the framework that guides research and practice, dictating whether a quantitative, qualitative, or mixed method approach should be adopted. This research will be conducted from a critical realist perspective and utilise both qualitative and quantitative methods to understand and collect in-depth data from this study. Due to the longitudinal nature of the study and the extensive number of participants, a multi-method approach will enable the researcher to collect data from multiple sources, across different times, in different settings through various techniques to gain new insights. Therefore, a multi-method approach would be better suited than a mixed method approach. This integration of various sources and techniques means that some researchers consider mixed methods as a subset of multimethod research (Axinn and Pearce, 2006). It has been suggested that the use of well-designed and well-executed multimethod research has significant advantages over using a singular quantitative or qualitative method (Seawright, 2016). Multi-method research enables the scope of research to be expanded, moving away from a descriptive method into a detailed exploratory and explanatory method. However, some concerns have been raised as to the reliability of utilizing multi-method approaches. Therefore, careful consideration should be taken when applying this methodological approach (Axinn and Pearce, 2006; Seawright, 2016).

Combining qualitative and quantitative methods for this study aims to expand the scope and increase the depth of exploration into the study by bridging data that can account for the objective reality and allowing for the interpretation of social constructs (Sanghvi, 2014), thus reflecting the critical realist approach adopted. The utilisation of the Qualitative research methods within this study will allow for immersion into the research, as the researcher has less requirement to be neutral than in quantitative research. For this action research case study this immersion is necessary as, "immersion in research allows for greater nuance and understanding, provides greater credibility among various stakeholders" (Sanghvi, 2014). Combining this with quantitative methods enables the researcher to *"isolate cause and effects, operationalize theoretical relations to measure and quantify a phenomenon to allow for generalisations of the finding"* (Sanghvi, 2014).

3.6. Time Horizons

A cross sectional time horizon researches a phenomenon at a singular point in time, whereas a longitudinal time horizon researches a phenomenon over a prolonged period (Saunders et al, 2012).

The time horizon adopted in this research will be longitudinal, with research taking place over a 3-year period within a practical setting. This approach is often more appropriate for action research due to the demanding nature of this type of study, the time involved and the intensive resource requirement (Saunders et al, 2012). Conducting a longitudinal study with unlimited access to the company will allow the researcher to study change and development whilst allowing the variables being studied to be under some measure of control and ultimately produce the development of novel findings, rather than a snapshot at a particular time (Saunders et al, 2012). Most studies surrounding this topic demonstrate that most of the co-branding research is conducted cross-sectionally and from an external perspective. However, given the unique position of the KTP, with lengthy, integral access and extensive resource allocation the application of a longitudinal action research study is highly suitable and appropriate.

The study will look at changes in Royston when the application of digital co-branding campaigns is implemented. Preliminary research, including interviews, questionnaires and scope of the organisation, will enable the researcher to understand the existing position of Royston from a brand equity and performance stance. Following this, digital co-branding campaigns will be implemented and the findings will be recorded and analysed across a designated period, with integrated active optimisation cycles to drive continuous improvement. To conclude this approach, post-campaign research will review the new position of Royston and assist in analysing the changes caused by the action research case study longitudinally.

3.7. Techniques and Procedures

A multi-method research approach was applied to the methodology of this action research case study, combining a variety of techniques and procedures that aimed to improve Royston's eMarketing capability through digital co-branding in their B2B environment. The multi-method approach enabled the researcher to collect data from multiple sources, across different times, in different settings through various techniques to gain new insights both of a qualitative and quantitative nature (Axinn and Pearce, 2006).

The following sections in this chapter will outline the various techniques and procedures that were used to conduct the action research in this case study, discussing the theoretical reasoning and justification of applying these to the research. The initial techniques were used to gather preliminary research that will consist of mapping out Royston's existing processes, strengths, weaknesses, and threats through both primary and secondary data. The findings derived from the preliminary research identified opportunities, which were ideated and changed into digital co-branding campaigns and implemented in the business once approved. Based on this, the case study was 'theoretically' divided into two parts. The first part of the case study gathered the data to identify and map the opportunities for digital co-branding and the second part presents the campaigns that have derived from the findings and implement them through a process of continuous improvement.

This methodology uses multiple methods throughout the research process, the below table summarises all key methods used and outlines their aim, objective and participant information.

Table 5: Summary of Research Methods

Area	Methods	Objective	Alignment with Research Aim	Participants
Preliminary research	Systematic Reivew	Review the most recent literature for B2B branding to identify important research gaps	A main objective of this research is to conduct a review of the B2B branding literature to understand current gaps and propose future research avenues within the knowledge area.	Researcher and research supervisors
	Semi-structured interviews	Identifying opportunities for co-branding and building rapport with the participants within the research context	Identifying opportunities for co-branding was essential in developing the co-branding campaigns. This also provided an opportunity to build rapport amongst the participants within the action research case study.	Royston employees, customers and partners
	Questionnaire	Identifying digital capabilities for implementation and maintenance of digital co-branding	To assist with the implementation of various co-branding campaigns, the researcher required understanding of the current digital capabilities of Royston employees as for customer assistance and maintenance a base level capability was required.	Royston employees
	Focus Groups	Optimisation and improvement of the implementation and processes both specific to digital and co-branding	This method intends to ensure participants are aligned with the ideation and implementation of each of the processes, alongside, the maintenance and optimisation processes.	Focus groups were held multiple times with the Spare Parts team, alongside the enginei team in Royston.
Co-branding campaign 1	Co-branded website pages	Identify the impact of co-branded website pages on key brand equity metrics.	Adding co-branded pages that represent products on Royston's website, will allow the researcher to understand how the addition of digital co-branded elements on Royston's website will impact key metrics.	Royston OEM Partners, Marketing and Spare Parts teams and customers
	Six Sigma	Six Sigma is used as a strategy for process improvement. The application of Six Sigma to this research will endeavour to improve the conversion rate of co-branding campaign 1.	The implementation of co-branding campaign 1 demonstrated a poor conversion rate and Six Sigma was implemented as a method to understand issues and strategies for improvement.	Royston OEM Partners, Marketing and Spare Parts teams and customers
Co-branding campaign 2	Paid Advertising	Identify the impact of co-branded versus non-co-branded paid advertisements.	The implementation of co-branding campaign 2 enabled the researcher to compare two highly similar advertisements, one with a co-branded element and the other without. This intends to increase understanding of the impact of co-branding on PPC advertising platforms and allow the researcher to understand whether any changes to brand equity metrics take place.	Royston OEM Partners, employees and customers
Co-branding campaign 3	AB Testing	A/B testing will enable the researcher to test optimal factors for social media strategy. Factors will include co-branding versus non-co-branding elements.	Conducting A/B Testing allowed the researcher to understand if certain factors such as co-branding outperformed alternate factors such as non-co-branding	Royston OEM Partners and Marketing Team
Co-branding campaign 4	Co-branding with localised partners	This campaign endeavoured to understand whether the B2B digital co-branding impact key brand equity metrics when the partner is a smaller localised brand.	The implementation of co-branding campaign 4 intends to understand whether the impact of digital co-branding in a B2B setting in replicable with both global and local partners.	Royston local partners, Marketing and enginei teams

Table 5 presents an overview of the research methods conducted throughout this methodology, and provides a breakdown of each research area and how this connects to the overarching research aims and objectives. This intends to provide the reader with a clear narrative and reference point for the methods throughout. The table provides the area of the research being conducted and includes a breakdown of each method used within that area. The third column connects each method to its related overarching objective and then details how the use of that method aligns with the research aim. The final column outlines key participant information for each individual method.

3.7.1. Preliminary Research

The commencement of the research focused on gathering data and knowledge about the company, Royston, their products, services, and processes, while becoming integrated into the company team. Initial research included reviewing internal and external data sources, conducting stakeholder interviews, focus groups and questionnaires. The data collected was used to gather information to create comprehensive customer journeys, competitor analyses, perceptual maps, strategic marketing, and branding plans and to identify opportunities for co-branding.

3.7.2. Interviews

3.7.2.1. Academic Overview and Interview Type

This research incorporated subjectivity as a core element in driving the action research project. Therefore, incorporating qualitative methods to collect data from key stakeholders is essential. Working within the company means that accessibility to individuals at various stakeholder levels is good (Gillham, 2000).

Figure 6: The Verbal Data Dimension (Gillham, 2000, pg. 6)

Unstructured	←				→	**Structured**
Listening to other people's conversion: a kind of verbal observation	Using natural conversation to ask research questions	Open-ended interviews: just a few key open questions e.g. elite interviewing	Semi-structured interviews. i.e. open and closed questions	Recording schedules in effect, verbally administered questionnaires	Semi-structured questionnaires: multiple choice and open questions	Structured questionnaires: simple, specific, closed questions

It was necessary for the interviewer to retain some level of control and direct the interviewee towards openly sharing broad answers that balance the focus and personal insight of the interviewee. The interview structure is the key dimension of difference. The extent of structure dictates the level of information provided. Highly structured interviews typically present specific answers with limited detail or depth. This is common in market research when the interviewer knows the responses they are wanting to achieve and do this by asking direct and structured questions. The less structured an interview, the broader the responses can be expected to be. An unstructured interview can lack direction and the answers can be extremely general. A balance of structure and flexibility needs to be applied dependent on the aim of the research.

3.7.2.2. Structured Interview

A structured interview would enable the interviewer to retain a high level of control regarding the direction of the interview questions and, therefore, highly focused answers. However, a structured interview would not allow for free expansion of answers from the interviewees, which could restrict their viewpoints and experiences (Turner, 2010, pg. 756).

3.7.2.3. Semi-Structured Interviews

Semi-structured interviews provide a balance between the focus and the interviewee's personal insight. By utilizing open ended questions, the interviewer can probe with focused questions but also allow the interviewee to elaborate and provide their perceptions surrounding the question. The open-ended nature of the questions enables the interviewees *"to contribute as much detailed information as they desire and it also allows the researcher to ask probing questions as means of follow up"* as well as *"fully expressing their viewpoints and experiences" (Turner, 2010, pg. 756).* Therefore, to ensure that interviewees can elaborate on their experiences and the researcher can collect optimal data, semi-structured interviews will be used.

3.7.2.4. Justification of Semi-Structured Interviews

A semi-structured interview approach was necessary to achieve the optimal balance between specificity and generalisability, focus and freedom, using a mixture of open and closed questions. The semi-structured questions were constructed to allow the participants to provide detailed descriptive and informative answers. The use of a semi-structured interview technique minimised the risk of not eliciting relevant responses closely related to the topics and themes which these interviews intend to identify (Rabionet, 2011). This approach intended to create a bridge between the focus that could be applied with structured interview questions and the unfocused personal insight of the participants. The questions were carefully designed to enable the participants to fully express their viewpoints and experiences whilst allowing the researcher to continue to ask further questions and gain more insight (Turner, 2010). The questions are divided into four main categories to ensure the participants have a coherent structure to follow and gain a rapport with the researcher. As the participants in this interview do not necessarily have backgrounds in marketing, business or branding it is important that the terminology of the questions is kept simple throughout the interview to minimise the possibilities of misunderstandings through the use of complex, technical or subject-specific terminology. The opening questions of the interviews are specifically designed to build a rapport between the participant and researcher. Rabionet (2011) stresses that this stage is particularly important, as taking the time to establish the rapport can be reflected in the depth and truthfulness of the responses gathered from the participant. These questions are general and focus on the participant profile in relation to the company.

For this study, interviews, as a technique, are selected based on their capability of gathering qualitative data based on the knowledge and individual perceptions of the Royston employees, providing the researcher with insight into the current processes, culture, and friction points of Royston from a primary source. These semi-structured interviews allow individuals to provide descriptive answers to a set of pre-determined questions to ensure a focused communication process. They also allow a level of rapport to be built between the researcher and the interviewee, which helps with establishing the truthfulness of the responses and provides interviewees with the opportunity to elaborate further on their perceptions away from other peers (Rabionet, 2011).

3.7.2.5. Interview Ethics

Brown (2006) explains that there is "*a need to explain the study benefits and purpose to the participants, explain the rights and protection of the participants and obtain their informed consent."* All participants will consensually agree to complete the interview prior to interview commencement. They were advised of the potential uses of the results, their anonymity and that the interview will be recorded; this ensures that all interviewees provide their "*informed consent*" and, therefore, could not accuse the researcher of deception or coercion (Brown, 2006).

3.7.3. Questionnaires

The use of a questionnaire enabled the collection of objective and quantifiable data. However, questionnaires have a variety of definitions. For the purpose of this research questionnaires refer to questions that an individual has filled in by themselves (self-completed). Questionnaires allow the researcher to gather data from a large sample, which would be time-consuming to conduct through face-to-face methods. These are most often used for the collection of quantitative data. However, some forms of questionnaires, e.g., questionnaires that have open ended questions, allow for qualitative data to be collected. Questionnaires allow researchers to gather either descriptive or explanatory primary data, allowing identification of different phenomena. Many methods of questionnaire distribution can be utilised, such as web questionnaires allowing swift data collection and data analysis.

The questionnaires that are used in this research do not fit the mostly exploratory and inductive nature of this research. They are, however, used to understand how the processes implemented during the project have affected the digital capabilities of the employees. Questionnaires were conducted at the commencement of the project and towards the end of the project to understand how the action-research closed any knowledge gaps that it intended to. These questionnaires also provide an opportunity to gather preferences on communication methods. Questionnaires are suitable to gather this information, as a quantitative analysis can determine the outcome and provide an objective result amongst a large sample group of employees. The utilisation of a web-based questionnaire allowed for quick data collection and analysis of the responses.

3.7.4. Focus Groups

Focus groups are either defined as a group discussion or interview as they usually consist of multiple subjects and one researcher. Focus groups provide the opportunity to collect a broad scope of information quickly and efficiently as responses can be elicited simultaneously from multiple subjects, allowing detailed investigation, which is guided by a facilitator/researcher. Focus groups are used for various reasons, including the exploration of new or under-researched areas, or to investigate an area of research in which the subjects have knowledge and experience, but the facilitator or researcher does not. They can also be used at the commencement of research projects to collect data that can be used to develop further research methods or, alternatively, confirm and validate the interpretation of findings from other methods of data collection (O'Gorman et al, 2015).

For this research, focus groups are a suitable method due to their capability of gathering broad information from multiple subjects. The focus groups were used to firstly to gather information in a new setting for the researcher from subjects who have extensive knowledge and experience within this setting and, secondly, to allow the researcher to verify the interpretation of the findings from previous interviews and questionnaires. The focus groups commenced early in the project and continued regularly throughout to capture information from specific departments and, as the wider project aims to drive transformation, this allowed the researcher to continually remain up to date with the impact of various changes. The subjects for the focus groups were recruited and segregated based on their specific department, allowing subjects to bring a wide basis of perceptions and first-hand experience to the table.

The focus groups were monitored, and information received was recorded and mapped using the following three techniques: customer journeys, competitor analyses and perceptual mapping.

Focus Group	
Aim	Drive improvement through an action research approach, incorporating employee knowledge at all stages of the process.
Alignment with research aim	This research aims at improving the emarketing capability of Royston through the implementation of digital co-branding strategies. To achieve this, the knowledge, participation and alignment of employees is essential.

Participants	All departments were included in the focus group sessions individually. From each department, a range of managers and administration employees were included to ensure a range of knowledges and experiences were collected.
Timeframe	Focus groups were held every 3 months throughout the duration of the 24-month KTP.
Resulting actions	The outcoming actions intend to include: - Customer journey - Competitor mapping - Perceptual mapping

3.7.4.1. Customer Journeys

Customers are a valuable knowledge source for firms, not only for their interests and preferences but also for their past experiences. For this reason, customer journeys have become popular amongst practitioners for their use in mapping customer value and friction points in complex and digitalised markets (Yachin, 2018; Kuehnl et al, 2019). They outline the series of encounters that customers have with an organisation and focus has shifted to ensuring customers have optimal experiences, as research has demonstrated that these encounters are the basis of customer judgement and contribute to customer retention (Voorhees et al, 2017). Customer journeys have been pinpointed as sources of customer value and extend the business offering beyond their products and services (Kuehnl et al, 2019). With the increase of digital touchpoints, customer interaction with organisations is through a growing plethora of channels, media, and platforms (Lemon, 2016). Customer journeys continue to grow in importance as research suggested that by 2018, organisations would be redirecting 50% of product investment into customer experience innovations (Vakulenko et al, 2019). The findings from customer journeys enable organisations to drive customer experience innovations that improve overall customer experience, remove areas of friction, and increase positive attitudes towards the organisations brand (Tax et al, 2013; Lemon, 2016; Vakulenko et al, 2019).

Mapping the customer journey will be essential for the application of this research, understanding what touchpoints the organisation uses, how they use them, where they could enhance the customer journey and any points of friction that they could reduce to improve customer experience both digitally and traditionally.

3.7.4.2. Competitor Analysis

"Firms use competitor analysis to attempt to define and develop a deeper understanding of their industries and identify and target existing, as well as potential, competitors, determining their strengths and weaknesses and anticipating their strategic and tactical moves (Sheng et al, 2002, pg. 107). A marketing competitor analysis aims to identify the similarity, differences, strengths, and weaknesses of the other competitors of an organisation, working either directly or indirectly within

the industry. By doing this, organisations can understand both threats and opportunities within their playing field. However, this can often be criticised as a reactive approach in marketing (Sammut-Bonnici & Galea, 2015). Competitor analysis can be conducted across a broad range of operations, such as marketing, products, services, or innovation.

The use of a competitor analysis is suitable to map out the direct and indirect players in the industry that Royston operates in. This will allow the researcher to understand how Royston compares in relation to their competitors and assist in identifying major opportunities or threats.

3.7.4.3. Perceptual Mapping

"A perceptual map is a chart used by market researchers and businesses to depict and understand how target customers view and feel about a brand or product," (Botha, 2018). Perceptual maps can also be referred to as positioning maps, useful to visually represent the position of an attribute in comparison to others within the same field or industry. The attributes are plotted within a two-dimensional graph that has two variables with low and high ends, for example, high and low product quality against high and low product price (Alchemer, 2018).

For this research, Royston's position has been visually plotted in a perceptual mapping process against competitors within the industry. This acts as a visual tool for the researcher and company team to understand where Royston is situated when compared to competitors against many variables.

3.8. Ethics

Ethical consideration must be of paramount importance, particularly given the integral nature of the action research and the potential effects that Royston's stakeholders, particularly their employees, can face. The overarching ethical considerations and agreement from all parties has been in place from the commencement of the application process.

Prior to the commencement of this research project, ethical approval protocols were adhered to. Given the context in which this research has been conducted, the researcher completed the documentation and requirements to ensure alignment with Newcastle University's ethical framework and protocols. By completing the ethical requirements, the researcher will align with the following protocols outlined by Newcastle University:

- *"Through the application of a robust and proportionate ethical review process.*
- *By adopting and implementing legislation, best practice guidance, funder requirements, concordats and other key standards.*
- *Generating its own internal standards outlining its expectations.*
- *Providing support such as guidance, training and signposting to the staff and student body to enable them to both understand and meet their obligations.*

- *Embedding a culture across the institution in which ethical working is the norm.*
- *Communicating the University's ethos and standards beyond the institution to related parties; including research participants, funders, collaborators and the public.*
- *Ensuring all relevant activities are compliant with the University's standards."*

(Newcastle University, 2018)

Further to this and given the context in which the research will be collected the researcher signing a non-disclosure agreement (this NDA is a requirement from the KTP process but will carry over to this research), a screening process from both Academic and Company Supervisors and individual considerations for different research stages, for example, interviews, research application and employee workshops. The participatory nature of the individuals involved in this research brings about concerns as to how this may impact them. Whilst the participation of various methods is optional for employees, some may feel pressurised into participating and view this as a work obligation. When looking after the well-being of employees this can have negative effects. Firstly, the addition of further 'work obligations' to their existing role can increase stress and negative feelings towards the researcher and/or the workplace. Secondly, feeling an obligation to participate may increase anxiety, causing negative feelings, increased stress, and a poor work experience.

The research in this PhD thesis was collected throughout the duration of KTP with Royston, which is designed to create changes that impact on the company. Whilst these changes are expected to have an overall positive effect, it is important to note that Royston has a high level of both direct and indirect stakeholders reliant on their consistent operation.

This research focuses on collecting and analysing company data that is of a sensitive nature. This data in the hands of competitors could be severely detrimental to Royston. Whilst certain research aspects can be published, a screening process utilising both academic and industry supervisors must take place to ensure that no disclosure of sensitive or detrimental data takes place. For the interviews, informed consent was required, meaning that the reason for the research was explicit and consented to (Carson et al, 2001). Therefore, participants were required to provide consent prior to the commencement of the interview. This was either verbally recorded or written. Ensuring sensitive data is managed and stored correctly is an essential ethical priority. The research used was sensitive company data alongside individual perceptions. Therefore, the researcher prioritised the management of this data (McNiff, 2019).

3.8.1. Limitations

Several main limitations in this research exist. Firstly, implementing the research has been delayed and changed by Covid-19 and the impact on both Royston and the wider diesel engineering industry across the globe. With other co-branding stakeholders, the availability of budget for marketing activities including co-branding has declined. To avoid the potential implications of delayed research, a timeline to adhere to any Covid-19 workplace restrictions was implemented and to ensure the continuation of any data collection campaigns was consistent. Secondly, the KTP focuses on creating positive change within a predominantly traditional workforce, it is likely that when implementing a change within a pre-existing culture, the researcher will experience a level of resistance to change. If the level of change resistance is significant, this could have implications for the implementation of the research and the ability to collect accurate and useful data. To minimise the potential of change resistance, the Six Change Approaches Framework by Kotter and Schlesinger **(Figure 7)** will be utilised.

Figure 7: Six Change Approach (Kotter and Schlesinger)

Unwillingness to participate may create limitations within this research across a broad range of stakeholders. As this research relies on the incorporation of external stakeholders, including OEM partners, distribution networks and customers, an unwillingness to participate could be detrimental to the outcome and quality of the data. Creating relationships with key personnel was key in creating opportunities and aimed to ensure that all stakeholders are willing to participate, ensuring that a comprehensive and quality dataset can be collected and analysed.

4. Action Research Case Study: Royston KTP

The setting in which this research took place is through a Knowledge Transfer Partnership with B2B engineering organisation, Royston. The KTP provided a 'real-life' setting in a B2B organisation that required digital transformation to improve their existing e-marketing capabilities. The KTP presented a unique opportunity to implement new processes to explore the impact of B2B co-branding. The KTP is highly important in terms of the setting of the research and the action case study, given the influence of Royston's existing employees, partners and processes. Therefore, to provide a holistic understanding of the setting, this section will provide a detailed view of Royston, the KTP aims and objectives, and discuss how the various stages of the KTP have facilitated the research implementation.

4.1. Royston KTP

Royston required a digital transformation process to improve their current digital and online marketing capabilities. Historically, Royston have used traditional methods to market and build their brand, including on-the-road sales personnel and exhibitions. This has been intertwined in their culture, and digital methods of building the brand and improving their digital standing have not fully been explored or implemented. A change of leadership and a desire to drive digital transformation led Royston to apply for a Knowledge Transfer Partnership, part funded by Innovate UK. Royston's business model strongly incorporates partnerships in different forms and at different stages of the supply chain and therefore, looking to incorporate strategies that can leverage the resources that Royston can easily access. The motivation to study this research gap derived from an exploration into key opportunities around these easily accessible resources and ascertained that there was the potential for Royston to leverage certain attributes from their partners through strategic co-branding. However, at this stage it was understood that there was a scarcity of literature within B2B co-branding, particularly in a digital setting and coupled with the pressing importance within these areas, the need for exploration into this area linked the action research to the research thesis.

Based on the type of business, the partners, and assets available, an opportunity for digital co-branding was identified, but further exploration into existing research in this area demonstrated a significant gap in the B2B branding literature. These were reviewed and outlined in the systematic literature review in Chapter 2. This presented a unique opportunity to study how digital co-branding affects a B2B organisation within Royston Limited, a B2B marine engineering organisation, across the course of 3 years. The following section details the justification for the application of an action-research case study and its suitability for this research. The theoretical justifications presented were applied practically to Royston as an organisation and the following section will provide a detailed overview of Royston and the specific details of the various techniques and procedures implemented within this action-research case study.

4.2. Royston Overview

The action case presented in this research is based on Royston Limited, a small-medium sized enterprise (SME) diesel engine specialist headquartered in Newcastle Upon Tyne. Royston are well established within the global diesel engine industry, with over 40 years' experience and regional offices in Australia, Singapore, Malaysia, and Nigeria; alongside a network of international distributors. Royston currently have three revenue streams, diesel engine servicing and spare parts procurement of major Original Equipment Manufacturers (OEMs) alongside vessel fuel management, through Royston's innovative product, enginei. These services are provided to blue chip customers in the marine, offshore, defence, industrial and utilities markets. Primarily, Royston's business is conducted with B2B customers, approximately 98%, with the remaining 2% of business conducted with B2C and leisure customers.

4.2.1. Royston Capabilities

Diesel Engine Servicing: Royston provide a comprehensive range of diesel engine services across the globe to supply, maintain and repair diesel driven equipment, including marine diesel engines, marine generator sets, propulsion systems, turbochargers, and fuel injection equipment.

Marine Commercial: Royston offer a worldwide service for blue chip operators within the marine and offshore sectors, across all diesel-driven vessel types, including passenger ferries, tug vessels and offshore support vessels. As official partners of seven Original Equipment Manufacturers (Volvo Penta, DEUTZ, GE Marine, Cummins, Napier, Niigata and Yanmar) and OEM-trained engineers for over forty other Original Equipment Manufacturers, Royston have established a diverse reputation and a team that can work across all major engine types, whether onboard the vessel or at one of Royston's specialist workshops.

Marine Leisure: Royston provide similar services on leisure vessels in relation to their Marine Commercial division. However, due to the limited scale of vessel work, this is mostly conducted at a localised level.

Industrial: Royston have an established reputation and successful record within major industrial, power generation, mining and renewables industries and have developed a specialist team of employees and engineers to support Royston's industrial operations. Royston have fulfilled contracts for major corporations such as NHS Trusts, public services, airports, and power critical sites on a substantial range of power generation equipment.

Spare Parts Procurement: Royston have a dedicated team of spare parts procurement specialists, who facilitate the acquirement, purchase, and delivery of over 300,000 OEM spare parts from their various official partnerships. Procurement from a wider more-specialist product range can be arranged.

enginei: enginei is a Vessel Fuel Management System (VFMS) developed by a team of Royston specialists and leading academics. *"Enginei is a comprehensive and flexible energy management solution comprised of hardware and software for the marine industry"* (enginei, 2020). The product delivers a variety of features, including fuel monitoring, performance optimisation, bunker monitoring, tank monitoring, energy management and emissions monitoring. Most sales derive from vessels operating within the oil and gas industries, as legal and contractual obligations from international oil companies require tendered vessels to have a Vessel Fuel Management System onboard. However, further customers include passenger vessels, dredgers, FPSO's and ferries, as enginei has proven cost reduction advantages, emissions reduction and optimisation features that can decrease fuel use and provide data to drive optimal performance. Primary enginei consumers are large B2B corporations as the cost of enginei systems (or similar systems) can exceed £100,000, depending on various factors, for example the number of sensors required for installation.

4.2.2. Royston Structure

Royston has a Functional structure that includes the various departments outlined above. These departments focus on individual tasks or aims. Alongside these core business departments, Royston's structure also includes traditional business functions. These departments are outlined below:

- Sales
- Customer support
- Accounting
- Marketing
- Administration
- Human relations

At the beginning of this research project, Royston's marketing team consisted of one member and, therefore, needed to outsource various skills, including, website development, public relations, design and print.

Royston's employee structure represents a traditional hierarchical frame. Currently, Royston have four core directors based in Newcastle Upon Tyne, alongside one regional director based in Singapore. Reporting to the Directors are top-level managers that have a high level of seniority within the company. This senior management team mostly consists of department leaders. Below this, each department consists of various employees with layered levels of seniority. The functional structure of departments and the hierarchical layout of employees has played a significant part in the establishment of Royston's culture, management, and leadership styles.

4.2.3. Knowledge Transfer Partnership

The research presented within this thesis is based on a practice-led Knowledge Transfer Partnership (KTP). "*A Knowledge Transfer Partnership (KTP) is a subsidised three-way partnership between a business, a high-calibre graduate, and an academic institution*" (Invest NI, 2020). The Knowledge Transfer Partnership is a project between Innovate UK, Newcastle University and diesel engineering experts, Royston Limited. Royston identified a gap in their capabilities in relation to their marketing and branding functions and applied to undertake a collaborative partnership to create positive impact within their topic boundary through innovation.

The collaborative, practice-led partnership was conducted over 24-months and assisted Royston in developing an enhanced e-marketing ability, driven by an understanding and use of data analytics, to incorporate co-branding and co-creation, enabling Royston to develop an optimal marketing strategy working in partnership with their stakeholders (KTP Agreement, 2017). Seven stages followed:

1. Mapping existing products, services, practice, stakeholders and identifying opportunities
2. Developing a brand strategy and an integrated marketing communication plan
3. Co-branding with selected OEM Partners
4. Co-creating with customers
5. Leading the industry transformation
6. Embedding the capability
7. Commercialisation

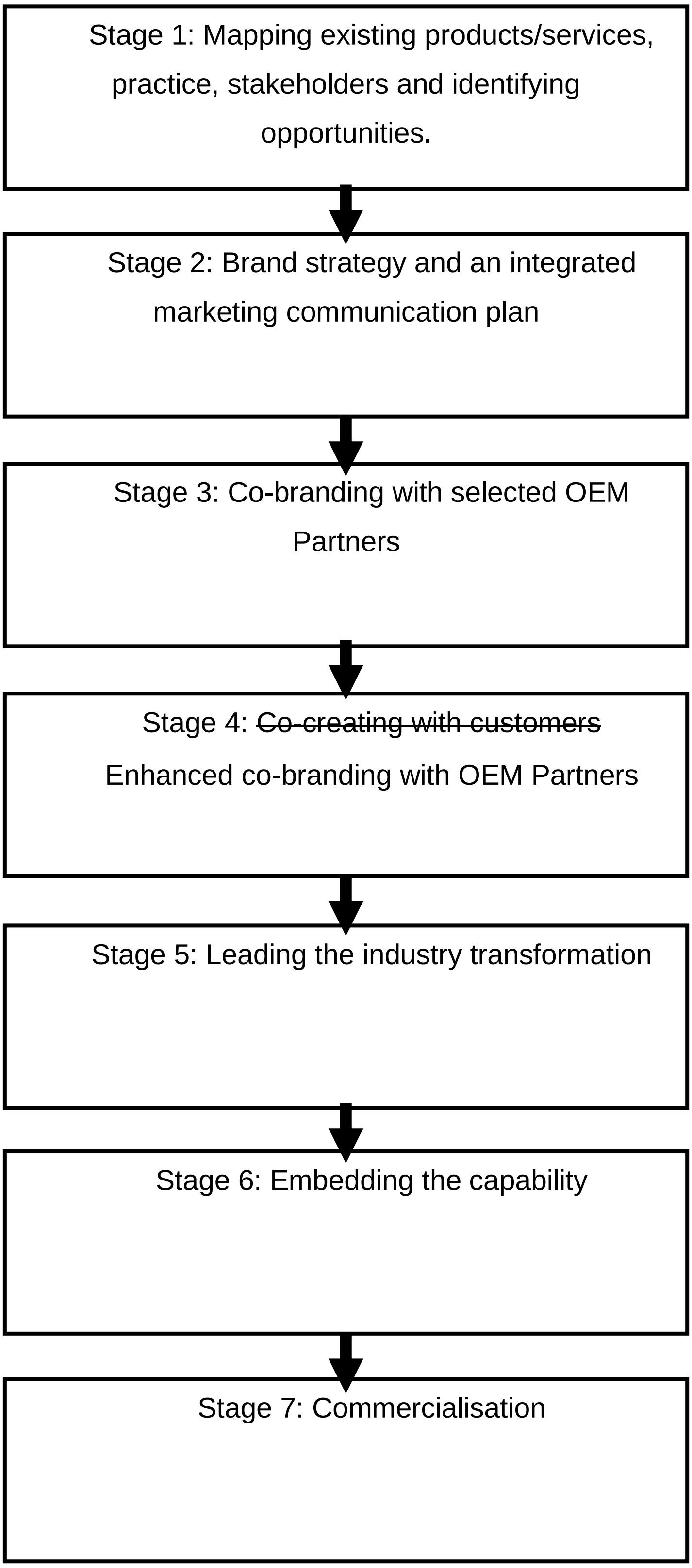
The Knowledge Transfer Partnership creates a unique environment through the collaboration of industry and academic experts, focusing on innovative change. The integration of the KTP associate into the company enabled a 24-month, longitudinal in-depth inquiry with access to all components and players (both internal and external) influential in Royston's processes. The access granted through the KTP, combined with a demonstrated willingness-to-change from the leadership team, provided a unique opportunity to use innovative methods that have limited academic scope within the specific B2B setting, enabling not only the advancement of practice/commercial capabilities but also the advancement of academic theory. A primary goal of the KTP was to deliver practical results through the development of an enhanced ecommerce capability for Royston. These practical goals focused on the increase of financial, branding and marketing key performance indicators. However, the academic literature, demonstrated in Chapter 2 of this thesis, presents a research gap within B2B digital brand equity transfer, more precisely the phenomenon of digital co-branding within a B2B environment. By implementing digital co-branding within a B2B environment through a practice-led action research case study approach, this research aims to advance the existing academic literature on digital co-branding within B2B environments, alongside the generation of practical performance improvement for the organisation.

The need for this Knowledge Transfer Partnership was due to the identification, by Royston management, of a need to improve their current digital marketing and e-commerce capabilities, as they traditionally focused on offline and physical marketing techniques. The KTP comprised of seven stages, moving from the preliminary research stage, identification and implementation of co-branding strategies followed by the data analysis and finally, embedding the knowledge into the wider company. These stages, demonstrated below, present the flow of the KTP project and display how the action research co-branding strategies were implemented, analysed, reviewed, and embedded. Prior to the KTP, Royston's Marketing capability was limited to one team member, whose job role extended into other company roles. Therefore, reliance on outsourcing certain functions was necessary. Alongside this, Royston's management recognised a change within the wider diesel engine industry noticing that there was an increase in digitalisation and digital methods within the customer purchase journey. These factors demonstrate the need for exploration and the implementation of new theories that can improve digitalisation.

To accommodate this change, a team of academic, company and project management specialists was formed through the Knowledge Transfer Partnership, combining a wide variety of marketing, B2B, digital, data analysis, research, business and project management specialists. The Knowledge Transfer Partnership Plan was devised by both the company and academic specialists and consists of seven stages. The stages are demonstrated below:

4.2.4. Knowledge Transfer Partnership Project Stages

Figure 8: Knowledge Transfer Partnership Project Stages



The various project stages **(Figure 8)** combine to create an enhanced e-marketing ability. Alongside these stages, dedicated periods will be used for Induction, Training and Development and Action Plan Development. A detailed description of the KTP Work Plan and various stages is discussed below. Following this, the KTP stages are linked directly to the objectives of the PhD.

Project Stage 1: Mapping existing products/services, practice, stakeholders and identifying opportunities will enable the familiarisation of Royston's offerings within the existing diesel engine market through the perspectives of three major stakeholders (employees, customers, and OEM Partners). Information at this stage captured how Royston's brand is perceived and communicated.

Project Stage 2: Utilising the data and information collected in Stage 1 a brand strategy and integrated marketing communication plan was prepared, this enabled external communication initiative to scale-up organically whilst underpinning the digital transformation process.

Project Stage 3: This stage focuses on the negotiation, design, and implementation of co-branding campaigns with external partners or brands in an attempt to strengthen Royston's brand image through coupling with brands that are typically much larger and stronger.

Project Stage 4: Following the co-branding campaigns, the co-branded partners and other relevant stakeholders were engaged in an idea development process for future innovative and collaborative solutions for co-creation. This focused on digital transformation and be assisted through joint marketing communication activities.

Project Stage 5: Royston operates in an industry that is currently undergoing rapid transformation. This offers an opportunity on which the company can capitalise. Selected/important industry news could form the basis on which marketing campaigns could be based. Digital tools could be deployed to monitor such trends. Templates for fast deployment/dissemination were prepared. By being in the forefront of the changes, and capturing the "spirit of the moment", the company can help strengthen its brand as a dynamic and proactive one.

Project Stage 6: Building on the embedding activities throughout the project (reports, presentations, staff participation, training, etc), this stage ensures the embedding activity is completed. This ensured Royston can continually develop the marketing strategy, enhancing the same with data analytics, to meet the changing needs of the sector.

Project Stage 7: Implementation of the business case for the future direction and development/enhancement of the new marketing capability to achieve project objectives, capitalizing on Enginei's market penetration and high expected growth to benefit the other products of the company.

Changes to Stage 4: Further opportunity to use co-branding strategies were deemed to be more appropriate once the preliminary research was conducted. Given the Covid-19 pandemic, extending the specific co-branding research and campaigns was more feasible than co-creation.

4.3. Linking the KTP to the Research

The KTP provides the base and opportunity to conduct the research. The KTP application demonstrated a need for Royston to enhance their e-marketing capabilities and based on a preliminary review of their supply chain, partners and current digital capabilities, an opportunity for collaboration or co-branding was identified.

(KTP: Stage 1) a review of existing literature was conducted. The literature review (Chapter 2) demonstrated a significant gap in the wider B2B branding literature, with research on digital brand equity transfer strategies for B2B organisations being scarce.

The following stage (KTP: Stage 2) provided the basis of the digital co-branding process, marketing, branding and communication guidelines, and plans were constructed and communicated across Royston's employees. This provided a baseline for the researcher to understand Royston's current processes, firstly, to ensure that any further communications or portrayal of Royston's brand was consistent and professional. These documents and guidelines also provide the researcher with a baseline on which to build the digital co-branding campaigns. This stage will also identify Royston's current in-house capabilities with questionnaires and focus groups.

KTP: Stage 3 focuses on the co-branding campaigns. At this stage, the researcher constructs, implements the initial two digital co-branding campaigns.

Based on the findings from the initial co-branding campaigns, a decision was made to continually focus on digital co-branding campaigns in KTP: Stage 4. This would benefit the research as further exploration into alternative digital co-branding campaigns could be conducted, providing a further data for analysis on the effects of digital co-branding in a B2B setting.

The final stages of the KTP (KTP Stages: 5-7) focus on continual analysis and optimisation of the co-branding campaign and how this affects brand associations, alongside, embedding this knowledge into the wider B2B organisation.

This research was action driven, based on a KTP project implemented to create practical results for a B2B organisation. In this journey, a gap in the existing literature was identified and the demonstrated importance of closing this gap within the B2B branding literature provided the opportunity to use the KTP as a case study. The aims of the KTP and research aligned well, as the KTP wanted to create optimal eMarketing capability through co-branding and this is in part what the research presented in this thesis intends to do.

4.3.1. Application of Chosen Research Techniques and Procedures

Based on the theoretical justification of the selected techniques and procedure, this section will provide a detailed description of the application of these techniques and procedures into this action-research case study. The practical timelines, participant information, structure, aim and implications will be detailed. The below table provides a summary of the key research techniques and procedures that will be used within this research and link the aim of each technique to the overarching research objective.

Table **6** presents the various interviews questionnaires that were conducted at various stages of the KTP, outlining the timeline, participant figures and basic participant profile.

Table 6: Timeline of Interviews and Questionnaires

Activity	**Timeline**	**Participants**	**Profile**
Employee Interviews	First 3 months of project	8	Employees ranging from Manager to Administrator. All levels.
Customer Interviews	First 3 months of project	1	Royston customer.
OEM Interviews	First 3 months of project	0	No OEM partners accepted a request for formal interview.
Questionnaire 1	First 3 months of project	32	Digital questionnaire sent to all employees.
Questionnaire 2	Last month of project (Month 24)	19	Digital questionnaire sent to all employees.

The interviews intend to gather information both internally, externally and at both ends of the supply chain (customers and interviews) so that the researcher can accurately understand key perceptions relating to Royston's brand. These perceptions enabled the KTP team to identify opportunities that could be implemented to drive improvement. These interviews are intricate in this action-based process, due to the action-research approach. Firstly, employees are part of the process. Their experience, knowledge and understanding of the business, its functionality, and daily operations, provide a detailed insight beyond the current knowledge of the external researcher. By understanding this, the researcher has an increased granularity of information that can be used to identify strengths, weaknesses, opportunities, or threats. This action-research study is based on driving forward digital transformation. To manage this and, ultimately, change the existing company culture, the researcher required buy-in from employees. The interviews provided the researcher with an opportunity to build rapport with the employees that were involved in the digital transformation. This is important when implementing change within an organisation (Webb, 1994). Secondly, understanding external perspectives from customers can further identify how they perceive the brand and assist in mapping the competitive landscape, enhancing the knowledge surrounding Royston's brand and, again, identifying strengths, weaknesses, opportunities, and threats. Finally, OEM Interviews enabled the researcher to understand perceptions of Royston from the top of the supplier chain and probe into identifying and prioritising co-branding opportunities. These sets of interviews allowed the researcher to map Royston's current position, understand the existing culture, customer journeys and friction points, and identify opportunities for digital co-branding, which will form the basis of this action-based study.

The questionnaires gathered information on the existing internal digital capabilities of Royston's employees alongside their preferences for digital communication and their willingness to be involved in the transformation process. Using a questionnaire enabled the user to gather responses from a number of participants to a set of pre-determined questions (Saunders et al, 2012). The questionnaire will allow the researcher to gather responses from the entire employee base of Royston. Many employees work from different locations and therefore, a questionnaire provides a convenience and consistent method of data collection.

The questionnaires aim to gather information of the digital capabilities of the KTP / project participants, this relates to the implementation of the research aims within Royston. To implement and maintain these digital strategies within Royston, we require in depth understanding of the existing digital capabilities. By doing so, the researcher will be able to gage the extent of training required and also identify ambassadors that can assist in the longer-term maintenance of the co-branding strategies. This indirectly influences the research objectives as it will provide an in depth understanding around the resources that are available for the implementation and maintaining of digital co-branding strategies. Two questionnaires were conducted, one at the start of the project and one at the close of the project. This enabled the researcher to determine if or how Royston employees have progressed in their digital capabilities and determine if they have bridged any evident gap identified at the commencement of the project.

4.3.2. Royston Interviews

Three sets of interview questions were designed for the different stakeholders participating in the interview: employees, customers, and OEM Partners. The questions will be constructed by the researcher and agreed by senior company management and the academic team. All participants will provide consent, for internal stakeholders (employees). This is agreed to be verbal consent whilst external stakeholders (customers and OEM Partners) must provide written consent. An example of the written consent form which must be signed by each external participant is shown in Appendix A.

4.3.2.1. Pilot Interview Study

Three pilot interviews were conducted with the internal stakeholder group, Royston's employees. The pilot studies enabled the interviewer to identify any issues with the questions and expected time scale to effectively improve the research quality and to improve the reliability and validity of the findings (Malmqvist et al, 2019). This section of the methodology will outline and discuss the first set of the interview questions that were asked to Royston's employees, followed by the questions that were posed to Royston's OEM Partners and it concludes with the customer interview questions.

4.3.2.2. Employee Interview Questions

The researcher will conduct interviews with internal stakeholders (employees) to capture the perception of Royston's brand currently. The interview protocol (Appendix A) will be designed and approved by the company and academic supervisors. The interviews aim to identify areas of strong practice, as well as opportunities for improvement, focusing on the role that employees can play in conveying the company's brand.

4.3.2.3. OEM Interview Questions

The researcher will conduct interviews with selected OEM partners. Those involved will be both decision makers and marketing/communication managers and the interviews (protocol in Appendix A) will gather evidence related to the company's external brand image and identify synergies for co-branding (when it comes to digital channels). The company will provide the necessary sample, while the academic and company supervisory teams will jointly design the interview protocol.

4.3.2.4. Customer Interview Questions

Interviews will be conducted by the researcher with customers, capturing their perceptions of the company and the reasons they buy products and services from it. The data collection protocol and questions (Appendix A) will be designed and approved by the company and academic supervisors. The interviews will focus on collecting qualitative data, which can be complemented by company data to provide a richer perspective to the answers provided. The customer list will be provided by the company. This will focus on capturing the process that decision makers go through when completing a purchase and the role that digital channels play in this.

4.3.3. Questionnaire

The use of a questionnaire enables the collection of objective and quantifiable data from the wider Royston employee team (Saunders et al, 2019). An exploration of Royston's current marketing communication abilities will be conducted to identify both the internal and external communication touchpoints. The first exploration will focus on Royston's internal employees and intends to identify the levels of marketing information shared throughout the company, the digital platforms they currently reside on and their abilities to utilise these platforms. This presents an opportunity to identify employees that would be interested in progressing into a Brand Ambassador role whilst allowing the researcher and company management to understand the digital abilities in the company. A questionnaire will be constructed using Qualtrics software and distributed through a hyperlink to an internal company employee email list. Questionnaire responders have the option to remain anonymous; however, those employees that are interested in progressing to Brand Ambassadors had the opportunity to leave their details. Questions will be reviewed by Senior Company Management prior to distribution. This questionnaire aims to achieve a detailed understanding of how employees view communication within the workplace. The questionnaire will consist of 11 questions that prompt employees to consider both internal and external perspectives.

Due to the longitudinal nature of this research, this questionnaire will be conducted twice over the duration of the research, once within the first six months of the KTP and the second time in the final month. This will allow for comparison of employee participation and perceptions on communication, enabling the researcher to drive guideline creation with the marketing team to create an internal communication strategy that aims to target most of the workforce and maximize interest. The later questionnaire will have some further questions included to collect data on perceptions of any changes made throughout this research process. This will enable the researcher to conduct a comparative analysis of any changes made throughout the Knowledge Transfer Partnership.

4.3.3.1. Questions

The first section identifies details about the participants; although all mandatory questions will be anonymized, these generic details enabled the categorization of results and enable strategic recommendations regarding the following co-branding.

1. **What department of the company does your work primarily focus on?**

   Employees were given five options: administration, sales, engineering, technical and other

2. **How often do you read the internal communications sent by Royston?**

The following questions attempted to identify employee preferences when it comes to internal communications.

3. **How often would you like to receive internal communications? Please rank the following methods of internal communication from your most preferred choice (1) to least preferred choice (5).**

   Employees were given five options: email, newsletter, meetings, noticeboard, online platforms

4. **What type of information would you like to receive or read regularly in an internal communication? Please rate each topic below**

   Employees were given five options: industry insights, future trends, business updates, employee updates, and organised events.

5. **Are there any other types of information you would like to receive? (If yes, please detail these in the box below)**

The next section focused on the engagement of the employees in relation to social media and aims to identify suitable brand ambassadors, who can aid in the scaling up of the marketing communications capacity.

6. **Do you follow Royston Limited or enginei on social media? If yes, do you engage with any of Royston Limited's social media posts e.g., commenting, sharing, retweeting?**
7. **Would you like to be involved in a social media or a newsletter campaign in the future?**

The final section gathered both contact information (optional) and any extra information that the participant has not had the chance to comment on.

8. **This questionnaire is anonymous; however, if you would like to leave your email address to get further information about this questionnaire or would like to contribute to future campaigns, please do so in the comments box below.**
9. **Are there any further comments you would like to make?**

4.3.4. Focus Groups

Focus groups were used to conduct 'group interviews' within each department of the various Royston functions, enabling the researcher to focus on specific details within that department. This expanded the scope of the individual semi-structured interviews by encouraging the focus group participants to share their perceptions of certain issues within an open environment. Aligning with the research aims, focus groups were used to collect qualitative data at different points during the research project. This will assist in building an understanding of any anomalies noted across the data and add the intrinsic knowledge of the KTP participants and Royston employees to understand any fluctuations in the data or processes. Alongside this, focus groups will assist the researcher in accurately structuring customer journeys alongside mapping the digital and traditional customer toucher points. By doing so the researcher will have both qualitative and quantitative data from each of the teams at various points across the research journey. Focus groups will be conducted with each of the teams involved in the process, with specific focus on the Spare Parts team which include the Spares Parts Manager, the sales associates and sales manager. During the focus group the researcher (KTP associate) will act as the moderator and direct the participants to focus on specific topics, including the exploration of their department's customer journey, their competitors and the perceptions surrounding Royston and their specific competitors. Note that due to the variation of Royston's departments, different competitors and customer journeys are expected for each focus group.

The focus groups were conducted various times throughout the KTP, commencing from month 3 and they were held approximately bi-monthly for the remainder of the project. They focused at enabling the implementation and optimisation of strategy throughout the project, from the employees. This aims to create a continual process of optimisation and incorporate the employees throughout the process using their knowledge and experience, alongside achieving their buy-in, which drove transformation and incorporated this into their culture. These focus groups focused on identifying areas of friction or improvement and creating further opportunities.

Within the preliminary research, the focus groups worked within three topic boundaries:

- Customer journey
- Competitor analysis
- Royston and competitor perceptions (perceptual mapping)

The data collected from the focus groups will be amalgamated with a broader review of data collected through the other preliminary research techniques (interviews and questionnaires) to create a comprehensive image of the outlined topic boundaries and assist in the identification of opportunities for future campaigns.

Amalgamated results were analysed and opportunities for digital co-branding were presented to the Royston leadership team. Once agreed, a series of campaigns were created, piloted, and implemented.

4.3.4.1. Customer Journey

It was essential to build on the knowledge developed during the interviews and build a comprehensive overview of the process that a typical customer of Royston will go through, from awareness to conversion and repeat custom. Based on the primary data and knowledge gathered from the interviews, focus groups and questionnaires, alongside secondary data, customer journeys will be constructed. Due to the extensive variation of typical customers across Royston's departments, the decision was made to construct three customer journeys, representing the marine services department, the spare parts department and the enginei department. Focus groups will be held with key members from these three departments and questions aim to identify typical customer personas and processes, digital and physical marketing touchpoints, and areas for improvement. The development of comprehensive customer journeys enables the identification of areas for effective co-branding opportunities to be implemented.

