



## Blending Internet-of-Things (IoT) solutions into relationship marketing strategies

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### ABSTRACT

With contemporary life becoming more instantly connected and as the disruptiveness of technologies is occurring at a faster pace, the Internet-of-Things (IoT) is now even more accessible and common, prompting companies to adopt IoT solutions to improve their customers' experiences. IoT enables physical devices to connect and exchange data through the Internet by collecting strategic information, thus creating opportunities for companies to become more efficient and responsive to market changes. This paper thus investigates how companies are blending IoT solutions into their relationship marketing strategies and focuses on finding how this combination can boost business performance and what the challenges are when dealing with disruptive technology changes.

To explore the subject's detailed information and to get a better understanding of managerial decisions concerning IoT, this research conducts in-depth case design analysis from a company's point of view. The data presented herein come from two main sources: open-ended interviews and direct observations, with the interviewees holding high managerial positions in Taiwan's IoT industry. This study aims to contribute to the literature by bringing awareness to the importance of closely following technological trends in combination with relationship marketing strategies and how they help firms remain competitive and profitable.

The results of this empirical research shed light on the importance of understanding the impacts of IoT solutions on businesses, especially on clients' behaviors and the development of targeted strategies. The cases herein present similarities on the awareness of the speed of disruptive technologies like IoT, the importance of developing new solutions aligned with new technologies, their impact at creating new business solutions, and their contribution to the development of firm strategies. The findings also show that the application of innovative IoT solutions positively affects the process of developing long and successful relationships through relationship marketing actions. Conversely, concerns related to data security vary according to business segments and relationship marketing pillars such as trust, commitment, and reliability, which could help reduce feelings of ambiguity.

This research contributes to filling the gap in the literature by offering a deeper understanding of the correlation between IoT and relationship marketing. Moreover, we illustrate how a combination of these two factors can contribute to the development of stronger marketing strategies, as well as their implications on business. The results of this research suggest further and more comprehensive investigations are needed in the future in order to explore the topic in greater depth and to see how the speed of technology is evolving.

### 1. Introduction

Conducting business globally has become quite common for many companies over the last few decades, especially taking into account the speed of technology advances and the expansion of globalization. The use of Internet or e-commerce helps firms tap new markets and provides opportunities to increase their competitive advantages globally. Along with this, the popularity of online shopping has grown considerably,

and companies are investing vast sums of money on expanding their business through online channels.

Many researchers and practitioners have focused their attention on the speed at which technology has evolved and the way people and industries interact through new innovative technologies. Information and communication systems have been a part of people's daily lives for many years, with the result generating an enormous amount of data that can be stored, mined, and analyzed (Gubbi et al., 2013). In a world

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with Internet-of-Things (IoT), anything can be connected and communicated intelligently. With the popularity of online shopping, business owners are now interested in finding creative IoT solutions to their e-commerce in order to attract more customers.

IoT overall has the potential to drastically change how companies interact with their costumers and also how people interact with products and the Internet. Accessing products through IoT technology helps provide a wider exploration of digital services and experiences, creating a revolutionary way to connect businesses and costumers. This paper aims to shed light on how this combination can boost business performance and the challenges behind dealing with fast disruptive technology through an investigation into the way companies are blending IoT solutions and relationship marketing strategies.

The paper is organized as follows. [Section 2](#) presents the relationship marketing literature theory, introduces the IoT literature, and shows the causal interrelationship between the two. [Section 3](#) illustrates the methodology and steps taken to develop this study. [Section 4](#) addresses practical cases and the inferences obtained through an analysis of them. [Section 5](#) offers conclusions and future research suggestions.

## 2. Literature review

### 2.1. Relationship marketing

Over the past 20 years there has been a growing interest in the concept of relationship marketing among practitioners and academics ([Gummesson, 2002](#); [Morgan and Hunt, 1994](#); [Parvatiyar and Sheth, 2000](#); [Sheth and Parvatiyar, 2002](#)). The topic has developed over the years as a new and interesting strand of marketing that focuses on establishing long-term relationships with customers and other parties. It is based on three main principles: trust, mutual value creation, and commitment. Establishing a strong relationship with customers generates an outstanding level of customer satisfaction, which in turn helps gain their trust and their loyalty, thus benefitting the company as a whole ([Payne et al., 1995](#)). The overall literature on relationship marketing agrees that the quality of the relationships among the participants is an important determinant of their longevity, thus leading to the success of relationship-marketing practices.

