

KM as a Facilitator for CRM in a US Print Company

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Abstract: To survive in a rapidly changing and increasingly competitive global marketplace it is necessary for organisations to have access to accurate and timely information. The focus of this paper is to present Knowledge Management (KM) as an enabler for Customer Relationship Management (CRM), which in turn facilitates customer service excellence. The paper considers a large US print company as a case example of how customer relationship management has successfully been applied with a positive impact on customer service excellence. Understanding CRM to enhance growth and profitability is not only a priority for organisations, but a critical area for academic research.

This paper presents empirical data from CRM implementation, which has been attributed to the company's success, especially within the customer service department. Adopting KM principles to successfully build and develop core business practices, enhanced customer knowledge is used to deliver a superior service and product range to their customer base. Preliminary findings reveal that at the centre of the business success is the strong focus on their customer. The company identifies how strategically significant each customer is and focuses on knowledge about, for and from customers. Customer data is stored in IT-based systems and extracted and transformed into customer knowledge (as phase one of the CRM approach). Combining clean and focused data with human expertise (phase 2) has led to good KM practice. Lessons learnt from Company A highlight the never-ending focus on customers and the importance of having a strategic and operational business focus for CRM implementations.

Keywords: Knowledge Management, Customer Relationship Management, Customer Focus, Case study

1. Introduction

The purpose of this exploratory paper is to extend strategic thinking in the area of Knowledge Management (KM) as a facilitator to Customer Relationship Management (CRM), which in turn enables customer service excellence. As outlined by Garrido-Moreno et al., (2010), '*CRM is a business strategy that aims to establish and develop value-creating relationships with customers based on knowledge. Using IT as an enabler, CRM requires a redesign of the organisation and its processes to orient them to the customer, so that by personalising its products and services, the firm can optimally satisfy customer needs and thereby generate long-term, mutually beneficial, loyalty relationships*'. Research has considered the links between CRM and KM (Dous et al., 2005, Lambe 2008, Bueren, 2005) to the extent that Stefanou et al., (2003) claim, '*CRM is definitely related to the discipline of knowledge management, thus, the existence of sufficient and continually updated customer knowledge is critical for an effective CRM system*'.

This paper focuses on a US Print Company (Company A) and details their successful CRM implementation and on-going success in customer engagement. The aim of the research is to identify how improved KM can lead to successful CRM promoting better decision-making and 'first-time right' solutions throughout the entire company. The paper considers the role of KM as a key driver of value creation as defined by the strategic management literature (eg Barney, 1991; Asmussen et al., 2013; Cavaliere and Lombardi, 2015) where a greater resilience on intellectual capabilities exists and employees are central to knowledge processes such as knowledge creation (Auernhammer and Hall, 2014), knowledge sharing (McAdam et al., 2012) and knowledge implementation (Tseng, 2010).

The paper presents data from preliminary findings derived as part of a short research project, conducted early 2016. A single case approach using semi-structured interviews, observation and company documentation is the employed methodology. While the results are from a first stage, exploratory data collection approach, the initial findings provide empirical insight into the concept that KM should underpin CRM implementation. Collaborations with Company A are on-going with a second research visit planned for April 2017.

2. Case Study Context

Company A are a US based print and design company with locations in seven US cities. They have five different brands in their company portfolio. Promotion of the various brands is under the concept of a common vision that allows customers to make memorable moments that last a lifetime. The company has remained at the

forefront of innovation, introducing new technology, expanding product offerings and making it easier for their customers to share important events in their lives. The company CEO has a career history of working in senior management for some of the world's most famous brands, such as eBay, Levi Strauss & Co, Pepsi-Cola North America and Quaker Oats Company. In his role model as knowledge champion, he places great emphasis on customer experience and the use of existing customer knowledge to derive stronger customer relationship management.

Company A were established in 1999 in the USA. They launched their company with over 1,000 competitors, including giants like Walmart, Eastman Kodak, and Yahoo. This heavily saturated market meant that survival would be difficult. However, at the start of 2013 the company had 47 financial quarters of revenue growth. Company A floated on the stock market during 2006. They specialise in digital photo products and services for consumers and professional photography. Customers can upload, store, share, edit, and print photos through its website. In August 2014, the total number of customers was 2.6 million, reflecting an increase of 13% from the prior-year. Total orders generated were 4.2 million, up 16% year over year. Average order value was \$36.14, up 3% year over year driven by promotional strategies and integrated marketing campaigns adopted by the company.