4.3.4.2. Competitor Analysis

To build a comprehensive knowledge base of Royston's current market position, two competitor analyses will be conducted, one for Royston's marine and parts offerings and another for their product, enginei, as both have a vastly different array of competitors. The competitor analyses will enable the comparison and benchmarking of Royston and enginei against both their direct and indirect competitors. The analyses primarily focus on marketing and branding benchmarks but will expand into the competitor’s products, services, abilities, and overall customer offering.

Working with the relevant departmental managers and utilising Peteraf and Bergan’s Framework (2001) the competitive terrain of Royston and enginei was mapped based on market commonality and resource similarity, highlighting both the direct, indirect and potential competitors. This broad approach will minimise the risk of missing competitor blind spots.

4.3.4.3. Perceptual Mapping

Building on the competitor analyses, perceptual mapping enables the building of a visualisation of Royston’s current market position and the industry landscape in which they operate. The competitor analyses will enable the comparison and benchmarking of Royston and enginei against their direct and indirect competitors. The analyses will primarily focus on marketing and branding benchmarks but will expand into the competitors' products, services, abilities, and the overall customer offering. Working with the relevant departmental managers and utilising Peteraf and Bergan’s Perceptual Mapping Framework (2001) the competitive terrain of Royston and enginei were mapped based on market commonality and resource similarity, highlighting the positions of direct competitors and minimise the risk of missing competitor blind spots.

4.3.4.4. Enginei Perceptual Mapping

The perceptual maps were constructed using enginei’s direct competitors: Fueltrax, Ascenz, Krill and C-Sense.

The various attributes compared within the perceptual maps were determinants that have been demonstrated to have importance in the preliminary research. These include:

1. Price vs perceived quality
2. Actual vs Perceived Quality
3. Price vs Number of Installations
4. Price vs Functional Variety
5. Website Quality vs Brand Image

The following section will outline the methodology that will be used to implement the four digital co-branding campaigns.

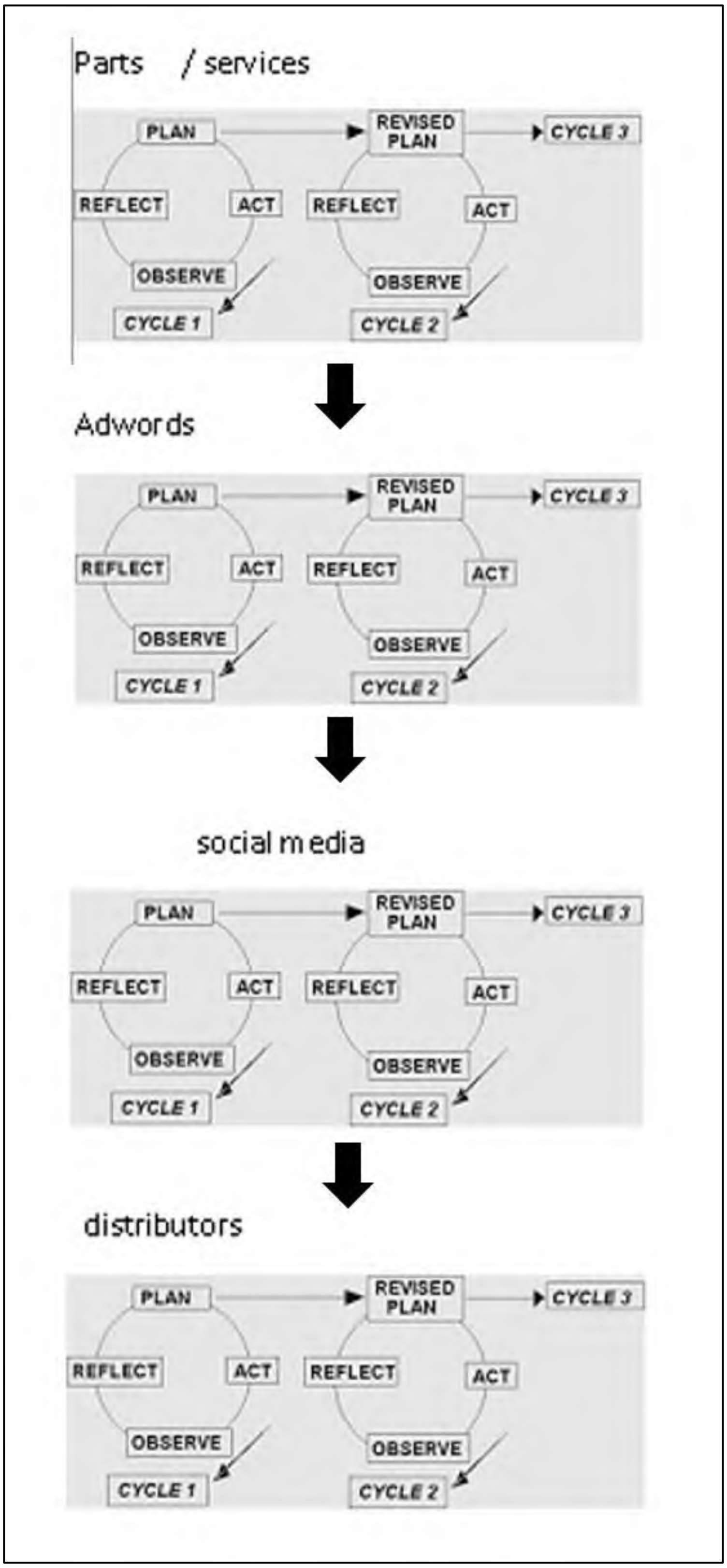
4.4. Co-branding Campaigns

Utilising findings from the Preliminary Research within this action research case study, the researcher identified and implemented four digital co-branding campaigns. Royston co-branded with partners at various levels of the supply chain, including those above and below Royston, operating at both supplier and distributor level. The campaigns were designed to understand the effect of co-branding utilising a baseline example (where applicable) of a non-co-branded Royston campaign. The four campaigns aim to assist in the generation of knowledge within brand equity transfer through digital co-branding within a B2B environment, both with major brands at the top of the supply chain and with smaller brands at lower levels within the supply chain. As the term 'digital' is not confined to a single platform, this research maximised the scope by conducting campaigns across a variety of digital platforms, including Royston's website, search engines, B2B social media platform, LinkedIn, alongside a final combined approach.

4.5. Implementation of Co-branding Campaigns in action research

The co-branding campaigns were implemented, and each subsequent action research cycle enhanced the knowledge around digital co-branding, messaging, management of OEM Partners and the B2B environment. This knowledge drives further continual iterations, which enables the convergence and starting point for the following cycle. Therefore, as each cycle progresses the knowledge enhancements created in the previous cycles will help drive decisions for any progressive iterations in the cycles thereafter. This aims to increase both the depth and scope of the research enquiry, allowing the researcher to collect a comprehensive set of data that assists in successfully responding to the research questions. **Figure 9** below shows the proposed progression of the campaigns. Given Royston's functional structure and heavy focus on multiple partnerships within the broader industry, both above and below them in the supply chain, the use of digital co-branding to elevate digital performance and improve brand equity is appropriate. Due to these existing resources, digital co-branding is an accessible avenue to pursue as other potential alternatives may be too resource heavy for an SME to proceed with implementing at this stage.

Figure 9: Co-branding Campaign Structure



4.6. Co-branding Campaign 1: OEM Parts

The aim for this initial campaign is to identify how a digital co-branding campaign can affect the e-commerce and online metric analysis of a B2B focused marine engineering company. This aims to advance the existing theory on how digital co-branding campaigns affect brand equity transfer with a major brand in a B2B environment, alongside understanding the impact of digital co-branding on Royston's KPIs, including financial and non-financial indicators. This will help with answering two of the research objectives and questions. The strategic commercial aim of this campaign deployment is to improve OEM product sales alongside improved website visibility for Royston, whilst the research aims intend to identify the impact of digital co-branding campaigns within the B2B engineering industry, both commercially and for global website visibility.

4.6.1. Campaign 1: Method

1. Suitable Royston OEM official and affiliate partners were identified based on their product list availability and format, territory restrictions and their willingness to participate within Royston's digital co-branding strategy.
2. Written consent was obtained from each partner.
3. The original product lists were formatted prior to public upload to include all the necessary details and ensure the correct format is adhered to for the Royston website.
4. An initial pilot test was conducted, consisting of an official OEM partner of Royston, a well-recognized OEM within the marine engineering industry. The pilot test product list consisted of 38,190 individual products and will be used as a pilot to identify any potential knock-on effects that a wider strategy implementation could cause, such as slowing the page loading speed.
5. The product URLs were formatted and adapted to best suit the co-branding strategy and the wider Royston website.
6. An XML sitemap was then submitted to Google Search Console to enable crawlers to explore each individual URL and provide relevant metadata for organizational purposes.
7. Following the pilot test, a comprehensive roll out of 5 other OEM partners' product lists were uploaded to the Royston website.
8. Data on the number of enquiries, sales, and website information (including SEO, location, and Search Engine Results Position) was collected at regular intervals and utilised to drive iterations and further optimise the strategy.
9. Continual improvement techniques, such as Six Sigma, were implemented to drive optimisation.

4.7. Co-branding Campaign 2: PPC with OEM Partners

The aim for this campaign is to identify how co-branding affects the success of paid advertising. Like Campaign 1, this campaign also aims to advance the existing theory on how digital co-branding campaigns affect brand equity transfer with a major brand in a B2B environment. However, by using another digital platform, namely Search Engine Advertising, this campaign firstly expanded the scope of the existing collected data whilst advancing the existing campaign through other channels. This campaign developed multiple paid advertising campaigns utilizing the Search Engine tool Google Ads. Multiple ads were created with different OEM Partners, including Volvo Penta, Deutz and Perkins, alongside a non-co-branded paid ad to collect baseline information. This intended to identify how a relevant audience will react to co-branding advertisements that connect Royston with companies operating above Royston in the supply chain.

4.7.1. Campaign 2: Method

1. Suitable Royston OEM official and affiliate partners were identified based on their product list availability and format, territory restrictions and their willingness to participate within Royston's digital co-branding strategy.

2. Written consent was obtained from each partner.

3. A review of current competitors' adverts and existing paid advertisements surrounding the OEM collaborations took place.

4. Co-branded advertisements were created, including set keywords, text and metadata on Google Ads with company and academic supervision.

5. To ensure baseline data can be collected, an advert with no co-branding components was created.

6. Budgetary consistency across all locations and adverts received confirmation.

7. Adverts were uploaded and pushed live once approved.

8. Data on LinkedIn was collected at regular intervals and utilised to drive iterations and further optimise the strategy.

9. Continual improvement techniques, including Six Sigma, was implemented to drive optimisation.

4.8. Co-branding Campaign 3: Decision Tree and A/B Testing

One of the research aims focuses on understanding the impact of digital co-branding on B2B social media. Therefore, in addition to the previous campaigns, campaign 3 builds on the collected data by understanding how digital co-branding can affect brand equity transfer with major partners on the

B2B social media platform LinkedIn. This intends to help with answering the second research objective and question, enabling the researcher to understand the impact of digital co-branding when conducted on a social media platform. The experiment conducts an A/B test comparing numerous factors including co-branding on social media platform, LinkedIn and analyse the data to understand whether co-branding on B2B social media outperforms a non-co-branded alternative. This section discusses the method used for the exploratory data analysis and A/B testing experiment, through orthogonal design, by applying the principles of Six Sigma to the B2B marine engineering company Royston. Various marketing best practice techniques are suggested for social media platforms; however, these are rarely industry or company specific and often specifically focus on companies operating in B2C industries. These best practices mainly include the inclusion of an image or some form of rich media, a short post and the inclusion of call-to-actions and hashtags. Therefore, this study focused on identifying company specific best practice techniques.

Experiments are widely applied as a quantitative research method in business and social science research due to their ability to act as a reliable and efficient method of collecting and verifying data. Experiments are particularly useful in trying to understand the impact of a single independent variable on a dependent variable. Experiments are a popular quantitative research method as researchers can have a high level of control over the conditions within the experiment, creating direct and reliable data that can be used for comparative analysis with minimal bias (Taheri et al, 2018). Six Sigma was used to increase the rigour of the experiment, reduce variation, and assist in developing a cycle of continuous improvement, similarly to what was used as campaign 1. This campaign merges into the previous campaigns by optimizing the existing co-branding strategy by expanding the scope of Royston's co-branding through different platforms. The data collected helps with understanding how these platforms and their users react to co-branding campaigns and create understanding as to the effect of brand equity transfer through digital co-branding on the B2B social media platform LinkedIn.

4.8.1. Application of Six Sigma

This methodology is based on the principles of Six Sigma: define, measure, analyse, improve, confirm and transfer (Gitlow, 2009). By applying these principles, an image of the current situation of Royston's LinkedIn platform strategy is constructed through quantitative methods, enabling the implementation of tools to optimize and improve the current situation.

4.8.1.1. Define

Define is the most important stage in Six Sigma and can take up to 50% of the time of the project due to the range of information and requirements that need to be defined at this stage. Royston, a marine engineering company operating primarily within the B2B industry, utilizes platforms such as

LinkedIn and Twitter. Their primary social media marketing platform is LinkedIn, a B2B social media platform directed at professional networking and particularly popular with companies within the B2B sector, with over 30 million business platforms and 675 million monthly users (Hootsuite, 2020). Royston's primary objectives on LinkedIn are to gain awareness, create engagement and thus create connections with potential customers, highlighting the importance for Royston of gaining an optimal profile and strategy for the platform. A combination of paid advertising and optimal marketing practices can enhance a company's presence and, therefore, success on social media platforms like LinkedIn. However, optimal marketing practices should be company specific, enabling the attainment of strategic results specific to the company's objective. Royston issues social media posts 2-3 times a week using LinkedIn, with the aim of driving awareness and engagement. In the past, Royston's social media posts have varied in type, style and content, with results recorded. Therefore, this data can be used to drive a strategic and intricate approach in order to identify optimal marketing practices on LinkedIn and, furthermore, to provide a benchmark for future improvements. Royston have set an objective of improving their engagement on LinkedIn by 20%. It is important to take a scientific approach to the design of the posts with regards to their style and content to identify the optimal factor combination. The aim of this campaign is to improve the engagement results represented by the number of impressions, reactions, comments, shares, and clicks in relation to Royston's LinkedIn posts. By a combination of decision tree analysis, exploratory data analysis and A/B testing through orthogonal design it is intended to identify the optimal factor combination, enabling the improvement of engagement on Royston's posts by 20%.

4.8.1.2. Measure

The response to LinkedIn social media posts is evidenced by the number of impressions for awareness objectives and clicks, likes, comments, shares, and click-through-rate for engagement objectives. By observing a set of 75 previous posts from Royston's LinkedIn, a decision tree analysis was undertaken to identify important factors. A decision tree analysis enables the learning of a classification, concluding the value of a dependent variable against independent variables (Mathuria, 2013). The factors which have been considered in this observation include:

- If an image has been included
- Length of post (counted through number of lines)
- If an OEM partner has been included
- If Hashtags have been included
- If a Call-to-action has been included
- The type of content in the post (technical / non-technical)
- The day it was posted

These factors were chosen based on their consistency across historic LinkedIn posts, allowing us to prioritise the importance of variables for the A/B testing. Some factors are straightforward to understand. However, others, such as type of content in the post, were less easily placed. For example: the type of content was based on whether technical terminology was used. To ensure consistency, technical terminology refers to any post that includes the name of an engine, component or mechanical procedure.

To understand the importance of these factors, an analysis of the previous 75 posts was conducted, measuring the historical clicks, comments, shares and impressions. This data was collected predominantly through LinkedIn's data analytics centre.

4.8.1.3. Analyse

Exploratory data analysis uses graphical and tabular presentation to understand the patterns in the data from Royston's previous LinkedIn posts, which were collected through the LinkedIn social media platform through the collection of several key performance indicators, including impressions, clicks, likes, shares and comments. A preliminary analysis of the observed data was conducted using scatter plots, heat maps, parallel plots, box plots and decision tree analyses, enabling the identification of important factors affecting the various awareness and engagement analytics. The decision tree analyses were used to further explore the relationships between successful and/or unsuccessful posts and any trend in the factors leading to these results. If an instance occurs in which the results of the decision tree analysis are vague (e.g., there are fewer cases than needed or if the factors are unbalanced, such as if 99% of the posts analysed have an image versus 1% without) then it will not be easy to detect an effect due to an image. The factors arising from the exploratory data analysis and decision tree analysis will determine the elements used in the A/B testing experiment.

4.8.1.4. Improve

The factors derived from the measure and analysis phases will be A/B tested during a statistical experiment using randomized orthogonal design. A/B testing through orthogonal design will enable a balanced experiment to be conducted, which will have a higher likelihood of detecting influential factors, if any exist, rather than only looking at results, such as impressions and engagement factors from previous posts. If the factors derived from the initial analysis through the decision tree analysis have no effect, then no significant results will be found. This highlights the importance of defining the factors as clearly as possible and of conducting the experiment strictly according to the guidelines.

As the strength of the experiment to detect the influence of factors increases with the number of trials, this experiment will use 16 trials (each trial representing a post) and test a maximum of 4 factors (these will be the most prominent factors from the previous decision tree analysis). The 4 factors at 2 levels will have 16 possible combinations. An example combination could look like image inclusion, OEM Partner inclusion, length of post and no hashtag inclusion.

The design is a full factorial design with 16 trials. The design was created using MINITAB. Various factors may be important for different outcomes, as this was a single study focusing on improving engagement. The 4 factors were chosen to represent most of the engagement metrics. The time order of conducting the trials were checked to make sure there is no effect of time trends in this campaign.

4.8.1.5. Control

Control refers to maintaining the gains of the experiment. The results from the experiment were confirmed in a further 4 posts using the optimal combination of factors. The engagement from these confirmatory tests will be compared to those from the experiment to identify whether there are significant differences. If there are no significant differences the optimal factors can be adopted. However, if we had experienced significant differences, further analysis would have been required. This may include the analysis or impact of time trends as it is realized that finding the optimal factor combination will not necessarily pass the test of time and always give higher engagement, meaning that the investigation may have to be repeated in a timely manner. The time scale for repeating the experiment will also be considered along with other ways of maintaining the engagement objective.

4.8.1.6. Transfer

Other applications of the methodology presented in this campaign will be identified and recommended.

4.8.2. Campaign 3: Method

1. Data on the results and features of 75 of Royston's most recent past posts on Royston's LinkedIn page was collected and analysed through various statistical tools. The statistical tools used for the preliminary analysis include scatter plots, box plots, decision tree analyses, heat maps and parallel plots. This enabled the identification of multiple factors that correlate with the overall trends surrounding the success and/or failure of the post's results.

2. The accumulation of responses were monitored daily over a period of a few weeks to record the totals as well as the patterns.

3. In line with the company objective of improving engagement on their LinkedIn posts the Independent Variable for the decision tree analysis focused on 'clicks', as this indicates the number of LinkedIn users that have clicked directly onto the post. The dependent variables included the factors from the observation set of 75 previous posts.

4. Following this preliminary analysis, the most influential four factors were selected (i.e., the ones that appear to improve the engagement metrics most) and an orthogonal design experiment was created in MINITAB to conduct the A/B testing in a balanced manner.
5. Posts were then be written according to the 16 combination factors from the orthogonal design.
6. These posts were uploaded on LinkedIn over 8 weeks, with two posts uploaded each week. Results were collected and recorded for 7 days after the initial upload. A 7-day period of result recording was chosen, as previously recorded results demonstrated that changes beyond these 7 days were minimal.
7. The analysis of the A/B testing experiment was assessed in terms of potential increase in engagement and the issues of maintaining the gains will be summarized.
8. Further analysis enabled the optimisation of co-branding on the B2B social media platform LinkedIn.

4.9. Co-Branding Campaign 4: Distribution Network

The final digital co-branding campaign changes the direction of the implementation in the value chain by utilizing the same digital platforms with partners below Royston in the supply chain. Many of these brands are perceived as ‘smaller’ brands. However, this is not a criterion of selection. Partners are selected based on their increased localization attributes due to their global location and existing reputations within specific markets. By creating a campaign that uses all the comprehensive platforms as outlined in the previous campaigns (website, search engine and LinkedIn), this campaign aims to identify the effect of co-branding with smaller Partners below Royston in the supply chain and advance knowledge surrounding smaller, localized brand equity transfer within a B2B environment. Royston currently have 15 distributors across the globe in primary shipping regions. The distributors focus on selling their energy fuel management system within the region they operate in and are managed by those who reside or have knowledge within that specific area.

4.9.1. Campaign 4: Method

1. The research and company marketing teamwork with enginei personnel to identify key distributors and their capabilities. The information gathered was used to create a Distributor Matrix detailing the location, physical and digital capabilities alongside the approximate size (employee numbers) of the organization and their existing marketing processes.

2. Following the initial review, potential partners from key regions were identified and approached by the enginei regional manager from key regions who consent to co-branding with Royston.
3. Identify suitable co-branding channels, working with Partners in different region.
4. A baseline of Royston's current position was established in agreed locations and on agreed channels.
5. To enable the creation of both internal and external campaign creation an extensive set of documents were created, including brand guidelines, marketing guidelines, and partnership establishment forms. This will ensure that co-branding campaigns maintain both the brand image of Royston and their partners.
6. Once the selection of a suitable partner has been made, the marketing team worked closely with the distributors' representatives to create co-branded campaigns for each selected channel.
7. To understand the impact of the co-branding campaigns, data was collected from each platform. Google Analytics, search console and ads enable the collection of data surrounding the impressions, clicks, search terminology and search engine results position, whilst establishing a baseline on the enginei and Royston platforms.

4.10. Measurement of Brand Equity through Key Performance Indicators

The transition from practical key performance indicators to measurements of brand equity has long been discussed in relation to marketing research. In this research, the researcher will implement Aaker's Brand Equity as the theoretical framework, to assist accurate measurement of changes to brand equity within the following co-branding campaigns and wider methodological techniques and procedures.

4.10.1. Theoretical Framework: Aaker's Brand Equity

"*Building brand equity in this competitive environment is a very challenging and difficult task*" (Tanveer and Lodhi, 2016, pg.43). Brand equity has been conceptualised since the 1980's, coined by David Aaker, but research has become popular within this sphere and researchers such as Kotler and Keller have added valuable insights to this body of literature. To understand the impact of co-branding on brand equity, the theoretical framework used in this research will be Aaker's brand equity framework. This section will review Aaker's brand equity framework prior to discussing the application and suitability of the framework for this research.

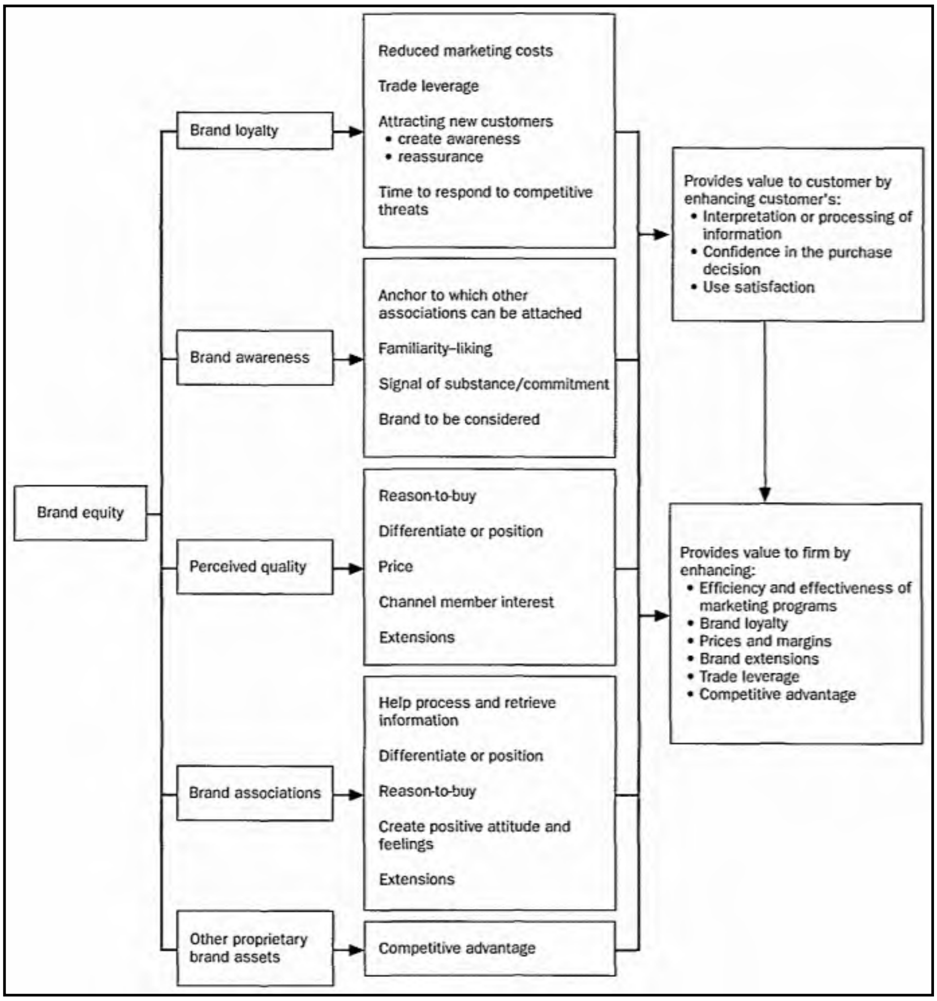
4.10.2. Brand Equity

"The added value of a brand over its commodity form is known as brand equity." (Boyle, 2002 pg. 253). Brand equity can be defined as *"a set of assets (and liabilities) linked to a brand's name and symbol that adds to (or subtracts from) the value provided by a product or service to a firm and/or that firm's customers"* (Aaker, 1996, pg. 7). In the 1980's brand equity became one of the most popular and necessary marketing concepts (Keller, 2013) to the extent that Chay (1991 pg. 31) stated that "*the future of consumer goods marketing belongs to the companies with the strongest brands."* Brand equity has emphasised the importance of brands within marketing and enabled management to define strategies, interest, and research activities (Keller, 2013). Brands can create great value for firms, but researchers have argued about how to measure the value of brand equity and no single method has been consensually agreed on (Keller,2013). Brand equity is defined by Aaker (pg. 28) as "*a set of brand assets and liabilities linked to a brand, its name and symbol that add to or subtract from the value provided by a product or service and/or to that firm's customers."* It is unanimously agreed that there is money to be made from brand equity, and value is created from the perceived uniqueness of a brand, and it is argued to be one of the components that can increase the financial value of an entity's brand (Boyle, 2002; Menon, 2016). However, Chay (1991) points out that "*brands can have both positive and negative equity*" and that their brand status can change almost instantly and suggests it is of immense importance that companies use consumer research to attempt to predict how certain internal changes will impact brand equity and performance (Chay, 1991). Marketing managers and teams within corporations have a significant impact on brand equity due to their strategic marketing decisions, and whilst management usually recognise the importance of brand equity and believe it is a key asset for any firm, they often get side-tracked to achieve high sales targets and performance. Chay (1991) argues that marketing activities must both be designed and work in harmony with the brand, otherwise it can "*lead to decreasing profits, decay and eventual bankruptcy.*" This would be a consequence if brands only competed on "*price, promotion, and trade deals, as these can be replicated by competitors, whereas brand image is the only aspect of the marketing mix which cannot be replicated"* (Chay, 1991 pg. 31).

To measure the effects of co-branding, a measurement framework has to be established to benchmark the participating brands. Aaker's framework (**Error! Reference source not found.**) enables organisations to measure the brand equity of an entity, service, or product.

4.10.3. Aaker's How Brand Equity Generates Value

Figure 10: How Brand Equity Generates Value (Aaker, 1992).



Brand equity has been measured by different academics in numerous ways, Aaker, who has dominated the brand equity literature, determines the value of brand equity through assets and liabilities which equate to an entities brand equity. Numerous researchers determine the value of brand equity through other variables. Keller measures brand equity through "*brand awareness and brand image."* Kamakura and Russell determine brand equity through *"actual consumer purchase behaviour or market behaviour*" (Gill and Dawra, 2010). Authors such as Gill and Dawra (2010) are sceptical about to what extent the plethora of dimensions enable the quantification of brand equity. The original framework **(**Error! Reference source not found.**)** focused on four asset categories: brand loyalty, brand awareness, perceived quality and brand associations, prior to a fifth category of 'other proprietary brand assets' being added to the current framework. The following sections will review the literature surrounding each of the individual asset categories.

4.10.4. Brand Equity Asset Categories

4.10.4.1. Brand Loyalty

Brand loyalty has "*emerged as a significant marketing concept for many consumer-driven businesses*" (Shen, Choi, and Chow, 2017 pg. 175) and can be defined as "*a commitment to repurchase a preferred product or service in such a way as to promote its repeated purchase.*" (Cossio-Silva et al., 2016, pg. 1622) Aaker argues that "*a highly loyal customer base can be expected to generate a very predictable sales and profit stream"* (Aaker, 1996, 21) and "*consumers with a high level of loyalty would spend more money on the products or services"* (Shen, Choi, and Chow, 2017 pg. 175). This therefore suggests that brand loyalty should be included as a brand asset category, despite the exclusion by many researchers. The benefits of brand loyalty do not focus solely on repeat customers but can branch out into minimising marketing costs as it costs less to retain customers than attract new ones, (Aaker,1996) and studies have shown that larger brands with a solid customer base advertise and promote less often (Shen, Choi, and Chow, 2017). Brands can leverage the awareness they have created to reassure new customers that they are well established and well known within the market and, therefore, a reputable body who can be trusted. A loyal customer base can build substantial entry barriers to new competitors as the costs involved in building a brand and then changing the loyalty of customers is likely to be extortionate.

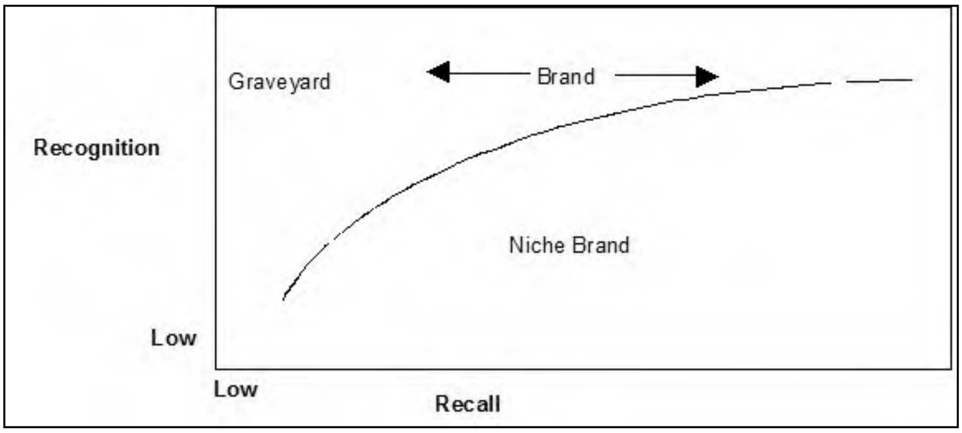
Aaker segments customers of a brand depending on their loyalty, enabling marketing managers to make strategic decisions to target certain segments. Aaker (1996) divided the customer base into the following groups: "*noncustomers (those who buy competitor brands or are not product class users), price switchers (those who are price sensitive), the passively loyal (those who buy out of habit rather than reason), fence sitters (those who are indifferent between two or more brands) and the committed*" (Aaker, 1996, pg. 22). Whilst it is essential for brands to attract new customers, situated within the noncustomer group of Aaker's segments to grow, they can often fall into an expensive trap by focusing solely on gaining new customers rather than retaining loyal customers. Research has shown that retention of just 5% of customers can generate up to 85% more profit for one company, and similar trends were identified across multiple industries (Aaker, 1996).

Marketing strategies are often set up to enhance the loyalty of customers through a variety of initiatives such as frequent buyer programmes, customer clubs and database marketing.

4.10.4.2. Brand Awareness

"*Awareness refers to the strength of a brand's presence in the consumer's mind…and is measured according to the different ways in which consumers remember a brand, ranging from recognition, to recall to "top of mind" to dominant."* (Aaker, 1996, pg. 10) Menon (2016) adds to the definition, stating that brand awareness "*also refers to its correct association to a particular product category*" (Menon, 2016, pg. 49). Determining the level of brand awareness falls under two categories: brand recognition and brand recall (**Error! Reference source not found.**) (Menon, 2016). These levels of awareness have been analysed by different cognitive theories and brands which have gained recognition are said to have gained a level of familiarity by a consumer and will have a higher potential rate of conversion than a brand which registers no familiarity (Aaker, 1996). Aaker's work identifies the importance of familiarity, suggesting that 73% of consumers (undertaking an experiment) choose an inferior product because they recognised the brand name, (Aaker, 1996, pg. 11) highlighting the importance of creating awareness when developing a brand. Recognition differs from recall in that a recall occurs "*when its product class is mentioned*" (Aaker, 1996, pg. 11).

Figure 11: Recognition Versus Recall: The Graveyard Model



Aaker's work on brand awareness continues into brand name dominance, which he argues is the "*ultimate awareness level*" (Aaker, 1996, pg. 15). The success of brand name dominance can work against a brand if the name becomes too widely used and broadens to not solely represent that brand. It is unarguably vital for an entity to create awareness when building or strengthening their brand provided this is done correctly and strategically and not generally (Aaker, 1996, pg. 17). Aaker's model identifies each asset category as individual and solitary. This is critiqued in the wider literature, with academics including Menon (2016) arguing that brand awareness and brand associations are intrinsically interlinked. Menon (2016 pg. 49) states that "*a consumer forms brand associations and perceives brand quality on the basis of their associations and perceives brand quality on the basis of their brand awareness and previous interaction with the brand.*" This brand awareness stage can be identified as an initial stage in various decision making models, (Menon, 2016) including the consumer conversion funnel.

4.10.4.3. Perceived Quality

Perceived quality most simply relates to the consumer's "*quality associations of the brand*" (Menon, 2016, pg. 48). It is defined as a brand association by Aaker (1996) and is the only brand association to be proven through three different studies to improve financial performance. It is argued that the perceived quality directly correlates with the consumer's willingness to buy (Menon, 2016). Perceived quality enables a firm to strategically place and price their product within its product class and competitor map. Perceived quality can be difficult for a brand to substaniate without clear evidence, as research has outlined three different situations which occur after purchasing a product or service which theoretically will affect repeat customer and customer reviews about the brand's perceived quality. The three situations as described by Menon (2016, pg. 49) include:

1. *Perceived quality = Actual Quality = Customer Satisfaction*
2. *Perceived Quality > Actual Quality = Customer Delight*
3. *Perceived Quality < Actual Quality = Customer Dissatisfation / Dissonance*

Aaker (1996) outlines three problematic areas that entities can face when trying to achieve a level of perceived quality, different to that of actual quality. Firstly, previous incidents of poor quality within an entity can continue to 'over-influence' customers' perceptions, ultimately creating the view that the perceived quality is lesser than the actual quality. Entities have to specifically and strategically create perceived quality that is relevant to their consumer base. Consumers should benefit from any improvement in quality. Without this there is likely to be no impact on perceived quality and no impact on brand equity.

4.10.4.4. Brand Associations

"*Brand equity is supported in great part by the associations that consumers make with a brand, which might include product attributes, a celebrity spokesperson, or a particular symbol*" (Aaker, 1996, pg. 25). It is necessary for a brand association to fit in with the image the brand wants to portray to the consumer base. This is the image of how the company wants the brand to be recognised in a customer's head; research has shown a relationship between greater brand experience and higher levels of loyalty and commitment from the brand's customer base (Brakus et al, 2009; Iglesias and Bonet, 2012). Creating positive brand experiences for consumers enables the consumer to create positive memory nodes / links to that brand, which has been shown to create positive brand associations and, therefore, increases the likelihood of loyalty and returned custom (Brakus et al, 2009; Iglesias and Bonet, 2012; Anderson and Bower, 1973). The phenonomen of brand association theory derives from memory and cognitive theories (Korchia, 2004). The most popular and widely used theory within branding literature (Keller, 2003) is Bower's (1973) network model of memory / human associative memory (HAM) model.

4.10.5. Application of Theoretical Framework to the Research

This research draws upon Aaker's Brand Equity framework as its application to the subject of branding is appropriate and suitably relates to the research aim of understanding how digital co-branding impacts the Brand Equity and Brand Performance of B2B organisations across various digital platforms, including a B2B website, B2B social media platform and search engine advertising platform.

Applying this framework will assist in achieving the research objectives as it provides a measurable set of attributes that can be applied to a majority of brands. The individual asset categories provide a breakdown of important brand factors that accumulate to build brand equity. These individual asset categories enable the researcher to simply understand the impact of specific strategies on different elements of the brand. This assists in distinguishing useful and non-useful findings from the research and, finally, allows a level of generalisation in the understanding of strategies impacting the individual assets affecting brand equity. This provides the researcher with the ability to distinguish the different assets of a brand, regardless of platform, allowing the researcher to understand the impact of across social media, aligning with the research objectives. The application is appropriate for understanding the implications of this action research case study. Aaker's brand equity framework is widely adopted, both theoretically and practically. Theoretically, the utilisation of a widely recognised framework allows the findings to be discussed in a common language. Practically, this will ensure that the interpretation of the findings in this research is easily transferrable to practical settings, allowing for future implementation of related strategies (Sutton et al, 1995; Swanson, 1997). By focusing on the specific assets of Aaker's brand equity framework, the scope of this research can be kept specific and relevant, enabling the researcher to analyse the findings to answer the questions in a focused manner. Brand Equity has become a highly valuable asset for a brand and one of the research objectives is to understand how the individual brand asset categories are impacted by the implementation of digital co-branding in a B2B organisation. The application of Aaker's brand equity framework will assist in understanding the impact of digital co-branding within B2B settings on brand equity. Aaker's brand equity framework was applied to this research due to the relevance and measurable benefits; the framework is relevant to the nature of the research, determining how digital co-branding can improve the overall brand of a B2B organisation. Other frameworks, including the spillover effect framework, were examined for their relevance to this research. However, due to the action-based nature of this research, the brand equity framework enabled the researcher to holistically understand the effect of digital co-branding on the business's brand and performance, rather than the specific interaction of the spillover between individual co-branding partnerships. For these reasons, Aaker's brand equity framework was more suitable to apply to this research. Brand equity can be defined as "a set of assets (and liabilities) linked to a brand's name and symbol that adds to (or subtracts from) the value provided by a product or service to a firm and/or that firm's customers" (Aaker, 1996, pg. 7). This reflects the added value of the brand (Boyle, 2002). Researchers have demonstrated that brand equity holds significant financial and non-financial value for organisations, but brand equity can be both positive and negative. This means that marketing and brand managers can impact the firm's brand equity. Aaker's original framework focused on four asset categories: brand loyalty, brand awareness, perceived quality and brand associations, prior to a fifth category of ‘other proprietary brand assets’ being added to the current framework. By accumulating the impact on the individual asset categories of Aaker’s framework, the researcher can demonstrate the impact on the overall brand equity of the organisation, providing an understanding of how digital co-branding will affect the brand equity of the B2B organisation.

To measure the practical impact of brand equity improvement strategies, **Table 7** starts to link the brand equity component to the corresponding measurable variables (Yew et al, 2011).

Table 7: Brand Equity Measurement (Yew et al, 2011)

Component	Variables
Brand Awareness	1. Brand Recognition 2. Brand Recall 3. Top-of-mind 4. Brand Dominance 5. Brand Knowledge
Brand Associations	6. Reliability 7. Durability 8. Social Image 9. Trustworthiness 10. Perceived Value 11. Differentiation 12. Country of Origin 13. Corporate Ability 14. Corporate Social Responsibility
Perceived Quality	15. Extrinsic Attributes 16. Intrinsic Attributes
Brand Loyalty	17. Frequency of Repurchase 18. Top of mind 19. Price Premium

Measuring these variables for digital co-branding campaigns can be done by using digital marketing indicators as signals for each brand equity dimension. The Chartered Institute of Marketing (CIM) recommends various digital marketing metrics to measure an organisation’s brand equity online within a practical setting. For this research, the co-branding campaigns will be measured through recognised digital metrics linked with each of Aaker’s brand equity dimensions, enabling the translation into academic/theoretical analysis. The key digital metrics utilised within this research are outlined below against their relevant dimension. This allows the analysis of the campaigns both individually and collectively and enables the researcher to understand the effects of digital co-branding within a B2B environment, advancing the current research.

- **Brand Awareness**: impressions, clicks, engagement, global coverage
- **Brand Loyalty**: return customers, return users, retention
- **Brand Associations**: search terms, perceptions, result changes
- **Perceived Quality**: Net Promoter Score (NPS), brand-focused perceptions

These metrics determine how co-branding has influenced the various categories of brand equity.

5. Findings

Part 1: Preliminary Research

The Preliminary Research consisted of two sections: a review of external industry data sources and a comprehensive analysis of company stakeholders.

5.1. Thematic Analysis of Employee Interviews

A thematic analysis was used to analyse the interview responses to determine recurring themes amongst the employee responses. This approach allows the researcher to have a consistent and thorough approach to analysing the information. The analysis will assist in the identification of gaps within Royston's existing strategy, alongside identifying and mapping their market and competitive position. This information will help with the creation of ideas and formation of future strategies. 11 key areas were identified whilst listening to and coding the responses. These include internal communication, external communication, brand image, culture, support, innovation and research, product uniqueness, competitors, opportunities, challenges, and resources.

Theme Description

These themes were identified after transcribing the interviews and utilising NVivo to analyse the core themes in the breakdown of the transcripts. These themes are defined in Table 7 below

Table 8: Interview Theme Description

Theme	Description
Internal Communication	Any comment which relates to the internal procedures of how staff members will communicate with other staff members to create plans and structure within enginei.
External Communication	Any comment which relates to how internal staff members communicate with external stakeholders.
Brand Image	Any comment which suggests that the brand image of enginei may have been affected either positively or negatively.
Culture	Any comment which relates to positive or negative attributes arising from cultural differences when working across cultural boundaries.
Support	Any comment which relates to support either from internal or external parties, e.g., Royston or IOC.
Innovation and Research	Any comment which relates positively or negatively to enginei's current or potential innovation or research procedures.
Product Uniqueness	Any comment which relates to the unique characteristics of enginei and the product's unique selling point.
Competitors	Any comment which is related the current competitors of enginei.
Opportunities	Any comment which relates to the potential future opportunities for enginei.
Challenges	Any comment relating to the possible challenges enginei could face in the future.
Resources	Any comment relating to the resources accessible to the team.

5.1.1. Interview Findings

Certain questions were aimed at identifying negative experiences and were not restricted to any time. Therefore, issues arising from certain responses may be resolved prior to this interview or are in the process of being resolved. These interviews were carried out prior to March 2019 and the enginei team dynamics have since changed. These outcomes focus primarily on areas for improvement but also include some positive responses showing strengths.

5.1.2. Internal Communication

Areas for improvement within internal communications were a recurring topic within the enginei interview responses. Whilst several comments focused on strengths within the team, such as the use of SLACK as a communication platform to reduce email accounts and attempted improvement of communication across the entire business, a few trends highlight a lack of formal guidance or procedures between team members.

"if someone calls into the office and asks to speak to someone our team have this panic of who he needs to speak to…but I don't know what happens if I'm not here because the team don't have that procedure"

The indication of a lack of guidance arose in several of the interviews, highlighting certain interviewees' need for infrastructure in place.

"The team need to look at the after service, support and other services – but to do that Royston need the infrastructure in place."

Responses indicate that internally feedback may only be shared with certain team members or may not be passed to those employees who are out of the office, as two different responses identified that the enginei product had never received negative feedback, whilst the other five responses had received negative feedback.

These initial queries within the enginei team are related to the direct team and the communication procedures they have between individuals within the team. However, other findings within this theme identify wider weakness areas, which may easily be improved through communication. Responses relating to this theme highlighted two areas of possible lack of communication about the direction that enginei is going (therefore, this can make it harder to pass a message across to external stakeholders).

"enginei is in a strange place in terms of the way it presents itself, Royston is an engineering company, enginei is primarily a software company and that's a challenge."

"enginei is and should be more branded to become a technology company."

Stemming from these comments another interviewee response indicated concerns about employment prospects in the future.

"enginei is a technology company, which still treats all staff like engineers, that is a big challenge to get the right people in to do the right job that the company wants."

The other area highlighted in the responses identifies a communication barrier between the enginei team and Royston Limited. One interview response provided a negative experience with office-based staff over visa queries, and another suggested there was no information regarding how the expansion of enginei into other countries will work with UK based '9-5' office staff and the time zone logistics of supplying foreign countries with a product that requires 24/7 customer service.

5.1.3. External Communication

The theme of external communication recurred the most within the thematic analysis. A few positive comments were noted when interviewees suggested that the enginei team were building up the name and communicating with external stakeholders, particularly in Nigeria, using forums and meetings to get clients and potential clients face-to-face.

However, the main points within external communication theme seemed to be the language used to clients at many different stages of the process. Interviewees suggested that the focus on financial and monetary gain for enginei superseded all other customer focus.

"if there is a problem, all we ask for is money, we put barriers in place. I don't know if we've completely lost, but we have certainly had a slowdown from some clients there is no availability the after sales support is just not there. There was a lot of rumours between clients and potential clients so people may have been put off."

"We won't respond until we see money, all finance focused rather than customer focused and that's from more than one client, we've had similar feedback on that."

"We seem to be making things difficult for them." It currently stands for: let's just get as many people as we can, just get the money and we'll do our best.

Enginei is a product among a range of other fuel monitoring systems which are gaining popularity due to legislation such as Sulphur 2020. This means that some oil companies and IOCs are making it mandatory for all offshore vessels to have these fuel monitoring systems in place before working with them. Unfortunately, this also means that they are not welcomed by all, often including the vessel's crew.

"Crews are scared to touch the system."

This problem is exacerbated when problems regarding the fuel monitoring system arise, with at least two interviewees suggesting customers may begin to look elsewhere for a similar system.

"The distrust is there if we can't give a reason for technical or hardware differences. If we can't do that it doesn't give them the trust and if we can't provide that they're much more likely to push off and look for other suppliers/ competition"

"not being able to give answers causes fractious relationships then another challenge is getting them back on side."

The quotation above indicates, once a distrusting or fractious relationship is created the challenge of bringing the customer back on side is difficult, particularly when queries take a long time to be resolved. One interviewee response pointed out that customers may not be fully aware of the team's ability to solve problems remotely.

"Clients think they need engineers to go on board, when they probably don't, so that communication is probably lacking – let's have a look at data and system before sending an engineer out."

These responses are directly related to external communication but also significantly impact enginei's brand image. This is particularly important when considering that Word of Mouth Communication has the largest impact, particularly within a close-knit marine community e.g., Nigeria.

5.1.4. Innovation, Research and Product Uniqueness

When matching text with the thematic codes, innovation & research and product uniqueness overlapped significantly. Therefore, whilst these are 2 separate themes, they will be reported simultaneously as they are both significant.

The first point this research will discuss focuses around the uncertainty of the unique selling point whilst some interview responses suggest that the degree of flexibility, the ease of use and the small footprint on board the vessel are enginei's USP's. Most of the responses focused on the cheaper cost of the product in comparison to competitors.

"We are just the cheapest version of the thing they need…but you just need one person to undercut you and that's it."

"We're cheaper."

"Fueltrax is our biggest competitor, and on price, I don't think it's the system or service but it's the price."

In addition to this, two interview responses pointed out that there was little difference between enginei and the main competitor Fueltrax's product, outlining that each product was no better than the other but equally no weaker than the other. One response suggested that the only advantage Fueltrax seem to have is their location base in Houston, which is close to the oil majors.

"Our biggest competitor is Fueltrax, products are very similar, they have a larger development team, perception that there are more people on the ground (which I don't think is true), they are much better at lobbying the oil companies because they are based in Houston. But no huge difference between actual product of enginei or Fueltrax."

This response explains that the main competitor, Fueltrax, potentially had a larger Research and Development team, which would easily enable further innovation and product development for them. But equally another response identified that with the smaller team "innovation was harder."

"We have a smaller team (than Fueltrax), a smaller research team, it's harder for the innovation."

Other responses from the 'future challenges' question and 'competitor focused' questions included a lack of resources, focusing on Fueltrax and following in their footsteps rather than individual innovation.

5.1.5. Other Findings

To summarise the other responses, more than two responses suggested that individuals did not see the brand image of enginei as international through the website particularly with no international domain (currently the *www.enginei.com* domain is registered to another party and not available for enginei to use) despite working in numerous countries around the world. Alongside this, most responses, when asked about enginei's future opportunities, discussed the opportunity of breaking into the Asian markets over the next few years.

5.1.6. Recommendations

Internal Communication Plan

Identify communication routes and ensure these are streamlined so that when a client or stakeholder calls into the business, the team are aware of which person is the most relevant for this query and who is their 2nd or 3rd in line, in case of absences.

Identify sales processes and procedures to ensure that any prospective clients with inbound enquiries are not asked to send across an email for a team member to send across a proposal checklist. This links to the external communication proposal in that all employees should aim to engage customers to aim to improve conversion rates of inbound inquiries. As currently, prospective clients with inbound inquiries may be asked, "*can you send us an email to this address or send us an email to this address and we will send you a proposal checklist back and if I'm again putting myself as a customer, I would not be extremely keen unless I needed it."*

Ensure at the bi-monthly meeting all communications and feedback, including any non-conformance issues, are shared with the wider team. This can increase the levels of inclusion if certain members are unaware of feedback and higher levels of inclusion may increase the potential of rectifying problems and identifying solutions.