[Koiranen \(1995\)](#) explains relationship marketing as a way to establish, cultivate, and enhance long-term relationships with customers and other stakeholders. As stated in the relationship marketing theory, relationships represent much more than the goods and services provided by a supplier to its customers; thus, service quality aspects are not the only things influencing business loyalty. Even so, service quality is considered essential for customer satisfaction as is often discussed in the literature ([Anderson et al., 1994](#); [Brady and Cronin Jr, 2001](#); [Cronin Jr. and Taylor, 1992](#); [Dick and Basu, 1994](#); [Gotlieb et al., 1994](#); [Parasuraman, 1998](#)).

One primary assumption is that a relationship helps participants to meet their objectives, and depending on the stage of the relationship (whether at the beginning stage, cultivating stage, or enhancing stage) the strategic implications might vary. As a result, firms must pay attention to different aspects through the different stages, from creating customer knowledge to shaping its perceptions.

The relationship between an organization and its customers is strengthened by many attractions displayed by multiple marketing actions ([Berry et al., 1983](#)), leading to further customer retention. Relationship marketing embodies tactical and strategical elements that can positively impact a firm ([Grönroos, 1996](#)). According to [Landry \(1998\)](#), relationship marketing can be defined as an expanded database created by a firm to get a better understanding of its customers' profiles, therefore facilitating the development of relationships through the exploration of different communication channels and further delivering value and service. [Armstrong and Kotler \(2000\)](#) emphasize that relationship marketing is a relationship process for developing, retaining,

and boosting mutual value among firms and customers or other stakeholders, focusing on a long-term arrangement that can transfer value to customers. The implementation of relationship marketing endeavors to enhance the value of an enterprise to its customers along with the long-term relationship between them ([Bruhn, 2003](#)). Fundamentally, customers and firms both derive value and gain from a mutually beneficial relationship, providing a win-win situation as intended by the marketing concept ([Baker, 1975, 2009](#); [Gummesson, 1999](#)).

Relationship marketing theory focuses on comprehending the main drivers that influence the critical outcomes for the firm, as well as the reasons behind the relations between these drivers and outcomes. All the activities embedded in relationship marketing are fundamentally evaluated on the basis of the company's overall profitability. However, there are numerous variables largely independent that influence a firm's profitability, and these variables are not necessarily related to relationship marketing actions. Considering this, we note two main points in the marketing literature that discuss important relationship marketing outcomes: customer word-of-mouth communication and customer loyalty.

Relationship marketing explores the marketing concept further, by focusing on the customer as an important representative figure, exploring a promising way to acquire competitive advantages through the exchange of information and closer to the customer, strengthening the bond to be truly advantageous to both parties, and committing both buyers and sellers to work toward achieving long-term benefits that offer greater chances for a successful relationship ([Ganesan, 1994](#)). Relationship marketing can be a challenging concept to implement, and the development of close bonds with customers is not always possible or alluring ([Webster Jr., 1992](#)). Developing desirable bonds can be costly, especially considering the time and resources allocated during the process, without even taking into account the resistance that customers may present to the seller's attempt at establishing such relationships.

With the advances of the Internet and technology, the 21st century is already demonstrating a favorable time for tapping into different forms of communication with customers and for exploring how to access the large amount of available customer data. Sellers can utilize technology to go through large amounts of data, deriving specific information and gaining insights about customer preferences and behavior. Therefore, they can design more suitable solutions and products to meet their customers' needs.

The value of relationship management for business is considered essential for the development of any firm, and the quality of the relationship determines continuity of the business relationship in the future. The strength of the relationship can be seen as a competitive edge in any industry sector, and the quality of the relationship determines the type of maintenance of this competitive aspect.

The concept of relationship quality is not widely employed in the relationship marketing literature. Several studies have, however, applied concepts and measurements used in social psychology to identify specific components of relationship quality. According to [Wray et al. \(1994\)](#), the composition of relationship marketing is complex with a strongly relevant interaction among its components, and the elements that predict and determine relationship marketing are not easily determined. The inherent ambiguity existent in theories on this topic results in a lack of a commonly accepted definition for relationship marketing in the literature ([Ashnai et al., 2009](#)). However, many researchers cite commitment, trust, and relationship satisfaction as the focal dimensions of relationship quality ([Smith, 1998](#); [Ulag and Eggert, 2006](#)).