The company has an innovative customer service centre that promotes the customer relationship through the manipulation and management of their customer data. Customer service centres are an important component in the delivery of product/services to consumers. Many organisations provide this as their main customer interface for all customer contact as they recognise that managing the customer experience resulting from customer service centre encounters has important implications for an organisation's success (Dean, 2007). In the customer service centre, service encounters occur via telephone or via online 'chat' each time a customer interacts with the company. This is different from face-to-face encounters that occur between employees and customers in the non-electronic environments of service companies (Jaiswal, 2008). The customer-contact employee plays a major role in delivering superior customer experience (Malhotra and Mukherjee, 2003) and is viewed to be vital in the promotion of the company image and reputation.

Company A has embraced the concept of KM embedding systematic approaches to find, understand, and use knowledge to achieve organisational objectives, such as the reduction of time and expense of trial and error, reinvention and duplication. They have implemented a robust strategy based on knowledge management principles, the synergetic combination of people, process and technology. Combining IT systems (the management of their customer data) with personal devotion from staff (to enhance the customer experience) Company A has achieved high CRM success.

Company A has a very fluid, relaxed working environment. Open plan floor layouts encourage staff to converse with each other during the day, management are located in pods on the 'shop' floors so they are seen to be part of the team and not removed from staff. Each individual staff member has their own desk, often equipped with two monitors to enable dual-screen working, which they can personalise with pictures, photographs, plants, etc. if they wish. Typical of an artistic environment, the working environment makes use of art, graphics, product displays and open spaces to encourage an informal atmosphere. Refreshment breaks are encouraged as Company A appreciates socialisation and informal knowledge exchange, with common spaces provided. Refreshments are provided free of charge with fresh fruit delivered daily. Staff can avail of the common areas as and when they need, with no restrictions on break times.

Due to the informal working environment, the feeling of being valued and trusted, the higher than average pay and opportunities for training and progression, employees are loyal to the company and staff turnover is low. Staff are multi-cultural and gravitate to this part of the US to work for Company A. As one production operative declared *'I would never get opportunities like this in my own country. There is not the same support for graphic designers, I love the creative freedom I get here and can create my own ideas to match the customer's brief, so long as the customer is satisfied that is what is important'*. (PO3) Another outlined *'I get to undertake some very specialised work, I seem to have gained a reputation for being a little bit out there, I have even designed for the CEO so feel very valued working in [name of company] (PM1)'*, however not everyone shares these views, as PO4 mentioned *'Sometimes I would like to go beyond in terms of creativity, however we have procedures and protocols to adhere to, I suppose this is not a bad thing, it keeps the work to a higher quality without it being too wacky, it just makes me feel that my innovation is stifled at times'*.

The culture of an organisation can support or suppress the capacity and ability to use its knowledge sources (Davenport and Prusak, 1995; Nonaka and Takeuchi, 1995) to maximum effect. According to Schein, (2004) organisational culture is a pattern of common assumptions, values, beliefs and attitudes that influence organisation behaviour. Schein asserts that organisational culture exists at three levels from outer to inner, namely artifacts, espoused values and basic underlying assumptions. While artifacts (such as physical environment, behaviour patterns) are visible manifestations of core cultural tendencies, basic underlying assumptions are the invisible but identifiable reasons why group members (employees) perceive, think, and feel they way they do in that particular environment. Espoused values are the shared values of the group members which form the organisations' philosophies, strategies and goals. In another view, Schneider, (2000) describes organisation culture simply '*as the way things are done in the organisation*'. Culture is seen as the most influential factor in the success or failure of KM initiatives (McManus and Loughridge, 2002) with KM capacity having a direct impact on organisational performance (Chen and Fong, 2015). Therefore, within Company A the culture can be seen as a facilitator of business success as employees embrace the strong customer focused culture. The physical environment and behaviour of the management team support this culture and aid the delivery of excellent customer service.