Lastly, identifying a clear brand identity (how strategists want the company to be perceived – Aaker, 1996) and clarifying the relationship between enginei and Royston Limited alongside, the direction enginei is aiming go in the future will be beneficial. These aspects need to be clear and conveyed to all members of staff to ensure a clear message can be conveyed to any external stakeholders. For example, if employees do not have full clarification of whether enginei is going towards an engineering company or a technology company, this may deter the best candidates from applying to work at enginei. Identifying a clear brand identity should be discussed in the bi-monthly meetings and outcomes conveyed to the wider team.

External Communication Plan

The external communication plan will be a section in the brand guidelines aiming to outline the language and methods used for communicating with external stakeholders. These can be outlined for separate occasions, such as selling, dealing with problems, or trying to get a client 'back on side.' Examples of thorough brand guidelines, including making a genuine connection with the customer, the tone of voice: e.g., Volvo Brand Guidelines, say that all employees should:

- *Ensure their voice is competent, not arrogant; intelligent, not intellectual, and sympathetic, not flattering.*
- *They should be challenging, but never aggressive; witty but never sarcastic and powerful but never grand.*
- *The conversations should be to explain, never lecture; reveal but never just describe and to prove but never just claim.*

(Volvo Brand Guidelines, 2016)

These guidelines should also include a set of guidelines which brief the team on the importance of avoiding monetary focused responses and ensure that they focus on helping the customer and problem resolution first.

Whilst these guidelines above primarily focus on telephone conversations, the same professionalism and consistency should be transferred through all communication platforms, such as email. Emails should be sent with a consistent structure, with aligned terminology (e.g., do not have separate team members identifying enginei as a separate business whilst others refer to Royston Limited as the primary business). This should also include consistency when sending emails to external parties. Emails should always be consistent in terms of the inclusion of enginei digital signatures or footers, with professional language, correct grammar (Volvo, 2016).

Creating a communication-focused set of brand guidelines to which employees can adhere and refer would be beneficial for both Royston Limited and enginei's team. However, this should have more information than the above and include guidelines for email campaigns, brochures, presence at exhibitions, fonts, colour schemes, imagery, iconography, and website design. Creating a high level of consistency and professional, positive language used throughout the team and towards any external stakeholders should increase the levels of trust and in turn increase brand loyalty of stakeholders through creating higher levels of customer satisfaction, preventing clients from turning to other competitors (Aaker, 1996).

The main aim of these changes is to change the current external stakeholders' perceptions (particularly those who have had problems/fractious relationships) of enginei's brand image. This change to engine's brand image intends to demonstrate an international, highly customer focused, engaged, consistent and professional company.

Innovation and Research Plan

Use bi-monthly meetings to continually focus on enginei's unique selling point, enabling the product to become differentiated from other similar competitors. Ensure this feedback is shared among the wider team so that a level of consistency is portrayed to customers who speak to a variety of employees. Once this is identified, the unique selling point should be conveyed to potential clients throughout the website, marketing materials and any communications from enginei employees.

One interviewee highlighted that enginei has a smaller research and development team than Fueltrax, this means that innovation was difficult. There are a variety of examples of small technology companies using creative innovation techniques with limited resources such as, providing one day every other month for employees to work on a project related to the future of enginei. The United Nations now recognize a world creativity day to use creativity in problem solving. They are just one of many organisations adopting creative techniques for innovation and problem solving. This approach may be beneficial for enginei to allow employees to direct their focus solely to the future innovation, problem solving and R&D without adding additional resources.

Other Findings

It is important when creating the content for the website and brochures that the terminology used is consistent with an international brand. Firstly, using search engines which are popular in target countries enables potential customers to easily find and identify enginei as a fuel monitoring system which is likely to be available in their own country. Therefore, enginei should begin to expand their website across different search engines, particularly with Asian search engines e.g., Baidu and

DuckDuckGo, or identify other domains for target countries, which have availability for an enginei domain e.g. .com, .sg (Singapore), .my (Malaysia) etc.

Prior to implementing the above suggestions enginei employees should identify major decision makers (this may not be those on-board the vessel) in Asia and their characteristics. This may lead to translation of the website into a particular targeted country’s language, if we identify a large proportion of the marine community with a first language other than English.

5.1.7. Conclusion

The interviews highlighted several areas of strength for enginei, including the team, the support of the IOC’s and the professional looking product. However, a few areas for improvement were highlighted, including communication, both internal and external, product development and research. The best practice section outlines a few proposals, including brand guidelines, team briefings, and online techniques, which, once implemented, aim to provide a consistent, professional, and well-defined image understood by the entire enginei team and a message which can be clearly conveyed to external stakeholders, including clients and potential clients. A suggestion for developing a creative strategy by using bi-monthly or quarterly innovation days has been recommended for the highlighted problems with innovation and product development, which aims to increase innovation by enabling creativity during designated days of the year. These recommendations aim to improve and define the overall brand image of enginei to external stakeholders.

5.2. Customer Interview Analysis

5.2.1. Customer Selection

Initially, a list of potential interviewees was selected by the enginei regional sales manager. The list included customers who have developed a good rapport with the team but also those customers who have had more complex relationships. It is important to note that the customer in interview 1 has had a positive rapport with the enginei team from the outset. Further interviews were conducted to showcase a wider range of customer perspectives.

5.2.2. Interview Analysis

The customer outlined that they operate in the oil and gas industry, which is in operation 24 hours per day, 7 days a week. They were approached by enginei 4-5 years ago. At this stage Fueltrax were the sole provider of EFMS’s within the marine industry and it was approximately 4 years since they had EFMS devices fitted by Fueltrax. The customer was looking for an alternative product, as they were not keen on being “bullied” into booking with Fueltrax. They advised that they were looking for a product that was applicable for their specific needs, which could be developed and tailored for them. They found this within enginei.

They have remained a customer for the last 4 years as the willingness to develop a product towards their needs appealed to them. The customer said they had different needs than OSV vessels. The next point is difficult to interpret. The customer mentioned that a lot of crew boats, especially the small ones, have reservations as to whether this was part of the functioning so they didn't want to be bullied into fitting a bridge insert by Fueltrax, not knowing whether or not it would work. Subsequently, they approached Royston, and a product was developed with all the NMEA requirements and the customer's specific requirements. They wanted one system for communications and have all the data sent to one place.

The customer said that the Royston brand stands for a company that is willing to walk the extra mile to meet the requirements. They also mentioned that Royston listens to individual needs and specifications. However, from a marketing perspective they see Royston/enginei as having an introverted nature. The customer provided the example of, "*earlier this year Fueltrax sent a marketing campaign to say they were now compliant with Opsealog requirements for Exxon Mobile, everyone was sent it over emails and social media etc. enginei have been compliant with this for more than two years so it's not an achievement for enginei. Enginei, are the market leaders but they are not actively promoting their achievements and successes in the industry, so from that perspective they are introverted in sharing their successes, which is quite strange…"*

The customer continues by saying that enginei have a lot more to offer and for some reason they seem to do marketing on a more behind the scenes basis, building customer relationships, which is good especially for long term relationships. However, the customer believes within the wider market if enginei had a brick wall of marketing campaigns more people would be leaning towards the enginei product. Currently more people are leaning towards Fueltrax, not because it is a superior product but simply from a marketing perspective it looks like a superior product. They said if enginei needs to achieve a product differentiation within the consumer base enginei needs to achieve this early on, even if it is only on a social basis, because people will know about it and think one product is superior to the other.

The customer was asked whether they were aware of Royston's global operations. They were. When asked why they chose Royston as their supplier, the customer outlined one specific example. "*A few years ago, I went to the Fueltrax seminar in Lagos, which was quite interesting because they talked about their key functionality product and subsequently, we had a follow up meeting with enginei to identify how they can improve the service division and the product to the end user. They have taken* *what we have requested to heart and with the software update it is mighty valuable. It's not just promises, they have gone back to the drawing board."*

The customer was then asked about their use of the web portal and specific graphs. They responded that they use the web portal once per week as a minimum.

5.2.3. Actions

Actions taken based on the interview:

1. Meeting was organized with key players in the enginei team to discuss media presence and to share feedback.
2. A comparison analysis of two key competitors' social media posts. These were showcased to the enginei team to gain an understanding of why this customer thought enginei was introverted on media platforms.

5.3. OEM Partners Interview Analysis

A selection of OEM partners were approached to participate within the preliminary interviews. However, at that time no OEM partners consented to interview participation, but they agreed to informal discussions regarding co-branding.

5.4. Questionnaire: Beginning of Project

The following section will firstly break down the questionnaire results prior to recommending strategies to maximize the impact of any internally distributed questionnaires. The questionnaire consisted of 10 questions and was distributed to an internal email list of 58 recipients. Out of these 58 recipients, 32 employees participated in the questionnaire.

The first section will identify details about the participants; although all mandatory questions will be anonymized, these generic details will enable the categorization of results and enable strategic recommendations to be made.

Question 1: What department of the company does your work primarily focus on?

Employees were given five options: administration, sales, engineering, technical and other

Figure 12: Analysis of Question 1

Admin (accounts, marketing, HR, stores)	11
Sales	4
Engineering	10
Technical (innovation, IT and development)	3
Other	4

Four participants (12.5%) selected 'Other'. Of these two reported they worked in "stores" (this is included in administration) and one other listed "service department."

Question 2: How often do you read the internal communications sent by Royston?

Figure 13: Analysis of Question 2

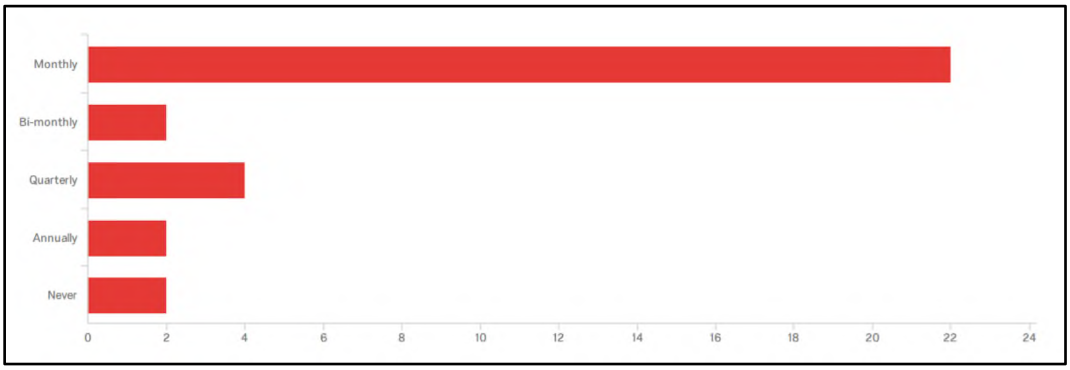
1. Always	20	62.50%
2. Most of the time	7	21.88%
3. About half of the time	2	6.25%
4. Sometimes	3	9.38%
5. Never	0	0.00%

Twenty participants reported that they always read internal communications, with another seven stating they read communications most of the time. No participants reported that they never read the internal communications and only three suggest they sometimes read the internal communications.

The following questions attempt to identify employee preferences when it comes to internal communications.

Question 3: How often would you like to receive internal communications?

Figure 14: Analysis of Question 3

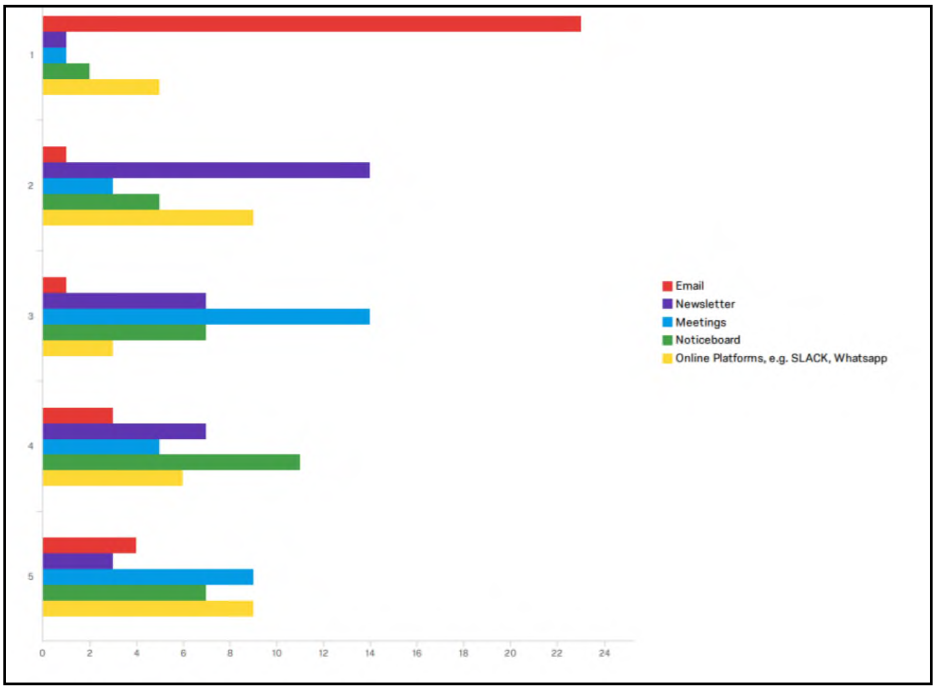


Twenty-two participants (68.75%) stated they would prefer to receive internal communications monthly, four participants suggested they would prefer a quarterly internal communication and the remaining six participants were evenly split between bimonthly, annually, and never (2 participants in each section).

Question 4: Please rank the following methods of internal communication from your most preferred choice (1) to least preferred choice (5).

Employees were given five options: email, newsletter, meetings, noticeboard, online platforms

Figure 15: Analysis of Question 4



When identifying which method employees would prefer to receive internal communications by, almost 72% (twenty-three participants) selected email as their preferred choice, with the next most popular choices being either newsletters or online platforms (when considering the top two choices). The two least popular choices were noticeboard and, again, online platforms (when comparing the last two choices).

Question 5: What type of information would you like to receive or read regularly in an internal communication? Please rate each topic below

Employees were given five options: industry insights, future trends, business updates, employee updates, and organised events.

Figure 16: Analysis of Question 5

#	Field	No Interest	Limited Interest	Average Interest	Interested	Very Interested
1	Industry Insights	15.63% 5	12.50% 4	15.63% 5	37.50% 12	18.75% 6
2	Future Trends	15.63% 5	9.38% 3	18.75% 6	37.50% 12	18.75% 6
3	Business Updates (e.g. New Customers/Feedback)	12.50% 4	0.00% 0	3.13% 1	43.75% 14	40.63% 13
4	Employee Updates (e.g. New starts)	3.13% 1	3.13% 1	12.50% 4	43.75% 14	37.50% 12
5	Organised Events	3.13% 1	3.13% 1	25.00% 8	53.13% 17	15.63% 5

Showing rows 1 - 5 of 5

The highest levels of interest came from the business updates, with 27 participants reporting that they were either very interested or interested in receiving regular updates in relation to the business. This is closely followed by employee updates, with 26 participants stating that they were either very interested or interested in receiving these updates. Organised events have 22 participants selecting the interested buttons during the questionnaire. Whilst the industry insights and future trends seem to have the least interest (5 participants selecting the no interest option), 18 participants in each questionnaire selected very interested or interested.

Question 6: Are there any other types of information you would like to receive? (If yes, please detail these in the box below)

Three responses were reported.

- “How the business is doing, figures from other departments.”
- “Business plans.”

- “PR articles, advertising campaigns, vacancies, feedback on non-conformance’s/re-work.”

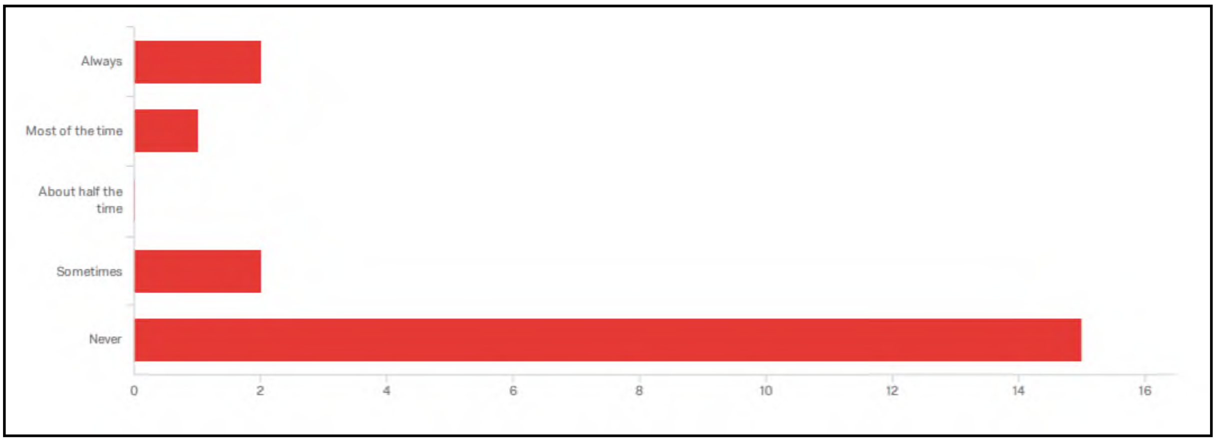
The next section will focus on the engagement of the employees in relation to social media and aims to identify suitable brand ambassadors who can aid in the scaling up of the marketing communications capacity.

Question 7: Do you follow Royston Limited or enginei on social media?

These results show limited employee involvement on social media. Only 8/32 participants follow the main Royston LinkedIn page. Only 4/32 follow the Royston Twitter page and only 3/32 follow the enginei LinkedIn page.

Question 8: If yes, do you engage with any of Royston Limited’s social media posts e.g., commenting, sharing, retweeting?

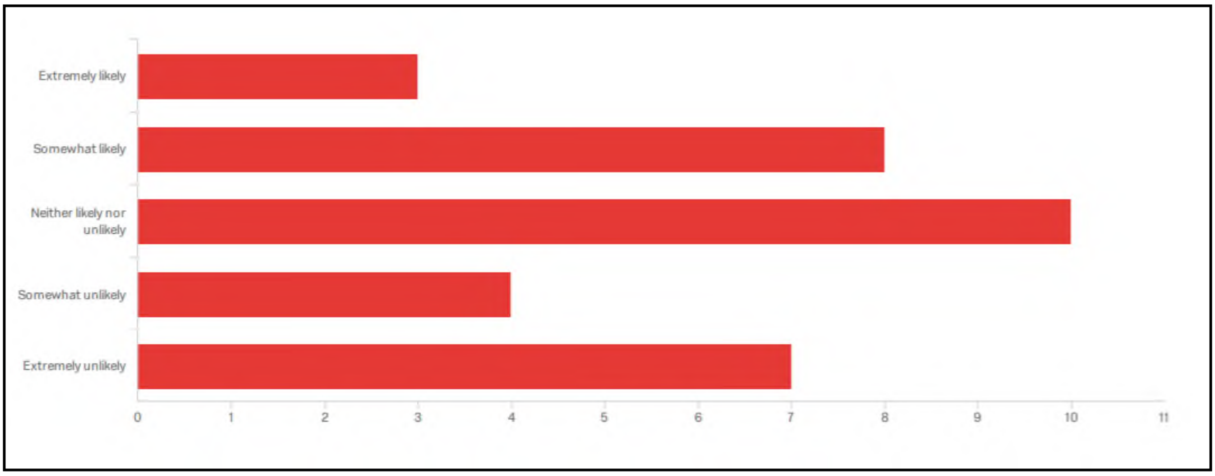
Figure 17: Analysis of Question 8



These results show a lack of employee engagement on social media posts, with 15 participants reporting that they never engage on social media posts and another two participants saying they sometimes (less than half the time) engage on social media. Two participants, however, did state that they engage all the time and another reported that they engage most of the time.

Question 9: Would you like to be involved in a social media or a newsletter campaign in the future?

Figure 18: Analysis of Question 9



This question aimed to identify the willingness of employees to participate in social media or newsletter campaigns. The results average out as 11 participants who selected the top two likely categories, showing some willingness to participant (3 participants selected 'extremely likely' and another 8 selected 'somewhat likely'). Another 11 participants selected the top two unlikely categories, showing little or no willingness to participate in social media or newsletter campaigns (7 participants selecting 'extremely unlikely' and 4 selecting 'somewhat unlikely'). The remaining 10 participants selected neither likely nor unlikely to participate.

Question 10: This questionnaire is anonymous; however, if you would like to leave your email address to get further information about this questionnaire or would like to contribute to future campaigns, please do so in the comments box below.

Three participants left their email address to be contacted. These participants are likely to make good brand ambassadors.

Question 11: Are there any further comments you would like to make?

There was one response. A participant reported that *"Royston don't shout enough about the good work we do."*

5.4.1. Focus Groups

The results of the focus groups enabled the mapping of the individual customer journeys for three main revenue streams (marine, parts and enginei) whilst identifying potential opportunities with key employees from each relevant department. This was essential as these employees have built the most comprehensive working relationship with both customers and suppliers, including OEM partners, and they will know their personas and journey.

Three focus groups were conducted with managers from each department. An open discussion was used to identify their key issues and potential areas for improvement. One aspect of the focus group included identifying areas that would benefit from co-branding.

5.4.2. Customer Journey

Based on the findings of the focus groups and preliminary research, three customer journeys have been compiled with highlighted pinpoints and areas for improvement. These will assist in creating the co-branding campaigns. (Figure 19 full size in Appendix B).

Figure 19: enginei Customer Persona and Journey

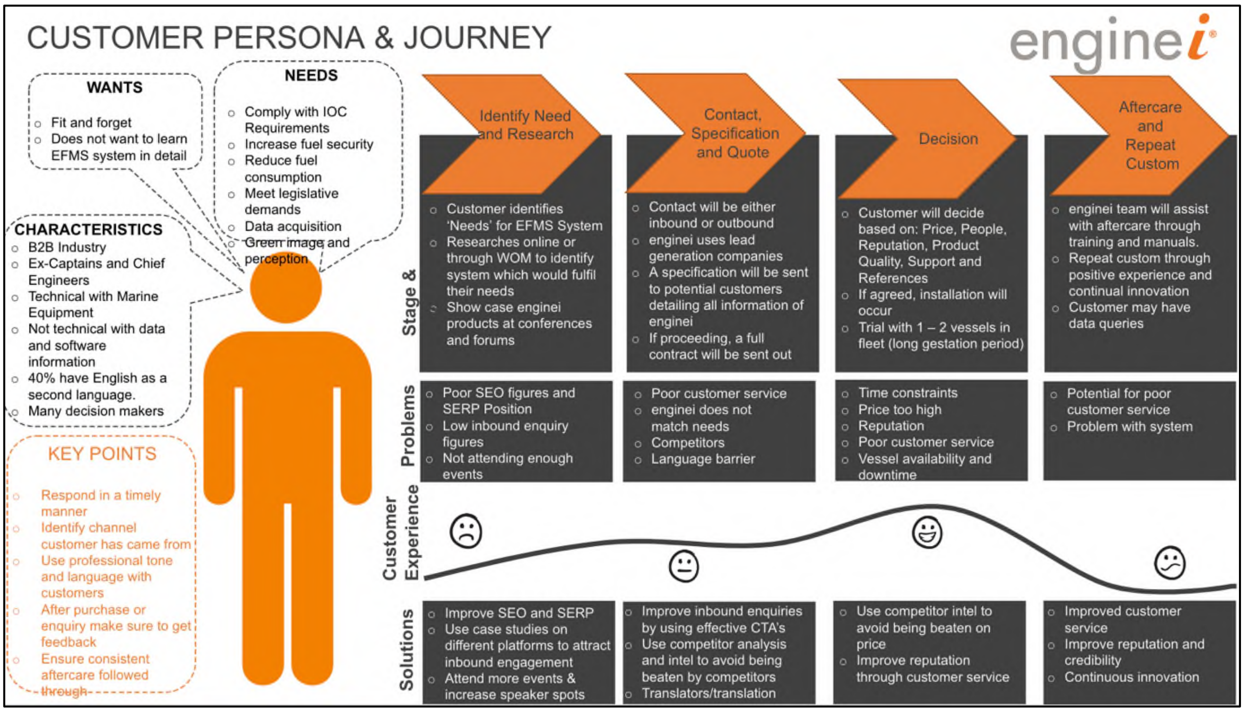


Figure 20: Marine Services Customer Persona and Journey

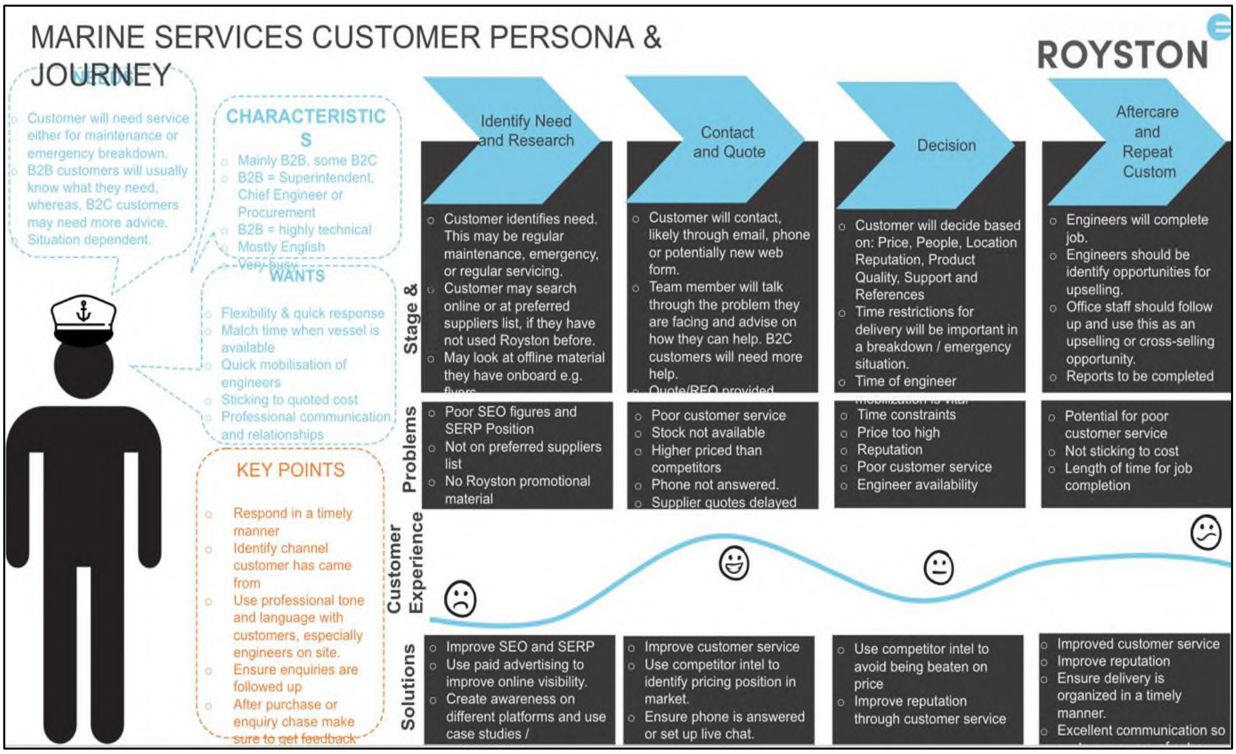
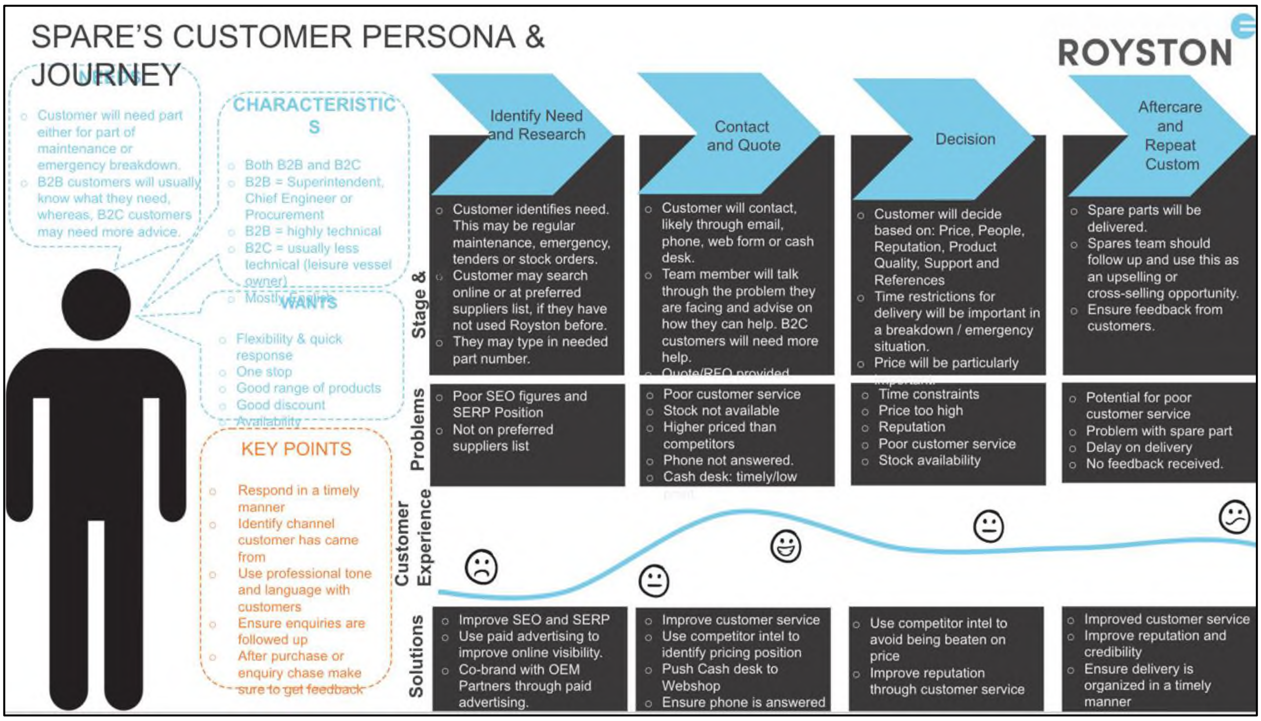


Figure 21: Spare Parts Customer Services and Journey



5.4.3. Competitor Analysis and Perceptual Mapping

This perceptual mapping exercise provides visual maps of competitor placement based on two different determinant attributes. These maps are formulated based on information derived from the enginei competitor analysis and enable identification of gaps within the market (or between direct competitors). Perceptual maps should be updated regularly, particularly when any changes to the market occur, including changes to (or new) competitors or products. The perceptual maps in this report were created using: https://maps.groupmap.com/maps.

The perceptual maps within this report have been created for enginei's four direct competitors: Fueltrax, Ascenz, Krill and C-Sense.

Five perceptual maps have been created:

1. Price vs perceived quality
2. Actual vs perceived quality
3. Price vs number of installations
4. Price vs functional variety
5. Website quality vs brand image

Figure 22: Perceptual Map of Price vs Perceived Quality for enginei

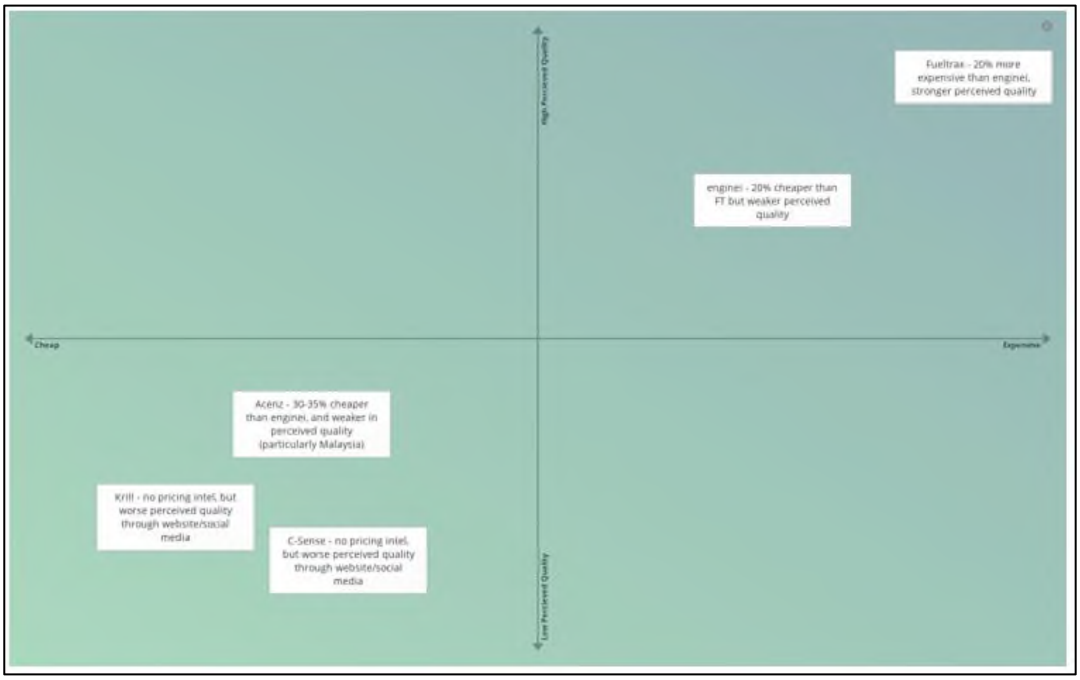


Table 9: Competitor Analysis - Price vs Perceived Quality

Competitor	Price	Perceived Quality
enginei	Usual 11 sensors pricing = £80,000 Annual subscription: £11,000 (with Iridium)	Worse perception than Fueltrax but perceived as higher quality than Ascenz, Krill and C-Sense
Fueltrax	20% more expensive (gap might have closed)	Perceived better in customer field
Ascenz	30%-35% lower than enginei	Perceived worse than enginei, particularly in Malaysia
Krill	No inside information regarding price	Perceived worse than enginei based on digital sources (e.g., website / social media)
C-Sense	No inside information regarding price	Perceived worse than enginei based on digital sources (e.g., website / social media)

Figure 23: Perceptual Map of Actual Quality and Perceived Quality

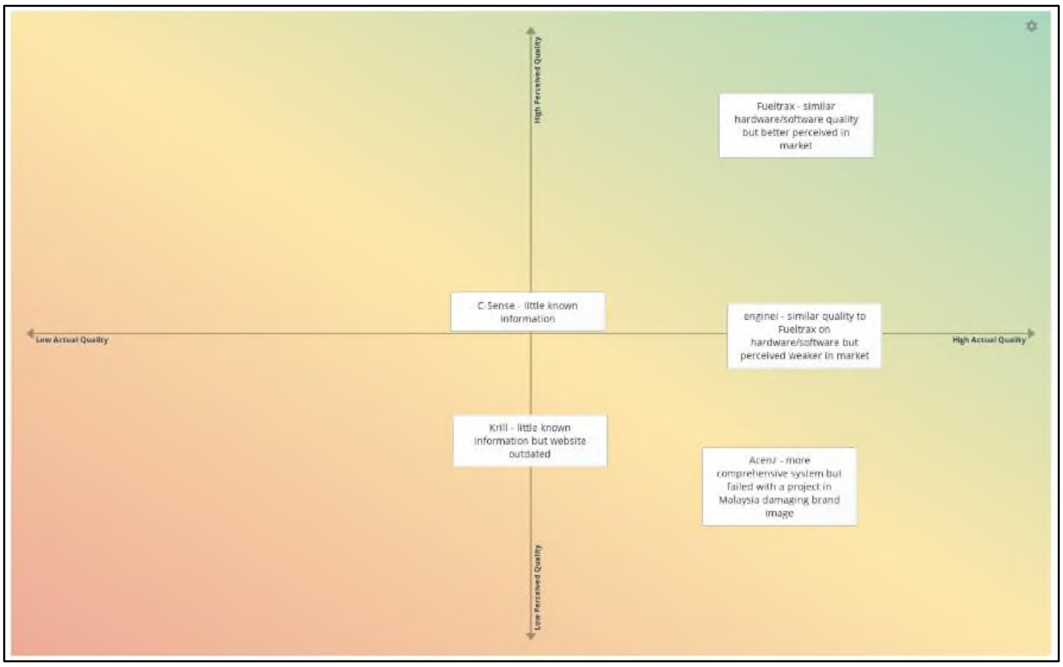


Table 10: Perceptual Map Table – Actual Quality vs Perceived Quality

Competitor	Actual Quality	Perceived Quality
enginei	Hardware / software quality	Worse perception than Fueltrax but perceived to be better than Ascenz, Krill and C-Sense
Fueltrax	Installation quality slightly better but hardware/software perspective = same as enginei	Perceived better in customer field
Ascenz	More comprehensive system but failed with a project in Malaysia, which damaged brand image	Perceived worse than enginei
Krill	No information regarding quality of system known	Perceived worse than enginei based on digital sources (e.g., website / social media)
C-Sense	No information regarding quality of system known.	Perceived worse than enginei based on digital sources (e.g., website / social media)

Figure 24: Perceptual Map of Price vs Number of Installations

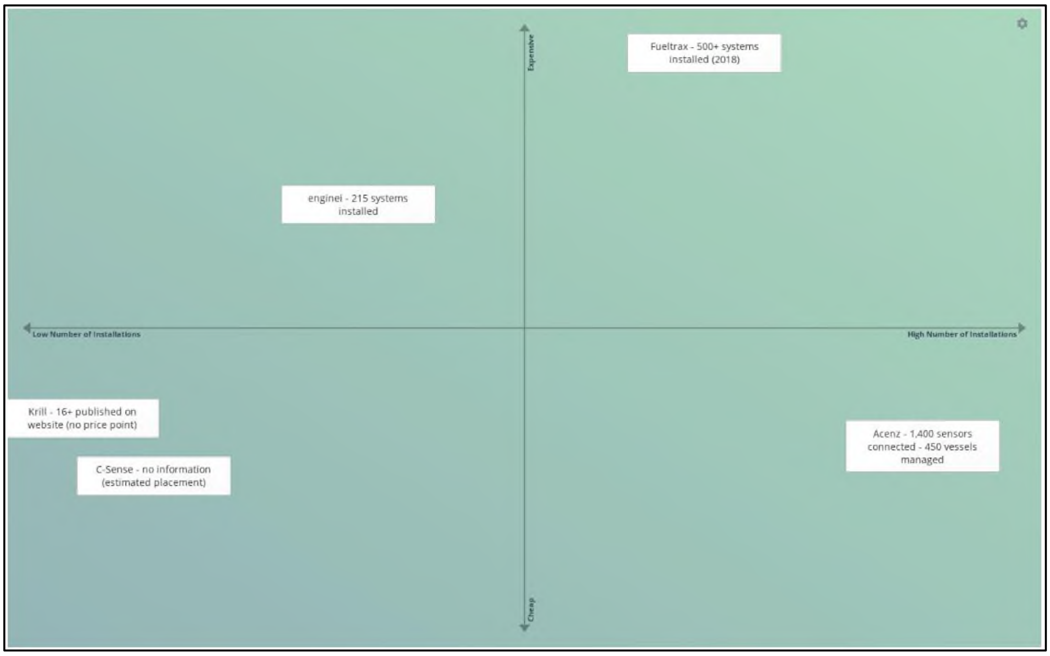


Table 11: Competitor Analysis - Price vs Number of Installations

Competitor	Price	Number of Installations
enginei	Usual 11 sensors pricing = £80,000 Annual subscription: £11,000 (with Iridium)	215
Fueltrax	20% more expensive (gap might have closed)	500+
Ascenz	30%-35% lower than enginei	1400 sensors connected and 450 vessels managed
Krill	No inside information	16 published on website
C-Sense	No inside information	No information

Figure 25: Perceptual Map for Price and Functional Variety

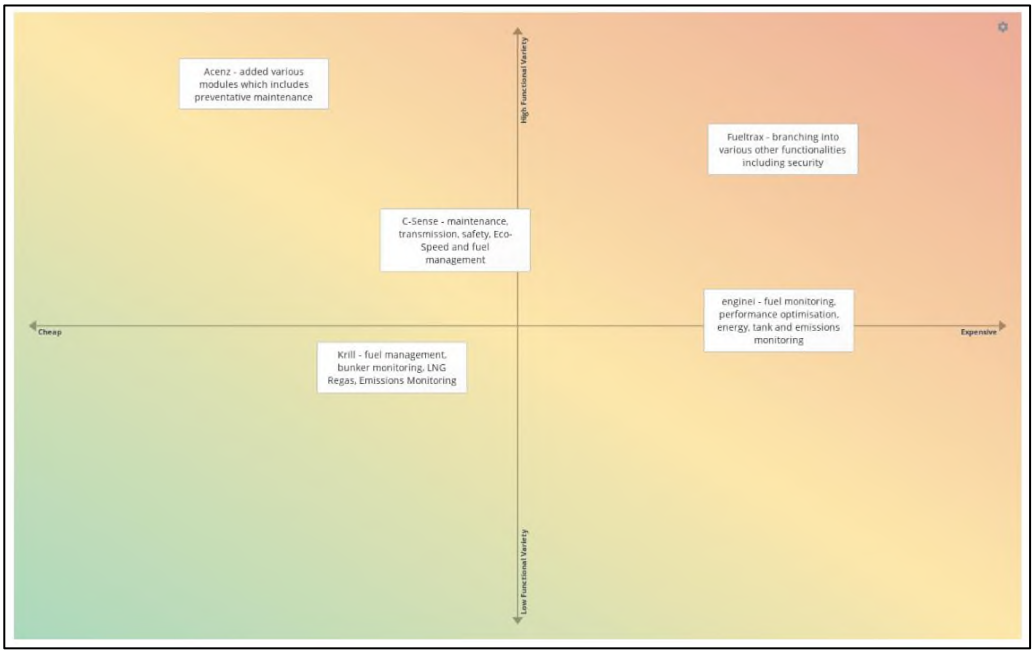


Table 12: Competitor Analysis - Price vs Functional Variety

Competitor	Price	Functional Variety
enginei	Usual 9 sensors pricing =	EFMS Energy management Tank Monitoring Performance optimisation - Ecospeed and auto-mode Emissions monitoring
Fueltrax	20% more expensive (gap might have closed)	Fueltrax - EFMS system FuelNet - web portal including vessel tracking, weather tracking Fueltrax Mobile - mobile fuel custody transfer unit records all transfers, sight verification of flow, density alarms and print outs. Fueltrax Vision - 4 x CCTV cameras to verify weather, HSE claims Emissions compliance (not monitoring) Best Economy - performance optimisation (Ecospeed) Tank Monitoring
Ascenz	30%-35% lower than enginei	7 different modules: Fuel consumption Carbon comply Propeller efficiency Voyage manager MRV Activity management BunkerXchange"
Krill	No inside information	Fuel management Bunker monitoring LNG regas Emissions Installations
C-Sense	No inside information	Kral flowmeters make it possible to identify unusual flow at inlet (fuel feed pump) and outlet (injectors leaks). The crew can anticipate a failure and prevent more important damage. Eco-pilot Interface Transmission Canbus technology

Figure 26: Perceptual Map of Website Quality vs Brand Image

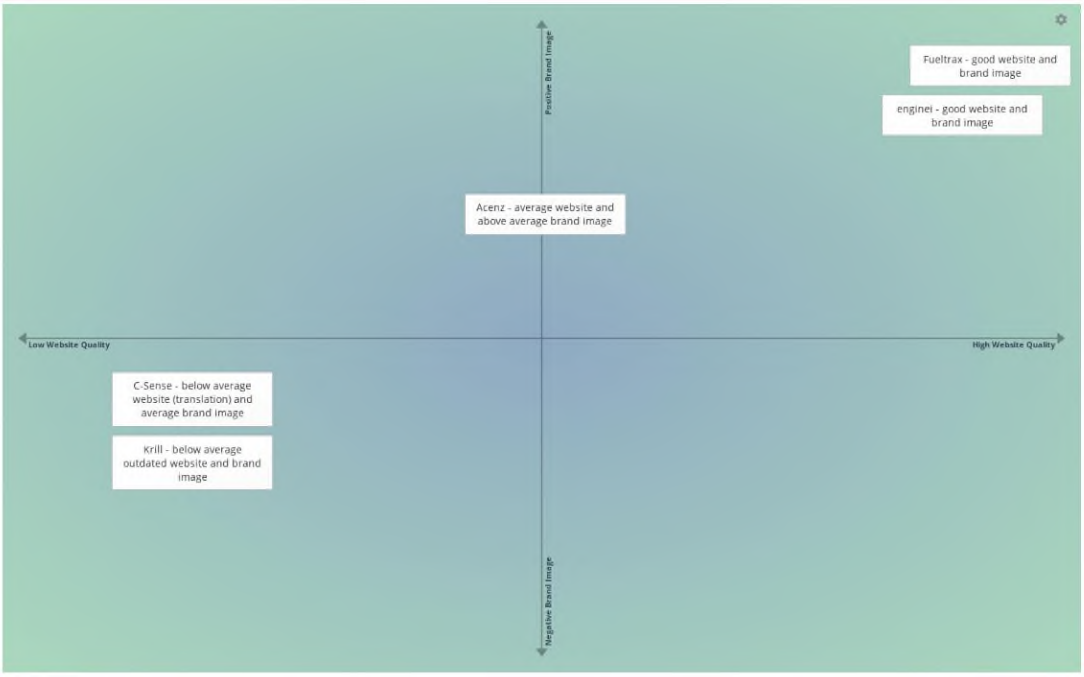


Table 13: Competitor Analysis - Website Quality vs Brand Image

Competitor	Website Quality	Brand Image
enginei	New website – easy to use, smart and informative	Consistent brand image
Fueltrax	Website – easy to use, smart and informative	Consistent brand image
Ascenz	Website – easy to navigate, overload on information and writing, outdated	Outdated
Krill	Outdated but informative	Inconsistencies, out of date
C-Sense	Google translation to English is broken, little information	Inconsistencies

5.4.4. Recommendations

Price vs Perceived Quality

Recommendations to improve price and perceived quality include improving perceived quality through proposed content strategy and brand guidelines and reviewing the competitor pricing strategy every six months and track changes closely. Current indications suggest that the primary competitor Fueltrax are decreasing the cost of their product. However, to further understand the price point, the enginei sales team should conduct regular offline market research to identify price points for Krill and C-Sense.

Actual vs Perceived Quality

Recommendations to improve the position of Royston’s actual vs perceived quality would firstly include further offline market research to identify not only the price point for Krill and C-Sense but the actual quality of the product. Secondly, conducting annual market research through surveys, analysing customer feedback or customer interviews can identify up-to-date changes and improve enginei's perceived quality through the content strategy and communications. Finally, by ensuring high quality content and thought leadership, articles are used to create increasing perceived quality in areas of interest. This could be further assisted by conducting a social media analysis of direct competitors on a regular basis e.g., bi-annually, to identify changes in messaging, approaches to strategy and content. This could also indicate new additions to the employment team.

Price vs Number of Installations

The current perceptual map shows a significant space surrounding Fueltrax and Ascenz for different factors. Market research suggests that Ascenz has over 1,400 sensors connected and Fueltrax has over 500 systems involved. Both have different price points to enginei, one cheaper and one more expensive. To improve the current position of enginei, it is recommended that further market research into Krill and C-Sense is conducted to identify the total number of installations and a price point is needed to conduct full competitor analysis.

Price vs Functional Variety

To improve the current position within the price vs functional variety map, the enginei team should review enginei functionality in comparison to their competitors' functionality, particularly in relation to their price point. This should also incorporate other stakeholders' perceptions and the team could identify if there is a need for increased functionality through customer feedback. Finally, the enginei team should continually forecast the next movements in relation to product functionality or define USP/content, which steers them away from increased functionality. This will be assisted by the identification of competitors' successes through increased functionality, e.g., what extra functions have worked well and why?

Website Quality vs Brand Image

Enginei are relatively equal in terms of brand image and website quality with Fueltrax and ahead of the field with the rest of the competition. The enginei branding is in the process of changing. A full roll-out of this and adaptions to the website will need to be made in due course to ensure a consistent brand image.

5.5. Preliminary Findings Conclusion

Summarising the findings from the preliminary research enabled the researcher to incorporate stakeholder perceptions and map the holistic customer processes and journeys. This was essential to identify opportunities and areas of friction within Royston to create a process for digital transformation through B2B digital co-branding and enable this to be embedded into Royston's capabilities.

5.5.1. Royston Overall Discussion

At the commencement of the research project, digital capabilities and presence amongst employees was low, meaning the likelihood of implementing and embedding digital co-branding campaigns could be hindered and, therefore, based on this finding, the researcher had to be careful to acknowledge and adhere to any risk prevention tactics to avoid project failure.

By the end of the project, the employee stakeholders had increased their digital capabilities and presence, demonstrating an increased capability to embed and uphold the digital changes caused by the co-branding transformation.

Royston have various opportunities due to their marine and parts departments that offer OEM parts, ranging from low to high costs, across a huge variety of B2B customers across the globe. Employee interviews provided insight into issues around branding and brand identity and the manual and lengthy customer journey that customers experience, with no procedures to drive awareness, engagement, conversion, or retention across online platforms.

The perceptual maps demonstrate that enginei is continually being outperformed by a USA competitor in terms of perceived quality and brand image. The key information provided about enginei in the methodology and preliminary findings demonstrate that the market enginei operates in is highly niche and with a significant cost to customers. Employee interviews provided insight into issues around branding and brand identity and the customer journey.

These findings have identified key information that has shaped the following B2B digital co-branding campaigns and incorporated into each of the continual optimization cycles. The following section will perform a thematic analysis based on the proposed research questions from the findings of B2B digital co-branding campaigns.

5.6. Co-branding Campaigns Findings

This section of the findings chapter will reconcile the results from each co-branding campaign, allowing these to be analysed thematically based on the proposed research question they intend to answer. The Chartered Institute of Marketing (CIM) recommends various digital marketing metrics to measure an organisation's brand equity online within a practical setting. For this research, the co-branding campaigns will be measured through recognised digital metrics linked with each of Aaker's brand equity assets, enabling the translation into academic/theoretical analysis.