### 2.2. IoT

Over the last two decades, IoT has been the subject of ever-growing global interest ([Martínez-Caro et al., 2018](#)). Its concept was introduced in 2005 ([Yang et al., 2013](#)), and recent trends in IoT research have been stimulated by applications and the need for convergence in a great

number of interdisciplinary technologies (Gubbi et al., 2013). Technology devices are now commonly utilizing the Internet to exchange information, to achieve smart identification, and to conduct IoT operations management (Wang and Hsieh, 2018). Moreover, the high impact of IoT in several different aspects of people's daily life is the main strength of this technology, and its effect on potential users' behavior has just recently become a field for exploration. IoT has changed the static state of the Internet into an integrated mode that is more flexible and able to promote interconnections among people at an astonishing and unseen scale. The growing presence of IoT can be seen in both domestic and working contexts. In the domestic scenario, IoT appears in e-commerce, enhanced learning, and domestic-assisted living. In the context of business, IoT has expanded into automation systems, industrial manufacturing, logistics, and business process management. Therefore, investigating how IoT behaves in combination with interdisciplinary technologies is very important, as is the interaction between IoT and management theories.

IoT is an innovative communication paradigm in which objects that are a part of everyday life can be adapted into transceivers responsible for digital communication, microcontrollers, and adequate protocols that allow them to interconnect with one another. IoT also allows users to become an integral part of the Internet (Atzori et al., 2010). The concept of IoT has helped the Internet to become even more immersive and also facilitates interaction and access for a wide range of devices, such as smartphones, surveillance cameras, home appliances, monitoring sensors, and much more. These objects are potentially able to gather an enormous amount of data from users, creating innovative applications and services for companies, public administrations, and people. IoT can be applied to a large number of business segments, such as mobile healthcare, elderly assistance, intelligent energy management and smart grids, industrial automation, medical aids, etc. (Bellavista et al., 2013).

The broad field of IoT applications influences the ability for identifying solutions that can fit and satisfy their requirements, thus creating a challenging innovative environment. These challenges have led to an increase of proposals that might be incompatible for the realization of IoT systems. In addition to issues related to technical difficulties, the use of the IoT paradigm is also affected by the lack of a widely accepted business model that can contribute to the allurements of investments to explore these technologies (Laya et al., 2013).

### 2.3. IoT and relationship marketing

IoT enables physical devices to connect and exchange data through the Internet, by collecting strategic information. The collection of a great amount of data represents a powerful force for understanding and predicting consumer behavior. It has the potential to expand communications and to create opportunities for companies to become more efficient, responsive, and even more proactive, especially in relation to customer service. However, having access to a large amount of data does not necessarily mean having access to useful information and a greater competitive advantage. In order to develop more innovative businesses and increase market competitiveness, companies need to be able to transform data into information they can utilize and also need to understand and continuously adjust their customer relationships.

One of the most important objectives of the relationship marketing theory is to understand the key drivers that affect a firm's performance and to comprehend the triggers behind such performance (Hennig-Thurau et al., 2002), as they can directly provide tactical and strategic implications for the firm (Grönroos, 1996). The development of a long-term database by a firm contributes to a better understanding of its customers' profiles, thus creating opportunities for further relationship development (Landry, 1998). The enhancement of mutual value between enterprises and customers and developing and retaining customers are the main aspects of relationship marketing (Armstrong and Kotler, 2000). IoT holds the potential to thoroughly change the way this is being done.

## 3. Method

### 3.1. Research setting

This study investigates how companies are blending IoT solutions and relationship marketing strategies and focuses on finding how this combination can boost business performance as well as the challenges behind dealing with fast disruptive technology changes. We take into account that many important studies highlight the importance of fostering a high-involvement relationship between buyers and suppliers in order to enhance performance (Clark and Fujimoto, 1991; Womack et al., 1990), and that relationship marketing enhances performance and is therefore critical in achieving business success. This paper further explores how companies are facing the disruptiveness of new technologies and how they are adjusting themselves to make the most of the opportunities that arise.

Over the last three decades relationship marketing has attracted great attention from academia and practitioners, mainly in the business-to-business context (Dwyer et al., 1987; Ganesan, 1994; Morgan and Hunt, 1994; Pillai and Sharma, 2003). Adjusting strategies to the speed of technology advancement in the world is crucial for any globalized business. Thus, this research applies a multi-case design that is aligned with the "replication logic," which stands for a group of studies analyzed by Yin (1994). Providing information from multiple cases increases reliability, therefore increasing the overall quality of the study, which can be considered as being more complete (Herriott and Firestone, 1983). A case study is an empirical inquiry that investigates a contemporary phenomenon in greater depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident. Such an understanding encompasses important contextual conditions, because they are highly pertinent to the phenomenon being studied (e.g., Yin and Davis, 2007). Because the phenomenon and context are not always distinguishable in real-life situations, other technical characteristics, including data collection and data analysis strategies, have now become a part of technical definition case studies.