3. Knowledge Management

Although Knowledge Management is not a new concept, it has received criticism for lacking clarity in its rationale, definitions and frameworks (Lin et al., 2012). Taking that into consideration KM is still deemed an essential part of the corporate strategy for innovative, forward thinking organisations (Moffett, 2014). The practice of managing knowledge is concerned with deciding with whom to share, what is to be shared, how it is to be shared, and ultimately sharing and using it, hence managing knowledge produces value when shared knowledge is used and reused. Consistent value occurs when there is an atmosphere of trust and motivation for people to share and use knowledge, when there are systematic processes to find and create knowledge, and, when needed, there is technology to store and make knowledge relatively simple to find and share (CIO Council, 2001). KM involves systematic approaches to find, understand, and use knowledge to achieve organisational objectives. Managing knowledge creates value by reducing the time and expense of trial and error or the reinvention of the wheel (CIO Council, 2001).

The effective use of knowledge is a key ingredient in all successful organisations, no matter what business they are in or what services they provide. Effective KM enhances products, speeds deployment, increases sales, improves profits, and creates customer satisfaction. Considering the latter point, customer satisfaction includes product quality and suitability, price points, warranties, speed of delivery, etc. However, one key area of customer satisfaction occurs when the customer has a problem or a question that needs to be answered. Successful companies recognise that a customer problem may be an opportunity to cement a lasting relationship with the customer by taking care of the problem quickly and efficiently, with good humour and real concern for the customer's satisfaction. However, this cannot easily be done without KM solutions, through the integration of people, process and technology. Being able to engage and empower employees to recognise the value of knowledge capture, creation, share and use, and encourage them to 'go the extra mile' with reward and recognition, will result in a highly charged workforce.

KM implementation is challenging, strategies and operational focus for KM application must be carefully planned in advance to succeed in the attempt and effort; challenges will not be met without adjustment. However, while difficult to install and embed in organisational practices, largely due to the human dimensions and organisational change needed for success, the results of KM implementation are widely noted for organisational improvement, development and sustainability (Davenport and Prusak, 1998; Moffett and Hinds, 2010).

4. Knowledge Management as a Facilitator of Crm

A key theoretical basis for CRM research is the relationship marketing literature (Reinartz et al., 2004). While early relationship marketing activity involved one-to-one marketing, CRM emerged in the mid-1990s promising to significantly improve the implementation of relationship marketing principles by enabling organisations to manage profitable and long-term relationships with customers (Osarenkhoe and Bennani, 2007). In a broad context, CRM suggests that firms must develop a knowledge base to allow modified responses to customers on a continual basis (Campbell, 2003). While CRM is a marketing and business strategy, it does depend on an enabling IT system for data collection, storage, manipulation and extraction. CRM technology, allows firms to

manage interactions across different customer contact points and disseminate this knowledge across the organisation (Crosby and Johnson, 2001; Garrido-Moreno, 2010). CRM is not a strategy confined to marketing, but it is based upon the integration of all resources and capabilities of an enterprise, similar to KM strategy. From this perspective, CRM cannot be isolated to marketing managers, but rather knowledge and orientation must be brought deeper into the functional areas within the organisation (Reinartz et al., 2004).

Gebert et al. (2003) acknowledge the importance of customer knowledge in CRM. They highlight that customer knowledge relating to needs, motivations, and behaviour should be collected and kept up-to-date continuously. It is therefore necessary to apply customer knowledge in CRM for continuous performance improvement. Therefore, it can be concluded that KM is significantly related to CRM, especially in terms of customer knowledge management (Bueren et al., (2005); Lambe, 2008). Gebert et al., (2003) conclude that the knowledge that is most valuable to a company is customer knowledge.

CRM systems are key at storing the physical collection of customer data (knowledge) that can then be analysed via business intelligent (BI) tools. Meaningful patterns can emerge through techniques such as data mining and analytics, this can be converted into actionable information to help corporate executives, business managers and other end users make more informed business decisions. Comparing internal data (eg sales data, previous marketing trends) with external sources (customer expectations, changing perspectives) can generate new insights for competitive advantage. The application of technology, not only interrogates the data in sophisticated ways but generates reports, visualisations and dashboards that present 'knowledge nuggets' that may have been previously uncovered or ignored.