A reminder of the key digital metrics utilised within this research is outlined below against their relevant asset category. This will allow the analysis of the campaigns both individually and collectively and enable the researcher to understand the effects of digital co-branding within a B2B environment, advancing the current research.

- **Brand Awareness**: Impressions, clicks, engagement, global coverage, SERP
- **Brand Loyalty**: return customers, return users, retention
- **Brand Associations**: search terms, perceptions, result changes
- **Perceived Quality**: Net Promoter Score (NPS), quality based perceptions, revenue

This chapter will break down the findings by each co-branding campaign, prior to reconciling the conclusions in a thematic-based summary (by research question). Further research, including Net Promoter Scores (NPS) and research-end questionnaires, will be detailed as these will contribute to the measured brand categories detailed above.

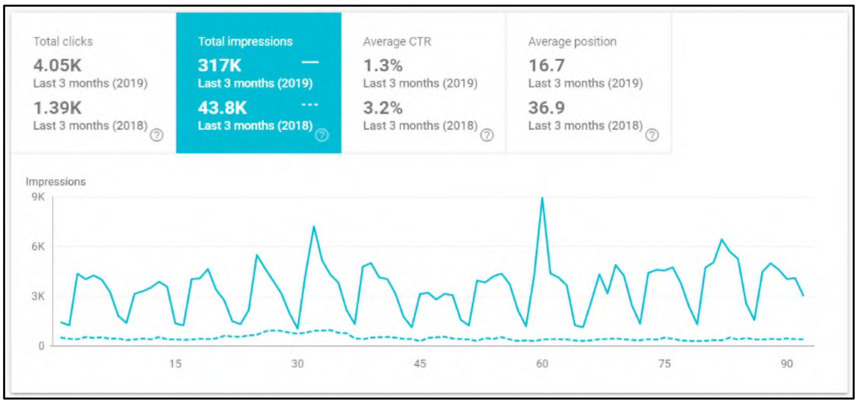
5.7. Co-branding Campaign 1 Findings

Co-branding Campaign 1 was the implementation of co-branded content from five global OEM partners across Royston's website and demonstrated significant shifts in Brand Awareness by connecting the two brand names together. This co-branding allows Search Engine algorithms to connect Royston's brand with the larger OEM brand across the globe, enabling them to potentially leverage a portion of their search queries. The digital co-branding campaign uploaded five co-branded product lists to Royston's website, starting in March 2019. Figures recorded from a comparable previous period set a baseline to conduct a comparative analysis once the co-branding campaign was implemented. Various metrics have been recorded in line with recognized Brand Performance measurement metrics to enable application of the campaign results to the broader theory and understand the impact of digital co-branding with larger OEMs on Royston's website.

Impressions

In 2018 Royston's impressions totalled 43,800 prior to the co-branding campaign. In 2019, during the same period, Royston's website impressions increased to 317,000, demonstrating an increase of 273,200 impressions within the first year of campaign implementation. This change represents a 623.74% increase, with no other significant changes made to Royston's website.

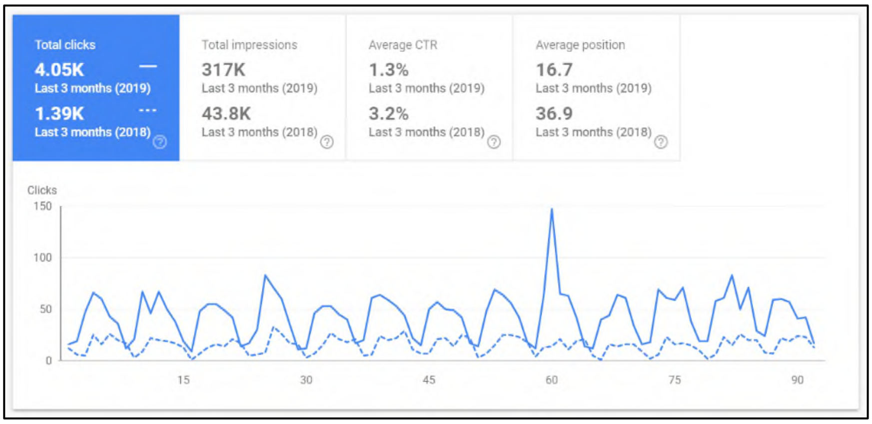
Figure 27: Google Analytics Diagram of Impressions



Clicks

Using the same time frame as above, the second metric for data collection is the number of clicks onto Royston's website. The clicks onto Royston's website have increased significantly from 1,390 clicks in 2018 to 4,050 clicks in 2019. This change represents a 191.37% increase, again with no other significant changes to Royston's website.

Figure 28: Google Analytics Diagram of Clicks



Search Engine Results Position

The final metric for digital analysis of this co-branding campaign is the search engine results position. This relates to the position in which Royston's website ranks on Google (SERP), which has significantly increased since the digital co-branding strategy was deployed.

Figure 29: Google Analytics Diagram of SERP

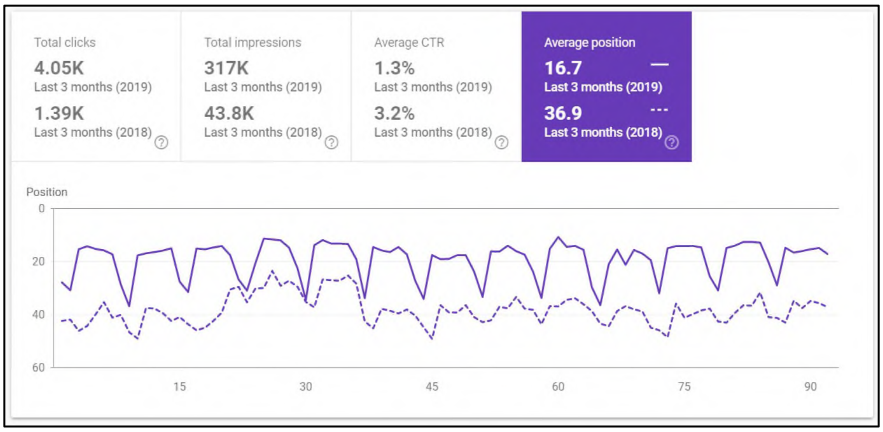


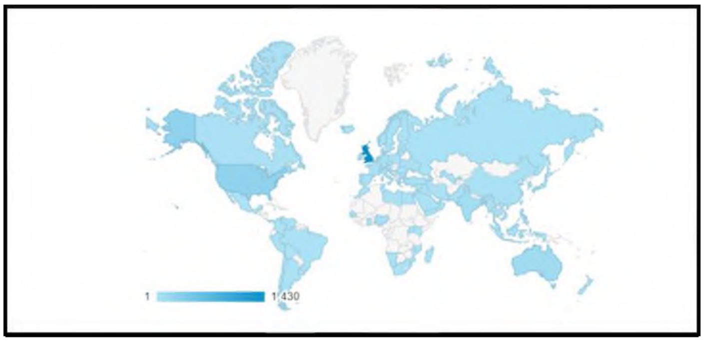
Table 14: Search Engine Result Position Results

Timeline	2018 Benchmark	3 Months Post Launch	6 Months Post Launch
90 day average	36.9	21.9	16.7
28 day average	37.8	19.6	16.2
7 day average	40.6	19.1	16.5

Global Coverage

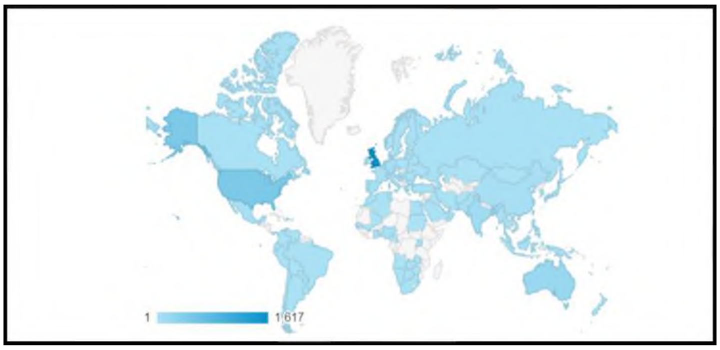
The global coverage indicates the location of individuals entering the Royston website. In the 3-month comparison it is noted that the website has increased visitors from countries in Africa, Southeast Asia, and South America. The website initiative has improved the global coverage for Royston, increasing its scope to 18 countries within 3 months since implementing this co-branding strategy, including: Algeria, Papua New Guinea, Mongolia, Kazakhstan, Afghanistan, Turkmenistan, Botswana, Zimbabwe, Mozambique, Angola, Cameroon, Ghana, Togo, Mali, Ecuador, Paraguay, and Haiti.

Figure 30: Global Coverage Prior to Campaign 1



The ratio of visitors per country has also increased from 1:1,430 to 1:1,617 indicating that the density of visitors is increasing per country. The density of website visitors from the United States has increased in the period presented.

Figure 31: Global Coverage Post Implementation of Campaign 1 (3 months)



Financial Performance Improvement

Aside from the digital metrics, the number and value of sales enquiries and conversions have been recorded. Royston have previously conducted sales through traditional methods and, therefore, the baseline for digital enquiries and sales is zero. For reference, Royston's annual OEM parts sales are demonstrated in **Table 15** below.

Table 15: Volvo Penta Sales by Year (2017-2020)

Years	Volvo Penta Sales
2017	£820,611
2018**	£1,054,805
2019	£1,267,926
2020 (Covid Impact)	£1,049,436

***Implementation of co-branding Campaign*

The monetary results have shown significant increase in inbound website driven enquiries, creating both enquiry and conversion value. These enquiries have been identified and attributed to the co-branding campaign through monitoring and recording the relevant traffic channels. Firstly, the sales team were tasked to ask enquirers about how they found the specific part that they were enquiring about, this was recorded and tracked using a spreadsheet and the value of the enquiry attributed to the co-branding campaign. Secondly, the use of analytics platforms allowed us to track certain enquiries based on location, user demographics and page visitation. Finally, there was an online enquiry form that allowed users to directly enquire about a specific part, this was only accessible if the user accessed a page that was developed through the co-branding campaign. The implementation of the co-branding campaign significantly increased the number of co-branded URLs and these were submitted as a sitemap and a review of search terms on Google Search Console demonstrated an increased volume of search terms related to the collaboration between Royston and the co-branded partners. Various analytical tools on relevant search engines have been used to confirm the enquiry had come through the relevant channels in relation to the co-branding campaign. The increase in monetary value highlights the fact that the co-branding campaign has delivered commercial value for Royston Limited. Table 15 below demonstrates that the conversion rate of enquiries (per number) is at 53.7%. However, the value of enquiries converted is significantly less at £11,664.61, only 1.93% of the total enquiry value (**Table 16**). The following action research Optimisation/Iteration Cycle will focus on the improvement of the conversion value.

Table 16: Increase of Enquiries in 6 Months Following Campaign Launch

	Total Enquiries	**Total Enquiry Value**
3 Months Post Launch	46	£313,685.69
6 Months Post Launch	82	£603,915.59
Conversion	44 (53.7%)	£11,664.61 (1.93%)

5.7.1. Optimisation 1: Application of Six Sigma

Six Sigma was applied to improve the overall conversion value, as it was evident that whilst the conversion rate of the total number of enquiries was above the acceptable level of Royston's expected conversion rate of 42%, the total enquiry value was much less, at only 1.93% of all enquiries, demonstrating that only small value orders were converting. An investigation into the conversion rate value using the principles of Six Sigma was launched. Key findings concluded that personnel factors from Royston's sales team were a significantly large portion of the conversion value. The full Six Sigma Charter can be seen in Appendix B.

The improvement of some key issues identified throughout the process have been rectified and this improvement can be seen in the higher conversion rate. The new enquiry level is £24,771.04 and a conversion level is £9,116.14, this means that the conversion rate has increased from approximately 2.5% to 36.8% since the implementation of six sigma principles since September 2020 (3-month period). This is demonstrated in the following hypothesis test; a 2 proportion hypothesis test (**Table 17**) was used due to the suitability of its application.

Table 17: 2 P Test

2 P Test - Attribute		
	Before	**After**
Number of Errors / Defects	20,000	9,116.14

Number of Products	760,000	24,771.04
Proportion	0.026315789	0.368016
Test Statistics (ABS)	111.3147399	
P Value	Reject Null	

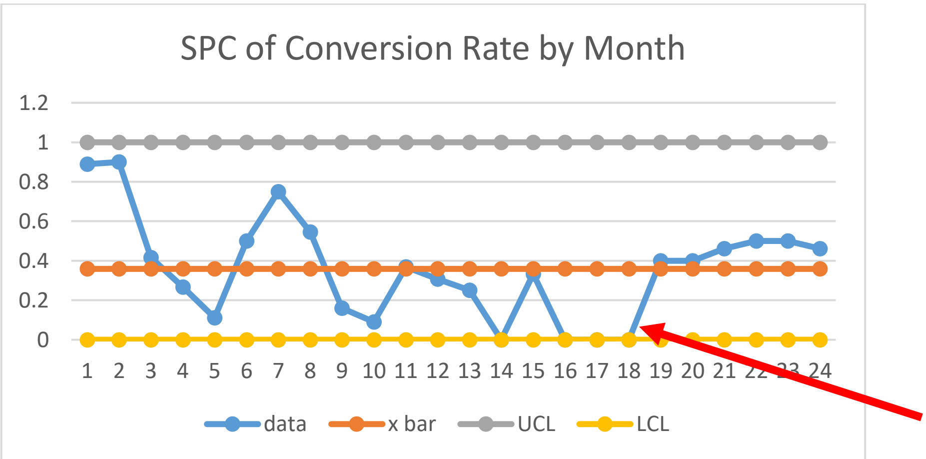
The rejection of the null hypothesis demonstrates that the application and improvement of the before and after P Values are statistically significant.

Due to company processes of approval and the slowdown caused by Covid-19, the full extent of improvements cannot be identified in this report. The roll out of an ecommerce site in quarter 1 of 2021 will improve the digital user experience, reduce friction in the customer journey (to conversion) and speed up the enquiry process e.g., reducing waiting times for responses to initial enquiry. These were key points identified through the roadmap (5W's and 1H) as problematic and preventing an increased level of enquiries.

Control charts should demonstrate the reduction of variation and show the movement towards a lean methodology. The control chart in

Figure 32 demonstrates the extensive variation prior to the implementation of Six Sigma in the company. The chart demonstrates that the variation starts to stabilize post implementation of Six Sigma. The company have been advised to continue to monitor the data using control charts. The statistical process control chart demonstrates the point when Six Sigma was implemented. The conversion rate was at the lower control limit (yellow line). There is a notable increase, which rises above the X bar and continues to remain there for the following 6 weeks.

Figure 32: Statistical Process Control Chart of Improvement



***Six Sigma implemented at red arrow*

After 18 months from the launch of this co-branding campaign (including business closure for 5 months during Covid-19) the recorded financial results included:

- **£771,126.08 inbound enquiry value**
- **250 enquiries**
- **Enquiries from 45 different countries**
- **81 conversions**
- **32.4% conversion rate**
- **Post implementation of Six Sigma >40% conversion rate**

Amongst these, 41 enquiries did not receive an assigned quote with a financial value. The reasons for this included, but are not limited to: quote missed (discussed in Six Sigma Project), product out of stock or email bounce back.

All enquiries recorded are from new customers, unknown to Royston, that were directly sent through a parts enquiry form, who have been asked by the parts team how they heard of Royston (and confirmed through search engine/parts store) or who have been tracked through Google Analytics.

5.7.2. Optimisation 2

Given the results provided through the first optimisation process, a further cycle was conducted. Two focus groups / feedback sessions were held with various company personnel to identify how the campaign could be optimized further. The first session was held with members from the Spare Parts Team, including the manager and various OEM Leads. This enabled further understanding of issues within the customer journey and focusing on campaign optimisation at a tactical level. The second session included the Marketing Manager and CEO with the aim of focusing on optimisation at a strategic level.

Focus Group/Feedback Session 1: Spares Manager and Team

One formal focus group meeting was conducted as well as multiple informal feedback sessions to understand both issues and opportunities for optimisation at a tactical level. The feedback included the following points:

- Process from original co-branding campaign incorporates multiple personnel in the customer journey, slowing down the process significantly. Multiple customers have responded reporting that they have already purchased goods elsewhere by the time they receive a response to their enquiry.

- An increase in orders deriving from this digital co-branding campaign increased the lead times for responses from the sales team, as this increased their workload and slowed the customer journey down even further.
- This digital co-branding campaign increased the internal touchpoints within the customer journey and increased the number of personnel involved in the enquiry or order process. This has caused confusion within communication, missed responses, and missed orders.

Focus Group/Feedback Session 2: Marketing Manager and CEO

The second session conducted during marketing strategy meetings reviewed the digital co-branding campaign from a marketing and strategic perspective.

- Analytics demonstrated that a significant number of website users were arriving on the enquiry form but failing to submit an enquiry. Within a 3-month period the number of users submitting an enquiry form was less than 2% of users arriving onto the enquiry form page. Potential causes for this discrepancy reported in this session included: security concern from a third party embedded form that did not have any consistency or resemblance to Royston's brand; too much information required from the user; lack of professional look.
- The high number of individual co-branded website pages increased the likelihood of content duplication identification, meaning that the indexing of the pages decreased. Out of 250,000 pages, approximately only 50,000 were indexed at any given time, reducing the possibility to attract users to Royston's website. This is caused by limited control over the content upload and website back office.
- Limited brand consistency presented on the website with both Royston's brand and the co-branded partners brand may prevent users from trusting the site or feeling comfortable submitting personal information.

5.7.3. Solution

After discussing opportunities to optimize and improve this digital co-branding campaign, a decision was made to develop Royston's existing website into an operational **ecommerce shop** with the listed OEM products, creating an online shop with over 250,000 products accessible to consumers. This would be conducted alongside updating the content and brand image of the existing website. Whilst Royston's operations are over 95% in the B2B environment, this iteration opens the spare parts business stream into the B2C industry. To construct the new ecommerce shop, Royston collaborated with website developers to create a streamlined and optimized website with an accessible ecommerce shop. Firstly, an overview of the original website took place and a brand strategy incorporating all OEM partners was created, enhancing the brand image, brand consistency and perceived quality, through both an optimal brand strategy and a comprehensive co-branding strategy using major OEM partners.

Key Changes

Based on the findings from Six Sigma, a number of processes were altered. In the first instance, all forms, sign up options and enquiry pages have been embedded into the website and feature Royston or co-branded partners brand image. This endeavours to increase brand trust and user reliability of the website. This embedding has been essential to implementing a more streamlined customer journey that aims to maximize user experience, enabling immediate checkout of products rather than the alternative enquiry form option. This also decreases the employee's length of time spent on administrative and sales tasks per order, reducing overall waste. Continuing the brand image improvement to drive user trust, enhanced co-branding through imaging and specific content was used on each product description page. By integrating a well-recognised ecommerce platform, Royston minimize the negative effects caused by low level indexing figures. To do this, an updated and professional brand identity has been created and portrayed to reflect quality. The new brand identity will consider the necessary guidelines to assist in collaborating further with individual OEM partners. Royston's new website reflects the brand identity of partners by using official logos, wording, and content and the improved layout and navigation of the website allows users to easily navigate the website to reach their goal, based on the multiple brands that Royston collaborate with. Lastly, improved SEO and back office facilities enables the Royston marketing team to have increased capability of making alterations to content, metadata, and co-branded product information.

Results

- Increased Impressions, Clicks and Purchases.

Streamlined Customer Journey

- The ecommerce site allows customers to purchase directly through the website, removing sections, streamlining the customer journey, and decreasing the time spent on average per Royston employee, per sale.
- To enhance this further, Royston have created discount offers (e.g., 10% off any spend through the website) and these have been sent to the spare parts email database to further incentivize customers to purchase direct through the website.
- Customers could continue to avail themselves of advice from the spares parts team. However, overall Royston was able to increase their capacity for enquiries or purchases whilst minimizing infringement on the current spares parts team.

Improved, Consistent Brand Image

- Informal feedback from various Royston stakeholders (including employees and OEM partners) indicated that the consistency of the brand image increased the professional look of the new website and ecommerce shop.
- When asked, Royston employees indicated that they would be more comfortable inputting their personal information into the new ecommerce forms in comparison to the previous forms. When asked why, responses included references about the perceived security, reliability, and trustworthiness of the forms.
- The marketing and management teams were intricately involved in the design and construction of the website, working closely with the website designers to align all components of the website and ecommerce shop with Royston's brand guidelines. The brand guidelines of any partners were also adhered to.

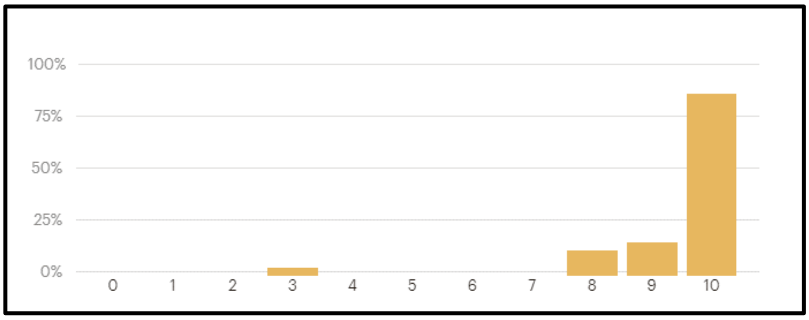
The overall financial improvement for the OEM spare parts department since 2017 indicates a financial turnover increase. The KTP commenced in 2018 with the launch of the OEM spare parts co-branded campaign in quarter 1 of 2019. This is demonstrated in **Table 18**.

Table 18: Financial Turnover of OEM Spare Parts

	FYE February 2017		FYE February 2018		FYE February 2019		FYE February 2020	
	Spares Turnover	**% Of Total Turnover**	**Spares Turnover**	**% Of Total Turnover**	**Spares Turnover**	**% Of Total Turnover**	**Spares Turnover**	**% Of Total Turnover**
Turnover for OEM Spare Parts	£2,744,291	26%	£3,783,567	24%	£6,231,106	33%	£7,470,334	39%

Further to this, a survey was sent out to spare parts customers to determine the Net Promoter Score for this department. This was conducted in quarter 3, 2021. Net Promoter Score is a tool that organisations can use to determine customer experience and is calculated using a scale from 1-10. Users at the top of the scale (9-10) are classed as promoters and are loyal enthusiasts (Net Promoter Score, 2021).

Figure 33: Net Promoter Score for Spare Parts Department



The spare parts department averaged a Net Promoter Score of **9.4 (Figure 33).** The survey was anonymous and, therefore, no identification or follow up was possible with the user that scored the spare's department a '3'. Overall, the score of 9.4 indicates a high level of perceived quality and advocacy for Royston's spare parts department. Table 18 below demonstrates the changes in Volvo Penta sales from 2017 to 2020. Two points to note include the commencement of the KTP and co-branding campaigns (this is also attributed to co-branding campaign 2). The second point relates to the effect of Covid-19 in 2020. Aside from this potential anomaly, a clear upward trend in financial performance is demonstrated from 2018.

Table 19: Volvo Penta Sales (2017-2020)

Year	Volvo Penta Sales
2017	£820,611
2018**	£1,054,805
2019	£1,267,926
2020 (Covid Impact)	£1,049,436

***Implementation of co-branding Campaign*

Figure 34: Breakdown of Volvo Sales by Month 2019-2021

The implementation of Co-branding Campaign 1 took place in March 2019. Due to the organic nature of the campaign, it took an amount of time for the website indexing to achieve a suitable level and create significant impact. From May 2019, a significant incline is noted, and it remains at a higher-than-average level throughout the rest of the year and into the initial months of 2020. March – June 2020 shows a significant decline, and this subsequently relates to the initial commencement of quarantine from Covid-19.

5.8. Co-branding Campaign 2

All other campaigns work on organic methods. This campaign will identify how paid advertising is influenced through co-branding. Royston have never used PPC Advertising campaigns previously. However, creating a baseline non-co-branded campaign alongside various OEM co-branded campaigns will enable the analysis of how co-branding impacts the metrics of paid advertising. A full breakdown of the PPC research is in Appendix C.

An initial review of search terminology, existing OEM paid adverts and manager recommended locations took place to identify an entry strategy to launch the paid advertising campaign. To ensure a control is in place, a non-co-branded advertisement focusing solely on the Royston brand will be created. This will set a baseline to compare the other co-branded campaigns against.

5.8.1. Advert 1 – Non-Co-branded

- 15.6% of search queries related to Volvo Penta
    - The Volvo Penta queries totalled 34,681 impressions
    - The Volvo Penta queries totalled 37 clicks
    - 0.107% click through rate
- The overall advert accumulated:
    - 159,885 impressions
    - 1,197 clicks
    - 0.749% click through rate
- The clicks derived from 226 countries*
    - Top 10 countries
        - United Kingdom
        - United States
        - Indonesia
        - India
        - Italy
        - Australia
        - Germany

        - France
        - Spain
        - Turkey
- Royston's contact page had 6,622 impressions and 134 clicks
    - 2.024% click through rate

The results established a baseline for the co-branded advertisement. The non-co-branded advertisement was stopped after the initial round, as a business case could not be justified for resource and finance allocation.

5.8.2. Advert 2: Co-branded with Global Brand

- 18.6% of search queries related to Volvo Penta
    - The Volvo Penta queries totalled 100,508 impressions
    - The Volvo Penta queries totalled 139 clicks
    - 0.138% click through rate
- The overall advert accumulated:
    - 398,738 impressions
    - 3,394 clicks
    - 0.851% click through rate
- The clicks derived from 234 countries*
    - Top 10 Countries
        - United Kingdom
        - United States
        - Indonesia
        - India
        - Italy
        - Germany
        - Spain
        - Australia
        - Netherlands
        - United Arab Emirates
- Royston's Contact Page had 18,433 impressions and 345 clicks
    - 1.872% click through rate

**Google records countries based on ISO 'Country Codes', of which there are 249.*

The co-branded advertisement outperformed the non-co-branded advertisement, with an overarching click through rate (CTR) of 0.85% from 234 countries, in comparison to the non-co-branded CTR of 0.74% in 226 countries. In terms of acquiring customers directly from the search engine, it is evident that the co-branded advertisement performed better in acquiring audience and driving click-through-rate, whilst increasing global presence. It must be noted that alternate explanations for these results are possible, such as the influence of key words, seasonality trends of partner products and Google algorithms based on spend. However, on the continuation of the optimisation steps, we continued to see the same trends for co-branded and non-co-branded advertisements.

5.8.3. Optimisation Steps for Co-branded Advertisement:

- Add negative keywords for irrelevant search terminology
- Set up Google MyBusiness for increased conversion tracking
- Set up goals on Google Analytics to track audience movements
- Review and amend advertisement text to elaborate on relationship between Royston and Volvo
- Add additional rich media links added

In campaign 2, the co-branded advertising campaigns involved search terms associated with the larger OEM brands, which ranked more successfully overall.

The co-branded campaign had the following results in association with their Volvo Penta OEM partner:

- 18.6% of search queries related to Volvo Penta
    - The Volvo Penta queries totalled 100,508 impressions
    - The Volvo Penta queries totalled 139 clicks
    - 0.138% click through rate

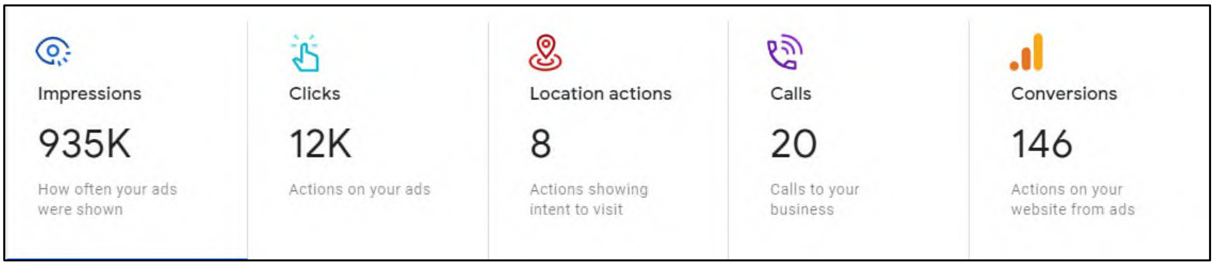
The non-cobranded campaign had the following associative search term results:

- 15.6% of search queries related to Volvo Penta
    - The Volvo Penta queries totalled 34,681 Impressions
    - The Volvo Penta queries totalled 37 clicks
    - 0.107% click through rate

As demonstrated, the co-branded campaign had a higher level of search term association, which is expected due to the links in the comment. However, as demonstrated, the overarching CTR (click through rate) is higher within the co-branded advertisement, meaning that when the advertisement's content is jointly presented or associated with the larger OEM brand, a higher percentage of people were more likely to convert.

The results established a baseline for the co-branded advertisement. The non-co-branded advertisement was stopped after the initial round, as a business case could not be justified for resource and finance allocation.

Figure 35: Screenshot of Basic Google Ads Results Display



5.8.4. Optimisation 1: Results

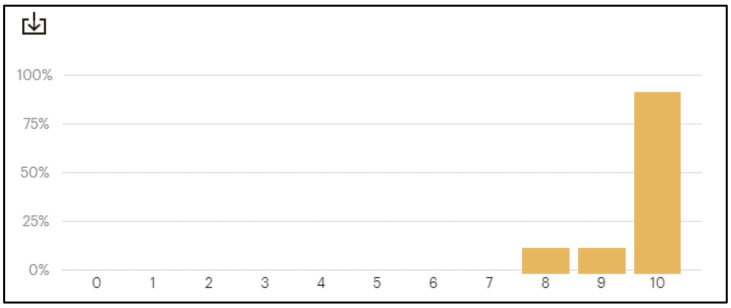
At this stage, goals had been set up to enable the recording of user actions on Google Ads, which recorded the digital conversions (e.g., a user who completed a pre-defined goal or who used the call function on Google MyBusiness). To identify if the co-branded advertisement translated into increased financial or alternative company objectives a comparative analysis of the enquiries and sales relating to Volvo Penta products within this time and similar previous time periods was conducted. The results of the co-branded optimisation advert were:

- 1.28% click through rate on overall advertisement.
- This click through rate demonstrates a percentage increase of 50.78% of the overall advertisement in comparison to the initial results.

Both Table 18 and Figure 34, discussed previously, can be reiterated here as they echo the changes experienced in Volvo Penta sales from 2017 to 2020. Two points to note include the commencement of the KTP and co-branding campaigns, and the effect of Covid-19 in 2020. Aside from this potential anomaly, a clear upward trend in financial performance is demonstrated from 2018.

The implementation of campaign 2 took place at the end of September 2020, with the launch going live in early October of the PPC campaigns. A notable increase was then achieved from October and into the following January. The campaign was stopped mid-way through January 2021 and a decline in sales is noted the following month.

Figure 36: Net Promoter Score for Marine



The results demonstrate the highest Net Promoter score, with a final average of **9.7 (Figure 36).**This demonstrates a relatively consistent consensus between customers in relation to Royston's perceived quality and advocacy.

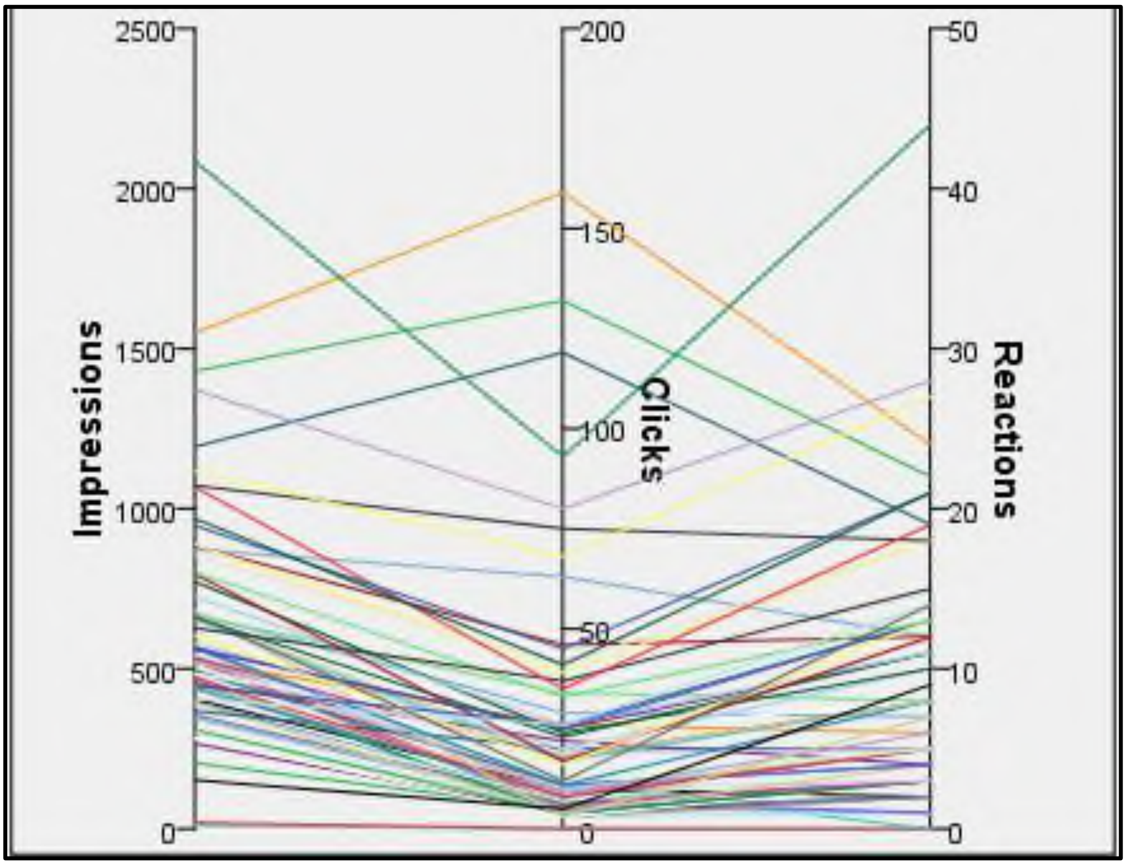
The results demonstrated that co-branding had an overall positive impact on key performance indicators relating to SEO, SERP and click-through-rate on the Royston website and subsequent search engine platforms. This research sets out to identify the impact of digital co-branding in a B2B setting through an action research case study. Therefore, to understand whether this impact is carried across alternate B2B digital platforms, the next co-branding campaign will conduct an A/B test using orthogonal design on the B2B social media platform LinkedIn. Theoretically, this will allow the researcher to understand if there is an impact, and, if so, what this may be. This theoretical understanding will drive practical decision-making processes and have implications for Royston in this action research approach.

5.9. Co-branding Campaign 3

The following findings will detail the orthogonal design experiment conducted on B2B social media platform, LinkedIn. This campaign used data analysis and A/B testing through orthogonal Design to determine the effects of digital co-branding and other success factors in Royston's social media strategy.

5.9.1. Preliminary Data Analysis

Figure 37: Parallel Plot of Engagement Interactions



The engagement metrics of 73 example posts were plotted in a parallel plot. From the original 75 posts, 2 posts were removed from the dataset as they were not suitable or relevant. The parallel plot in **Figure 37** indicates the engagement interactions by post. In this case we can see a trend which shows most of the posts have elevated levels of impressions, lower levels of clicks prior to an elevated level of reactions. There are 3 visible anomalies to this trend, which indicate a higher level of clicks versus impressions and reactions. These anomalies are 'job postings', which would usually see a much higher level of traffic than other posts. A full preliminary dataset is available in Appendix D.

5.9.2. Decision Tree using the CHAID Growing Method

This decision tree uses the CHAID growing method and indicates the variables which influence the number of clicks a post receives. This used 70 posts from the observed 73 posts as the 3 job postings were removed from the dataset. This decision tree shows that image, day posted and videos all influence the click rate and, according to this decision tree, a post which includes an Image and is posted on Monday, Tuesday or Friday gives a higher number of clicks. Lastly, the company has particularly been working on co-branding partnerships as a marketing strategy. Therefore, further exploration into OEM partner inclusion will be needed.

Figure 38: CHAID Decision Tree Analysis

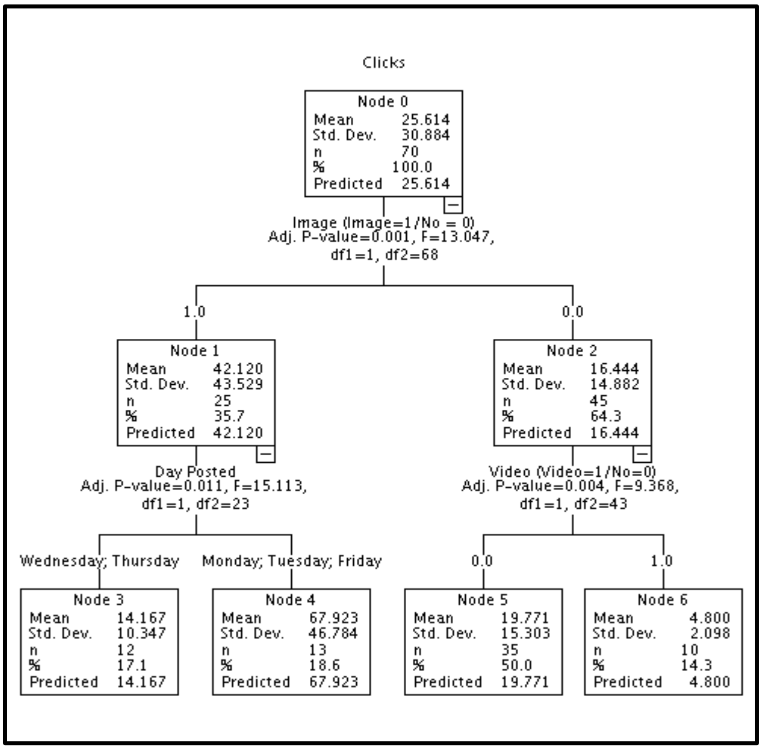
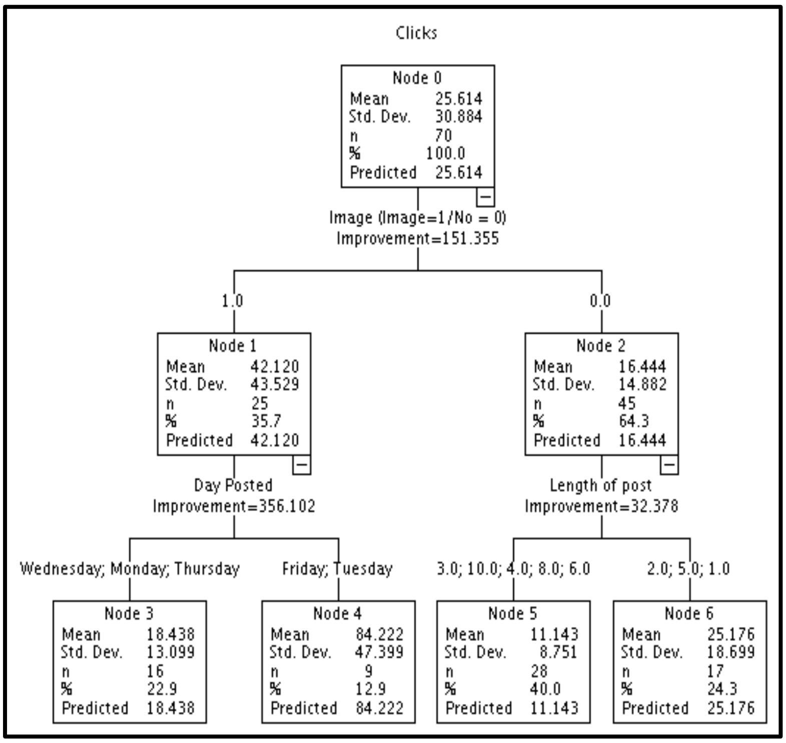


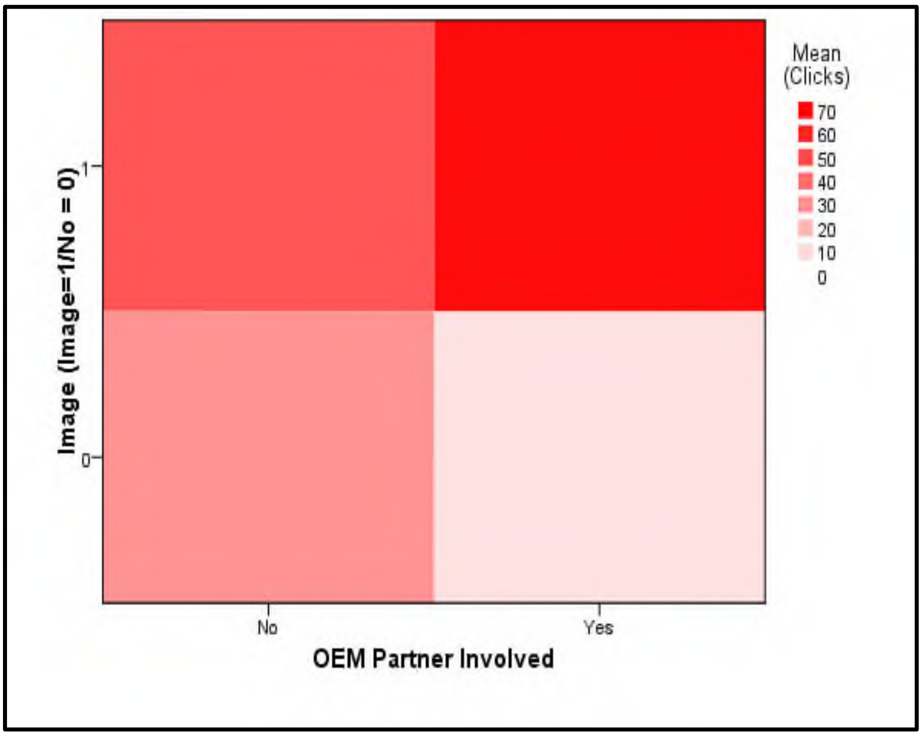
Figure 39: Decision Tree - CRT



Using the CRT growing method a similar set of results is found. The highest level of clicks is found when the post includes an Image and is posted on a Tuesday or Friday. The company is particularly working on co-branding partnerships as a marketing strategy. Therefore, further exploration into OEM partner inclusion was conducted.

Using a heat map, successful, unsuccessful, or indifferent interactions between variables can be viewed. In the decision tree analysis, the inclusion of OEM partners in a post was not a prominent or successful variable when determining the level of engagement through the number of clicks. However, the heat map conducted in this analysis demonstrates that when an OEM partner and an image is included in the same post, this interaction proves to be the most successful in terms of engagement rate. Posts that include an OEM partner and do not include image proved to be the least successful in terms of clicks. This trend continues when adding in further media variables such as video. The heat map (Figure 40) shows again that posts with an image and the inclusion of OEM partners achieve the highest clicks.

Figure 40: Heatmap showing OEM Partner and Image Interactions



5.9.3. Optimisation 1

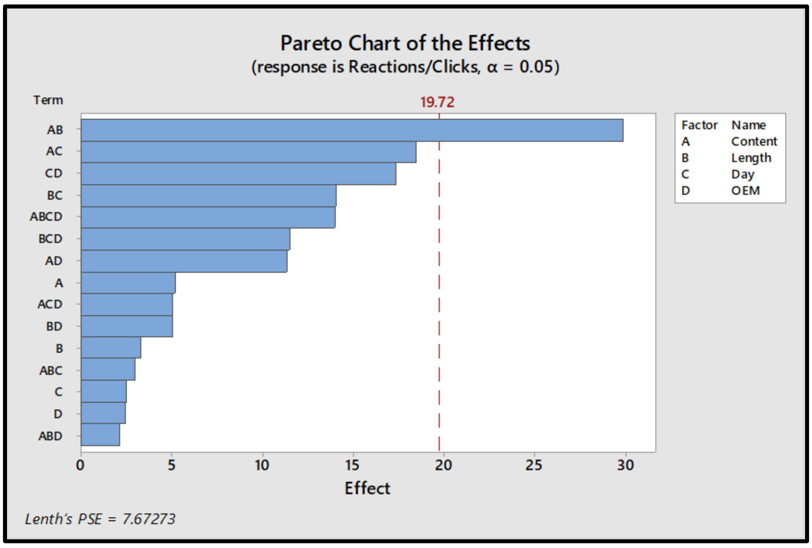
5.9.3.1. Random Design Experiment

Minitab was used to construct the orthogonal design used for this study, with the four most influential factors derived from the decision tree analysis: content type, OEM partner, day posted and length of post. This design accumulates 16 posts for the experimental A/B testing process. To decrease bias limitations the 16 posts were posted in a random order. The random design considered the alternating factors to ensure the posts could be uploaded twice a week without overlapping, meaning that the post order alternates from a Tuesday to Thursday each time. All other factors were subject to the random design process in Minitab. The original orthogonal design table demonstrates the various criteria used for this experiment.

Orthogonal Design Results

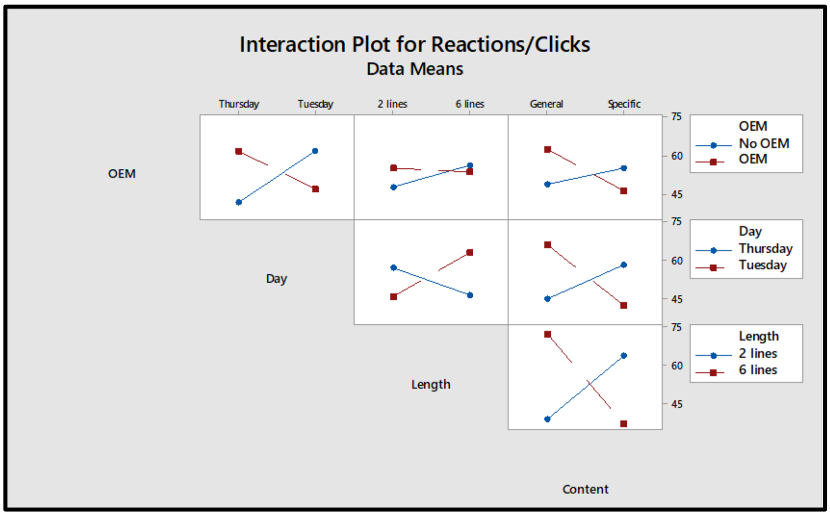
The orthogonal design experiment was conducted, and the data was collected and analysed through Minitab.

Figure 41: Pareto Chart of the Effects



The Pareto Chart (**Figure 41**) presents the effects of various criteria based on the response rate (proportion of reactions/clicks). The most influential reaction includes: the criterion of content type; whether a post is general or specific and the content length, whether a post is short (2 lines) or long (6 long). Other minor reactions are evident in the data, with co-branded posts including an OEM leading to a higher response rate, and the day a post is uploaded also affecting the response rate.

Figure 42: Interaction Plot for Reactions/Clicks



The Interaction Plot (**Figure 42**) demonstrates the interactions between the various criteria. Posts uploaded on a Thursday perform better when an OEM is included, is shorter (2 lines in length) and if the post is specific (includes more technical information). Post uploads on a Tuesday, however, perform better when an OEM is excluded is a longer post (6 lines in length) and if the post is general (includes less technical information). By analysing the impact of individual criteria, it can be concluded that the inclusion of an OEM Partner (co-branded) and a post that is general, e.g., did not include technical information / images, received a higher proportion of reactions. However, by accumulating all variables tested in this experiment and analysing these through the Interaction Plots in **Figure 42** two optimal criteria combinations can be presented:

Optimal Criteria 1: *OEM Included – 2 Lines – Specific Content – Thursday Posting*

Optimal Criteria 2: *OEM Excluded – 6 Lines – General Content – Tuesday Posting*

These criteria combinations can be presented to the company as recommendations to achieve the highest level of post engagement.

5.9.4. Discussion

The use of A/B testing through orthogonal design has enabled the identification of optimal criteria combinations for use within a specific B2B social media setting. By conducting a detailed analysis of 70 previous posts, an orthogonal design experiment was constructed to A/B test the influential variables. The experiment identified optimal individual criteria and criteria combinations that positively impacted the level of engagement a post received, thus demonstrating the importance of identifying and implementing B2B specific social media strategies and showcasing how SME's and organisations operating in the B2B industry can optimize their social media strategies through experimentation and analysis. This drove significant improvements on social media as the commencement of the KTP increased focus on Royston to increase their social media presence, starting with one LinkedIn profile with under 700 followers. Royston now have three profiles (one for their main Royston business, one for the enginei product and one for their Australia subsidiary) with over 3000 followers.

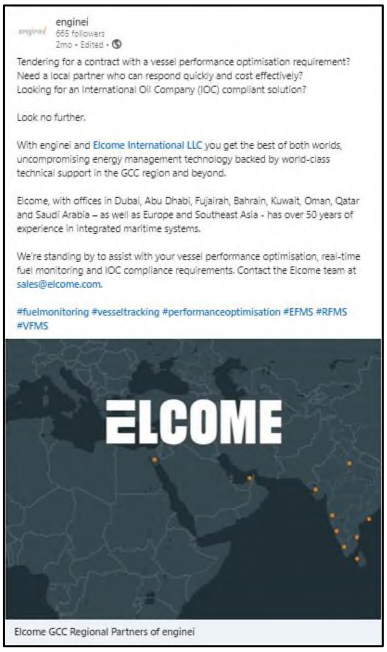
The previous co-branding campaigns in this action research case study focus mainly on co-branding with partners above Royston in the supply chain ladder. This allows the researcher to determine how the co-branding relationship is affected when other types of partnerships are created. To understand the theoretical and practical implications of alternate co-branding relationships, the next campaign continues to use the same digital platforms; however, this co-branding campaign was conducted with a Distribution Partner below Royston in the supply chain ladder.

5.10. Co-branding Campaign 4

For this campaign, a single distribution partner was selected to conduct an in-depth co-branding campaign utilizing four digital components. The distributor matrix identified Elcome, Dubai, as a suitable partner, as they have an existing online presence both through their website and through social media. Elcome is a maritime equipment supplier based in the GCC region, with regional offices in Dubai. They have an existing and localized presence with maritime operators in the immediate area. The marketing team and relevant personnel from Elcome agreed and to collaborate through a digital co-branding campaign with Royston's EFMS product, enginei.

The initial co-branded campaign was created and uploaded to the social media platform LinkedIn. The researcher, marketing team and the partner's marketing team collaborated and created a video and text that would be utilized on enginei's LinkedIn page. This social media post is shown in **Figure 43** below. (Full campaign breakdown in Appendix E).

Figure 43: Co-branded Social Media Post (Full Size Appendix E)



The results were recorded including all analytics for awareness and engagement. These results were analysed against all other social media campaigns uploaded on enginei's site from 1st May 2021 to 20th September 2021. The median was identified to gain a basic understanding of where the results of the Elcome co-branding campaign were situated in comparison to the other posts within this time. Similarly, to co-branding campaign 2, a decision was made to remove the job-related posts due to anomalies identified in the data.

Table 20: Results of Enginei LinkedIn Posts

Co-Branded/ Non-Co-branded	Update Type	Impressions	Clicks	CTR	Likes	Comments	Shares	Engagement Rate
CB	Organic	418	13	0.031	7	0	0	0.048
CB	Organic	467	31	0.066	16	1	6	0.116
NCB	Organic	379	16	0.042	10	0	1	0.071
NCB	Organic	338	7	0.021	7	0	1	0.044
NCB	Organic	619	33	0.053	16	3	1	0.086
CB (Elcome)	Organic	713	20	0.028	26	0	9	0.077
NCB	Organic	447	14	0.031	13	0	2	0.065
NCB	Organic	134	1	0.007	2	0	0	0.022
CB	Organic	382	15	0.039	8	0	2	0.065
NCB	Organic	306	4	0.013	7	0	0	0.036
NCB	Organic	386	8	0.021	9	0	2	0.049
NCB	Organic	1116	50	0.045	29	6	1	0.077
All CB	AVERAGE	495	19.75	0.041	14.3	0.25	4.25	0.077
All NCB	AVERAGE	482	16.8	0.031	12	1	1	0.086
All Posts (exc Elcome)	AVERAGE	486.91	36.67	0.033	12.5	0.33	2.08	0.063
Elcome	AVERAGE	713	20	0.028	26	0	9	0.077

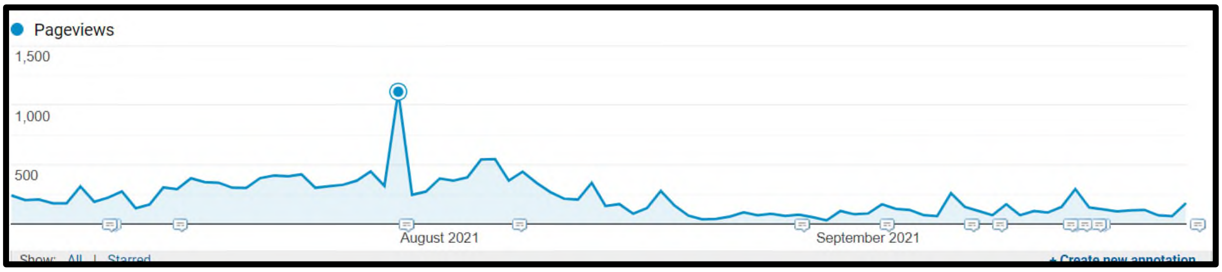
On average the co-Branded posts (CB) outperformed the non-co-Branded (NCB) posts across all awareness metrics, including Impressions, clicks and click-through-rate (CTR). They continued to outperform the non-co-Branded posts within two of the engagement metrics, likes and shares. However, in the remaining two engagement metrics, Comments and Engagement Rate, the Non-Co-branded Posts outperformed their co-branded counterparts.

5.10.1. Optimisation 1

To broaden the scope of this campaign, a press release was created linking back to the enginei website, again co-branded between enginei and Elcome. Linking back to the enginei website is common practice for any enginei news articles or press releases and the marketing team ensures that on the date of release an annotation is created on Google Analytics. Annotations allow the identification of any positive or negative changes on website visitors and allow the identification of the most-likely cause.

The digital press release was curated by the Royston and Elcome marketing teams and distributed on 29th July 2021 (**Figure 43**) both by Royston and Elcome. This coincided with sharing the press release on enginei's website and LinkedIn pages. The graph below shows the number of users across a 3-month period and a significant single spike in users can be clearly identified.

Figure 44: Google Analytics Screenshot of Users on Royston's Website



The spike represents the 29th of July, the date of the co-branded Elcome press release, and indicates that between 2-3 times the normal number of users visited the enginei website on that day. Multiple other press releases have been published in the same manner throughout the timeframe within the graph but have not received a similar response.

Google Analytics indicated that over 400 out of the 1,113 users entered the enginei site that day from a 3rd party referrer. Unfortunately, it is not possible to track the exact acquisition on many of these. However, it is possible that the Press Release launched on Elcome's site could have driven a significant amount of traffic towards the enginei site.

5.10.2. Optimisation 2

Two campaigns were originally scheduled for this stage, a non-co-branded general advertisement for enginei and a co-branded advertisement for enginei and their localized GCC Partner, Elcome. The opportunity to create a third advertisement with a localized Singaporean organization meant that the results could be compared, and any anomalies or trends could be identified. Due to external factors, the length of time that the advertisements were running for, and the individual campaign budgets varied, therefore, the results were analysed to identify averages, conversion rates and bounce rates.

enginei - General Campaign

- Cost to date: £280
- Number of clicks: 5800
- Number of users navigated to contact us page: 381
- Session duration on contact page: 48 seconds
- Bounce rate of contact page: 57%

This campaign has demonstrated above average results in comparison to the other PPC campaigns. The CTR is 6.5% but the cost to get a user onto the contact us page is under £0.74. Suggestion: ask the team to log information about where calls or emails derive from: this would increase accuracy with regards to Return of Investment information.

<u>enginei x Elcome</u>

- Cost to date: £83
- Number of clicks: 59
- Number of users navigated to contact us page: 6
- Session duration on contact page: 27 seconds
- Bounce rate on contact page: 0%

Again, this campaign was utilized with much narrower search terminology within a specific region and the results are expected to be lower. However, of the 6 users that reached the contact us page there was a 0% bounce rate and an average of 27 seconds duration. The CTR to contact is 10%. However, there was a significantly higher cost for a user to reach the contact page of over £13.

<u>enginei x Company 2: Singapore Based</u>

- Cost to date: £164
- Number of clicks: 342
- Number of users navigated to contact us page: 95
- Session duration on contact page: 83 seconds
- Bounce rate on contact page: 94%

This campaign was utilised with much narrower search terminology within a specific region and the results are expected to be lower. The CTR is 28% and the average cost for a user to reach the contact page is £1.74. There is a higher-than-average bounce rate, but also extremely high session duration.

5.10.3. Results

In the initial two cycles, joint website press release and social media, there were some indications of increased awareness metrics. However, these are not consistent in the social media campaign. Further to this, the PPC campaign with Elcome held a significantly higher cost-per-conversion, at over £13 in comparison to £0.74 within the generalized campaign. One promising factor of the PPC campaign with Elcome was the 0% bounce rate and the higher CTR, indicating a high level of relevance amongst the users. A second advertisement was conducted with another localized organization from

Singapore to assist in understanding if there were trends amongst the co-branded PPC adverts with localized brands in comparison to a non-co-branded alternative. No consistencies were identified as the bounce rate of 94% was significantly higher than the others. The analysis of session durations and cost-per-conversion results found no generalizable conclusions. The click through and stay rate is the CTR*(100-bounce rate) and on this measure Elcome has the highest score of 10% compared with 1.7% for Singapore and 2.8% for general. It could be considered that getting to the contact page is valuable in itself, as users may return on another occasion.

5.10.3.1. Financial Return

There was no evidence of financial return during this campaign with localized GCC partner Elcome. Extensive resources including the time of employees spent on the creation of this campaign and limited return was evident.

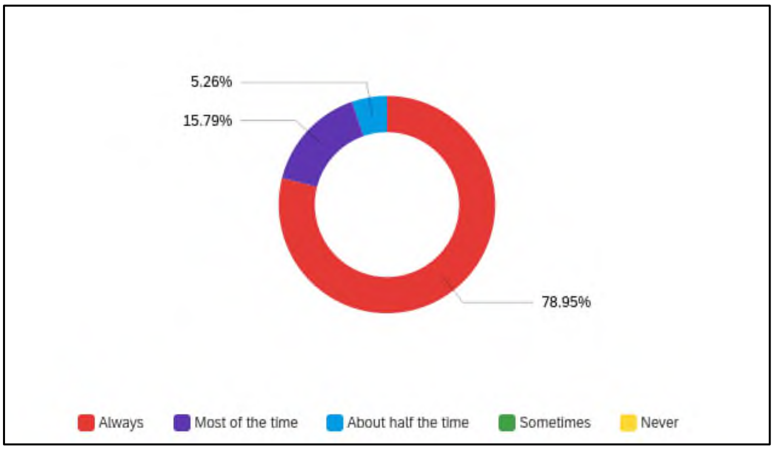
5.10.4. Conclusion

At this stage, the research was not able to draw significant conclusions from the digital co-branding campaign with Elcome, the localised GCC partner for Royston's enginei system across the tested platforms.

5.11. Post Research Questionnaire

Question 1: How often do you read Royston's internal communications?

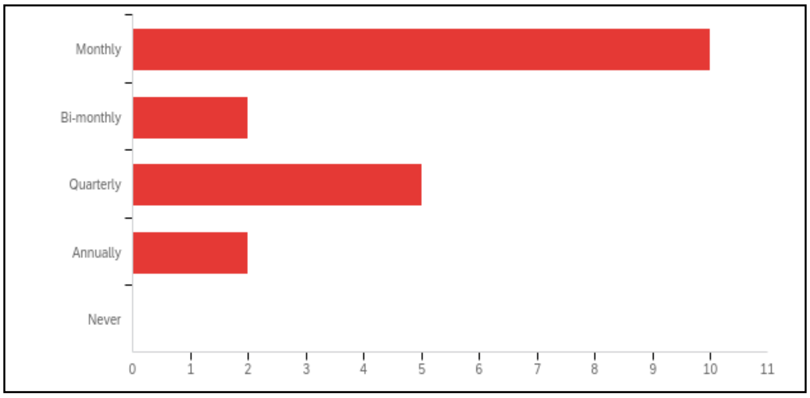
Figure 45: Analysis of Question 1 from Project End Questionnaire



- 78.95% of respondents read internal communications.
- No respondents answered, 'Sometimes' or 'Never.'

Question 2: How often would you like to receive internal communications?

Figure 46: Analysis of Question 2 from Project End Questionnaire



- Most respondents would like to receive internal communications monthly.
- One further comment was made by a respondent who would prefer to receive an internal communication bi-annually.

Question 3: Please rank the following methods of internal communication from your most preferred choice (1) to least preferred choice (5).

- Most people want to receive communications through emails (highest), newsletters or through meetings.
- Online platforms (e.g., Slack and WhatsApp) were the least popular options.

Question 4: What type of information would you like to receive or read regularly in an internal communication?

Figure 47: Analysis of Question 4 from Project End Questionnaire

#	Field	No Interest	Limited Interest	Average Interest	Interested	Very Interested	Total
1	Industry Insights	5.26% 1	10.53% 2	47.37% 9	10.53% 2	26.32% 5	19
2	Future Trends	5.26% 1	5.26% 1	36.84% 7	31.58% 6	21.05% 4	19
3	Business Updates (e.g. New Customers/Feedback)	5.26% 1	0.00% 0	10.53% 2	36.84% 7	47.37% 9	19
4	Employee Updates (e.g. New starts)	0.00% 0	5.26% 1	21.05% 4	47.37% 9	26.32% 5	19
5	Organised Events	5.26% 1	10.53% 2	21.05% 4	36.84% 7	26.32% 5	19

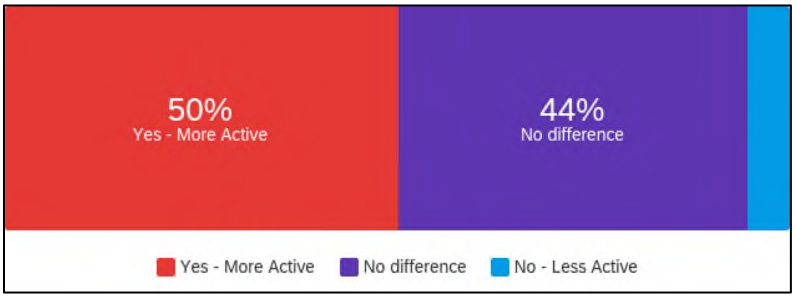
Showing rows 1 - 5 of 5

- The respondents noted a high level of interest in Business Updates (highest).
- A high level of interest was also demonstrated with employee updates, organised events, industry insights.

- Two further comments were included, stating that individuals would also be interested in receiving updates about the company finances/annual finance report.

Question 5: Have you become more active on your existing LinkedIn platform in the past 24months?

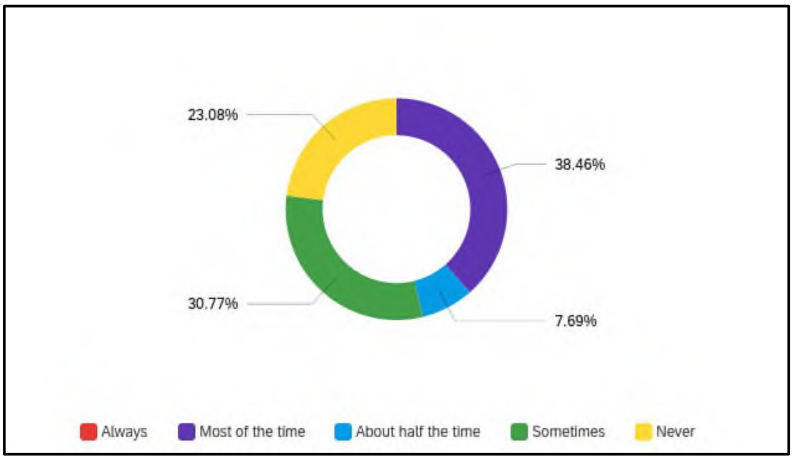
Figure 48: Analysis of Question 5 from Project End Questionnaire



- 50% of respondents stated that they were more active on LinkedIn in the past 24 months.

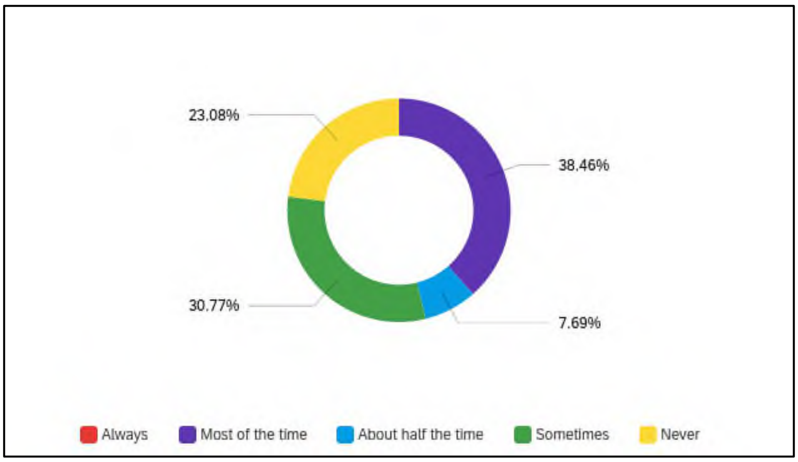
Question 6: Do you engage in any of Royston Limited's social media posts e.g., commenting, sharing, retweeting?

Figure 49: Analysis of Question 6 from Project End Questionnaire



Question 7: What type of social media content are you interested in?

Figure 50: Analysis of Question 7 from Project End Questionnaire



- One person made a further comment about being incentivized to contribute more to Royston's communications, stating, *"I feel everyone has a part to play in company communications, therefore people may be incentivized if it is included in their KPIs."*
- Two other suggestions discussed a cash incentive and mentioned that a lack of time was a factor in their lack of contribution.

Question 8: Would you like to be involved in a social media or a newsletter campaign in the future?

- 37% of respondents said they would be somewhat or extremely likely to be involved in a social media or newsletter campaign in the future.

5.12. Summary of Pre and Post Questionnaire Changes

5.12.1. Employee Engagement

- 95% of employees read internal communications either 'Always' or 'Most of the Time' at the end of the project in comparison to 81% in 2018.

5.12.2. Social Media

- 50% of participants were more active on digital platforms such as LinkedIn in the past 24 months (since the first questionnaire).
- Only 5% became less active.

- 77% of participants engage with Royston's social media posts as opposed to 14% in the first questionnaire.

5.12.3. Employee Contribution

- 32% of participants had sent information and/or photos to the marketing team over the past 6 months.
- 37% of participants would like to be involved in social media campaigns or newsletter campaigns in the future. This is a small increase from 33% in the first questionnaire (2018).

5.13. Research Question Thematic Analysis Summary

5.13.1. Summary of Findings from Research Question 1

1. **What impact does the implementation of various digital co-branding strategies have on the asset categories of Brand Equity within a B2B organisation?**

The results across the four campaigns were split. Campaigns 1-3 partnered with a larger, OEM partner and a significant uplift in results was experienced across the four B2B digital co-branding campaigns. However, the final co-branding campaign, when Royston was partnered with a localised entity, did not provide any recognisable trends across the results. All digital metrics when partnered with the larger organisations improved.

- Brand awareness metrics including impressions, clicks, global reach and coverage increased significantly.
- Brand loyalty was demonstrated by increased following on social media platforms, a high percentage of returning users on Royston's website and, lastly, numerous customers who purchased parts due to campaign 1 returned as repeat customers.
- Perceived quality was demonstrated through both the retention of customers and high Net Promoter Scores for departments that partnered with larger OEM organisations. The enginei department experienced an NPS of at least 1 point lower than Royston's marine and parts departments. enginei was also the only co-branding campaign to be conducted with a localised B2B partner.

No connection or significant result uplift/decrease could be identified when a digital co-branding partnership included a localised entity.

Brand Awareness

Across each campaign where co-branding was conducted with a larger global brand, Royston's awareness metrics, including impressions, clicks, global reach and coverage, increased significantly.

This extended beyond their immediate website and allowed their social media posts and platforms to gain increased traction.

Brand Associations

The success of the co-branding campaigns was due to the associations with the larger OEM organisation. The search terms from campaigns 1 and 2 changed significantly when co-branded elements were introduced. From a digital perspective, the link of co-branded content has driven the search or advertising algorithms to rank Royston's website in search engine results, driving the search engine results position. Campaign 3 demonstrated a similar trend, with co-branded posts demonstrating an increased level of impressions, engagement and shares across the social media platform LinkedIn, in comparison to their non-co-branded variants.

Brand Loyalty

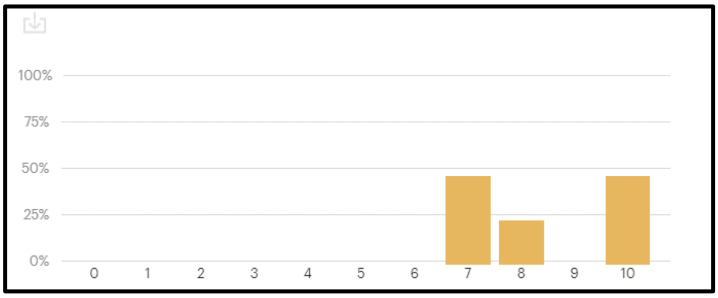
Brand loyalty is measured here by the retention of customers, the number of returning users on the website, social media followers and the Net Promoter scores.

- Campaign 1 demonstrated that approximately 14 converted customers acquired by the co-branding campaign returned more than once to enquire about or purchase subsequent products advertised through the co-branded element of Royston's website. The repeat customer was important as it can continue to drive the level of recorded enquiries and sales of Campaign 1.
- Campaign 3 increased the level of following by significantly equating to over 1000 new followers and a much higher consistent level of brand engagement.
- The Net Promoter Score surveys were conducted across each of the departments that were utilised in the co-branding campaigns. The NPS showed that both departments, marine and parts, that were involved in the co-branding campaigns with larger OEM Partners received scores of 9.4 and 9.7, placing them within the 'Promoter' category. The Promoter category is for any user that scores between 9-10. These are users that demonstrate loyalty and enthusiam both for using your brand but also referring others, assisting with and fuelling growth.
- The enginei NPS survey returned a score of 8.4, moving the average of their customers into the 'Passives' category. The passives are customers who are satisfied but not enthusiastic about remaining loyal and are, therefore, unlikely to refer other individuals whilst being open to more lucrative offerings (NPS Website, 2020).

Perceived Quality

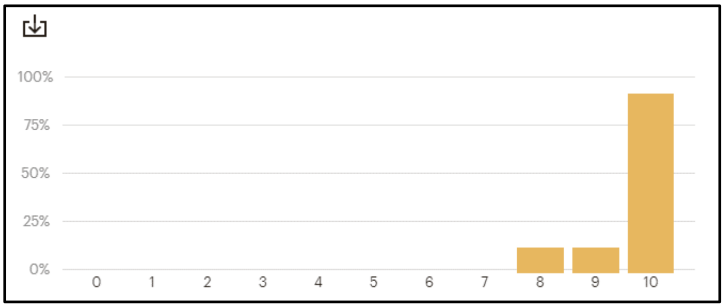
To determine the perceived quality, advocacy and associations relating to enginei, a survey was sent to current clients to determine the Net Promoter Score.

Figure 51: Net Promoter Score for enginei



The results demonstrate a lower Net Promoter score than Royston's spare parts department, with a final average of **8.4.** This demonstrates a slight drop in perceived quality and advocacy amongst the existing clients.

Figure 52: Net Promoter Score for Marine



The results demonstrate the highest Net Promoter score with a final average of **9.7 (Figure 52).** This demonstrates a relatively consistent consensus between customers in relation to Royston's perceived quality and advocacy.

Lastly, as noted in Chapter 5, a survey was sent out to spare parts customers to determine the Net Promoter Score for this department. This was conducted in Quarter 3, 2021. **Figure 33** demonstrates the Net Promoter score for the Spare Parts department. As demonstrated in Section 5, this department averaged a Net Promoter Score of **9.4,** indicating a high level of perceived quality and advocacy for Royston's spare parts department.

5.13.2. Summary of Findings from Research Question 2

2. **Can co-branding strategies drive positive brand equity transfer on a B2B social media platform. If so, how can they be used to drive optimal social media performance and how are social media KPI's impacted?**

- The heatmap demonstrated that co-branded posts with imagery were the most successful in terms of brand awareness metrics such as clicks, impressions and comments.

- *After conducting A/B testing on B2B social media platform LinkedIn, it was determined that the primary Optimal Criteria consisted of: OEM Included – 2 Lines – Specific Content – Thursday Posting.*
- The commencement of the KTP increased focus on Royston to increase their social media presence, starting with one LinkedIn profile with under 700 followers to their current position with three profiles (one for their main Royston business, one for the enginei product and one for their Australia subsidiary) with over 3000 followers.

5.13.3. Summary of Findings from Research Question 3

3. **How can B2B organisations leverage branding strategies to achieve optimal brand equity in the modern age and improve key performance indicators (e.g., financial benefits or improved KPI's)?**

Campaigns 1, 2 and 3, which focus on digital co-branding with larger B2B organisations across 3 digital platforms, demonstrated practical key performance indicator benefits in comparison to the non-co-branded default or alternative. The first data will derive from campaign 1 and presents a holistic scope of the digital and non-digital metrics that have stemmed from the implementation of this digital co-branding campaign on Royston's B2B website, enabling an understanding of changes to practical performance indicators. These practical performance indicators incorporate monetary, digital and coverage metrics directly related to the campaign.

- Financial performance was elevated in a measurable manner by co-branding campaign 1, which drove over £800,000 inbound organic enquiries within 18 months.
- Royston improved their search engine standings by significantly improving all key SEO metrics, including SERP, clicks, global coverage and Impressions.
- Royston became digitally visible across a much broader range of countries around the globe.
- Net Promoter scores across most of Royston's departments remained over a score of 8.

5.14. Conclusion

The next chapter will discuss these findings and results in line with the current literature to understand how these results answer the research questions and how these findings close the gap in the research that the overarching aim proposes to address.

6. Discussion

This research set out to explore the impact of digital co-branding strategies within B2B organisations, with a specific focus on the effect on brand equity. Building on existing co-branding research, this study focuses on exploring new avenues related to various digital platforms and how creating strategic collaborations between the host organisation and other partners of varying global and local stature can be helpful. To focus the study, three specific research questions and sub-questions were outlined:

1. What impact does the implementation of various digital co-branding strategies have on the asset categories of Brand Equity within a B2B organisation?
2. Can co-branding strategies drive positive brand equity transfer on a B2B social media platform. If so, how can they be used to drive optimal social media performance and how are social media KPI's impacted?
3. How can B2B organisations leverage branding strategies to achieve optimal brand equity in the modern age and improve key performance indicators (e.g., financial benefits or improved KPI's)?

This chapter will discuss the individual research questions and align the findings from this study with the existing literature, applying these to the theoretical framework of Aaker's Brand Equity, prior to drawing conclusions and ending with the implications, limitations and recommendations derived from this study.

6.1. Research Question 1

What impact does the implementation of digital co-branding strategies have on the asset categories of Brand Equity within a B2B organisation?

Aaker breaks brand equity into five distinct categories: brand loyalty, brand awareness, perceived quality, brand associations and other propreitary assets. The accumulation of these assets is said to define the brand equity that a firm holds. Therefore, any changes within these dimensions will impact the overarching brand equity either positively or negatively (Aaker, 1992). Branding literature echoes the importance of the organisational leverage of brand equity to achieve optimal financial and performance status (Chay, 1991; Aaker, 1996; Boyle, 2002; Menon, 2016). To understand if digital co-branding impacted the brand equity of a B2B organisation, this research implemented four campaigns across multiple digital platforms. These campaigns included: OEM collaboration with five global OEM Partners; a comparative analysis of co-branded and non-co-branded paid advertisement posts on the digital Search Engine Google; the exploration of the effects of digital co-branding on the B2B social media platform LinkedIn; and, finally, a combined campaign that investigated the impact of co-branding on the above digital platforms when Royston partnered with a smaller localised organisation.

The following section will discuss the findings in relation to the existing B2B branding and co-branding literature, relating this to Aaker's five individual asset categories.

6.1.1. Brand Awareness and Brand Associations

"*Awareness refers to the strength of a brand's presence in the consumer's mind…and is measured according to the different ways in which consumers remember a brand, ranging from recognition, to recall to "top of mind" to dominant"* (Aaker, 1996, pg. 10). To quantify the impact on brand awareness, Yew et al, 2011 outline five key variables: brand recognition, brand recall, top-of-mind, brand dominance and brand knowledge. These variables have been aligned to relevant digital metrics available on each digital platform by the Chartered Institute of Marketing, enabling the translation of practical results into theoretical analysis. The key digital metrics for brand awareness include impressions, clicks, engagement rate and global coverage. By co-branding with five global OEM Partners that have all independently established a global identity, the results demonstrated that Royston leveraged positive awareness associations on the digital platform Google. The first three campaigns presented a consistent and positive trend in all awareness metrics when compared to the non-co-branded alternative, whilst campaign 4 demonstrated an inconsistent and varied range of results across various platforms when partnered with a localised brand.

Co-branding campaign 1 demonstrated a significant increase in organic impressions and clicks, almost trebling Royston's previous average within 3-months of the campaign launch. The correlated uplift across both impressions and clicks demonstrated a high level of relevance between the user seeing the search result on Google and the user clicking through onto the website, demonstrating that the correct awareness association has been created. Menon (2016) adds to Aaker's original brand awareness definition by outlining the importance of the correct association when driving brand awareness (Menon, 2016). An increase in impressions without an increase in clicks would indicate that the digital awareness of Royston would be less relevant to the platform users and, therefore, inconsistent with a true inmprovement in brand awareness. This significant increase in awareness metrics can be explained by the Associated Memory Theory (HAM) model, cited by various co-branding researchers (Broniarcyzk and Alba, 1994; Korchia, 2004; Cunha et al, 2014). By creating an association between Royston and the OEM partners on the various digital platforms, Royston has been able to leverage the familiarity and existing awareness from the larger and well-known global brand image from the OEM organisations to drive their own digital awareness. This is demonstrated clearly when reviewing the search terminology results in Campaign 3. The co-branded advert showed a higher click-through rate and subsequently included a higher rate of OEM name in their search terms. Aaker highlights the importance of familiarity in the brand awareness asset category as consumers will have a higher conversion rate with a familiar brand. The co-branding campaigns with larger OEM partners show that the increased OEM partner terminology in the search terms translates into a higher click-through-rate on the digital advertisement. This is likely to happen on two levels. Firstly, the association between the brands enables Royston to leverage the brand name on the digital platform, allowing the web crawlers to create a preliminary cross connection. This then allows users, at a secondary level, to search for either name of the co-branded partners or terminology that relates to them. Communicating the partnership or alliance to users through digital platforms increasingly positions the Royston brand in front of potential users and customers by increasing their search engine results position (SERP) across a range of terminology that includes both partners and increases impressions. Once the user views the results on the search engine results page, the co-branded campaign can leverage and take advantage of brand spillover from the global, well-known, strong and familiar brand. This aims to engage the user by increasing familiarity and fostering trust to create consumer confidence and minimise feelings of risk, therefore creating higher levels of engagement and increased clicks. This is discussed in the B2B branding literature, which indicates that strong brands can foster trust, loyalty and minimise feelings of risk (Gomes, Fernandes and Brandao, 2016). The co-branding within campaign 1 has influenced and shaped user decision making, through driving an increase in the users' own awareness (Beverland et al, 2007). This familiarity has demonstrated that the digital co-branding campaigns have influenced and shaped decision making, driving an increased click-through-rate, indicating a potential alleviation of the user's perception of risk and acceptance of a favourable opinion within their decision-making process (Beverland et al, 200; Leek and Christodoulides, 2012; Chang et al, 2018). This may also be linked to the development of trust. The global OEM's partnered with Royston have created a global brand image, familiar and trusted by a global base of users. By connecting the global brand and Royston, we have demonstrated an extent of leverage that triggered the consumers' cognitive emotional brand engagement, through transferring the 'trust' associations (Taimine and Ranaweera, 2019).

The improvement of key metrics within campaign 1 and 2 indicates that digital co-branding can be used as a strategy to successfully leverage components from the strong B2B brand to improve brand awareness. When applied in a digital setting, specifically in a search engine or website context, it could be argued that a preliminary association transfer takes place. The collaboration of Royston with the co-branded partners at a digital content level means that when a user utilises a search engine such as Google to search for the well-known partner or partner product, web crawlers make an initial connection or association to Royston, due to the co-branded content on Royston's website, and present this within the cohort of search results to the user. As a global organisation, it is likely there will be a high number users searching for their brand name will significantly exceed that of Royston or another SME. By the web crawlers creating a preliminary association between Royston and the OEM, the Royston URL will be presented when the main OEM brand term (e.g. name or parts number) is searched for, allowing Royston to leverage this existing brand awareness. Aside from search volume, the number of locations where both the website (organic) and the advertisements (paid) were viewed increased when compared with their non-co-branded counterpart or period. Reviewing the literature, the elicitation of desirable associations can assist in conditioning the target consumers to associate the brand with the favourable associations from the partner brand (Priluck, 1997; Lee and Decker, 2008). Each of the partners that Royston collaborated with in these campaigns had desirable brand associations that would be beneficial for Royston to leverage. These associations included an existing strong brand image on a global scale, trust and quality, alongside high levels of familiarity and awareness.

Both Campaign 1 and 2 demonstrate that, when co-branded, Royston experienced both an increase in awareness and range of locations, indicating that the outlined associations from the larger brand were transferred digitally to Royston’s digital brand, allowing them to benefit by increasing users onto the website. Amongst the wider co-branding literature, initial findings demonstrate that digital co-branding can also successfully result in positive brand equity transfer, namely brand awareness in a similar manner to non-digital co-branding. Co-branding campaign 1 demonstrates that digital co-branded campaigns replicate these findings from traditional campaigns, through improving Royston’s position (SERP). This means that their website is presented in front of the customer across a wider range of terminology and at a higher position (above competitors) on digital platforms, increasing awareness and creating value due to leveraging these attributes from the stronger brand. Aside from this, the findings from campaign 1 and 2 demonstrate that co-branding with an SME and a stronger corporate brand allows the process of value co-creation to take place, improving brand performance and achieving improved competitive advantage (Kalafatis et al, 2012; Chang et al, 2018).

Campaign 3 explores the effects of digital co-branding on the B2B social media platform LinkedIn. social media platforms have been leveraged successfully within B2C industries and the growth of social media research within B2B organisations to leverage brand equity and brand familiarity is noted in the existing literature (Kumar and Moller, 2018). The third co-branding campaign analysed a range of social media posts from Royston’s LinkedIn platform and explores the impact of digital co-branding utilising Decision Tree Analysis, Data Exploration Techniques and A/B testing through orthogonal design on the B2B social media platform LinkedIn. Utilising quantitative methods enabled the identification of factors that influence brand awareness and engagement on social media, allowing Royston to create an optimal social media strategy. Using these techniques, the influence of co-branding on social media awareness and engagement performance metrics was identified. The preliminary data analysis demonstrated that co-branded posts with images/media attachments on a heat-map demonstrated the highest level of awareness and engagement as they received the highest level of ‘clicks’ amongst all other variations, an average of 30 ‘clicks’ higher than any other alternate variations. The result of the A/B testing experiment also demonstrated that co-branded posts resulted in the highest levels of awareness and engagement metrics from the orthogonal design experiment included co-branding as one of the factors. This was presented in optimal criteria 1. By implementing strategic digital co-branded initiatives, the findings have demonstrated that Royston has benefited from increased **brand awareness** by leveraging desirable **brand associations** from the stronger brand, demonstrating brand equity transfer. This transfer of brand associations created a positive online environment, allowing Royston to climb the search engine results position, gain following and increase engagement, all three of which are digital translations of the ‘*Brand Associations’* Dimension in Aaker’s Brand Equity Model (Aaker, 1996; CIM, 2020).

6.1.2. Perceived Quality and Brand Loyalty

Perceived quality relates to how the consumers perceive the quality associations of the brand, which has been proven via multiple studies to improve consumer willingness to buy, therefore improving financial performance (Aaker, 1996; Menon, 2016). The measurement of perceived quality was difficult to substantiate as existing literature points out that there are multiple situations that can affect customer satisfaction, customer retention and overall perceived quality. The Net Promoter Scores demonstrated across the campaigns showed a high level of **perceived quality** across the Royston brand, with a slight dip in score from the enginei product, from campaign 4. Campaign 4 was the only campaign to co-brand with smaller localised organisations and, therefore, the only campaign not to leverage the associations derived from an organisation that has a strong and global existing brand. This would mean that the scope of the brand spill-over for Royston was limited to a local, predominantly smaller brand. Co-branding literature indicated that firms with a more valuable brand should have no incentive to share it. However, by co-branding with localised and mostly smaller organisations, the research aimed to leverage a local audience and build familiarity, trust and perceived quality within specific locations for Royston’s product, enginei. If successful, the co-branding partnerships with localised SME’s should result in financial benefit for the larger organisation (Chaimbaretto and Gurau, 2017). Campaign 4 did not present any financial returns. However, B2B research demonstrates that typically the decision making process is complex and involves many players. This means that the gestation period for a purchase decision on the enginei product (which, exceeds an cost of approximately $100,000) may not have been passed within the duration of this research (Beverland, Napoli and Londgreen, 2007; Tarnovskaya and Biedenback, 2016). The joint publication of a press release article from both Royston and Elcome, on their individual websites, triggered a significant increase in users onto Royston's website, increasing the Brand Awareness. However, these findings were not simultaneous across the other digital platforms, including PPC Campaigns on Google Ads and Social Media Posts on LinkedIn.

These findings support the growing body of literature that suggests that the cluster of functional and emotional attributes (such as brand equity) within B2B organisations is significantly important within B2B branding (Brown et al, 2011; Leek and Christodoulides, 2012). The findings have shown how digital co-branding has positively impacted at least three brand equity dimensions and, therefore, these findings pave a new way in which B2B organisations can leverage brand equity and shape emotional attributes, advancing the current academic co-branding literature and creating implications for B2B managers.

Campaigns 1 - 3 co-branded with global Original Equipment Manufacturers that have pre-developed strong brands on a global scale. Each campaign consistently demonstrated that digital co-branding increased brand awareness when the host organisation was partnered with a global organisation. The initial campaign demonstrated that when co-branding with global partners online, Royston benefited from increased digital performance indicators, improving the website positioning and creating over £800,000 of enquiry value organically. A number of these enquiries developed new customers, who returned for further purchases, and subsequently created a loyal customer base that have become retained regular clients for Royston, demonstrating, firstly, reduced marketing operating costs and trade leverage amongst these retained clients. The points are the basis of brand loyalty in Aaker's Brand Equity Dimensions. The campaign 2 results showed that co-branded digital advertisements outperformed non-co-branded digital advertisements. The co-branded advert demonstrated an increased level of awareness, click-through-rate and included users from a higher number of countries. The results showed that the search terminology of the successful co-branded advert related strongly to the global partner in comparison to the non-co-branded advert. This suggests that the improved performance metrics seen in the co-branded advert derived from leveraging the global partner's brand. The final campaign to co-brand with global partners was Campaign 3. This campaign demonstrated that co-branding was an influencial factor in the success of a social media post on the B2B platform LinkedIn. Referencing the findings of the data analysis and experiment, co-branding alone was not enough to create a high level of awareness or engagement. However, when paired with other influencial factors, co-branded posts continuously outperformed any non-co-branded alternatives. The positive results from each of the campaigns indicate a positive influence on Royston's brand and performance on three varied digital platforms.

6.1.3. Transfer of Brand Associations and Other Proprietary Assets

Strategically positioning Royston’s brand beside global partners has improved Royston’s brand performance. The existing literature relates this to brand orientation. By leveraging the brand values or brand equity of an organisation with an existing set of desirable components, positive influence of brand performance can be attained. Existing research discusses how smaller organisations can improve their brand orientation by co-branding or co-creating with a stronger partner, which would allow the smaller organisation to improve brand performance by achieving competitive advantage (Kalafatis et al, 2012; Annes-ur-Rehman, 2017; Chang et al, 2021). This existing research has only explored the effects of co-branding with stronger partners through traditional (non-digital) approaches. However, this study has demonstrated that co-branding on digital platforms can also leverage and benefit from creating strategic alliances with global partners. Translating these results into the individual asset categories of brand equity demonstrates positive influences on the brand awareness, brand loyalty, brand associations and perceived quality categories. Each campaign demonstrated different levels of improvement. Campaign 1 indicated improvements across the four asset categories outlined above, whilst campaign 2 resulted in positive improvements in both the brand awareness and brand association transfer. Campaign 2 did not have the capability to accurately measure brand loyalty or perceived quality. Finally, campaign 3 again demonstrated a positive influence through digital co-branding within brand awareness. To summarise, digital co-branding has significantly improved Royston’s brand awareness through the transfer of brand associations from the global organisation. Some demonstration of brand loyalty was shown through repeat users and repeat customers in campaign 1 and Net Promoter Scores showed a high-level of perceived quality. This research advances the existing research by demonstrating that co-branding strategies within B2B organisations can successfully influence brand equity asset categories on digital platforms. These findings establish a method for managers to improve their Brand Equity in an environment where digital strategies have a powerful importance.

Campaign 4 utilised the same platforms as the first three campaigns but with a localised partner within the GCC region. An initial review of the results demonstrated that the various platforms did not provide consistent results when partnered with a localised brand. The joint publication of the press release on both enginei’s website and the partner's website created a surge of users onto enginei’s website, organically, over three times higher than other publications. This demonstrated an increase in awareness metrics. The second part of this campaign published a co-branded social media post on LinkedIn. When analysing the results in comparison to all other enginei posts within a five month period, the post with Elcome demonstrated high levels of impressions but no further trends could be drawn amongst the remainder of the results. The last part of this campaign utilised the PPC platform

Google Ads, comparing a co-branded advert and non-co-branded advert with the local GCC partner Elcome. The first metric demonstrated a huge difference in cost-per-conversion, the co-branded post cost over £13 per conversion, whilst the non-co-branded post cost less than £0.75 per conversion. The second metric focused on the bounce rates. The co-branded post experienced a 0% bounce rate in comparison to the 57% bounce rate experienced by the non-co-branded campaign. This indicates that the quality and relevance of users entering through the co-branded advert was signficantly higher than the non-co-branded alternative. Finally, the review of the average session duration demonstrated that users aquired from the co-branded campaign remained on enginei's website for 27 seconds, in comparison to the non-co-branded acquired users, who stayed on average for a longer period of 48 seconds. These results show a much more inconsistent outcome when compared to digital co-branding with global partners. These inconsistencies have prevented a generalised conclusion being drawn on the impact of co-branding with a localised B2B organisation across three digital platforms. No financial performance improvements derived from this campaign. However, linking back to existing B2B branding literature, the gestation period for purchase decision making on an expensive B2B product may well exceed the research timeline (Beverland, Napoli and Londgreen, 2007; Tarnovskaya and Biedenback, 2016).

Existing literature discusses the potentially unequal benefits of co-branding with smaller, local organisations. This indicates that if Royston believe their brand equity is stronger than a smaller and localised partner, they should have no incentive to share it (Chiambaretto and Gurau, 2017; Koschate-Fisher et al, 2019). The findings from this research partially support the literature outlined above, as there was limited performance improvement across the campaign, with a demonstration of increased incurred costs within the PPC advertisements as the co-branded advertisement cost over £12 more than the non-co-branded counterpart to achieve the same conversion. However, there are some indications of potential asset category improvement or influence, particularly in relation to Brand Awareness when the co-branding was conducted on the host organisation's website. However, the inconsistent results across the platforms mean that an overall conclusion cannot be reached on the impact of digital co-branding with localised, smaller partners. When co-branding on digital platforms there are different interactions in the background that take place before a post, advert or campaign is shown to the user. This is different from co-branding through non-digital means as the connection has to be acknowledged, primarily by web crawlers before a placement in front of the user.

Unlike the campaign with global partners, no financial performance improvement was demonstrated. Further replications or research into how the perception of enginei's product quality or the perception of Royston's brand within the GCC region would be advisable to understand if the impact of digital co-branding has impacted users' perceptions or influenced their brand loyalty and perceived quality. This implies that managers should be cautious when utilising co-branding campaigns with localised, smaller organisations as the benefits are not transparent and could potentially lead to incurred costs.

Postive trends were identified across all brand equity asset categories when Royston conducted digital co-branding with an organisation on a larger scale. The substantial improvement in digital brand awareness dominated the results and in turn assisted in driving changes across the other asset categories. It is evident that the implementation of digital co-branding with a larger partner has a positive impact on each of the individual asset categories of brand equity, therefore increasing the overall brand equity of the B2B organisation. This supports the existing literature that says when a brand collaborates with another brand which has higher levels of brand equity it can "*improve the perceived brand equity of the co-branded product and thereby generate positive spill-over effects*" (Shen et al, 2017, pg. 174). Similar to the existing literature within the B2C space, we can see a similar trend demonstrating that by co-branding with a better-known B2B brand, the external entities, and valued associations from the better known B2B brand can transfer to the new B2B brand (Keller, 2003; Cunha, Forehand, and Angle, 2014, pg. 1284). The association transfer indicates the importance of emotional attributes within B2B brand equity and builds on the emerging research in this area that suggests that the reliance on functional attributes for B2B decision-making is becoming less prominent and more balanced with emotional attributes (Kuhn et al, 2008; Mohan et al, 2018).

Returning to the overarching research question, it is evident that the findings from the co-branding campaigns demonstrate that digital co-branding can benefit organisations that operate in the B2B industry, advancing the current literature, which is dominated by celebrity endorsements and B2C social media platforms (Hanna and Rowley, 2015; Borges-Tiago et al, 2019; Mankevich et al, 2019; Weeks et al, 2021). This advances the existing knowledge and demonstrates that digital co-branding in B2B settings can enhance brand equity when conducted with a better-known brand.

The findings support the current literature determining that B2B branding is not solely driven by functional attributes, moving away from the original thought process that B2B organisations were not (or were only minimally) affected by emotional attributes. Referring to the broader brand equity literature, authors that reject the quantification of brand equity dimensions prefer to determine brand equity through consumer and market purchase behaviour. The shift in quantifiable benefits from the beginning of the co-branding campaigns to the conclusion of these campaigns demonstrate a significant improvement in consumer purchase behaviour, which could be influenced in an optimisation cycle using Six Sigma techniques. The findings continue to demonstrate a holistic improvement across various brand equity dimensions, alongside positive improvements in consumer behaviour, driving financial and performance indicator uplift and showing a strengthened Brand Equity through B2B digital co-branding. The findings present theoretical contributions to the existing body of literature from Kalafatis, Remizova and Singh, 2012; Mohan et al, 2018. This research further explores how the individual factors of brand equity are impacted during B2B digital co-branding in order to enhance the overall equity of a brand. This brings an increased granularity of understanding to the existing literature and deepens the exploration into the effects of digital co-branding within a B2B organisation.

6.2. Research Question 2

Can co-branding strategies drive positive brand equity transfer on a B2B social media platform. If so, how can they be used to drive optimal social media performance and how are social media KPI's impacted?

Various researchers suggest that the adoption of social media in B2B settings has been affected by numerous factors, some going so far as to state that the use of social media marketing in B2B organisations is irrelevant (Lacka and Chong, 2016; Dwivedi et al, 2019). Despite this, social media marketing has gained traction within B2B industries in recent years, and research surrounding the benefits of social media use in B2B settings has slowly emerged. The existing literature around digital co-branding on social media has been dominated by celebrity or influencer endorsements (Borges-Tiago et al, 2019). A key focus for B2B social media strategies has centred around relationship building, engagement driving, targeting and customer relationship management, which can directly generate higher levels of trust and loyalty between the organization and users of their social media platforms. Other benefits of B2B social media usage mentioned in the literature include the facilitation of potential co-branding initiatives and a platform for driving innovation (Moor et al, 2013; Cawsey and Rowley, 2015; Lacka and Chong, 2016). However, research has demonstrated that although there are many benefits and opportunities from conducting B2B social media marketing, it is still a challenge for many B2B companies to conduct this successfully. The commencement of the KTP increased focus on Royston to increase their social media presence, starting with one LinkedIn profile with under 700 followers to their current position with three profiles (one for their main Royston business, one for the enginei product and one for their Australia subsidiary) with over 3000 followers. The social media strategy effectively focuses on creating brand awareness, engagement and communicating a desirable brand image or message. The two key strategies implemented included digital co-branding and employee engagement. Employee engagement increased by 50% within 24 months and engagement on LinkedIn increased from 14% to 77%. The internal improvement was due to extensive engagement, training, and guiding employees on the benefits of B2B social media and assisting those who needed assistance with developing their LinkedIn skills. Linking this to Aaker's brand equity model, the increase in awareness metrics demonstrates an increase in global brand awareness through social media. By increasing awareness Royston's digital presence has becomes a base for other brand associations to attach increasing substance and familiarity to users who relate to, view, or engage with their social media content (Aaker, 1996). The improvement in this data supports emerging literature that points towards the benefits that co-branding on B2B social media platforms can have for firms and their B2B partners, including the ability to connect, engage, co-ordinate and collaborate (Drummond et al, 2020).

To create an optimal strategy for Royston to improve their social media performance, campaign 3 focused on using data analysis and A/B testing to quantitatively analyse the components that create a successful post. Existing research primarily focuses on B2C social media strategies; however, emerging research demonstrates that extensive differences between B2B and B2C social media marketing strategies exist. B2B strategies are thought to be less emotional and informative as they focus more on rationality, and they perform better in terms of variety and interactivity in comparison to their B2C counterparts (Zhang and Du, 2020). This suggests that strategies used within either of these (B2B and B2C) industries cannot be generalized and must be specific to the environment the organization operates within. These strategies have been well-developed within B2C industries. However, many areas of B2B social media marketing research are very much in their infancy, and the suggested potential benefits identified in the current research indicate that advancement within these areas is necessary. Contrary to the existing literature, it was concluded that co-branding is an influential component in the success of a post, indicating that B2B social media strategies are influenced by emotional factors.

Unlike the B2C industries, there is limited research demonstrating **how** companies operating within the B2B industry can optimize their social media marketing strategies to improve consumer awareness and engagement results. Coupled with the rapid digitalization and fast-paced evolution of social platforms, this adds complexity for the managers and organizational marketing capabilities (Drummond et al, 2020). This means that many organisations operating in the B2B industry fail to successfully leverage the benefits of social media due to a lack of "*comprehensive knowledge about the best B2B digital marketing practices*" (Pandey et al, 2020, pg. 1191). This message surrounding the lack of knowledge and resources that B2B companies have access to for social media marketing purposes is echoed across the literature (Wertime and Fenwick, 2011; Pandey et al, 2020; Zhang and Du, 2020). As many more consumers within the B2B industry have become increasingly influenced in their decision-making process by digital marketing (and social media), the importance of optimizing B2B social media practices has become more pressing (Pandey et al, 2020). The orthogonal design experiment demonstrated that the use of various criteria can impact the outcome of the awareness and engagement results within a specific B2B setting. This demonstrates how B2B organisations and

SME’s can strategically and tactically develop their social media marketing independently of their other marketing channels, whilst optimizing their social media posts to achieve their awareness, engagement or conversion goals, improve competitive advantage and move towards an increased ROI (Silva et al, 2020). From the experiment, stakeholders within the organization in focus can build an understanding of how their marketing goals can be achieved through digital methods within the B2B setting. The lack of understanding on utilizing digital methods for B2B marketing specific goals has been pointed out as a cause of the disparity of social media marketing strategies between B2B and B2C industries and the neglect of B2B social media marketing in previous academic literature (Jarvinen et al, 2012; Lopez-Lopez and Guisti, 2020).