According to Wahlberg et al., (2009) CRM operational issues have received less attention in the literature than the IT elements, causing some to consider CRM as an Information System (IS) issue. CRM is more than just technology, it involves the co-operation and commitment from people within an organisation in order to successfully implement CRM (Bose, 2002; Chen and Popovich, 2003; Prasongsukarn, 2009). While IT is an enabler, it is not the whole solution. If CRM is about searching, attracting, and retaining customers, it is important that the IT system is supported by KM principles, so users are empowered with customer or prospect information that they need, when they need it. It's not enough to have the complete history of the customer's interaction with the company at hand when interacting with them through a call centre or a website (Ferneckes, 2006). It is also critical to have the information to solve support issues, deliver product or competitive information, or anticipate what other products or services customers may be inclined to buy.

Considering the aforementioned, the term KM came to the forefront of business strategies in the 1990s, and it was generally accepted that it referred to a set of disciplines that enabled an organisation to capture, categorise, and present corporate knowledge for improved business and competitive advantage. Therefore, KM began as a method of institutionalising corporate memory and knowledge, but it was largely restricted to the corporate intranet; many KM initiatives failed because they didn't have a clear goal. This then led to knowledge initiatives focusing on the area of customer service as managers found it easier to match investments in KM against traditional metrics like call-handle times, reduction in repeat contacts, and problem escalations. Improving customer service with better informed contact service centre agents or a well-designed web self-service application is a goal that all customer-centric organisations strive to meet and is one that drives revenue, customer loyalty, and marketing efficiencies (Ferneckes, 2006).

A solid KM strategy (supported by a well-defined IT system) can help organisations to solve complex support problems more easily. Providing the right information at the right time to employees at the point of need, can lead to first-time resolution decision making. However, while this task sounds straightforward (how hard can it be to get it right first time?), many organisations have not attained the level of deep integration that ties knowledge based activity (particularly at the self-service level) to a CRM-facing customer record. Innovative organisations use the intersection of CRM and KM to guide product and service decisions and attempt to intercept customer service overloads before they begin (Compton, 2004). By combining KM with customer service metrics, companies can begin to navigate complex problems by way of cross-referencing data (existing and new, internal and external) which can make a difference between first-call resolution, a lingering issue or the loss of a customer.

5. Findings

Data was gathered by the researchers during site visits within Company A and various communications with key members of staff, during the first quarter of 2016. Face-to-face, semi-structured interviews were held with key personnel (n=33) to understand the KM and CRM strategies and the workflow processes that are embedded within the company. The interviews were conducted at a location selected by the interviewee (at their workstation, in the common area, over coffee/lunch) that encouraged open and frank discussions. Informal conversations as follow-up were held as necessary, confirmatory interviews were also conducted. Secondary data from company documentation was analysed to understand the history of Company A and how using KM to facilitate CRM has assisted in the growth of the organisation to become one of the largest print companies in North America.

Company A believe that CRM integration with the 'back office' provides an enhanced customer contact center infrastructure. Their focus on CRM-technology uses a system designed so they can act on the vast amounts of information gathered from a variety of sources (eg., Web sites, customer interactions, product sources and customer service representatives). This information is often captured at source in an unstructured format (i.e via telephone conversation) so a process of conversion is required to ensure systematic data is held, this assists in one-time data capture and data/system integration. Their system enables the provision of highly customised responses to inquiries based on a combination of information unique to individual customers, such as transactional history, behavioral information, customer preferences and demographic data.

The integrated approach ensures that responses to individuals are consistent with standardised company policies implemented across the organisation. The CRM system offers features to optimise Web-based self-service capabilities, such as the ability to recognise users as individuals; providing access to data relevant to each individual's relationship with the company; the ability to learn, over time, what knowledge is most valuable and automatically prioritising this knowledge each time there is an interaction with the customer. This approach brings together knowledge with unified customer data derived from multiple sources.