Co-branding was tested as one of the factors influencing the success rate. The decision tree analysis did not individually identify co-branding as one of the key influences in awareness and engagement improvement, but further analysis of Royston’s results demonstrated that when a co-branded post was combined with a photo or video, it was significantly more successful than any alternative combination, averaging over 30 clicks more per post. Due to this outcome, co-branding was selected as one of the influencial components tested within the A/B testing experiment. The first optimal strategy showed co-branding as a component which influenced success, ie. when a co-branded post was posted with other optimal factors it was more successful than a non-co-branded post, even when combined with all other optimal factors. This again emphasises the importance for B2B organisations not to underestimate emotional factors when posting on social media. The results from this co-branding strategy explores and demonstrates the implementation of a new method for B2B organisations to leverage strategies of brand equity transfer on social media, as the co-branding has demonstrated that the connection created between Royston and the other co-branded partners has enabled the transfer/spillover of brand awareness and engagement. Again, it is noted that applying digital co-branding in a stand-alone setting does not automatically provide increased success. However, when combined with other optimal components, a digitally co-branded post can create enhanced results over and above non-co-branded alternatives. This echoes the findings from campaign 1 and demonstrates that digital co-branding can be successfully leveraged to improve brand performance within B2B organisations.

It must be noted that the experiment was subject to external influences such as the company’s followers, Covid-19 and the current business climate, meaning that one of the posts had to be deleted after three days and another postponed. Excluding these results from the analysis would not reflect the changing and fast-paced evolution of social media and the B2B business environment. Therefore, it was important to include these results in the data analysis to present a representative picture of the factors that can influence B2B social media. Secondly, as noted widely in the literature, social media is fast-paced and evolves quickly. Therefore, A/B testing cannot be a one off experiment but needs to be repeated on a regular basis to ensure that the results remain valid (Kane et al, 2014; Pandey et al, 2020). Finally, the results in this campaign are specific to the marine engineering company. However, the methods used in this campaign aim to give insight into how other organisations operating in B2B industries can optimize their social media strategies through data analysis and A/B testing to improve their awareness, engagement or conversion goals and ultimately improve their return on investiment.

The use of A/B testing through orthogonal design has enabled the identification of optimal criteria combinations for use within a specific B2B social media setting. By conducting a detailed analysis of 70 previous posts, an orthogonal design experiment was constructed to A/B test the influential variables. This was implemented within Royston, who operate within the B2B industry using their LinkedIn platform account. The experiment identified optimal individual criteria and criteria combinations that positively impacted the level of engagement a post received, thus demonstrating the importance of identifying and implementing B2B specific social media strategies and showcasing how SME's and organisations operating in the B2B industry can optimize their social media strategies through experimentation and analysis. The results of this digital co-branding experiment on LinkedIn improved individual brand asset categories, creating an overall postive impact on Royston's brand equity (Aaker, 1996). A change in user behaviour and improvement in key performance indicators relating to brand image and brand awareness mark quantifiable results that correlate with the improvement of brand equity across the broader B2B branding literature (Chay, 1991; Gill and Dawra, 2010; Keller, 2013). This enhances the existing body of literature that has called for further exploration of B2B social media strategies and innovative managerial strategies to enhance brand performance, awareness, trust and brand equity (Leek and Christodoulides, 2012; Kalafatis, Remizova and Singh, 2012; Cawsey and Rowley, 2015; Lau and Lim, 2018; Kumar and Moller, 2018; Mohan et al, 2018 Zheng, 2019).

6.3. Research Question 3

How can B2B organisations leverage branding strategies to achieve optimal brand equity in the modern age and improve key performance indicators (e.g., financial benefits or improved KPI's)?

The transfer of positive associations is said to significantly impact the success of a brand (Keller, 2013). Both financial and non-financial performance indicators are referenced in co-branding literature. These indicators include improved financial performance, improved brand image or enhanced signalling of product quality, (Rao and Ruekert, 1994) and perceived globalness and localness (Mohan et al, 2018). This supports the various studies within B2B branding literature, including Rehman et al, (2018), which discuss the influence of strategic brand-orientated processes including brand awareness improvement, which can achieve an increased financial performance, but this research demonstrates that these performance metrics, both financial and non-financial, can also be applied successfully on a digital platform. Yang and Tsou (2017) have further demonstrated that improvements to brand performance elements result in positive financial returns. The findings from this study demonstrate that brand equity transfer through digital co-branding in B2B organisations can create enhanced financial and non-financial performance indicators.

6.3.1. Financial Benefits

The results from campaign 1 showed that there were over £800,000 of organic enquiries with a 40% conversion rate by number of enquiries within 18 months of launch. These enquiries derived from the significant improvement of Royston's search engine optimisation metrics, which include impressions, clicks and search engine result position (SERP). Superior brand performance within B2B organisations is suggested to enhance financial performance (Yang and Tsou, 2017; Rehman et al, 2018). Campaign 1 indicates that when utilised as a strategy for enhancing brand performance within a B2B organisation, digital co-branding can result in improved financial performance, particularly in relation to the number of inbound organic enquiries. However, campaign 1, after the initial launch, demonstrated that whilst there was a significant increase of brand awareness and engagement, the conversion rate was significantly lower than Royston's company average. Initially, a lower conversion rate existed, which demonstrated that although a financial benefit is derived from digital co-branding, This indicates that by increasing brand performance we do not automatically increase the level of conversion. The optimisation cycle, following the launch of campaign 1, applied Six Sigma techniques to identify the root cause of the lower conversion rate. The primary reason focused on issues surrounding customer service. Once these issues were addressed through focus groups and training, the conversion rate increased to 40%, aligning approximately with Royston's average conversion rate across the spare parts department. These results support the findings of Esch et al (2006), who argue that brand awareness is one of the components that is central to brand performance in marketing campaigns, the other being brand image. However, it is also noted that these two components are not sufficient for long-term brand success. Translating this into the findings, the brand awareness has created a sharp increase of online enquiries but, alone, it is not sufficient to convert these to a high level of organic sales. Digital co-branding within B2B organisations can enhance brand financial performance but must be supported with sufficient levels of surrounding functional and emotional attributes, for example, delivery and price, alongside customer service, to ensure proper response rates within a suitable time.

6.3.2. Alternate Performance Benefits

Aside from financial gain, Royston benefited from other practical benefits, including shaping their brand image to align with the associations from their co-branded partners. The range of search engine optimisation metrics has improved across the entire website. Due to the associations created between Royston and the relevant co-branded partner, the extent of search terms relevant to Royston and their connected partner expanded significantly, increasing the impressions, clicks and website users substantially and expanding the number of countries that website visitors derived from, increasing Royston's presence in further locations across the globe. This increase is linked to the increase in search engine results position. Royston moved up over 24 positions (from 40.6 to 16.5) at a certain point in time across all their search terminology. Improvements in SERP are linked to increased website credibility, relevant website content and brand signal, but Google outline over 200 ranking factors. The implementation of the co-branding campaign has resulted in a steep rise in average results position and broader search engine optimisation metrics. This indicates that despite the co-branding being conducted on a digital platform, it relates to existing brand performance research which suggests that value co-creation through co-branding with stronger partners increases brand performance through achieving improved competitive advantage (Chang et al, 2018). Further practical results included the increasing global reach of Royston's digital presence. Royston's global coverage increased by 18 countries organically within the first 3 months of launching campaign 1, indicating that by partnering with the global OEM partners, Royston has leveraged their global brand associations and global brand familiarity. This has enabled Royston to increase their presence in more countries, demonstrating that due to the connection formed through the co-branding campaign, Royston has been presented as a closely associated partner with the global firm and leveraged practical benefits organically through this.

6.3.3. High and Low Equity Partners

The current research has already discussed how the transfer of equity between high and low equity brands can occur asymmetrically (Kalafatis et al, 2011). Whilst no conclusions can be drawn regarding the brand equity transfer experienced by the larger OEM partners as to whether the benefits were symmetrical or asymmetrical, it is evident that Royston has benefited practically through digital co-branding on their website. The practical benefits, both financial and non-financial, driven through this digital co-branding campaign created a business case and provided the confidence for Royston leadership to develop an ecommerce store capable of housing over 250,000 parts. The development of this ecommerce store has removed or streamlined certain stages within the customer journey to assist in improving the conversion rate. The stages streamlined or removed through the customer journey were highlighted as problematic through the stages of Six Sigma. For this campaign, digital co-branding has paved the way to increasing practical performance indicators but the iterations demonstrated that a continuation of functional and supporting attributes is equally as important for overall brand performance.

Campaign 2 changed to a different digital platform and utilised Google Ads to identify whether co-branded or non-co-branded ads perform better. This campaign merges with the previous campaign by utilising paid advertising to enhance the awareness and drive traffic onto the co-branded pages of the campaign 1 initiative. The findings demonstrated that the co-branded advert outperformed the non-co-branded advert in relation to the monitored digital KPI's, including number of impressions, number of clicks, click-through-rate, and number of locations that traffic derived from. The click–through-rate (CTR) demonstrates the percentage of users that click through onto the website from an impression. Although the impressions and clicks were significantly higher, the most accurate comparison for the two adverts in relation to these metrics is the CTR. The co-branded campaign demonstrated a 0.8% CTR whilst the non-co-branded campaign returned a 0.7% CTR rate. An increase of eight countries was experienced within the co-branded campaign. These differences show a fundamental improvement across the major SEO markers and digital KPI's when a co-branded advertisement is used. Identifying the terminology that many users searched for to arrive on Royston's website demonstrated that terminology incorporating the term 'Volvo Penta' produced over 3% more than the non-co-branded counterpart. The connection created within the advertisement between Volvo Penta and Royston enabled Royston to leverage the familiarity and existing search volume attributed to Volvo Penta, who have an already existing and global brand image, with high levels of brand recognition and familiarity. The web crawlers have created a preliminary digital association, behind the scenes, which benefited Royston through brand spillover in a positive manner, creating the initial impression. However, a secondary association occurs when the user views the advertisement results. At this point, it is likely that the user has been influenced positively when they have viewed the co-branded advertisement, by the joint presentation of the two brands, increasing the possibility that they will click onto Royston's website through the advertisement. This suggests that consumers are influenced positively when evaluating a lesser-known brand when presented with a co-branded digital advertisement. The increased digital success metrics have assisted Royston in developing an optimal strategy, improving the relevant impressions and click-through-rate for their advertisements. Upon the second iteration cycle, a business case could not be created to continue the non-co-branded advert and, therefore, the decision was made that the non-co-branded advert had to be withdrawn. The second iteration of the co-branded advertisement manipulated the search terminology to reflect an increased Volvo Penta term volume. This optimisation increased the click-through-rate by over 50%, indicating that the extent of terminology present in the co-branded advertisement influences the success of the advert in relation to the practical performance indicators. This concept would need further exploration to draw a definitive conclusion. The first two campaigns demonstrate that in comparison to a non-co-branded alternative, the co-branded counterparts continues to outperform in relation to the practical performance indicators that are necessary to improving Royston's ecommerce capability. The cause of the co-branding benefits has been reviewed in the existing literature but the application of B2B co-branding on digital platforms is minimal. Understanding why the improved performance of digital co-branding advertisements can be linked to the existing literature surrounding the benefits of co-branding; co-branding can improve brand image or signal brand quality (Rao and Ruekert, 1994), change customer perceptions (Washburn et al, 2004) and the perceived globalness and localness (Mohan et al, 2018). The inclusion of Volvo Penta within the advertisements has influenced users and conditioned their perceptions of Royston through positive brand spillover, driving the overall improvement of performance indicators. It was not possible to measure the financial performance improvement within campaign 2. However, the non-financial performance indicators related to improved ecommerce capability showed significantly better performance than the non-co-branded alternative.

Campaign 3 created an alternative approach using quantitative methods to test and determine what factors created a successful social media post. The success was measured across LinkedIn's analytics metrics, including impressions, clicks, likes, shares and comments. These metrics can be used to analyse brand awareness, brand engagement and information that can assist in the formation of perceived brand quality, brand associations and possible brand loyalty. The decision tree analysis did not identify co-branding as an influential factor. However, due to the results of the previous digital co-branding campaigns, the decision was made to further explore if co-branding impacted social media posts. Further exploration identified the fact that, when combined with other components such as images or video, a co-branded post significantly outperformed the non-co-branded alternatives. The data analysis and experiment demonstrated that digital co-branding alone does not create a successful posting strategy. However, combined with other strategic factors, the optimal strategy for enhanced brand awareness and engagement included a co-branded element. This was demonstrated on two occasions. Firstly, the heat map demonstrated that a co-branded post when included with an image received over 30 more 'clicks' than any other combination. Secondly, the A/B testing result from the orthogonal design experiment resulted in an overall optimal strategy. This again included co-branding as a component. Initial explorations into co-branding through celebrity endorsement on social media within the B2C industry resulted in improved outcomes. Hanna and Rowley (2015) demonstrated that celebrity endorsement assisted the communication of strategic links between the two co-branded brands within the B2C industry. Two further studies have also demonstrated that co-branding on social media with celebrity endorsements has enabled the increase of audience emotion and sentiment (Mankevich et al, 2019) and has had the ability to influence perceived brand personality (Borges-Tiago et al, 2019). Campaign 3 elaborates on this existing research and indicates that digital co-branding applied on social media can improve the brand awareness and engagement in a B2B setting when combined with other successful metrics e.g. images on the B2B platform LinkedIn. The alignment and communication of the two co-branded B2B brands on social media has created a strategic link between the partners. This has allowed Royston to leverage attributes from the co-branded partner through brand spillover. The outcomes of this campaign provide evidence that digital co-branding on B2B social media has improved Royston's brand awareness, through the improvement of non-financial performance metrics. These findings have interesting implications for managerial actions within B2B organisations and demonstrate that digital co-branding on social media can improve their key performance indicators, particularly focusing on brand awareness and engagement. The improvement in brand awareness metrics indicates that the spillover from the digital co-branding on social media can influence and positively improve the brand equity of a B2B organisation. The improvement of these factors has allowed Royston to increase their social following by over 2,300 followers across their three platforms.

The final campaign, campaign 4, utilised smaller brands at key distribution locations across the globe. A specific case study focused on the implementation of digital co-branding with GCC distribution and a product partner for enginei, Elcome. Unlike the other campaigns in this research, campaign 4 co-brands with a partner below Royston in the supply chain. Royston's product, enginei, is distributed across key maritime locations across the globe but, to create a rapport with local vessel operators, Royston are working on strategies to improve their localised brand equity. To do this, the team have selected partners based on their current attributes and associations within a selected region. Using the results from campaign 4, the researcher aimed to identify whether digital co-branding with localised distribution partners impacts brand equity or actual performance indicators. The key differences from the first campaigns are that the partners within this co-branding initiative are smaller, localised firms that would create an asymmetric brand equity balance in Royston's favour. However, by co-branding with a localised firm in a specific region, Royston aimed to leverage certain attributes of brand equity that would be beneficial to reduce the risk of failure probabilities (Chiambaretto and Gurau, 2017), establish a brand image and signal product quality (Rao and Ruekert, 1994). Successfully completing this would positively create subsequent impressions about Royston's product, enginei, within the targeted location, due to the positive spillover from the existing and established partner. The first stage of this campaign jointly published a co-branded press release on both the enginei and Elcome websites. This resulted in a significant spike in traffic to Royston's website on the date of launch. This spike was significantly higher than any other non-co-branded Press Releases, indicating that the awareness derived from the co-branded Elcome press release outperformed the awareness derived from any of the alternative non-co-branded press releases. The users driven onto the website on the day of the co-branded press release tripled the number of users arriving onto Royston's website, demonstrating that conducting digital co-branding through jointly released PR articles on each of the partner's websites resulted in a significant increase of traffic onto the enginei website, higher than any non-co-branded press release.

The second component in this campaign included a co-branded publication on the B2B social media platform LinkedIn. On social media, the results demonstrated that, practically, digital co-branding with a localised distribution partner did not produce the same extent of practical benefits identified when digitally co-branding with major global partners. The digital co-branding with Elcome was analysed against all the co-branded and non-co-branded posts from 1st May 2021 to 20th September 2021. On average the co-branded posts outperformed the non-co-branded posts across all metrics except for 'comments'. However, the majority of these were co-branded with major partners. When co-branding with Elcome, a localized GCC regional partner, Royston experienced high levels of impressions, likes and shares, exceeding the overall average of all other posts; however, the average clicks and comments were significantly lower than the mean. This followed the trend of the other co-branded posts, other than the number of likes. Unlike major global partners, with large numbers of followers on social media, the increase of brand awareness overall does not indicate whether the increase in users within a specific location was recorded. Unfortunately, on LinkedIn it is not possible to extract the information regarding the number of users per target location. This means that drawing a conclusion on the practical impact of performance indicators is not conclusive and further analysis would need to be conducted to create a general understanding of the impact of digital co-branding with localised B2B organisations.

The final component replicated the PPC campaigns from campaign 2. The PPC component of campaign 4 produced some interesting preliminary findings. The conversion for this campaign was set to visitors arriving on the 'Contact Us' page. Due to the managerial decision of differences in budget and length of advertisement, the advertisements were compared on their conversion rates. Both co-branded campaigns had an increased cost per conversion, with the Elcome co-branded campaign reaching over £13 per conversion. A secondary PPC campaign was created to compare any similarities between the co-branded and non-co-branded advertisements with a localised partner. Aside from the increased costs, no continuity between the other factors was drawn, as the results varied significantly.

For example, the first PPC campaign with Elcome resulted in a 0% bounce rate. This indicates that a high quality and relevant user group were acquired through the advert. However, the second PPC campaign with Petronas resulted in a 94% bounce rate, indicating that a low-quality user group with limited relevance was acquired through the advert. When comparing these to the non-co-branded advertisement, which resulted in a 57% bounce rate, no conclusion could be drawn as to the impact of the varying co-branded and non-co-branded adverts on the bounce rate. Similarly, when reviewing the average session duration, no consistencies were presented amongst the two co-branded advertisements, with session durations varying between 27 seconds for Elcome and 1 minute 23 seconds for the co-branded Petronas advert, in comparison to 48 seconds for the non-co-branded enginei advertisement. In this campaign no conclusions could be drawn as to the impact of co-branding with a localised partner in a specific region through PPC.

Further exploration into the causes of result differentiation would be advised, by setting adverts using the same platform but utilising different regions if using localised firms. Search engines that are popular within the UK may not be popular in other locations around the globe and the impact of the PPC advert may be reduced. Overall, digital co-branding through websites with localised distribution partners has demonstrated improved non-financial performance indicators and increased brand awareness. This is not consistent when transferred to the B2B social media platform LinkedIn or PPC advertisements on Google Ads. The results from the PPC campaigns remained inconclusive, with no consistencies in the performance metrics. Therefore, this study provides no indication of brand spillover of the desirable associations from the localised partner improving the performance metrics of the PPC campaign. This campaign (Campaign 4) did not return the same results as the initial three campaigns; this demonstrates that Royston did not benefit from the digital co-branding campaign with localised partners in the same manner as with global partners. Referring to the literature, the desirable associations did not seem to transfer. This may be due to inequalities of the brand equity within the partner's entity. However, the research was not able to obtain the data to determine whether the co-branding PPC advertisements and social media benefited Elcome. The existing literature discusses how, unless a co-branding partnership is mutually beneficial, the larger brand should have no incentive to share it (Chiambaretto and Gurau, 2017; Koschate-Fisher et al, 2019). Whilst the outcomes may be different through a non-digital co-branding partnership, the preliminary exploration of digital co-branding with a localised B2B organisation demonstrates that various platforms react differently. With the social media and PPC campaign the results demonstrated no incentive for Royston to continue co-branded initiatives on these platforms, as cost per conversion exceeded the non-co-branded alternative with no/limited improvement in performance metrics.

These findings have explored the different co-branding strategies that can be implemented within co-branding in B2B organisations and explored how these strategies can be applied on various digital platforms. The results demonstrate that digital co-branding within a B2B organisation can lead to improved brand performance both financially and non-financially. This was demonstrated significantly in the first three campaigns, when the digital co-branding was conducted with global partners, but at each stage it was determined that whilst digital co-branding can enhance financial and non-financial performance, this must be accompanied with other optimal components, e.g., excellent customer service (campaign 1). In comparison, the later campaign, campaign 4, demonstrated that digital co-branding with a localised partner did not appear to be as successful. This supports existing literature in that leveraging brand associations from brands with asymmetric entities is more beneficial for the smaller firm and, therefore, can be discussed as a reason why a larger organisation should not necessarily share their brand if it is not of mutual benefit. Preliminary exploration demonstrates that both financial and non-financial benefits occur to the host brand when digitally co-branding with larger/global B2B organisations.

6.4. Summary of Research Contributions

This research has expanded the scope of current co-branding research through understanding the implications of co-branding within a digital B2B environment, moving beyond the existing knowledge, which predominantly lies within the B2C sector. This research was conducted due to current gaps in B2B branding literature and on the basis that theory could not be blindly applied from its B2C counterpart. The importance of research in this area was founded on the necessity of digital branding methods in leveraging competitive advantage in an industry that is said to be increasingly reliant on a combination of both emotional and functional attributes, such as branding, to drive performance (Brown et al, 2011; Mohan et al, 2018; Österle, Kuhn and Hensel, 2018). The outcomes in this research further substantiate the claims that B2B organisations are becoming more reactive and reliant on branding to improve performance, like findings in its counterpart B2C industry. The findings of this research demonstrated positive relationships with numerous brand equity factors, including brand awareness, perceived quality, brand loyalty, and brand associations, when the B2B organisation is partnered with a larger OEM partner on digital platforms. Co-branding with an established, larger partner improved the outlined asset categories of brand equity and improved overall brand performance. However, no relationship with co-branding and brand equity improvement could be identified when the co-branding partner was a smaller, localised entity. These conclusions provide important directions for B2B brand management. Theoretically, this novel research drives forward the current understanding of B2B branding strategies, demonstrating that the application of a digital co-branding strategy across B2B organisations can impact numerous asset categories of brand equity and positively affect the brand performance. The largest shift was identified across brand awareness. The association with the larger B2B organisation continually improved the digital awareness metrics, consequently leading to purchases and retained customers (brand loyalty). This relationship was replicated when the evidence demonstrated that B2B digital co-branding posts outperformed non-co-branded posts, increasing both brand awareness and brand engagement metrics. The improvement of brand equity reached across multiple digital platforms, including a B2B website, social media, and advertising platforms. The following points endeavour to directly answer the proposed research questions to summarise the findings in line with the research aim:

- B2B digital co-branding has demonstrated positive impacts on the measurable asset categories of Brand Equity, when partnered with a global OEM, including brand awareness, brand loyalty, perceived quality and brand associations.
    - Co-branding campaigns performed successfully, with uplift in the measurable categories of brand equity when the co-branding partner was a larger OEM entity.
    - No change or impact could be identified when the partner within the digital co-branding campaign was a smaller, localised partner. However, as this was an isolated campaign, further research across entities and industry types should be conducted.
- Co-branded social media posts on the B2B digital platform LinkedIn have outperformed any alternative non-co-branded posts. This was highly evident when an image was incorporated, adding a visual element to the co-branding campaign.
- B2B digital co-branding has demonstrated improvement on multiple brand performance indicators, both financial as a direct increase of inbound, organic enquiries, and non-financial, through the improvement of key digital performance indicators across various platforms.

This research provides a foundation to drive managerial decision making and opportunities within B2B organisations by utilising co-branding to increase brand performance, both through financial and non-financial performance indicators. This is a result of the demonstratable practical benefits within Royston due to the implementation of digital co-branding, including increased inbound enquiries and revenue, with a limited increase in the marketing budget. Further metrics supported this narrative demonstrating increased organic awareness across search engine, improved website and social media performance with minimal cost involved. Further down the funnel, the implementation of methods such as Six Sigma and A/B testing showed how Royston, as a B2B organisation, could leverage strategic tools to drive conversion rate improvement and social media engagement on digital platforms to enhance their co-branding performance. Alongside the implementation of digital co-branding, customer experience was not diluted in the majority of situations, evidenced through the NPS. This is partially due to the extensive training and optimisation procedures implemented throughout this process. This has expanded the understanding B2B brand performance improvement on digital platforms through co-branding and provided a direction to expand future research across various B2B industries.

7. Conclusion

As the B2B ecommerce industry continues exponential growth, valued at $6.64 trillion dollars, and predicted to grow at 18.7% CAGR (Compound Annual Growth Rate) until 2028, the importance of leveraging competitive strategies is paramount as competition intensity will increase (Grandview Market Analysis Report, 2021). The influence of technology and digital platforms on consumers and organisations is increasingly reported within the B2B branding literature (Graham and Mudambi, 2016). This demonstrates that in today's age, the importance of identifying digital strategies that can elevate brand performance and result in improved KPI's both financially and non-financially is essential for organisations to remain competitive. This research has explored the effects of digital co-branding within a B2B setting and demonstrated that these strategies can leverage desirable components of the selected partner to improve brand equity when partnered with larger organisations and drive improvements in financial and non-financial key performance indicators. The main factors based on the findings of this thesis demonstrate that B2B co-branding on digital platforms can improve individual asset categories of brand equity. Adding together the impact of each individual brand equity asset category, it is evident that digital co-branding can positively impact brand equity within a B2B organisation. Practically, it was also demonstrated that the digital co-branding in this research within a B2B organisation has driven improvement across financial and non-financial performance metrics. This demonstrates that B2B customers are also susceptible to emotional attributes, rather than only functional attributes, as outlined in early B2B branding literature. These findings have not been limited to a single digital platform but have shown improvements across multiple platforms, including a search engine, paid advertising, a website and social media. The implications from these core findings pave the way for B2B managers to make research-based decisions and formulate innovative strategies that can improve B2B brand equity and subsequently improve both financial and non-financial performance indicators through digital co-branding (Reijone et al, 2015; Chang et al, 2018).

Theoretically, this research demonstrates the importance of emotional attributes in B2B branding and provides evidence of brand equity transfer across the individual asset categories of Brand Equity. It advances various bodies of literature. Firstly, the findings bring an increased granularity to the existing body of literature by Kalafatis, Remizova and Singh, 2012; Mohan et al, 2018 by understanding the changes to the individual components that make up brand equity. The innovative strategies presented within this case study also advance the research of Reijone et al, 2015; Chang et al, 2018 by defining, implementing and analysing innovative strategies within the B2B organisation and providing new strategies that can be used to overcome traditionally risk adverse decision-making. (Leek and Christodoulides, 2012; Reijone et al, 2015; Chang et al, 2018; Lau and Lim, 2018; Zheng, 2019). This further substantiates the importance of B2B brand strategy investment (Blackhaus et al, 2011; Cassia and Magno, 2019). Numerous researchers, including Kalafatis, Remizova and Singh, (2012); Cawsey and Rowley, (2015); Kumar and Moller, (2018); Mohan et al, (2018), have called for increased theoretical understanding of specific social media strategies for B2B markets, including new digital platforms. This research has looked at the B2B social media platform LinkedIn and demonstrates the impact of digital co-branding on social media and the impact on B2B branding and the various platforms involved.

Summarising the results, the various co-branding campaigns resulted in improving the monitored metrics at each stage when partnered with global brands, demonstrating that regardless of the three digital platforms tested the result remained consistent, in that the co-branding initiative constantly outperformed the non-co-branded counterpart. This shows that the B2B organisation, Royston, continued to improve their previous or non-co-branded digital performance when digital co-branding strategies were applied. This demonstrates that digital co-branding can improve the brand equity alongside improving both financial and non-financial performance indicators. Across the various campaigns, the findings demonstrated that when a non-co-branded or co-branded alternative was presented, the digital co-branded alternative continued to outperform the non-co-branded counterpart, especially when co-branding digitally with larger organisations. The most notable improvements were identified in brand awareness, brand associations and key performance indicators including increased brand engagement and over £800,000 of organic enquiries within campaign 1. The practical performance indicators have provided the confidence for Royston to develop this campaign into an online ecommerce store utilising a co-branded approach.

This research advances the existing B2B branding and B2B co-branding literature as it paves the way for B2B organisations to gain competitive advantage in a digital age through improving brand equity, brand performance and practical metrics through the implementation of digital brand equity transfer strategies, specifically digital co-branding. This presents contributions to the body of literature through demonstrating a process of implementing B2B digital co-branding which can be used by other organisations to improve brand equity performance indicators. By advancing this research both the current body of co-branding literature and B2B branding literature has been extended, alongside the advancement of information for strategic B2B managerial decisions to be made.

7.1. Limitations

Several limitations of this research have been acknowledged, which could pave the way for future research paths. Conducting a practical action-research case study that incorporates many participants within a fast-paced environment presents numerous challenges. The application of this research was conducted through an action research methodology within an operational organisation. The influence of participants and continual need for business case justification resulted in changes and adaptations to the research. Due to the fast-changing environment, data collection in both the survey and interviews demonstrated a lack of consistency across participants, due to employee changes. There were particularly significant employee changes from before and after Covid-19. This was further enhanced by the participatory nature of the data collection methods, which increased levels of change resistance amongst employees that had assisted in forming or becoming accustomed to the company's culture over the previous 40+ years. Understandably, change can drive concern within a settled culture. However, some objections to the process prevented some of the required buy-in within the research taking place, slowing down the process or creating total roadblocks. This was exacerbated by a changing workforce, meaning there was less consistency to the employees that participated than desired. To minimise the effect on the research and its outcomes, the cultural web model was followed (Johnson and Scholes, 1992).

Additionally, the impact of Covid-19 created negative effects on many industries and organisations across the globe. The temporary closure of the organization and many of their stakeholders caused disruption during the research process and the implementation of the campaigns. During the implementation of co-branding campaign 1, initially launched during quarter 2 2019, was impacted significantly the following year due to closure of engineering businesses across the globe, including OEM partners. A drop in inbound enquiries was experienced, alongside a significant reduction in sales across the broader business. Across campaigns 3 and 4, delays from the proposed launch date were experienced. However, to ensure there were no adverse effects, the Knowledge Transfer Partnership was extended by four months to reflect the earlier postponement. Whilst this unexpected event altered the course of the business, this research takes place in a practical setting reflective of the changes experienced in a business climate. Therefore, this must be acknowledged in this research. The research was due to take place over the course of two years within the Knowledge Transfer Partnership. However, Covid-19 meant that the research was paused for four months to prevent resource limitations.

7.2. Further Avenues for Study

This study focuses on digital co-branding with OEM partners and the benefits of digital co-branding in a B2B environment to enhance brand equity within a business performance manner. Future avenues of research could explore how B2B digital co-branding impacts corporate social responsibility by partnering with socially responsible organisations or charities. Exploration into how

B2B digital co-branding could be used to leverage a favourable position, awareness, or brand image by co-branding with environmental and sustainable protection agencies would be highly relevant given the enhanced focus on current climate and ethical concerns. Research into this area would provide an understanding of how digital co-branding with B2B organisations and socially responsible organisations and/or charities would impact both organisations. Another avenue could explore the impact across a broader range of B2B organisations in different industries. Given the chosen method, this research was conducted within a single organisation within a specialised industry that is heavily dominated by several global partners, which have been utilised as co-branding partners within this case study. Further research could explore how digital co-branding impacts B2B organisations within other industries and the effect of B2B co-branding on an increased range of digital platforms, this further research could assist in further generalising the understanding of digital co-branding within B2B organisations.

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9. Appendix

9.1. Appendix A: Interview Guide

9.1.1. Employee Consent

The interviewees were read the following clause prior to the beginning of the interview (on record).

"This interview will be recorded and used for research purposes by Newcastle University and Royston Limited, by continuing with this interview you are consenting to this interview and the information you provide being published for research and company-based purposes. All information will be anonymous, therefore please do not provide any details that will compromise this."

It should also be noted that during the analysis of the data, certain job titles, job descriptions and task descriptions were omitted from the quotes due to the possibility of them breaking the anonymity promised to the interviewees.

9.1.2. OEM and Customer Consent Form

"Royston Limited and Newcastle University Research Interviews Consent Form.

This interview will gather evidence related brand image and co-branding synergies.

Please read the following statements, prior to signing and returning this form.

This interview will be audio-recorded and used for research purposes by Newcastle University and Royston Limited, by continuing with this interview you are consenting to this interview and the information you provide being published for research and company-based purposes. The participant can choose not to participate in answering any question that they feel uncomfortable answering or can withdraw from the interview at any stage. The research derived from this interview will be used for both company and university-based purposes. The data may be present in dissertations, conferences, presentations, published papers for example.

All information will be treated confidentially and if requested, information can be kept anonymous. Otherwise, the company name and job title of the interviewee may be shared within reports that derive from this interview.

I have had the time to ask any questions concerning the areas I did not understand.

I ________________ voluntarily consent to participating in this research study."

9.1.3. Employee Interview Questions

The opening questions are outlined below.

1. Can you tell me about your background at Royston Limited?

1.1. How long have you been an employee here?

1.2. Can you describe your educational or training background?

2. Can you tell me the reasons you have continued as an employee of Royston Limited?

3. Do you see yourself continuing your employment with Royston Limited in the future?

3.1. Why?

3.2. Why not?

4. Would you ever invite a friend of yours to apply to work at Royston Limited if a suited opportunity came about?

4.1. If yes, how would you describe working at Royston Limited?

4.2. If no, can you expand on your reasons for this?

Once the participant and researcher have developed a suitable rapport, the researcher moved to the next question category that focuses on the participant's experiences within the company, both personal experiences and feedback from customer experiences.

5. Can you share with me a positive or good experience you have had working with Royston Limited?

6. Can you share with me a negative or bad experience you have had working with Royston Limited?

7. Could you share with me a time either you or your team have received good customer feedback?

8. Have you or your team ever received negative customer feedback and why?

8.1. If yes, did you attempt to rectify this immediately?

8.2. Did you put measures in place to prevent this happening again?

The next section focuses on questions both directly and indirectly relating to brand image, these questions are all open-ended and cover a range of topics.

9. From your perspective, can you tell me how you view Royston and enginei, e.g., do you see them as separate entities, the same company or company and product? a. What differentiates them?

10. From your perspective, what do you believe Royston Limited stands for in terms of their brand image?

11. From your perspective, what is enginei's unique selling point, what makes this product stand out in the fuel management industry?

12. Who would you consider to be enginei's main competitor? a. What do you believe differentiates the enginei product from this competitor?

13. If you were to change one thing about Royston's brand image (their image to external parties) what would this be?
14. What would you consider as Royston Limited's greatest opportunity going into the future?
15. What would you consider as being Royston Limited's greatest challenge going into the future?
16. Could you share with me how you see / want to see Royston change and progress in the future?

Finally, the last category simply consists of one probing question enabling the participant to present any final comments or opinions prior to the close of the interview. This question intends to prompt the participant to disclose any further information that they wish to or did not have the chance to throughout the interview.

17. Is there anything you would like to add and was not given the chance to before this interview concludes?

9.1.4. Customer Interview Questions

Section 1 consisted of a brief to create rapport between interviewer and interviewee.

1. How long have you been a customer of Royston?
2. How did you first come across Royston and what has kept you a repeat customer for so long?

Section 2 focused on the Customer's perception of Royston Limited's brand image

3. When you hear of Royston what comes to mind?
4. How do you perceive Royston?
5. Are you aware of where Royston operate across the world?
6. Are you aware of the OEM's that Royston partner with e.g., Niigata?
7. Can you outline why you chose Royston as a supplier?
8. How would you describe your relationship with Royston?

Section 3 focused on the Customer's knowledge of Royston Limit's digital footprint

9. How often do you visit our website?
    - **9.1.** Have you ever purchased anything from our website – Volvo customers? (Or has our website ever led you to a purchase? – non-Volvo customers)
    - **9.2.** Have you found this a simple process?
    - **9.3.** Are you aware of our Volvo Penta Web shop? (only for Volvo customers)
10. How often do you receive and read our email campaigns? (Have note of historic campaigns)
11. Do you follow any of our social media accounts (if not, are you aware Royston have social media accounts)?

Section 4 focused on how awareness and additional needs for customers

12. Are you aware of the other products and services Royston provides? (Get list of OEM partners and services that Royston / enginei provides)
13. Are there any additional services you or your company would benefit from Royston?
14. Is there anything you would change about your customer service at Royston at any point throughout the customer journey? (Have copy of customer journey and be able to explain this)

Section 5 focused on the customer journey

15. Can you tell me what process you go through when selecting a new supplier?
16. Do you collaborate with any other companies for long term custom?
17. How would you envision the relationship between yourselves and Royston to progress in the future?

Section 6 focused on awareness of our other marketing channels / and the customers purchasing behaviour.

18. Are you aware / have you seen us at any events, seen our publications, or other media channels? (List email, social media, brochures, trade shows, events)
19. Have you purchased or enquired about any servicing or products after seeing our marketing material?

Section 7 consisted of a closing question to ensure all the interviewee has nothing else to say

20. Is there anything you would like to add prior to completing this interview, which you have not had the chance to say?

9.2. Appendix B: Co-branding Campaign 1

Pilot

The Pilot Campaign placed two co-branded OEM product lists onto Royston's website, creating over 70,000 co-branded website pages with the agreed OEM Partners, with a changing content carousel to minimize content duplication. The Pilot Campaign enabled the process to be reviewed and smoothed to minimize the possibility of any issues during the final OEM Product upload. The Pilot Campaign Test demonstrated some issues, which were rectified for the main campaign upload.

Campaign

Working with the company's Marketing Manager, Sales Team, and Directors, a number of suitable OEM Partners were identified to conduct co-branding campaigns with. The initial list of potential OEM Partners was subject to a review to identify the potentially most successful partnerships through considering various aspects of the current partnership, such as geographical restrictions, current partnerships structure, demand for products, availability of information for co-branding campaigns and existing relationships between marketing/management teams. Once these considerations had been reviewed a shortlisted number of OEM Partners was identified and presented for suitability to the Company team.

Following the agreement of the OEM Partners from the Company team, the OEM Partners were contacted. Their Marketing Teams were contacted where possible; however, if this was not possible the Sales contact for Royston was contacted.

The subsequent conversation at this stage outlined the benefits of co-branding and presented the proposed plans for Royston's co-branding strategies. This allowed the OEM Partners to understand the benefits, what they would need to provide and enabled us to gain their consent. Written consent was provided from the OEM Partners involved. This was often straightforward. However, some of the OEM Partners needed to seek further advice and conduct more in-depth calls with us, alongside providing certain conditions to the co-branding partnership. Once accepted, a finalized list of OEM Partners that were suitable and consented to participating in the proposed co-branding strategies was drawn up. It included the following OEM Partners:

- Volvo Penta
- Deutz
- Cummins
- Perkins
- GE Marine

The upload of the OEM co-branded product website lists increased the number of pages on Royston's website from 14 to over 240,000. Each page consists of co-branded content on a carousel that avoids content duplication and leads to an embedded online enquiry form.

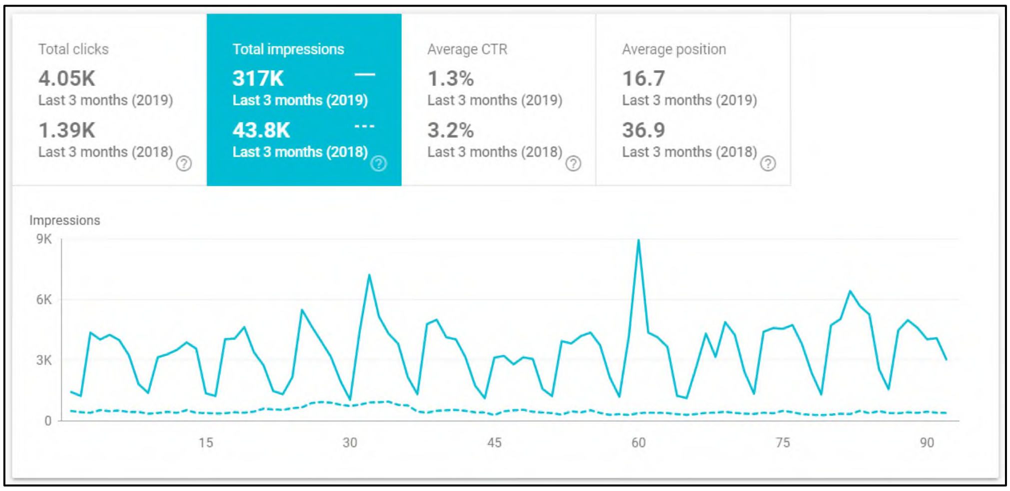
Results: Review 1

The implementation and addition of co-branded product descriptions on Royston's website impacted the monetary, digital and coverage metrics. The digital co-branding campaign uploaded five co-branded product lists to Royston's website starting in March 2019. Figures recorded from a comparable previous period set a baseline to conduct a comparative analysis once the co-branding campaign was implemented. Various metrics have been recorded in line with recognized Brand Equity measurement metrics to enable application of the campaign results to the broader theory.

Impressions

In 2018 Royston's impressions totalled 43,800 prior to the co-branding campaign. In 2019, during the same period, Royston's website impressions increased to 317,000, demonstrating an increase of 273,000 impressions within the first year of campaign implementation. This change represents a 623.74% increase, with no other significant changes made to Royston's website.

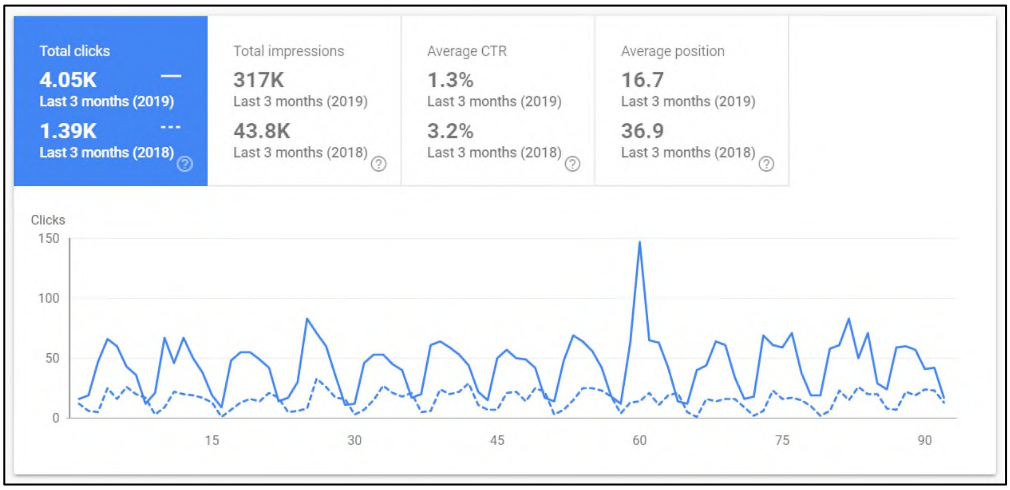
Figure 53: Google Analytics Diagram of Impressions



Clicks

Using the same time frame as above, the second metric for data collection is the number of clicks onto Royston's website. The clicks onto Royston's website increased significantly from 1,390 clicks in 2018 to 4,050 clicks in 2019. This change represents a 191.37% increase, again with no other significant changes to Royston's website.

Figure 54: Google Analytics Diagram of Clicks



Search Engine Results Position

The final metric for digital analysis of this co-branding campaign is the Search Engine Results Position. This relates to the position in which Royston's website ranks on Google (SERP) has significantly increased, moving the average position that Royston is shown on Google Results to 16.7 since the digital co-branding strategy was deployed.

Figure 55: Google Analytics Diagram of SERP

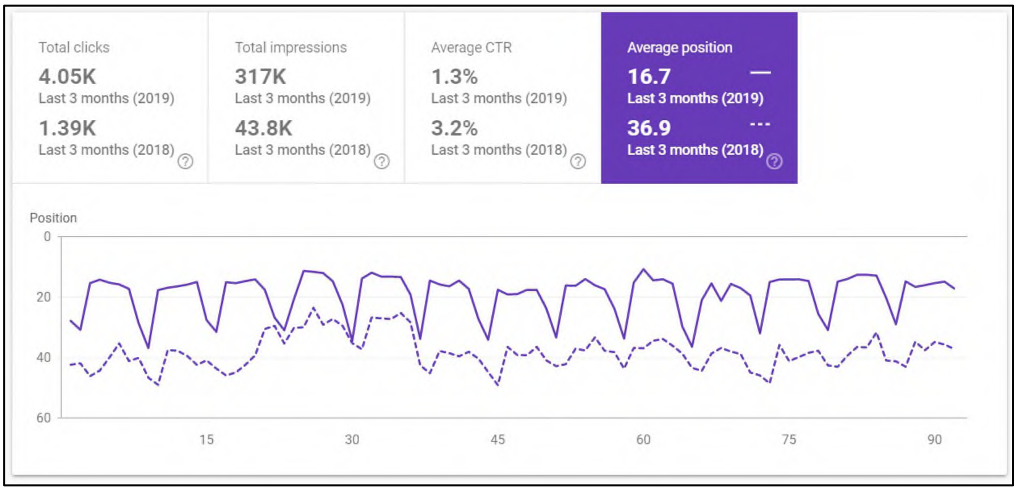
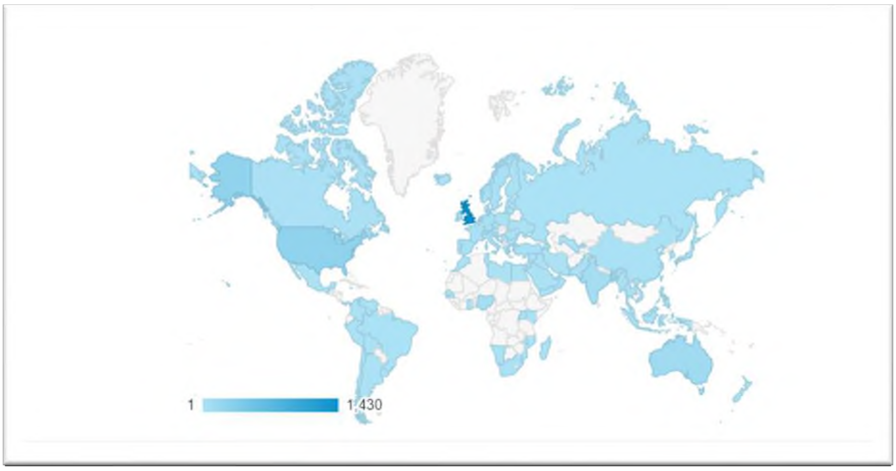


Table 21: Improvement in SERP

	2018	3 Months Post Launch	6 Months Post Launch
Average – last 3 months	36.9	21.9	16.7
Average – last 28 days	37.8	19.6	16.2
Average – last 7 days	40.6	19.1	16.5

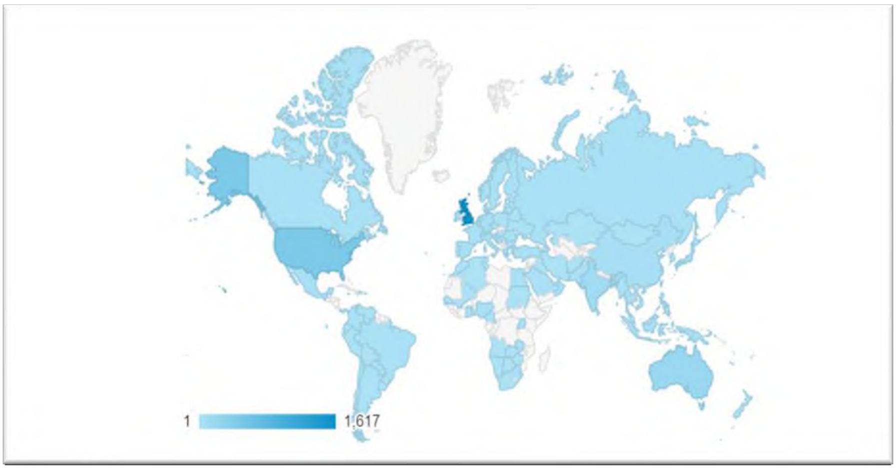
The global coverage indicates the location of individuals entering the Royston website. In the 3-month comparison it is noted that the website has increased visitors from countries in Africa, Southeast Asia, and South America. The website initiative has improved the global coverage for Royston, increasing its scope to 18 countries within 3 months since implementing this co-branding strategy including: Algeria, Papua New Guinea, Mongolia, Kazakhstan, Afghanistan, Turkmenistan, Botswana, Zimbabwe, Mozambique, Angola, Cameroon, Ghana, Togo, Mali, Ecuador, Paraguay, and Haiti.

Figure 56: Global Coverage Before Implementation of Campaign 1



The ratio of visitors per country has also increased from 1:1,430 to 1:1,617, indicating that the density of visitors is increasing per country. The density of website visitors from the United States has increased in the period presented.

Figure 57: Global Coverage Post Implementation of Campaign 1 (3 months)



Monetary Metrics

Aside from the digital metrics, the number and value of sales enquiries and conversions has been recorded. Royston previously have conducted sales through traditional methods and, therefore, the baseline for digital enquiries and sales is zero. For reference, Royston's annual OEM Parts sales are demonstrated in **Table 22** below.

Table 22: Volvo Penta Sales by Year (2017-2020)

Year	Sales
2017	£820,611
2018	£1,054,805
2019	£1,267,926
2020 (Covid Impact)	£1,049,436

The monetary results have shown significant increase in inbound website driven enquiries, creating both enquiry and conversion value. These enquiries have been identified as using channels derived from the co-branding website initiative. Various analytical tools on relevant search engines have been used to confirm the enquiry had come through the relevant channels in relation to the co-branding campaign. The increase in monetary value suggests that the co-branding campaign has delivered commercial value for Royston Limited. **Table 23** below demonstrates that the conversion rate of enquiries (per number) is at 53.7%. However, the value of enquiries converted is significantly less at £11,664.61, only 1.93% of the total enquiry value. The following action research Optimisation/Iteration Cycle will focus on the improvement of the conversion value.

Table 23: Increase of Enquiries in 6 Months Following Campaign Launch

	Total Enquiries	**Total Enquiry Value**
3 Months Post Launch	46	£313,685.69
6 Months Post Launch	82	£603,915.59
Conversion	44 (53.7%)	£11,664.61 (1.93%)

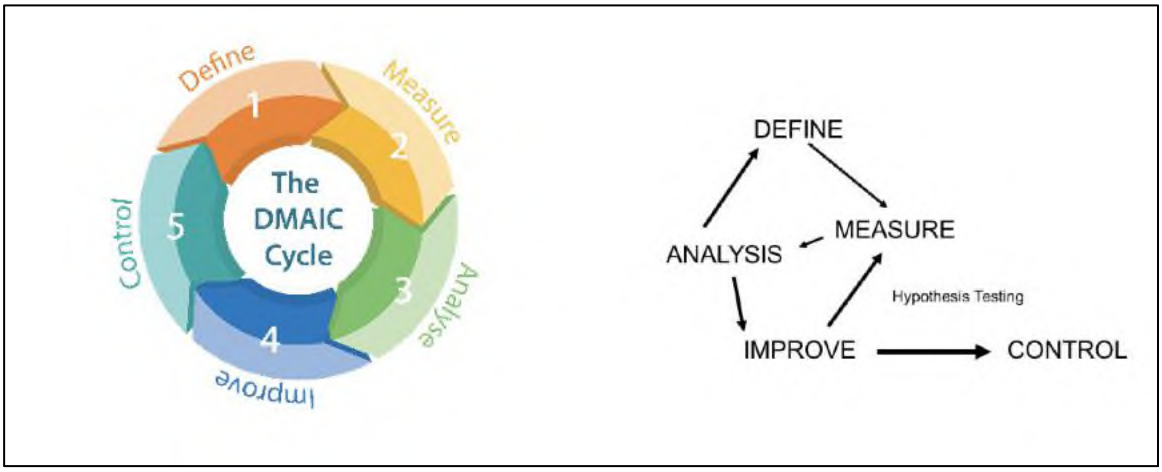
Optimisation 1

Six Sigma Project: Conversion Rate

This initiative has created significant numbers of enquiries, the conversion rate has not been below expectation. This section will use the principles of Six Sigma and various statistical tools to improve and optimize this co-branding campaign to improve the conversion rate.

DMAIC is often represented in a cyclical fashion (figure to the left below). However, a more accurate representation is the DMAic, which presents the continual cycle between Define, Measure, Analyse and Improve. This is more representative of the process used within this project.

Figure 58: Six Sigma DMAIC Cycles



Define Phase

Table 24: Six Sigma Project Timeline

Step	Details	Week 1-2	Week 3-4	Week 5-6	Week 7-8	Week 9-10	Week 11-12
Define	Define the problem through calculating the conversion rates, understanding the problem and the expected goals for Royston						
Measure	Record and reconcile all available data of the parts initiative from March 2019						
Analyse	Pareto the data						
Improve	Create e-commerce website to remove friction from user journey Add step into customer journey to nurture leads Training of sales team for customer service and email responses Set lead generation processes for follow up calls and report these weekly to Senior Management						
Control	The ecommerce site will remove the step for manual recording of mistakes Lead generation processes will be monitored by Senior Management through weekly meetings						

Project Charter

Having explained the definition and benefits of Six Sigma, the starting point is the Project Charter. This is shown below. Some of the company's financial data is confidential and has been limited or excluded from this report.

Table 25: Six Sigma Project Charter

Project Charter	
Project Name	Improvement of E-commerce Conversion Rate using Six Sigma Principles
Project Lead	Erin Coulson
Project Team	Royston Management, Royston Spares Team, KTP Academic Team
Project Sponsor	
Project Information	
Target Problem	- The conversion rate of the ecommerce spare parts initiative is significantly lower that the company average. The application of Six Sigma is necessary to improve this conversion rate to levels more in line with the company average.
Problem Statement	- 5W's and 1H Framework for Detailed Statement. - Over the past 20 months the ecommerce spare parts initiative has brought in over £760,000 worth of inbound enquiries. However, the converted sales from this amount of enquiries is approximately £18,000-£20,000. - This means that the current conversion rate of the e-commerce spare sales is approximately 2.5%, significantly lower than the company average of 45-50%. - Digitalisation is becoming more necessary for companies to work towards. Royston have done well in creating a digital ecommerce shop for their OEM Spare Parts but are failing to deliver high financial returns due to low conversion rates.
Expected Challenges and Benefits	- Challenge: Resistance to change within the Spares Team; moving from a traditional sales role towards a more digitally focused sales role. - Challenge: Implementing digital targets that will be consistently met by the Spare Parts Team.
Goals to be Achieved	- Improvement of conversion rate by 30-40%
Project Scope	- This project will use DMAIC and other Six Sigma tools to identify, measure, analyse, improve, and control the problems surrounding the conversion rate of the online sales enquiries.
Project Risk Analysis	- Resistance to change
Role of the Project Team	- The project team will facilitate the implementation of the Six Sigma project and work together to achieve the project scope by applying their knowledge and expertise. The team has a wide range of knowledge and expertise that will cover the project scope.
Key Steps, Milestones and expected Results	- Development of automated process to minimize loss of information. - Improvement procedures to increase conversion rate - Control procedures to facilitate cultural change and hold accountability - **A Six Sigma Project Timeline is shown at the end of the Project Charter**
Cost Estimate for the Project	- 12 weeks salary of project lead (£4,600) - New e-commerce site (£7,500)
Resources Needed	- Access to all past online sales - Access to Strategix (Royston's online accounting system) - Time reserved with the Spares Team to go through specific sales records - Assistance from Management to develop new processes of recording, lead generation or sales conversion for sales of spare parts.

Data is key to improvement and therefore to understanding the current position of the conversion rate the Defects per Million Opportunities (DPMO) has been calculated. A defect is non-conversion enquires and an opportunity is the number of enquires online.

DPMO

The Sigma Rating of the current conversion process is calculated below.

- Number of Defects: 163
- Number of Opportunities: 180
- DPMO: 905,555.6 ppm (particularly high value)
- Short Term: 0.186
- Long Term: -1.314
- This business process is extremely poor.

5W & 1H: Problem-Solving Framework with support data analysis

What is the problem?

A digital initiative designed to generate higher global interest in and enquiries about Royston's Spare Parts sales was uploaded to the back office of their website, creating over 250,000 pages. Royston invites the website user to enquire about their Original Equipment Manufacturer (OEM) Parts using an add-on enquiry form. This initiative is generating a lot of enquiries of substantial value; however, the conversion rate (2.5%) is minimal in comparison, and is far below the company average.

Pareto Analysis

A Pareto Analysis identified the largest 20% of enquiries and conversions. The sales team were then asked to contact the top 20 enquiries (with relevant contact information) to understand their reasons for converting or their reasons for not converting.

On identifying the top 20%, in several cases some enquiries were never responded to by the Sales Team and others were never followed up on. Many of the responses demonstrated no intention of lead nurturing or providing company details, which, from a brand management perspective, prevents a relationship and trust development being built between the customer and Royston's sales team. One further observation was that a response to the largest enquiry of approximately £250,000 that was received through the parts initiative said that the salesperson dealing with the enquiry was going on holiday that day and that he would respond 'properly' after his 2-week holiday. Again, this could cause the customer to develop a negative brand perception and prevent the potential customer from converting. A Pareto Analysis (**Table 26**) demonstrated that the largest 20% of enquiries accounted for 92.2% of the enquiry value.

Table 26: Pareto Analysis of Enquiries

Top 20% of Enquiries	92.2% Total Enquiry Volume
28	£682,558.11

The sales and marketing teams have been asked to contact each of the 28 enquiries and understand the reason behind them not converting their original enquiry.

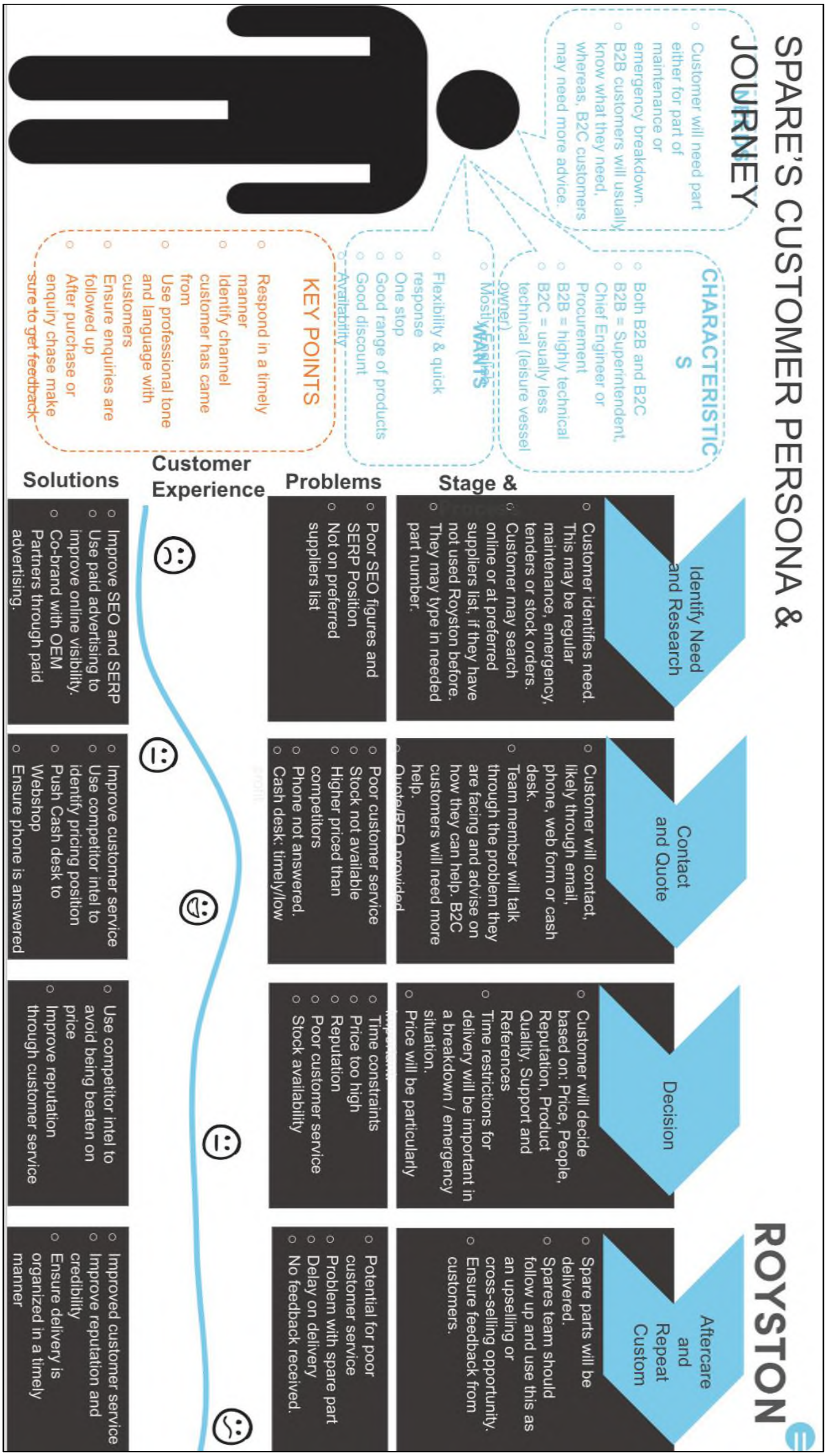
Where is the problem found?

This major problem with the conversion lies within the process. The customer is searching for a specific product they need, which is not manufactured by Royston. Therefore, from the initial point of enquiry an issue arises in the process, which prevents 97.5% of potential customers from converting. This project will use statistical tools to identify the problematic point(s) throughout the process from enquiry to conversion and set methods for improvement and control.

Customer Persona and Journey

A customer persona and journey has been created to demonstrate the usual customer type of Royston's Spare Parts and the journey they go on. This also highlights the possible frictions from an internal perspective that the user may experience throughout the customer journey.

Figure 59: Spare Parts Customer Journey



This problem is situated within the Spare Parts Customer Journey, seen in the SIPOC Diagram below.

Table 27: SIPOC Diagram

Suppliers	**Inputs**	**Processes**	**Outputs**	**Customers**
Who supplies the process inputs?	**What inputs are required?**	**What are the major steps in the process?**	**What are the process outputs?**	**Who receives the outputs?**
OEM Partners	Enquiry Form	Receive enquiry from customer	Updated online sales list for weekly reporting	Marketing Team and Management
Spare Parts Team including Sales and Admin Staff	Telephone Orders	Record details of enquiry	Product	Customers
Distribution / Delivery Companies	Email Orders	Respond to order enquiries and update Strategix	Correct and timed Delivery	OEM Partners
Digital Marketing Team	Updated enquiry list and conversion list	Complete enquiry if customer purchases or Nurture new leads	Customer Invoice	Spare Parts Sales Team
Strategix Accounting System	Complaints and returns	Update enquiry list to order status		Accounts

Table 28: Problematic Process Steps

Process	Customer	Spares Admin	Specialist Spares Personnel	Management	Marketing Team
Step 1	Creates enquiry				
Step 2		Receives enquiry			
Step 3			Responds to enquiry		
Step 4	Liaises with Specialist				
Step 5			Nurturing of lead / responds to any further queries		
Step 6	Decision Period				
Step 7			Processing order or identifying reason for not converting		
Step 8		Admin for order confirmation			
Step 9	If converted: receives delivery				
Step 10				Monitoring KPIs	
Step 11					Monitoring overall analytics

The above chart demonstrates the Problematic Steps / Processes within the current 'Spare Part Sales' process. Numerous areas in the table above show a process that is not currently fulfilled, is partially fulfilled or the process does not exist.

Google Analytics

The 'Parts Enquiry' page is the page that allows website users to submit an enquiry to Royston about one of their parts. The enquiry contact form is an add-in, and is not integrated fully into Royston's website, which can cause a lack of trust for potential customers to submit their details. The below figures demonstrate that over 962 people visited this enquiry form and the average time spent on this page was over a minute. However, only 114 people submitted their details through this enquiry form, which calculated to 11.8%.

The user has to actively click on the content form and, therefore, demonstrate a level of interest, meaning that expected submission levels should be approximately 70-80% of users landing on the enquiry page. This demonstrates a possible area of friction within the website journey funnel.

Figure 60: Screenshot demonstrating possible area of friction on Royston's Website

Plot Rows | Secondary dimension | Sort Type: Default | advanced

	Page	Pageviews	Unique Pageviews	Avg. Time on Page	Entrances	Bounce Rate	% Exit	Page Value
		962 % of Total: 1.08% (89,027)	879 % of Total: 1.17% (75,065)	00:01:03 Avg for View: 00:01:07 (-6.77%)	50 % of Total: 0.11% (46,473)	72.00% Avg for View: 64.00% (12.50%)	40.96% Avg for View: 52.20% (-21.54%)	£0.00 % of Total: 0.00% (£0.00)
1.	/parts-enquiry.php	962(100.00%)	879(100.00%)	00:01:03	50(100.00%)	72.00%	40.96%	£0.00 (0.00%)

This high level of friction in the user journey needs to be addressed.

Who found the problem?

The problem with the conversion rate was identified when the Marketing Team reconciled the data. Initial exploration was conducted.

When was the problem found?

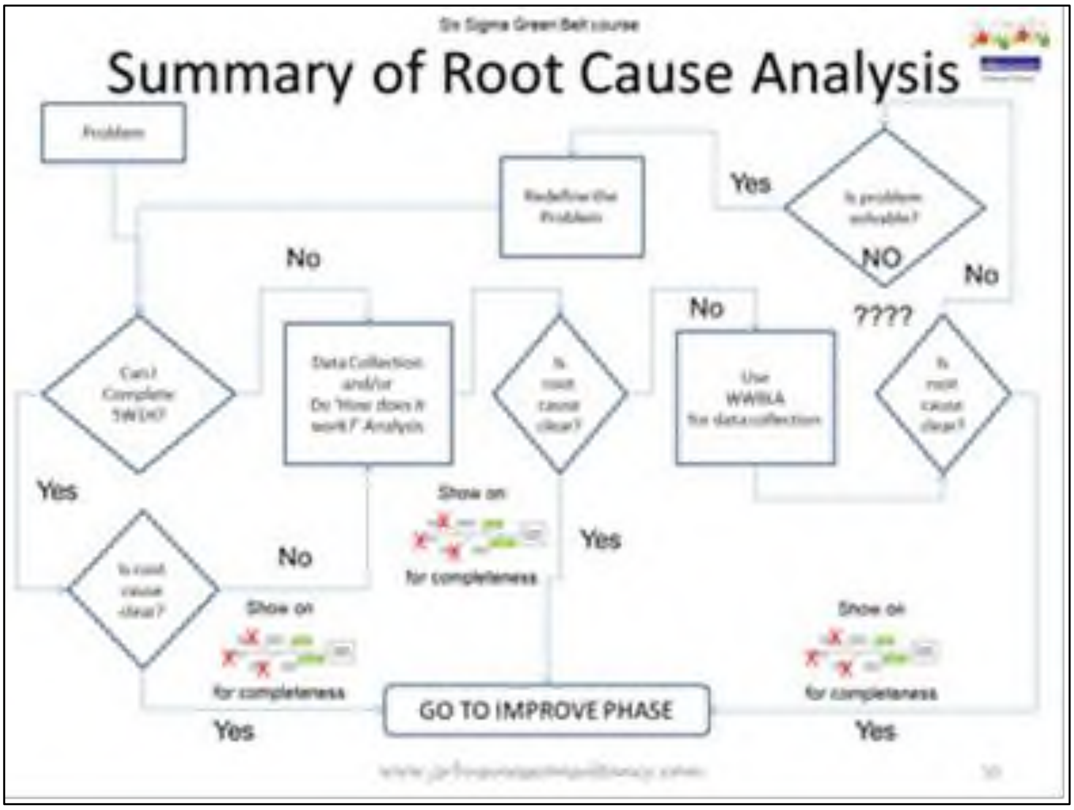
Over the past 20 months this has driven over £800,000 worth of enquiries. However, the conversion level is much lower, with approximately £20,000 of goods sold. The data was recorded on a weekly basis but was left to be embedded due to the issues surrounding mass website upload and indexing. Problems with the conversion rate started at the outset when the first enquiries were created.

How big or severe is the problem?

The above enquiry and conversion figures demonstrate a conversion rate of 2.5%. The expected level of conversion within the company is around 45% and should be even higher for inbound enquiries, i.e., users specifically contacting Royston and requesting a part using an enquiry form or phoning the company. Therefore, these figures demonstrate that this is a relatively serious problem that needs to be addressed, particularly as the B2B climate is moving towards digital and ecommerce. Royston cannot afford to let this problem continue.

The 5W&1H process shows the root cause lies in the current process and therefore a new process is required. The figure below shows the process used to move to the improve phase.

Figure 61: Summary of Root Cause Analysis



As part of the learning from Six Sigma, TRIZ work undertaken in the previous selection and the potential solution.

TRIZ (Teoriya Resheniya Izobreatatelskikh Zadatch)

Having identified the new process, I have used TRIZ to identify this and to check the solution advised above. The images below demonstrate the various Process Steps that have been used in this project and the TRIZ Matrix.

TRIZ Process Steps

1. Select the product or service which requires improvement
2. Break down the product/service to a specific part which requires improvement
3. Select a particular function of that specific part of the product/service.
4. Propose a method which you believe will improve this particular function.
5. Propose the negative effect of the improvement. This is the contradiction.
6. Write a statement about the contradiction “Taking this action will improve function Z in this way but will cause function X to get worse.”
7. Now fit this statement to the matrix, explore the TRIZ solutions.
8. Repeat as necessary addressing all contradictions.

The TRIZ problem is defined as 'To improve the productivity (39) of the spares order process without the loss of any customer information (22)'.

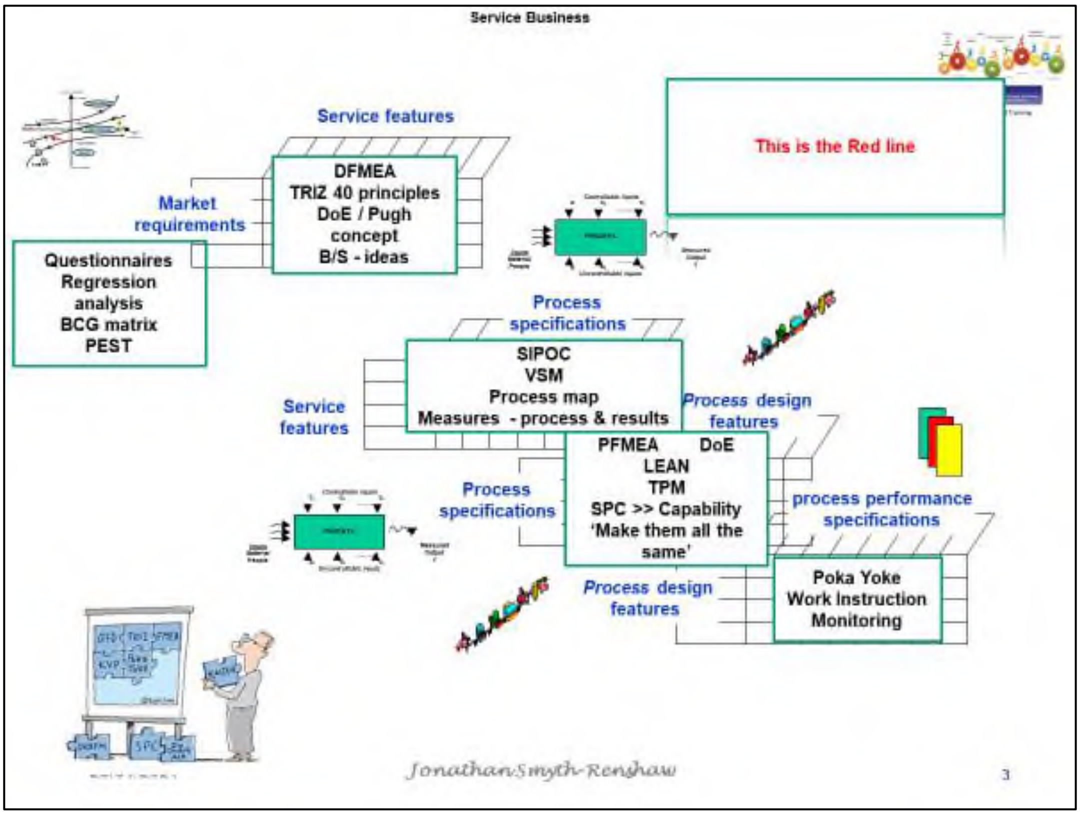
- Characteristics to be Improved: 39 – Productivity
- Characteristic that is getting worse: 22 – Loss of Information
- Using the matrix, the TRIZ solution to be used is Preliminary Action.
- Principles: 10 – Preliminary Action: Perform the required change of an object (either fully or partially) before it is needed.

With regards to this Six Sigma Project, the solution of Preliminary Action should be taken automatically before the query is sent through to the Spares Sales Team. An automated pre-recording of sales information at the commencement of the enquiry process (e.g., through a digital tool or ecommerce shop) would prevent loss of information through low productivity.

Improvement

The above analyses demonstrate that there is currently no process in place. Therefore, this improvement phase will focus on the need to redesign the process to improve the conversion rate. This will follow the Design for Six Sigma process shown below.

Figure 62: The Kano Model



The Kano Model is applicable to this project as it allows us to categorize subjective features, thus providing "an insightful way of understanding, categorizing, and prioritizing 5 types of Customer Requirements". This project intends to move customers towards the Excitement area.

Map of new process

This will be a change programme; Royston currently have a list of Spare Parts and an enquiry form on their website. The Improvement Phase will focus on creating change from their current situation to create a fully automated e-commerce site, which will eliminate problematic steps within the process map.

1. The loss of information at the early stages of the process and the issues around forgetting to change the enquiry status will be improved by eliminating this step from the process, through process redesign.

- **1.1.** The Process Redesign will remove the manual stages needed to record the information or change the enquiry status of the information through creating an automated process within the E-Commerce site.

2. A major point identified in the process is the impact of User Experience, and non-integration of enquiry forms causes a lack of trust from the point of enquiry.

- **2.1.** A new e-commerce site is in the process of being developed to improve the brand image, trust, and remove friction from the digital user journey.

3. The sales team did not nurture new leads, removing any confidence in purchase decisions from the potential customer.

- **3.1.** Training conducted with the sales team and an extra step has been added to the customer journey to ensure that the sales team improve their customer service.
- **3.2.** KPI's will be set and monitored from the Top Management Board. These will focus on two aspects, firstly, the nurturing of leads/conversions, but also the length of response time (4.) to ensure that response times are acceptable.

4. No response or delayed response to enquiries.

- **4.1.** Increased accountability by assigning and recording the specific salesperson that is dealing with the enquiry. This can be reviewed at recurring periods.
- **4.2.** The Team will adopt a First In, First Out process to ensure that all enquiries are responded to in an orderly and timely manner. This One-Piece Flow will focus on minimizing the potential of missed enquiries.

5. Improper recording of enquiries and conversions.

5.1. Full reconciliation of new customers and cash sales from March 2019 using Royston's account software, Strategix. Further training with sales team to demonstrate the importance of recording figures properly and how to do this, to ensure that the figures received are accurate.

5.2. This will focus on the implementation of Training and Procedures. A simplified version of the customer journey, using mostly images, will be used in the training of the sales team.

6. Risk assessment around the failure to implement the protocol of the KTP campaigns.

Table 29: KTP Risk Assessment

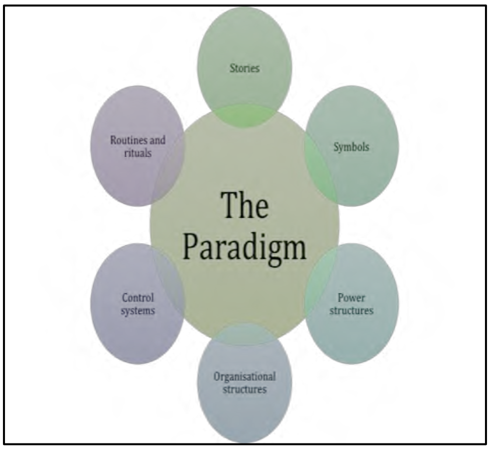
Reference Number	**Risk Description**	**Control in Place**	**Impact**	**Likelihood**	**Score**	**Risk**	**Further Action**
			1 Low - 5 High	**1 Low - 5 High**	**Impact x Likelihood**	**0-4 Low 5-9 Moderate 10-12 High 15+ Extreme**	
1	Necessity for quick turnaround, minimising research potential, meaning things may not be done to full potential	Follow workplan, focus on important tasks and prioritise	3	2	6	Moderate	Continue to review and refine measures. Continue to update the Gantt Chart and stay on track.
2	Lack of cooperation from OEM Partners / Customers may hinder co-branding campaigns	Ensure OEM Partners and customers are fully aware of benefits co-branding can bring for both Royston and their organisation	2	3	6	Moderate	Work with company contacts to identify best routes to approach co-branding opportunities
3	Desired co-branding campaigns not possible	Identify all possible routes and use	2	5	10	High	Identify multiple opportunities, ensuring that if desired strategy

		internal knowledge to identify potential co-branding initiatives that may offer the most success					is not possible another strategy may be presented.
4	Time Management	Follow workplan, focus on important tasks and prioritise	3	3	9	Moderate	Continue to review Gantt Chart and raise any concerns with supervisors.
5	Resistance to change	Explain benefits and why the change is required	4	3	12	High	Explain benefits to those involved in change.
6	Misunderstanding user requirements	Thorough research will minimise the risk of this. Conduct customer personas.	5	2	10	High	Continue to review and update customer personas within the relevant departments to minimise misunderstandings of user requirements.
7	Knowledge embedding	Potential difficulty in embedding new knowledge and changing current procedures	4	2	8	Moderate	Use infographics and visual guides to provide access to opportunities in an easy manner to embed knowledge within Royston's employee base.
8	Covid-19	Time changes and disruption to work	3	4	12	High	Extension and forward planning.

Control Phase

Following this, extensive training and procedural changes including the implementation of KPI's to increase accountability will aim at changing the current culture within Royston. These improvement suggestions will be formally monitored and continually implemented by top Management to ensure a routine is embedded into the Spares Team and with any new employees in the future. The implementation of this in the Control Phase will start to change the cultural web (**Figure 63**).

Figure 63: The Cultural Web (Johnson and Scholes, 1992)



Results

There is demonstratable improvement of a few problematic points identified throughout the process, which has led to an increased conversion rate with an enquiry level of £24,771.04 and a conversion level of £9,116.14. This increases the conversion rate from approximately 2.5% to 36.8% since the implementation of six sigma principles since September 2020 (3-month period). This is demonstrated in the following hypothesis test. A 2 Proportion Hypothesis test was used due to the suitability of its application.

Table 30: 2P Test

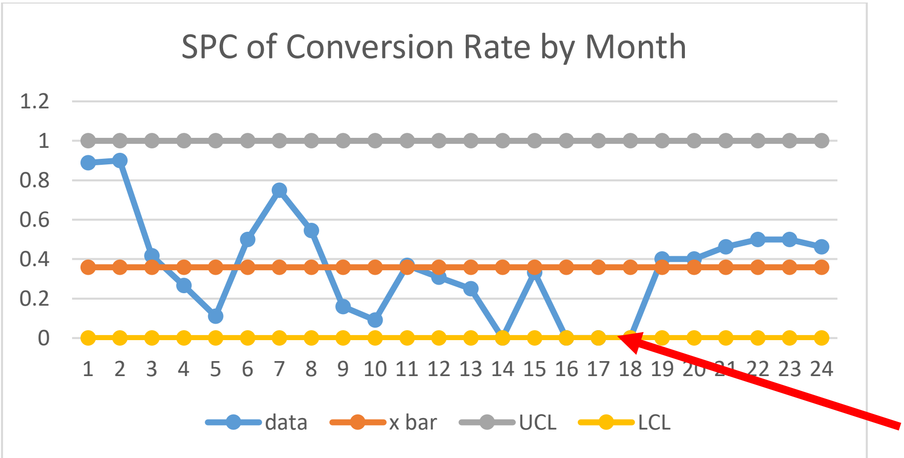
2 P Test - Attribute		
	Before	**After**
Number of Errors / Defects	20,000	9,116.14
Number of Products	760,000	24,771.04
P	0.026315789	0.368016
Test Statistics (ABS)	111.3147399	
P Value	Reject Null	

The rejection of the Null Hypothesis demonstrates that the application and improvement of the before and after P Values are statistically significant.

Due to company processes of approval and the slow down caused by Covid-19, the full extent of improvements cannot be identified in this report. The roll out of an ecommerce site in quarter 1 of 2021 will improve the digital user experience, reduce friction in the customer journey (to conversion) and speed up the enquiry process e.g., reducing waiting times for responses to the initial enquiry. These were key points identified through the roadmap (5W's and 1H) as problematic and preventing an increased level of enquiries.

Control Charts should demonstrate the reduction of variation and show the movement towards a lean methodology. The control chart below demonstrates the extensive variation prior to the implementation of Six Sigma in the Company. The Chart demonstrates that the variation starts to stabilize post implementation of Six Sigma. The Company have been advised to continue to monitor the data using Control Charts.

Figure 64: Statistical Process Control Chart



***Six Sigma implemented at red arrow*

The Statistical Process Control chart demonstrates the point when Six Sigma was implemented, at the lower control limit (yellow line). There is a notable increase, which rises above the X bar and continues to remain there for the following 6 weeks.

After 18 months from the launch of this Co-branding Campaign (including business closure for 5 months during Covid-19) the recorded financial results included:

- **£771,126.08**
- **250 enquiries**
- **Enquiries from 45 different countries**
- **81 conversions**
- **32.4% conversion rate**
- **Post implementation of Six Sigma 40% plus conversion rate**

Amongst this, 41 enquiries did not receive an assigned quote with a financial value. Reasons for this included, but are not limited to, quote missed (discussed in Six Sigma Project), product out of stock or email bounce back.

All enquiries recorded are from new customers, unknown to Royston, that have been directly sent through a Parts Enquiry Form, who have been asked by the Parts Team how they heard of Royston (and confirmed through Search Engine/Parts Store) or who have been tracked through Google Analytics.

Optimisation 2

Given the results obtained through the first optimisation process, a further cycle was conducted. Two focus groups / feedback sessions were held with various company personnel to identify how the campaign could be optimized further. The first session was held with members from the Spare Parts Team, including the manager and various OEM Leads. This enabled further understanding of issues within the customer journey, focusing on campaign optimisation at a tactical level. The second session included the Marketing Manager and CEO with the aim of focusing on optimisation at a strategic level.

Focus Group/Feedback Session 1: Spares Manager and Team

One formal focus group meeting was conducted and multiple informal feedback sessions to understand both issues and opportunities for optimisation at a tactical level. The feedback included the following points:

Issues

- Process from the original co-branding campaign incorporates multiple personnel in the customer journey, slowing down the process significantly. Multiple customers have responded reporting that they have already purchased goods elsewhere by the time they receive a response to their enquiry.
- An increase of orders deriving from this digital co-branding campaign increased the lead times for responses from the sales team, as this increased their workload and slowed the customer journey down even further.
- This digital co-branding campaign increased the internal touchpoints within the customer journey and increased the number of personnel involved in the enquiry or order process. This has caused confusion within communication, missed responses, and missed orders.

Focus Group/Feedback Session 2: Marketing Manager and CEO

The second session conducted during Marketing Strategy meetings reviewed the digital co-branding campaign from a marketing and strategic perspective.

- Analytics demonstrated that a significant number of website users were arriving on the enquiry form but failing to submit an enquiry. Within a 3-month period the number of users submitting an enquiry form was less than 2% of users arriving onto the enquiry form page. Potential causes for this discrepancy reported in this session included: security concerns from a third party embedded form that did not have any consistency or resemblance to Royston's brand; too much information required from the user; lack of professionalism look.
- The high number of individual co-branded website pages increased the likelihood of content duplication identification, meaning that the indexing of the pages decreased. Out of 250,000 pages approximately only 50,000 were indexed at any given time, reducing the possibility of attracting users to Royston's website. This is caused by limited control over the content upload and website back office.
- Limited brand consistency presented on the website with both Royston's brand and the co-branded partners brand may prevent users from trusting the site or feeling comfortable submitting personal information.

Solution

After discussing opportunities to optimize and improve this digital co-branding campaign, a decision was made to develop Royston's existing website into an operational **ecommerce shop** with the listed OEM Products, creating an online shop with over 250,000 products accessible to consumers. This would be conducted alongside updating the content and brand image of the existing website.

Whilst Royston's operations are over 95% in the B2B environment, this iteration opens the Spare Parts business stream into the B2C industry.

To construct the new ecommerce shop, Royston collaborated with website developers to create a streamlined and optimized website with an accessible ecommerce shop

Firstly, an overview of the original website took place and a brand strategy incorporating all OEM Partners was created, enhancing the brand image, brand consistency and perceived quality, through both an optimal brand strategy and a comprehensive co-branding strategy using major OEM Partners.

Key Changes

- All forms, sign up options and enquiry pages have been embedded into the website and feature Royston or co-branded partners' brand image.
- A streamlined customer journey has been developed to maximize user experience, enabling the immediate checkout of products rather than the alternative enquiry form. This also decreases the employees length of time spent per order.

- Enhanced co-branding through imaging and specific content on each product page. By integrating a well-recognised ecommerce platform, Royston minimize the negative effects caused by low level indexing figures.
- An updated and professional brand identity has been created and portrayed to reflect quality.
- By collaborating further with individual OEM partners, the new website reflects the brand identity of partners by using official logos, wording, and content.
- The layout and navigation of the website allows users to easily navigate the website to reach their goal.
- Improved SEO and Back Office facilities enable the Royston Marketing Team to have increased capability of making alterations to content, metadata, and co-branded product information.

Results

- Increased Impressions, Clicks, Purchases

Streamlined Customer Journey

- The ecommerce site allows customers to purchase directly through the website, removing sections, streamlining the customer journey, and decreasing the time spent on average per Royston employee, per sale.
- To enhance this further, Royston have created discount offers (e.g., 10% off any spend through the website) and these have been sent to the Spare Parts Email database to further incentivize customers to purchase direct through the website.
- Customers could continue to avail themselves of advice from the Spares Parts Team. However, overall Royston was able to increase their capacity for enquiries or purchases whilst minimizing infringement on the current Spares Parts Team.

Improved, Consistent Brand Image

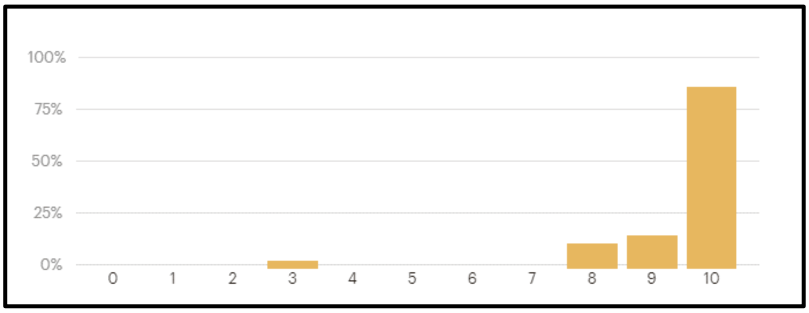
- Informal feedback from various Royston Stakeholders (including employees and OEM Partners) indicated that the consistency of the brand image increased the professional look of the new website and ecommerce shop.
- When asked, Royston employees indicated that they would be more comfortable inputting their personal information into the new ecommerce forms in comparison to the previous forms. When asked why, responses included references to the perceived security, reliability, and trustworthiness of the forms.
- The Marketing and Management Teams were intricately involved in the design and construction of the website, working closely with the website designers to align all

components of the website and ecommerce shop with Royston's brand guidelines. The brand guidelines of any partners were also adhered to.

The overall financial improvement for the OEM Spare Parts Department since 2017 indicates a financial turnover increase. The KTP commenced in 2018 with the launch of the OEM Spare Parts co-branded campaign in Quarter 1 of 2019.

Further to this, a survey was sent out to Spare Parts customers to determine the Net Promoter Score for this department. This was conducted in Quarter 3, 2021.

Figure 65: Net Promoter Score for Spare Parts Department



The Spare Parts department averaged a Net Promoter Score of **9.4 (**Figure 65**).** The survey was anonymous and, therefore, no identification or follow up was possible with the user that scored the Spare's Department a '3'. Overall, the score of 9.4 indicates a high level of Perceived Quality and advocacy for Royston's Spare Parts department.

9.3. Appendix C: Co-branding Campaign 2

All other campaigns work on organic methods; however, this campaign will identify how paid advertising is influenced through co-branding. Royston have never used PPC Advertising campaigns previously. However, creating a baseline non-co-branded campaign alongside various OEM co-branded campaigns will enable the analysis of how co-branding impacts the metrics of paid advertising.

An initial review of search terminology, existing OEM Paid Adverts and Manager recommended locations was undertaken to identify an entry strategy to launch the paid advertising campaign. To ensure a control is in place, a non-co-branded advertisement focusing solely on the Royston brand will be created. This will set a baseline to compare the other co-branded campaigns against. No other variables (e.g., targeting location, budget, advert type) will be changed.

Royston Adwords Recommendations

Table 31: Key Geographical Locations

Popular Geographical Locations from Analytics Report	Internally Suggested Geographical Locations for Paid Targeting
1. United Kingdom	1. Indonesia
2. United States	2. Malaysia
3. Australia	3. Azerbaijan
4. India	4. Thailand
5. Japan	5. Saudi Arabia
6. Netherlands	6. Nigeria
7. France	7. UAE
8. Germany	8. Cambodia
9. China	9. Russia
10. Turkey	10. Germany

Device Type (Average)

1. 75% Desktop
2. 20% Mobile
3. 5% Tablet

Table 32: Existing Paid Adverts (Google)

Keyword	Adverts
Volvo Penta Parts	www.medmar-services.com www.volvopentashop.com www.muldermotoren.com www.mkparts.ee
Cummins Parts	Parts.cummins.com www.jaytrac.co.uk www.alltrucktrailerpartsuk.com
GE Marine Parts	www.fujielectric.com www.cpbsmarineservices.co.uk www.boulters-chandlery.co.uk services.gehealthcare.co.uk
Perkins Parts	www.primepowersolution.com eu.perkins.com www.finddiesels.com www.cpspoweruk.com
Deutz Parts	www.bryco.co.uk www.jspower.co.uk
Marine Spare Parts	No adverts
Marine Services UK	www.fugro.com Number of knowledge cards present e.g., UK Marine Services (Cardiff) Ltd Bluepoint Marine Services M J Marine Services
Marine Engineering Companies UK	No adverts Number of knowledge cards present e.g., Land and Marine Engineering Ltd UK Marine Services (Cardiff) Ltd Apollo Offshore Engineering
Marine Engineering Services	www.wm-rentals.co.uk (not relevant) Number of knowledge graphs present

Initial Results

Advert 1: NON-Co-branded

- 15.6% of search queries related to Volvo Penta
  - The Volvo Penta Queries totalled 34,681 Impressions
  - The Volvo Penta Queries totalled 37 clicks
  - 0.10668665% Click Through Rate
- The overall advert accumulated:
  - 159,885 impressions
  - 1,197 clicks
  - 0.74866310% Click Through Rate
- The clicks derived from 226 countries*
  - Top 10 Countries

        - United Kingdom
        - United States
        - Indonesia
        - India
        - Italy
        - Australia
        - Germany
        - France
        - Spain
        - Turkey
- Royston's Contact Page had 6,622 impressions and 134 clicks
    - 2.02355783% Click Through Rate

Advert 2: Co-branded with Global Brand

- 18.6% of search queries related to Volvo Penta
    - The Volvo Penta Queries totalled 100,508 Impressions
    - The Volvo Penta Queries totalled 139 clicks
    - 0.13829744% Click Through Rate
- The overall advert accumulated:
    - 398,738 impressions
    - 3,394 clicks
    - 0.85118549% Click Through Rate
- The clicks derived from 234 countries*
    - Top 10 Countries
        - United Kingdom
        - United States
        - Indonesia
        - India
        - Italy
        - Germany
        - Spain
        - Australia
        - Netherlands
        - United Arab Emirates

- Royston's Contact Page had 18,433 impressions and 345 clicks
    - 1.87164324% Click Through Rate

**Google records countries based on ISO 'Country Codes', of which there are 249.*

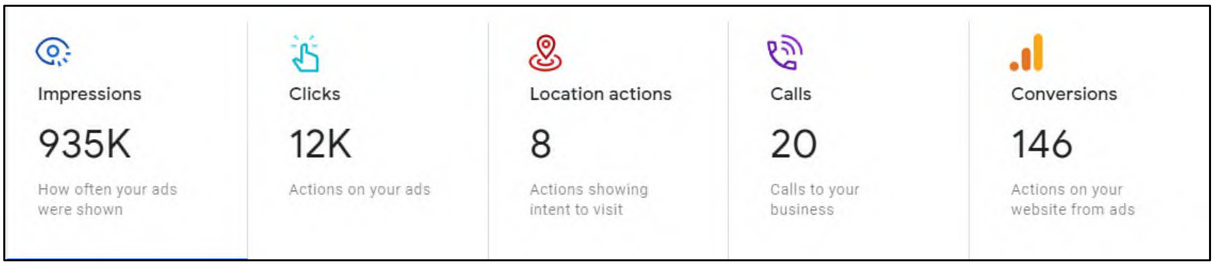
Optimisation 1

The results established a baseline for the co-branded advertisement. The non-co-branded advertisement was stopped after the initial round, as a business case could not be justified for resource and finance allocation.

Optimisation Steps for Co-branded Advertisement:

- Add negative keywords for irrelevant search terminology
- Set up Google MyBusiness for increased conversion tracking
- Set up goals on Google Analytics to track audience movements
- Reviewed and amended advertisement text, elaborating on relationship between Royston and Volvo
- Additional rich media links added

Figure 66: Screenshot of Basic Google Ads Results Display



Optimisation 1: Results

- 1.28342245% Click Through Rate on overall advertisement
- This Click Through Rate demonstrates a percentage increase of 50.7805836% of the overall advertisement in comparison to the initial results.

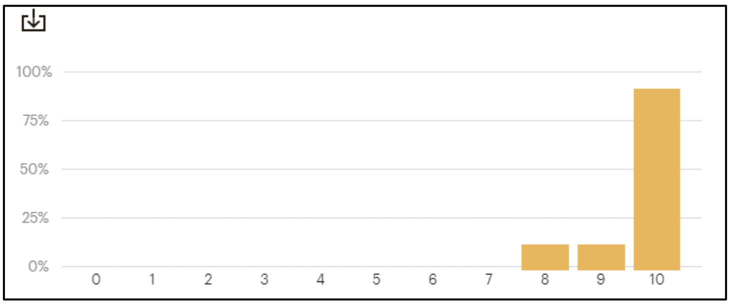
At this stage, Goals had been set up to enable the recording of user actions on Google Ads (e.g., a user who completed a pre-defined goal or who used the call function on Google MyBusiness). To identify if the co-branded advertisement translated into increased financial or alternative company objectives a comparative analysis of the enquiries and sales relating to Volvo Penta products within this time and similar previous time periods was conducted.

Figure 71 below demonstrates the changes in Volvo Penta Sales from 2017 to 2020. Two points to note include the commencement of the KTP and Co-branding Campaigns. The second point relates to the effect of Covid-19 in 2020. Aside from this potential anomaly, a clear upward trend in financial performance is demonstrated from 2018.

Figure 67: Breakdown of Volvo Sales by Month 2019-2021

The implementation of Co-branding Campaign 1 took place in March 2019. Due to the organic nature of the campaign, it took an amount of time for the website indexing to achieve a suitable level and create significant impact. From May 2019, a significant incline is noted and this trend remains at a higher-than-average level throughout the rest of the year and into the initial months of 2020. March – June 2020 shows a significant decline, and this relates to the initial commencement of quarantine from Covid-19. Following this, the implementation of Campaign 2 took place at the end of September 2020, with the launch going live in early October of the PPC campaigns. A notable increase was then achieved from October and into the following January. The Campaign was stopped mid-way through January 2021 and a decline in sales is noted the following month.

Figure 68: Net Promoter Score for Marine



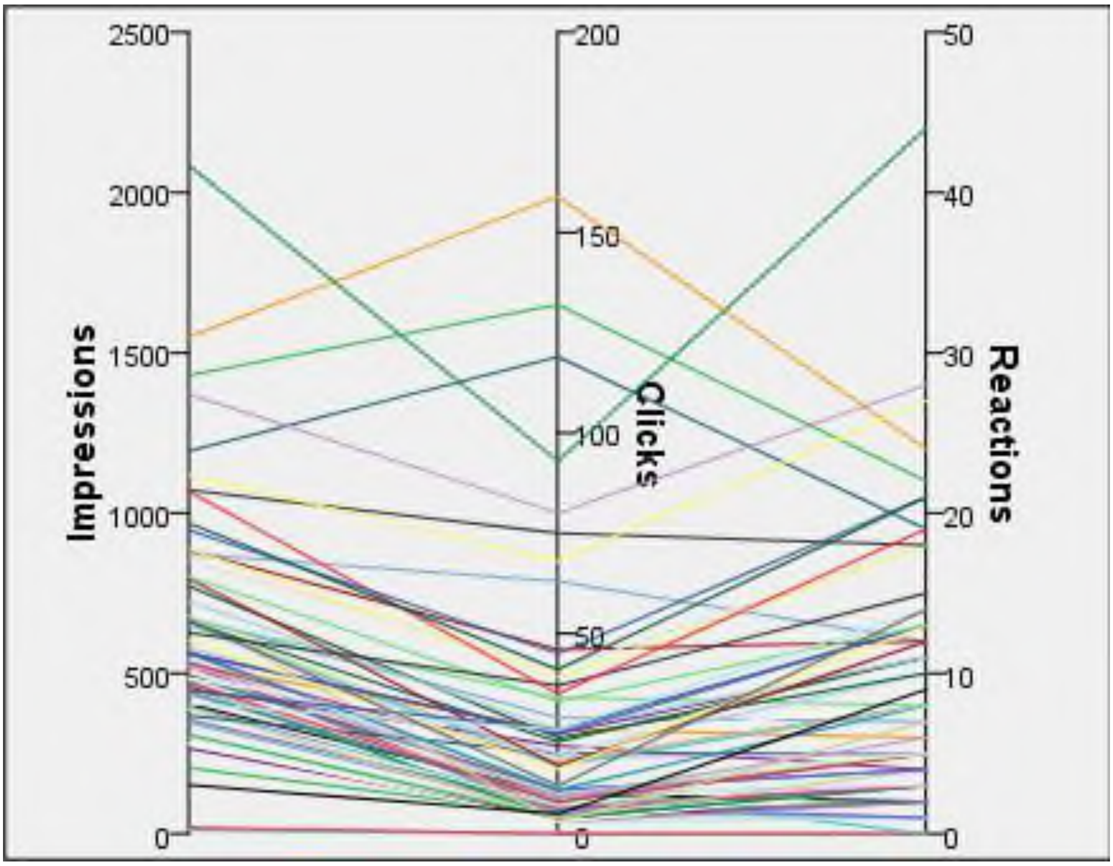
The results demonstrate the highest Net Promoter score, with a final average of **9.7 (Figure 68).** This demonstrates a relatively consistent consensus between customers in relation to Royston's Perceived Quality and Advocacy.