Company A focus on providing a superior customer experience to increase loyalty and drive growth. They have implemented strategies that include surveillance on all customer contacts. For example, each call is recorded and the surveillance/quality assurance team analyse the calls to monitor each moment of truth with the customer. The company award incentives to the customer support agents for superior customer experiences. The incentives are both individual financial and team based rewards such as a night out for the whole team. The data gathered from the surveillance/quality assurance team is then captured as 'knowledge nuggets' and integrated into the CRM system to help improve future customer experiences.

6. Discussion

Exploratory investigation into the KM practices of Company A, specifically considering CRM aspects, has been a positive experience for the researchers. By way of best practice, Company A have implemented a robust customer data management strategy that provides a formal and integrated approach to combining IT and human processes. This is critical not only in managing relationships with current customers, but also in building market share to gain the loyalty of new customers (Marzo-Navarro *et al.*, 2004). The strategy involves five facets required to create a 360-degree view of their customer. Figure 1 presents these five facets:

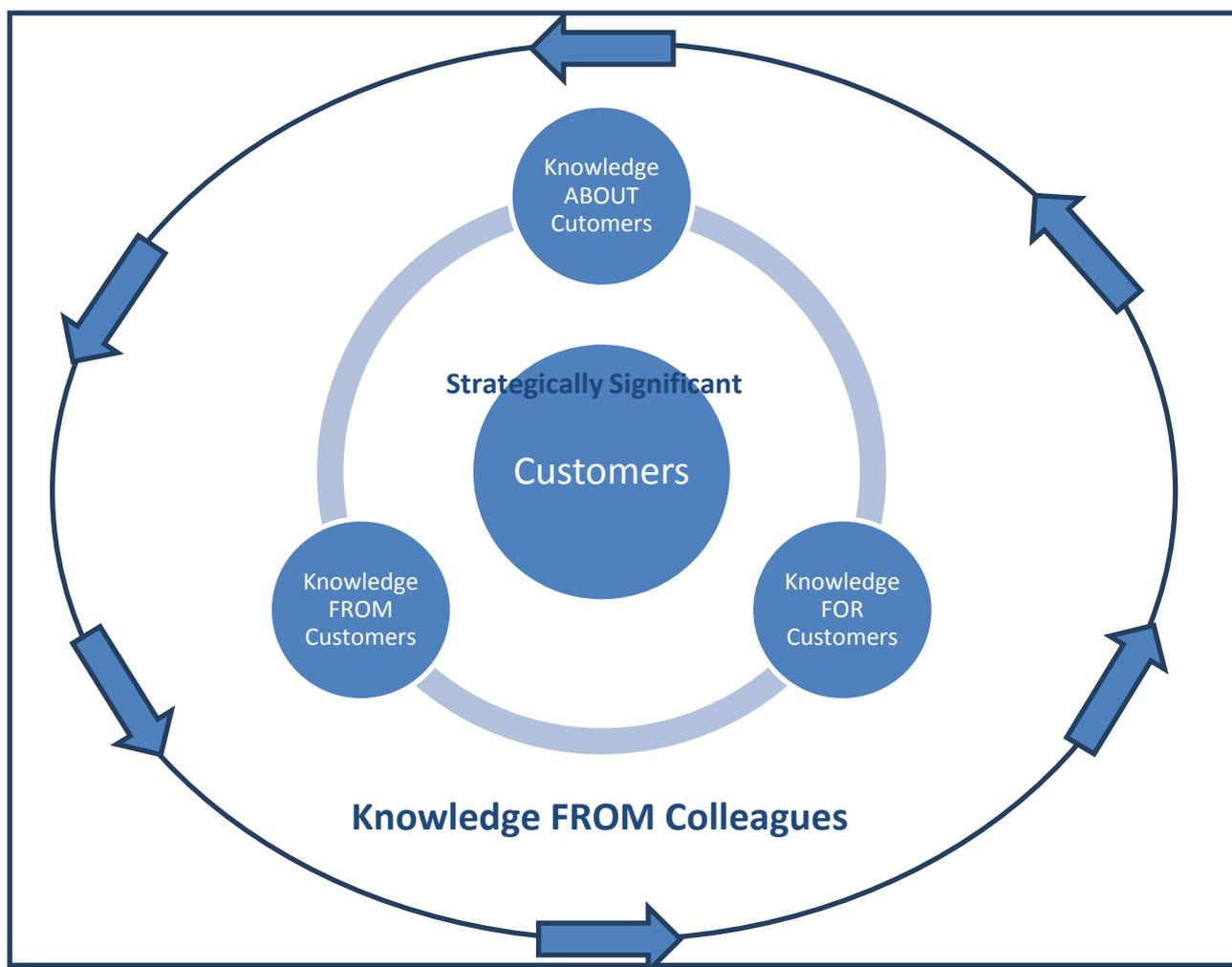


Figure 1: 360-Degree Customer View

Considering the above figure, the facets will now be discussed:

6.1 Identifying strategically significant customers

Company A calculate the lifetime value of a customer, which is the present-day value of all future margins that might be earned in a relationship. Some customers have higher value to an organisation than others. Company A calculate and predict customer lifetime value as not all high volume customers are necessarily of high lifetime value. The high life value customers are the focus of customer retention efforts. For a more accurate prediction of the life-long value of a customer, the profit/cost matrix together with retention/loyalty levels (variables) is used. Customer profitability is the difference between revenue and costs.

Company A have special teams to service these customers who in some cases are Hollywood movie stars and US music artists. These teams receive special training in customer service to ensure that superior service is maintained to these high value customers. They have personal design consultants as relationship managers to provide superior design and to gather knowledge about each specific customer. As one team member outlined *'while we respect each and every one of our customers we do tend to go the extra mile when we recognise the name of a celebrity, it's hard not to be a bit star struck'* (ST1) while another stated *'when you are in charge of delivering a product that will be on display to such a high-calibre audience, and you realise the potential customer-base you could attract, perfection is necessary'* (ST3).

6.2 Knowledge about customers

Company A collect knowledge to understand customers' motivations and to address them in a personalised way. This includes customer histories, connections, requirements, expectations, and purchasing pattern (Davenport et al., 2001). This knowledge is gathered through interactions with customers via the processing of