9.4. Appendix D: Co-branding Campaign 3

This campaign used Data Analysis and A/B Testing through Orthogonal Design to determine the effects of digital co-branding and other success factors in Royston's social media strategy.

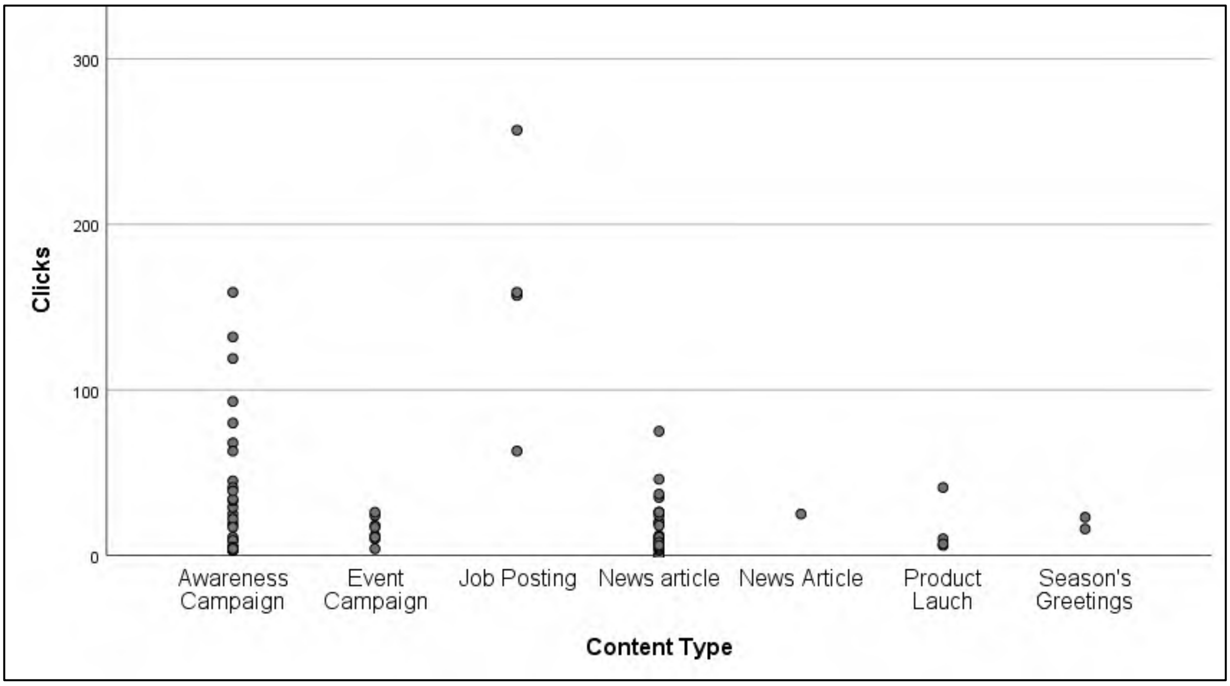
Preliminary Data Analysis

Figure 69: Parallel Plot of Engagement Interactions



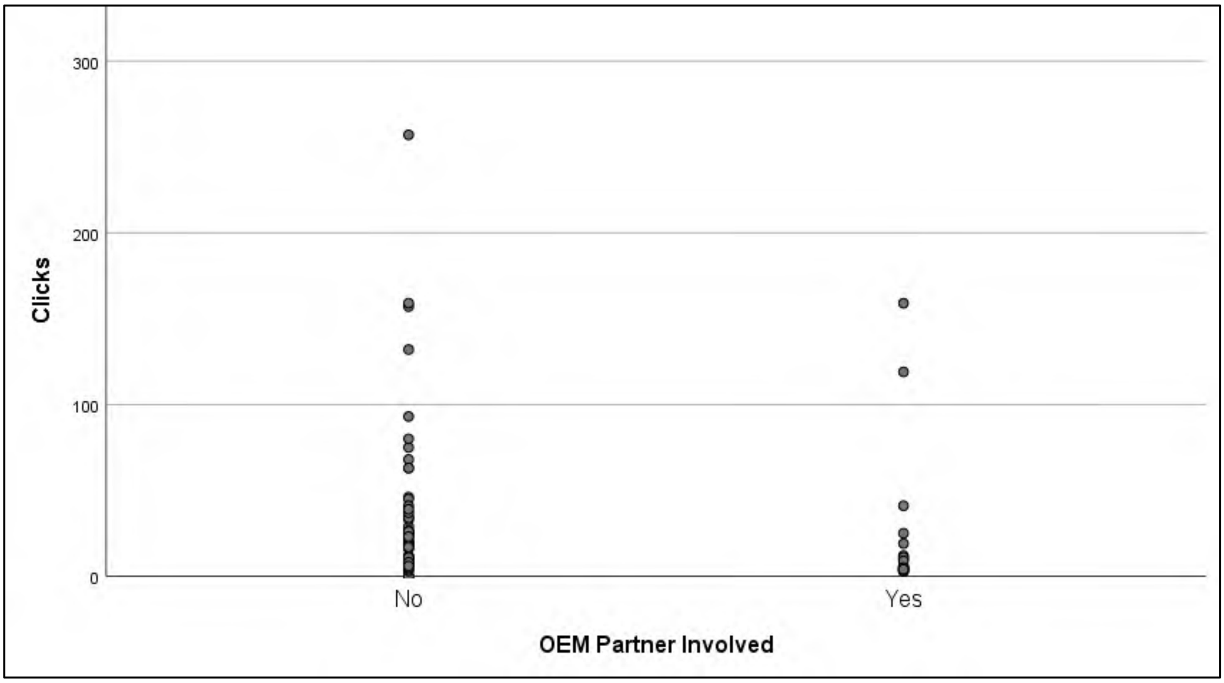
The Parallel Plot (**Figure 69**) indicates the engagement interactions by post. In this case we can see that the majority of posts have elevated levels of impressions, lower levels of clicks prior to an elevated level of reactions. There are 3 visible anomalies to this trend, which indicate a higher level of clicks versus impressions and reactions. These anomalies are 'Job Postings', which would usually see a much higher level of traffic than other posts.

Figure 70: Scatter Plot of Clicks by Content Type



This Scatter plot indicated anomalies within the 'Job Posting' category and to prevent skewing the data results these have been excluded from the Decision Tree Analysis and further exploratory data analysis.

Figure 71: Scatter Plot of Clicks by Content Type



This initial exploratory Scatter Plot indicates that the exclusion of OEM Partners may result in higher engagement, although there is an evident imbalance of the number of posts between those with OEM Partners included and those without. Literature suggests that incorporating an OEM Partner in a co-branded campaign, if done well, should improve the existing results through co-branding, therefore, further analysis will be needed to analyse this.

Figure 72: Scatter Plot of Clicks by Post Length

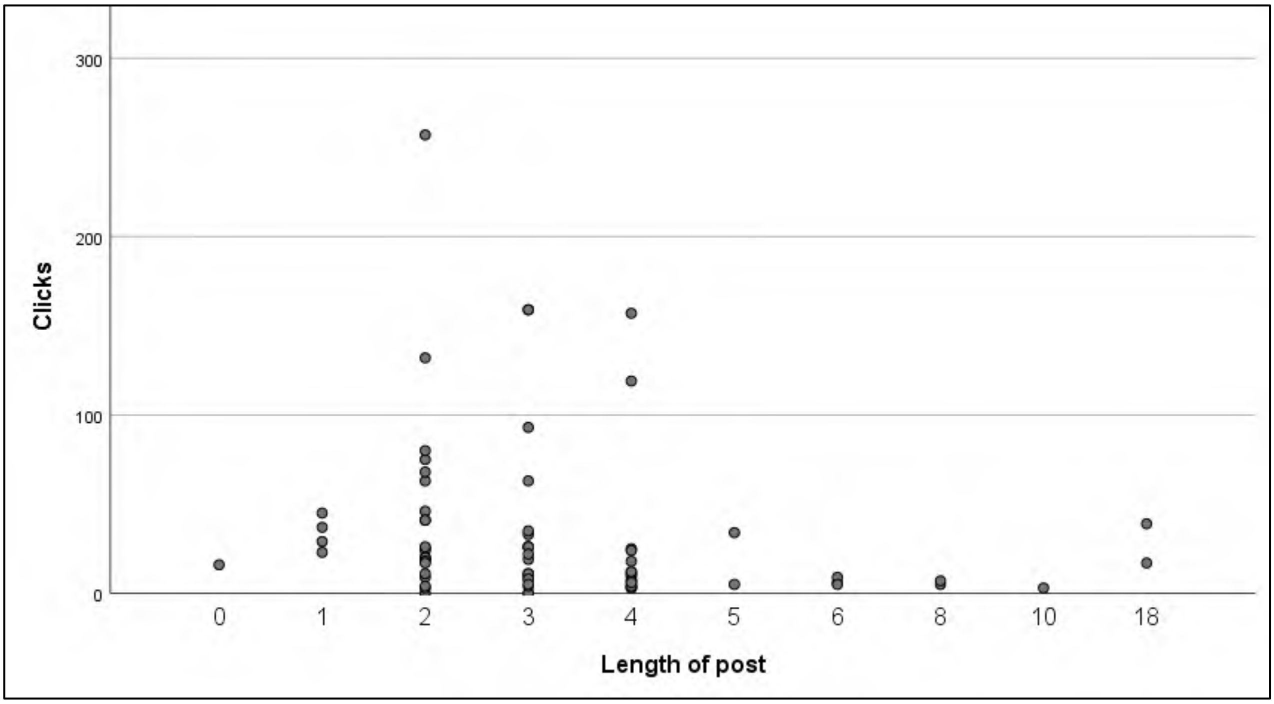
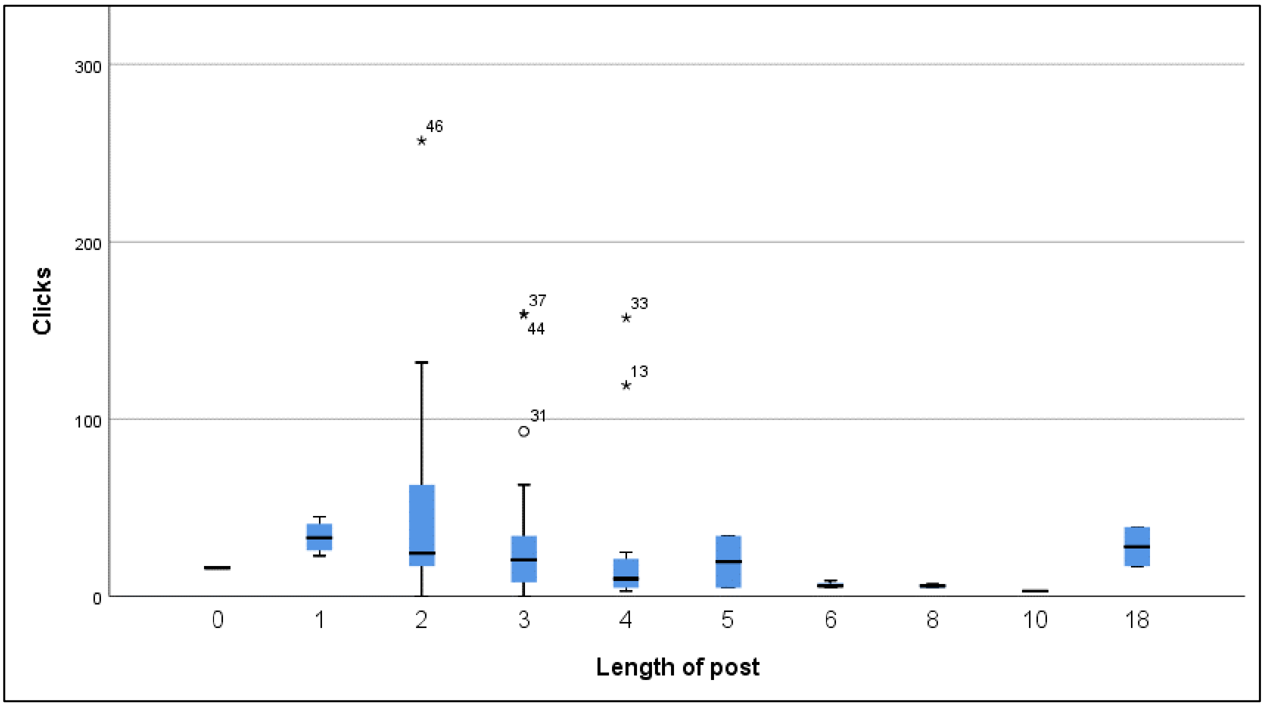


Figure 73: Boxplot of Clicks by Length of Post



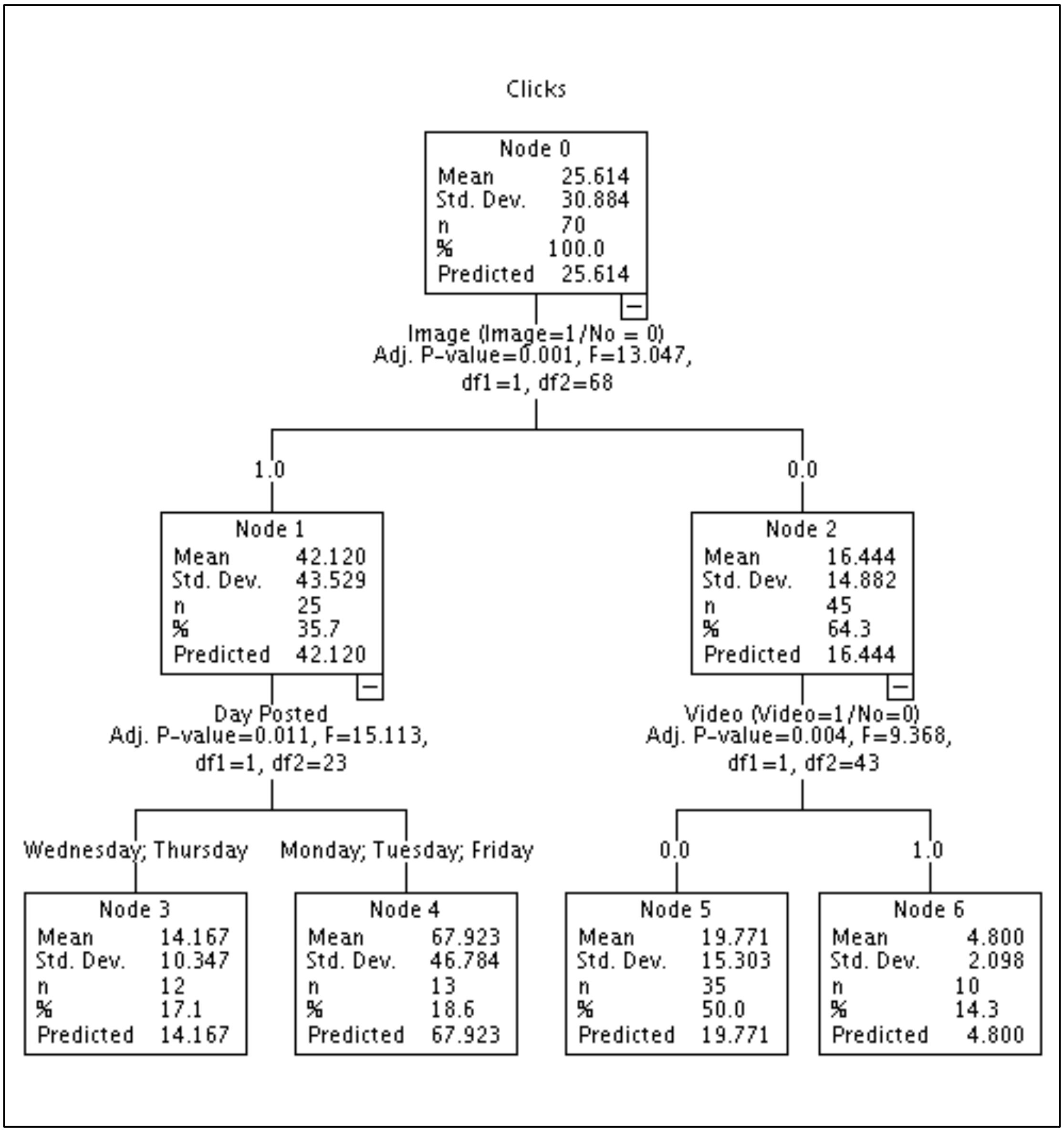
The length of post number represents the number of lines of text within a certain post. Initial data suggests that posts with fewer lines of text (e.g., 2 – 4 lines) indicate a higher level of clicks than those with 0 – 1 lines or those with 6+ lines.

Optimisation 1

Decision Tree using the CHAID Growing Method

This Decision Tree uses the CHAID (**Figure 61**) growing method and indicates the variables which influence the number of clicks a post receives. This used 70 posts from the observed 73 posts as the 3 job postings were removed from the dataset. This Decision Tree shows that Image, Day Posted and Videos all influence the Click Rate and, according to this Decision Tree, a post which includes an Image and is posted on Monday, Tuesday, or Friday performs the best. Lastly, the company has particularly been working on co-branding partnerships as a marketing strategy, therefore further exploration into OEM Partner inclusion will be needed.

Figure 61: Decision Tree – CHAID

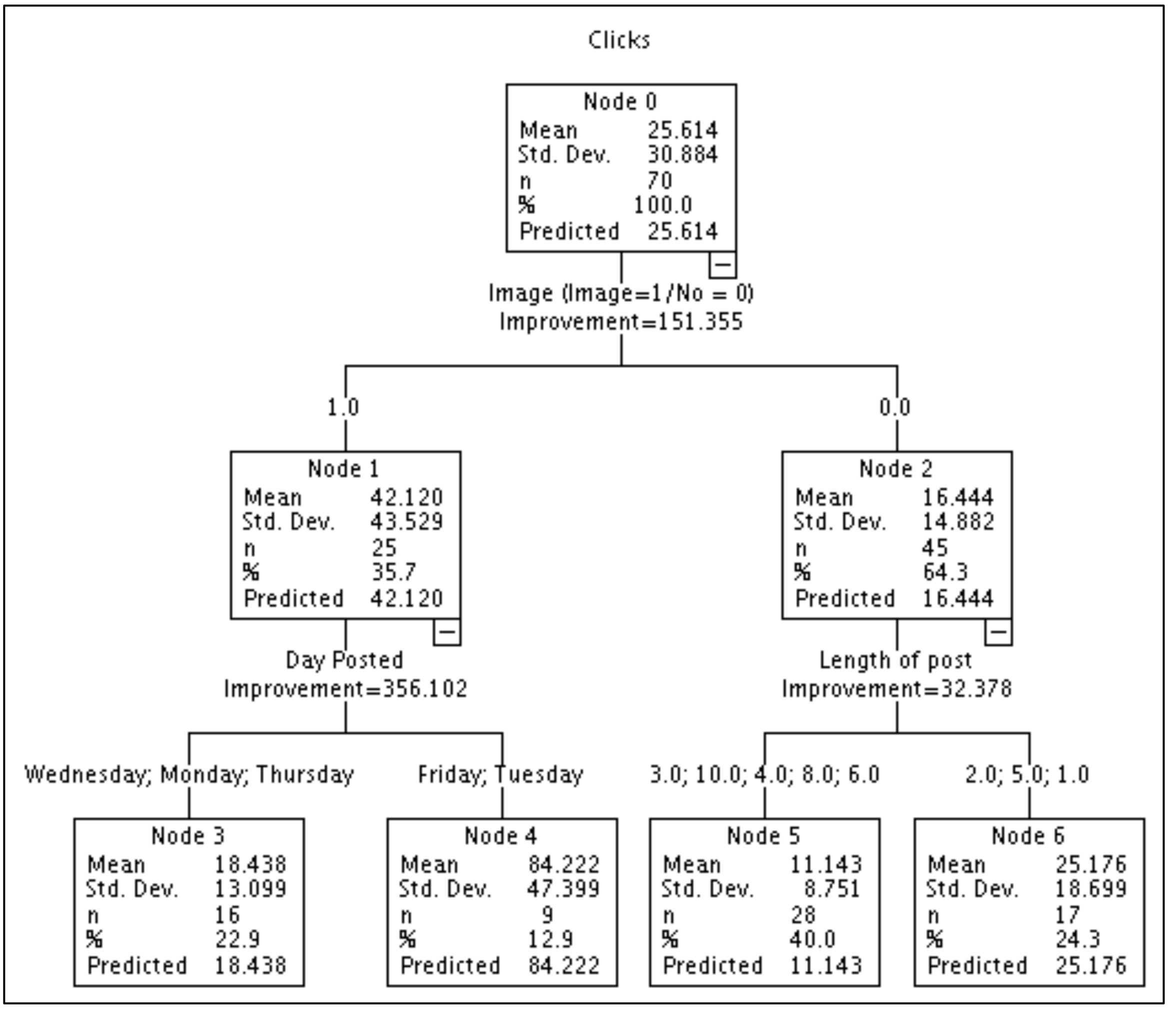


This Decision Tree uses the CHAID growing method and indicates the variables which influence the number of clicks a post receives. This Decision Tree shows that Image, Day Posted and Videos all influence the Click Rate and according to this Decision Tree a post which includes an Image and is posted on Monday, Tuesday, or Friday received the highest clicks.

Figure 74: Data Specification and Results for CHAID Decision Tree

Specifications	Growing Method	CRT
	Dependent Variable	Clicks
	Independent Variables	OEM Partner Involved, Content Type, Day Posted, Hashtags Yes=1/No = 0), Image (Image=1/No = 0), Video (Video=1/No=0), Length of post, Number of Call to Actions, Mentions (Yes=1 / no=0), Content Type ~= "Job Posting" (FILTER)
	Validation	None
	Maximum Tree Depth	5
	Minimum Cases in Parent Node	5
	Minimum Cases in Child Node	3
Results	Independent Variables Included	Image (Image=1/No = 0), Length of post, Content Type, Day Posted, OEM Partner Involved, Number of Call to Actions, Hashtags Yes=1/No = 0), Video (Video=1/No=0), Mentions (Yes=1 / no=0)
	Number of Nodes	17
	Number of Terminal Nodes	9
	Depth	4

Figure 75: Decision Tree – CRT Model Summary



Using the CRT Growing Method a similar set of results is found. The highest level of clicks are found when the post includes an Image and is posted on a Tuesday or Friday. The company is particularly working on co-branding partnerships as a marketing strategy, therefore further exploration into OEM Partner inclusion will be needed.

Optimisation 2

Random Design Experiment

Minitab was used to construct the orthogonal design used for this study, with the four most influential factors derived from the Decision Tree Analysis: Content Type, OEM Partner, Day Posted and Length of Post. This design accumulates 16 posts for the experimental A/B testing process. To decrease bias limitations the 16 posts will be posted in a random order. The random design considered the alternating factors to ensure the posts could be uploaded twice a week without overlapping, meaning that the post order alternates from a Tuesday to Thursday each time. All other factors were subject to the random design process in Minitab. The original orthogonal design table (as seen below) demonstrates the various criteria used for this experiment.

Table 33: Criteria for Experiment

Criteria 1	Criteria 2	Criteria 3	Criteria 4
Specific	OEM	Tuesday	2 lines
Specific	OEM	Thursday	2 lines
Specific	No OEM	Tuesday	2 lines
Specific	No OEM	Thursday	2 lines
General	OEM	Tuesday	2 lines
General	OEM	Thursday	2 lines
General	No OEM	Tuesday	2 lines
General	No OEM	Thursday	2 lines
Specific	OEM	Tuesday	6 lines
Specific	OEM	Thursday	6 lines
Specific	No OEM	Tuesday	6 lines
Specific	No OEM	Thursday	6 lines
General	OEM	Tuesday	6 lines
General	OEM	Thursday	6 lines
General	No OEM	Tuesday	6 lines
General	No OEM	Thursday	6 lines

The random design was completed, and the posts were given a 'Test Order Number', which dictates the order in which the posts will be uploaded. The table below demonstrates the order of the posts.

Table 34: Random Design

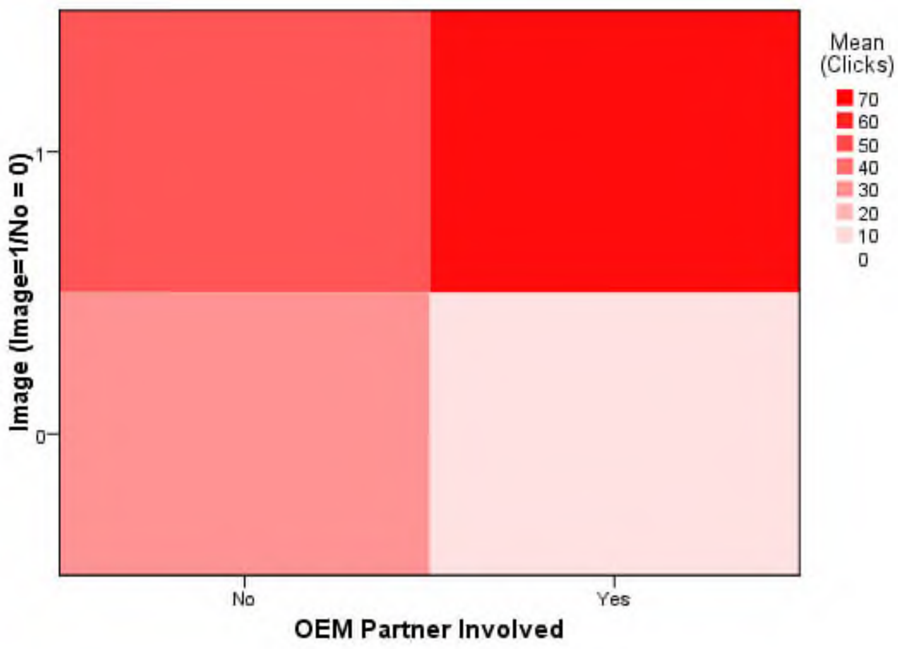
Test Order Number	Criteria 1	Criteria 2	Criteria 3	Criteria 4
1	Specific	OEM	Tuesday	2 lines
2	Specific	OEM	Thursday	6 lines
3	General	OEM	Tuesday	2 lines
4	Specific	No OEM	Thursday	2 lines
5	General	OEM	Tuesday	6 lines
6	Specific	No OEM	Thursday	6 lines
7	Specific	No OEM	Tuesday	6 lines
8	General	OEM	Thursday	6 lines
9	Specific	No OEM	Tuesday	2 lines
10	General	OEM	Thursday	2 lines
11	General	No OEM	Tuesday	2 lines
12	Specific	OEM	Thursday	2 lines
13	General	No OEM	Tuesday	6 lines
14	General	No OEM	Thursday	6 lines
15	Specific	OEM	Tuesday	6 lines
16	General	No OEM	Thursday	2 lines

Results will be recorded through the organic LinkedIn statistics, including impressions, reactions, comments, clicks, shares, and clicks. These will be recorded every 24 hours for 7 days after the date of posting. Prior analysis of two LinkedIn posts determined that after 7 days there were limited changes to key analytics figures. This determined the length of time after the initial post upload that results would be recorded for to ensure accuracy when analysing the results. The changes to the two test LinkedIn posts can been seen in the table below. Results will be recorded in a similar format for the 16 posts.

Table 35: Test LinkedIn Post Results

Post	Day	Impressions	Reactions	Comments	Shares	Clicks
1	1	770	26	1	1	96
1	2	1100	32	2	1	118
1	3	1197	32	2	1	122
1	4	1240	33	2	1	125
1	5	1339	34	2	1	138
1	6	1427	37	2	1	144
1	7	1516	38	3	1	149
2	1	156	1	0	0	2
2	2	179	1	0	0	3
2	3	191	1	0	0	3
2	4	237	1	0	0	3
2	5	289	2	0	0	3
2	6	311	2	0	0	3
2	7	347	2	0	0	3

Figure 76: Heat Map showing Inclusion of Image and OEM Partner

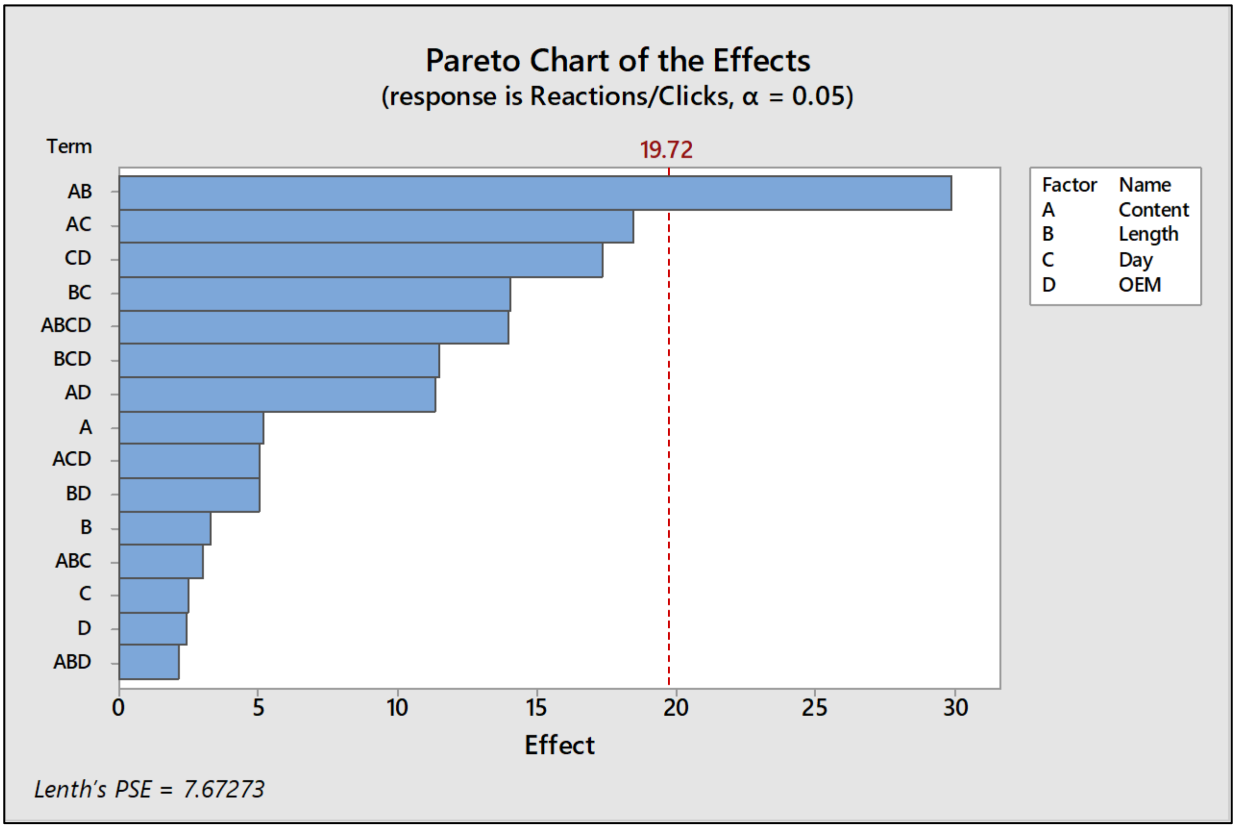


Using a Heat Map, successful, unsuccessful, or indifferent interactions between variables can be viewed. In the Decision Tree Analysis, the inclusion of OEM Partners in a post was not a prominent or successful variable when determining the level of engagement through the number of Clicks. However, the Heat Map conducted in this analysis demonstrates that when an OEM Partner and an image is included in the same post, this interaction proves to be the most successful in terms of engagement rate. Posts with an OEM Partner included, and no image, proved to be the least successful in terms of Clicks. This trend continues when adding in further media variables such as video. The Heat Map above shows again that posts with an image and the inclusion of OEM Partners achieve the highest clicks.

Orthogonal Design Results

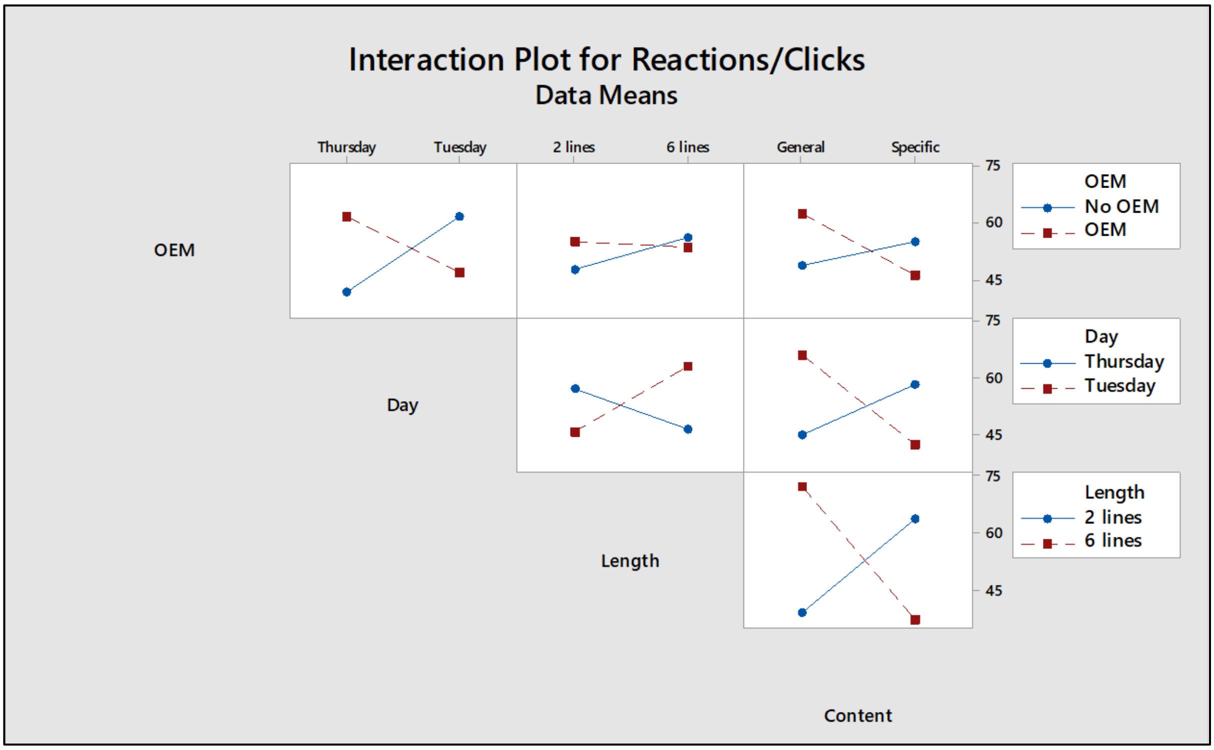
The orthogonal design experiment was conducted, and the data was collected and analysed through Minitab.

Figure 77: Pareto Chart of the Effects



The Pareto Chart presents the effects of various criteria based on the response rate (proportion of reactions/clicks). The most influential reaction includes: the criteria of content type; whether a post is general or specific and the content length, whether a post is short (2 lines) or long (6 long). Other minor reactions are evident in the data, with co-branded posts including an OEM leading to a higher response rate and the day a post is uploaded also affecting the response rate.

Figure 78: Interaction Plot for Reactions/Clicks



The Interaction Plot (Figure 78) demonstrates several interactions between the various criteria. Posts uploaded on a Thursday perform better when an OEM is included, is shorter (2 lines in length) and if the post is specific. Post uploads on a Tuesday, however, perform better when an OEM is excluded, is a longer post (6 lines in length) and if the post is specific or includes more technical information. By analysing the impact of individual criteria, it can be concluded that the inclusion of an OEM Partner (co-branded) and a post that is general, e.g., did not include technical information / images, received a higher proportion of reactions. However, by adding up all variables tested in this experiment and analysing these through the Interaction Plots in Figure 78, two optimal criteria combinations can be presented:

Optimal Criteria 1: *OEM Included – 2 Lines – Specific Content – Thursday Posting*

Optimal Criteria 2: *OEM Excluded – 6 Lines – General Content – Tuesday Posting*

These criteria combinations can be presented to the company as recommendations to achieve the highest level of post engagement.

Conclusion

The use of A/B Testing through Orthogonal Design has enabled the identification of optimal criteria combinations for use within a specific B2B social media setting. By conducting a detailed analysis of 70 previous posts, an orthogonal design experiment was constructed to A/B Test the influential variables. This was implemented within an SME marine engineering company operating within the B2B industry using their LinkedIn platform account. The experiment identified optimal individual criteria and criteria combinations that positively impacted the level of engagement a post received. Thus, demonstrating the importance of identifying and implementing B2B specific social media strategies and show casing how SME's and organisations operating in the B2B industry can optimize their social media strategies through experimentation and analysis.

Social Media Improvements

The commencement of the KTP increased pressure on Royston to increase their social media presence, starting with one LinkedIn profile with under 700 followers to their current position with three profiles (one for their main Royston business, one for the enginei product and one for their Australia subsidiary) with over 3000 followers.

9.5. Appendix E: Co-branding Campaign 4

This campaign focuses on the Distributors of Royston's vessel fuel management system, enginei. This campaign will focus on the creation of enginei's Distributor Network by creating campaigns based around the results of a co-branding campaign with enginei and a localized, regional distributor.

Distributor Matrix

A Distributor Matrix demonstrated the existing capabilities of enginei's Distributors and their locations. This enabled the researcher and Marketing Team to identify suitable partners for the initial digital co-branding campaign. To conduct a digital co-branding campaign, the partner was expected to reside in a suitable location, with current digital capabilities (including but not limited to, a website and a social media presence) and personnel (e.g., Marketing Team) willing to assist in collaborating.

Brand and Marketing Guidelines

Comprehensive sets of Brand and Marketing Guidelines were created to ensure that any co-branding campaigns created by Distributors with Royston/enginei's brand are within specified guidelines. This allowed the scaling of co-branding campaigns to occur both internally from Royston's Marketing Team and externally through multiple Distributors Marketing Team, demonstrating both globalised and localized aspects of the company.

Distributor Engagement

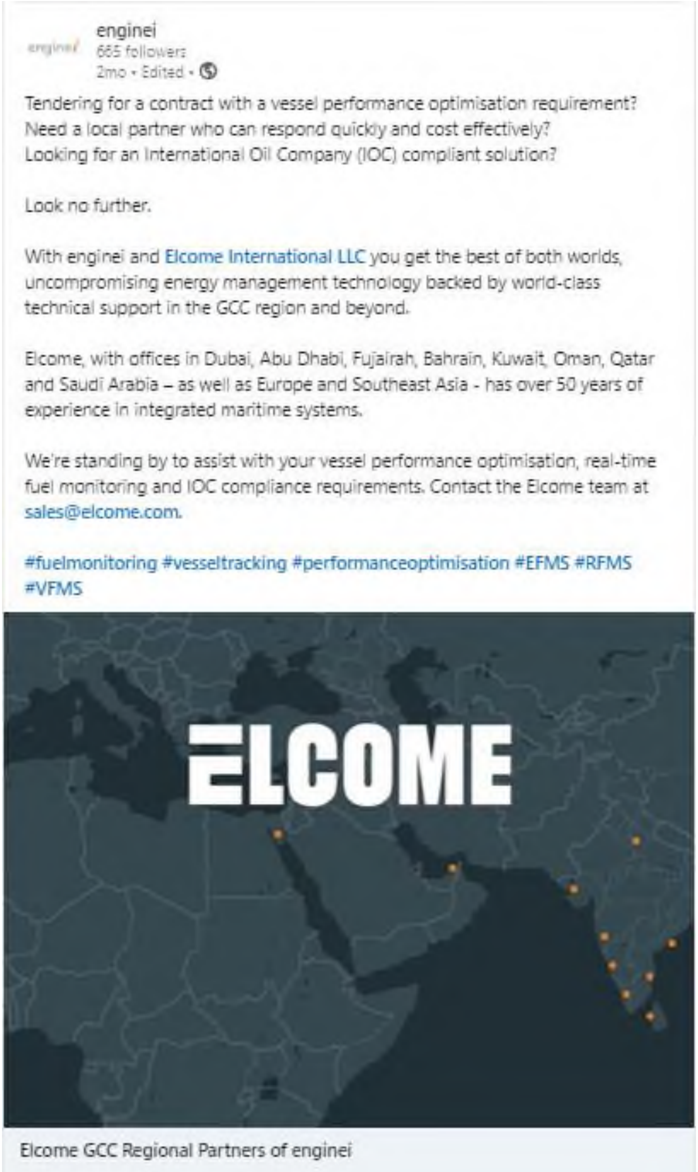
All local Distribution Partners were engaged and encouraged to create co-branding campaigns following the Brand Guidelines closely. Elcome's Marketing Team agreed to collaborate through a digital co-branding campaign.

Co-branding Campaign

For this campaign, a single Distribution Partner was selected to conduct an in-depth co-branding campaign utilizing four digital components. The Distributor Matrix identified Elcome, Dubai, as a suitable partner as they have an existing online presence, both through their website and through social media. Elcome is a maritime equipment supplier based in the GCC region, with regional offices in Dubai. They have an existing and localized presence with maritime operators in the immediate area. The Marketing Team and relevant personnel from Elcome agreed to collaborate through a digital co-branding campaign with Royston's EFMS product, enginei.

The initial co-branded campaign was created and uploaded to the social media platform LinkedIn. The Researcher, Marketing Team and the partner's Marketing Team collaborated and created a video and text that would be utilized on enginei's LinkedIn page. This social media post is shown below.

Figure 79: Co-branded Social Media Post



The results were recorded, including all analytics for awareness and engagement. These results were analysed against all other social media campaigns uploaded on enginei's site from 1st May 2021 to 20th September 2021. The median was identified to gain a basic understanding of where the results of the Elcome co-branding campaign were situated in comparison to the other posts within this time. Similarly to Co-branding Campaign 2, a decision was made to remove the job-related posts due to anomalies identified in the data.

Table 36: Social Media Post Analysis

Co-Branded/ Non-Co-branded	Update Type	Impressions	Clicks	CTR	Likes	Comments	Shares	Engagement Rate
CB	Organic	418	13	0.031	7	0	0	0.048
CB	Organic	467	31	0.066	16	1	6	0.116
NCB	Organic	379	16	0.042	10	0	1	0.071
NCB	Organic	338	7	0.021	7	0	1	0.044
NCB	Organic	619	33	0.053	16	3	1	0.086
CB (Elcome)	Organic	713	20	0.028	26	0	9	0.077
NCB	Organic	447	14	0.031	13	0	2	0.065
NCB	Organic	134	1	0.007	2	0	0	0.022
CB	Organic	382	15	0.039	8	0	2	0.065
NCB	Organic	306	4	0.013	7	0	0	0.036
NCB	Organic	386	8	0.021	9	0	2	0.049
NCB	Organic	1116	50	0.045	29	6	1	0.077
All CB	AVERAGE	495	19.75	0.041	14.3	0.25	4.25	0.0765
All NCB	AVERAGE	482	16.8	0.031	12	1	1	0.0861
All Posts (exc Elcome)	AVERAGE	486.91	36.67	0.033	12.5	0.33	2.08	0.0631
Elcome	AVERAGE	713	20	0.028	26	0	9	0.0771

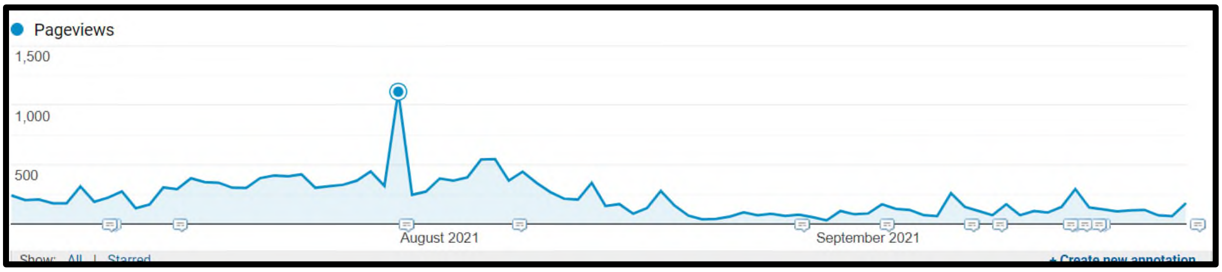
On average the Co-Branded posts (CB) outperformed the Non-Co-Branded (NCB) posts across all awareness metrics, including Impressions, Clicks and Click-through-Rate (CTR). They continued to outperform the Non-Co-Branded posts within two of the engagement metrics, Likes and Shares. However, in the remaining two engagement metrics, Comments and Engagement Rate, the Non-Co-branded Posts outperformed their co-branded counterparts.

Optimisation 1

To broaden the scope of this campaign, a press release was created linking back to the enginei website, again co-branded between enginei and Elcome. Linking back to the enginei website is common practice for any enginei news articles or press releases and the Marketing Team ensures that on the date of release an annotation is created on Google Analytics. Annotations allow the identification of any positive or negative changes in website visitors and allow the identification of the most-likely cause.

The digital Press Release was curated by the Royston and Elcome Marketing Teams and distributed on 29th July 2021 (shown below), both by Royston and Elcome. This coincided with sharing the Press Release on enginei's website and LinkedIn pages. The graph below shows the number of users across a 3-month period and a significant single spike in users can be clearly identified.

Figure 80: Google Analytics Screenshot of Users on Royston's Website



The spike represents the 29th of July, the date of the co-branded Elcome Press Release, and indicates that between 2-3 times the normal number of users visited the enginei website on that day. Multiple other press releases have been published in the same manner throughout the timeframe within the graph but have not received a similar response.

Google Analytics identified over 400 out of the 1,113 users entered the enginei site that day from a 3rd party referrer. Unfortunately, it is not possible to track the exact acquisition on many of these. However, it is possible that the Press Release launched on Elcome's site could have driven a significant amount of traffic towards the enginei site.

Optimisation 2

Two campaigns were originally scheduled for this stage, a non-co-branded general advertisement for enginei and a co-branded advertisement for enginei and their localized GCC Partner, Elcome. The opportunity to create a third advertisement with a localized Singaporean organization meant that the results could be compared, and any anomalies or trends could be identified. The length of time that the advertisements lasted, and the budget varied due to the business case, so the results were analysed to identify averages, conversion rates and bounce rates.

enginei - General Campaign

- Cost to date: £280
- Number of clicks: 5800
- Number of users navigated to contact us page: 381
- Session duration on contact page: 48 seconds
- Bounce rate of contact page: 57%

This campaign has demonstrated above average results in comparison to the other PPC campaigns. The CTR is 6.5% but the cost to get a user onto the contact us page is under £0.74. Suggestion: ask the team to log information about where calls or emails derive from: this would increase accuracy with regards to Return of Investment information.

enginei x Elcome

- Cost to date: £83
- Number of clicks: 59
- Number of users navigated to contact us page: 6

- Session duration on contact page: 27 seconds
- Bounce rate on contact page: 0%

Again, this campaign was utilised with much narrower search terminology within a specific region and the results are expected to be lower. However, of the 6 users that reached the contact us page there was a 0% bounce rate and an average of 27 seconds duration. The CTR to contact is 10%. However, there was a significantly higher cost for a user to reach the contact page, of over £13.

enginei x Company 2: Singapore Based

- Cost to date: £164
- Number of clicks: 342
- Number of users navigated to contact us page: 95
- Session duration on contact page: 83 seconds
- Bounce rate on contact page: 94%

This campaign was utilised with much narrower search terminology within a specific region and the results are expected to be lower. The CTR is 28% and the average cost for a user to reach the contact page is £1.74, this campaign also has a higher than average bounce rate, but also an extremely high session duration.

Overarching Results

In the initial two cycles, the joint website Press Release and Social Media, there were some indications of increased awareness metrics. However, these are not consistent in the Social Media campaign. Further to this, the PPC campaign with Elcome held a significantly higher cost-per-conversion at over £13 in comparison to £0.74 within the generalized campaign. One promising factor of the PPC Campaign with Elcome was the 0% Bounce Rate and the higher CTR, indicating a high level of relevance amongst the users. A second advertisement was run with another localized organization from Singapore to assist in understanding if there were trends amongst the co-branded PPC adverts with localized brands in comparison to a non-co-branded alternative. No consistencies were identified as the Bounce Rate of 94% was significantly higher than the others. The analysis of session durations and cost-per-conversion results found no generalizable conclusions. The click through and stay rate is the CTR*(100-bounce rate) and on this measure Elcome has the highest score of 10% compared with 1.7% for Singapore and 2.8% for general. It could be considered that getting to the contact page is valuable in itself, as users may return on another occasion

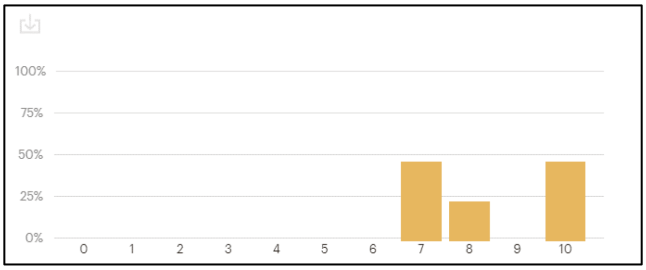
Financial Return

There was no evidence of financial return during this campaign with the localized GCC Partner Elcome. Extensive resources, including the time of employees, were spent on the creation of this campaign and limited return was evident.

Net Promoter Score

To determine the Perceived Quality, Advocacy and Associations relating to enginei, a survey was sent to current clients to determine the Net Promoter Score.

Figure 81: Net Promoter Score Analysis - Spare Parts



The results demonstrate a lower Net Promoter score than Royston's Spare Parts Department, with a final average of **8.4.** This demonstrates a slight drop in Perceived Quality and Advocacy amongst the existing clients.