customer orders as well as through different customer interaction channels such as phone, e-mail, interactive voice recognition (IVR), fax, mail and website. Operations knowledge about customers, for example, customers' personal information and purchasing history are held in computerised operational data stores (ODS), through billing and provisioning data stores. Each time a customer makes contact with the company, the customer's needs, as well as the actions taken to satisfy these needs, represent information that is captured and processed to benefit future customer interactions. One production operative outlined the process *'when a customer interacts with one of the design/product/sales team members, using a unique identifier we can quickly ascertain if they are a new or repeat customer. Our database is easy to interrogate to recall an order and/or customer history. Having customer knowledge at your finger tips places you in control of the relationship. From the first sentence of a conversation I can relate to the customer as a person, two-way communication normally brings resolution to the customer query the first time they make contact'* (PO2).

6.3 Knowledge for customers

This knowledge is required to satisfy information needs of customers. Examples include knowledge on products, markets, and supplies. This knowledge source relates to personal knowledge possessed by employees themselves or related to employees' work such as corporate manuals, guidelines, memos, and meetings. This knowledge is inside people's heads and can be extracted through person-to-person contacts or through the usage of intranets, e-mail, or other electronic sources. As employees become more experienced they tend to 'move up the ranks', as outlined by one Production Manager who began working for Company A as a temporary operative to cover the busy Christmas period.

6.4 Knowledge from customers

This is customers' knowledge of products and services they use as well as knowledge about how they perceive the offerings they purchased. This knowledge is used in order to sustain continuous improvement, for example, service improvement or new product development. This knowledge is collected from surveys both online and other, social media sites and any other customer generated content available to the customer. This customer focus has led to successful implementation of KM\CRM and continued market growth in North America.

6.5 Knowledge from colleagues

The culture of the organisation encourages knowledge sharing amongst employees at all levels. Openness in communication, defined by Lin, (2011b) as *'the degree to which employees are willing to exchange their ideas and knowledge with colleagues, even if those ideas contradict popular opinion'* is strongly encouraged and evident through observation. In Company A staff feel free to express their views and ideas, claiming they do not fear losing their jobs if personal opinion differs from what is broadly accepted by the organisation. Employees feel supported, and indeed are encouraged and not restrained by management from exploring new ideas; the expression of employees views aids the creative process. Management support helps promote a knowledge sharing culture (Cavaliere and Lombardi, 2015) and trust, a critical factor in any KM initiative (Moffett et al., 2014). Creative freedom is encouraged with the end goal of every product, conversation and collaboration being that of customer satisfaction.

Below is a summary of the lessons learnt from this successful implementation.

6.5.1 Best Practice Lessons

- Strategy needs to be enabled by technology and not driven by it. KM/CRM projects should be business-driven rather than technology-driven
- Corporate-wide knowledge-sharing culture is required to facilitate implementation of KM/CRM strategies
- Clear and ordered identification of business requirements need to be prepared before deciding on the technology to be adopted
- Focus on customers – knowledge about, for and from
- Special teams to service the strategically significant customers (high value)
- High quality data (checked and cleaned) guarantees accuracy and efficiency of CRM reports
- Long-term financial growth cannot be secured if customers' expectations are not being met
- Effective management of end-user training programs offered to the right people at the right time for the right period is essential to the KM strategy

- Continued commitment from top management is essential to the success of KM strategy and CRM implementation and development
- Multiple silos structures hinder business integration, interdepartmental communication, and full recognition of KM\CRM benefits
- Resistance to change poses a threat to KM\CRM.

The above lessons learnt have continued to allow this company to grow to market leader. Additionally, they have followed key strategic choices that include being an innovator and fast follower, this enables them to produce innovative products but at the same time to follow product development of other competitors within the marketplace. They have also recognized the impact that the growth of mobile generated content has on their business. Within Company A around 50% of photographs are uploaded from mobile phones, 30% of orders are placed using mobiles devices, and according to Forbes (2017) on a global scale this is set to rise dramatically in the next few years. They have been innovative with their technology and continually upgraded production and order systems to keep ahead of the fast pace of change within this marketplace.

7. Conclusions and Research Development

This research is the preliminary findings from a single case study project within a US Print Company. Findings reveal that at the centre of the company's success is the strong focus on their customer. The company identifies how strategically significant each customer is and focuses on knowledge about, for and from customers. This knowledge is data that is stored in their CRM systems and extracted and transformed into customer knowledge. The results from this research will inform current thinking and add to knowledge in the strategic areas of KM and CRM.

The academic impact of the study will be to develop a framework for KM\CRM successful implementation. There is currently no recent framework in the literature that incorporates key dimensions within this context. The researchers also argue that the findings, when developed, will enhance KM\CRM within this sector and in turn increase sales and customer satisfaction as evident in this case. As part of an on-going research project further investigation will occur in a site visit to Company A in April 2017. It is anticipated that deeper understanding of the KM\CRM relationship within Company A will enable comparative studies to develop with UK organisations to benchmark best practice and identify leading companies applying CRM based on KM strategy. Whilst the authors appreciate the limitations of this paper (only one case so results cannot be generalised at this stage) the results have offered valuable insight into the impact of strong CRM to enhance customer satisfaction.

In the words of Bruce Springsteen, *"Sustaining an audience is hard, it demands a consistency of thought, of purpose, and of action over a long period of time"*. Whilst referring to his music career, the same level of devotion and consistency is required in the customer interaction journey. This case study has proven that while one-off interactions are valuable, the attraction of new customers is crucial for market penetration, the customer journey over time requires commitment and effort to evolve into a meaningful two-way relationship for both parties (customer and business). Having a better understanding of 'what works' in one industry can pave the way for others (in different sectors, of different sizes, in different countries) to follow suit.

While this paper is pioneering in its approach to investigate the KM\CRM relationship it calls for further research in this realm. While knowledge-centered CRM firms such as Microsoft, Capital One, J.D. Edwards and Natura have brought greater attention to the crossover of KM and CRM, and have offered positive case reports of its success, there is little academic research driving the agenda forward. Hence more work is needed on theoretical underpinning, model conceptualisation, statistical testing and qualitative insight into the KM\CRM discipline. With better understanding researchers will be able to advise, shape and drive the KM\CRM agenda benefiting both academia and practice.

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