### 3.2. Data source

The newness of IoT has certainly given clear hints as to its strong growth potential, while the comprehensiveness of relationship marketing and its tools is firmly consolidated among different industries. The merging of these theories lights the path of endless possibilities to strengthen existent technologies, which can be perfected with IoT solutions, and innovative products and services, which can evolve at a faster pace due to the intelligence provided from RM intelligence.

To understand how relationship marketing and IoT are integrated in the current market this study approaches different cases that can provide insights into similarities and contrasts and how different industries are exploring relationship marketing solutions and IoT technology to grow and explore untapped markets. The cases studied herein approach the IoT and relationship marketing nexus differently; in one case, relationship marketing is already a tool explored by a well-established company and IoT solutions are applied for the creation of new products to tap an existent market, thus providing complementary innovation; the other case shows how IoT solutions aligned with relationship marketing strategies can inspire the development of a new business tapping an old market in an original way.

This research collected data from two main sources: open-ended interviews and direct observations. Appendix A summarizes the semi-structured interview questions. The length of each interview varied between 1 and 2 h; all of them were conducted in-person, and the interviewees were executives with a high managerial position. Table 1 presents their background information. The executives who collaborated on this research have worked for at least several years at the focus firm and are fully responsible for relationship marketing strategic

**Table 1**  
Interviewees' background information.

Company Information		
Company name	Easy Camp (Case 1)	Delta Electronics (Case 2)
Country	Taiwan	Taiwan
Industry	Camping	Home Appliance
Employees	15	4000
Interviewee		
Position	Marketing Manager	Project Manager
Length of job position	3 years	5 years

decisions.

The questions and inquiries of this research were presented to the interviewees in a semi-structured fashion, regarding the establishment of their firm's dyadic relationship, how customer commitment has evolved, communication, the challenges faced, and overall perception of service quality. In order to guarantee the authenticity of the interviews and accuracy of the information given, all interviews were tape-recorded under a non-disclosure agreement (NDA) regarding interviewee confidentiality toward any sensitive information that could possibly damage the firm's image. The taped interviews were transcribed afterwards and were made available as research material under further request regarding the NDA clauses.

### 3.3. Research process

In order to identify relevant information that could possibly answer the hypotheses proposed in this study, we developed a set of questions. These questions were carefully developed to bring out as much information as possible from the interviewees. The questionnaire was originally designed in English and later translated into Chinese, in order to reduce the chances of words lacking their full meaning or significance. It was then back-translated into English. The questionnaires were translated by native Chinese speakers, and any discrepancies that appeared were resolved under effective collaboration. The selection of the sample focused on companies with a high involvement of IoT solutions and with relevant relationship marketing strategies.

## 4. Case study

This section introduces a short summary of the conducted interviews and provides information about the companies and their respective cases.

### 4.1. Case 1: EasyCamp

EasyCamp was founded by 2015 and is now the largest platform for camping sites in Taiwan (see Fig. 1). EasyCamp cooperates with over 300 camping sites online and is closely linked through strategic alliances in order to promote novel marketing activities for those camping sites. It further connects with all of the camping sites' end users. Ever since the opening of the website, this case firm has been continuously deepening and expanding its service range. The wide range of services includes booking camping sites, direct delivery of fresh produce, and promotion activities. Managing the largest online and offline data for Taiwan's camping industry and knowing instant information about this industry help the firm to predict future trends.

The vision of the EasyCamp is to "Help all campers book a weekend home". EasyCamp has 75,000 memberships and daily website traffic of around 12,000. The average customer transaction price is about NT\$4200, with a customer conversion rate of 2.5%. The firm has 152,559 Facebook fans and also uses LINE and other APPs to service its consumers.

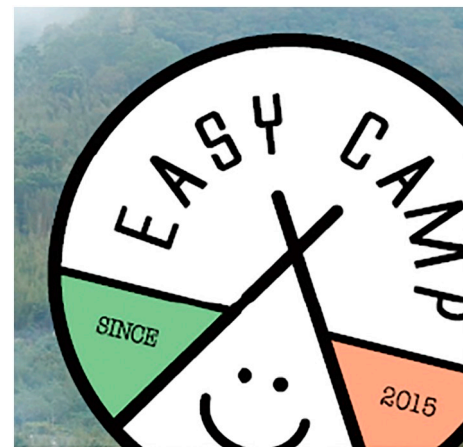


Fig. 1. Case company slogan.

As for industry analysis, the company's platform has collected a lot of camping data over the past years. According to data provided by Google Analytics in 2017, Taiwan's camping population exceeds 2 million. With such a big camping population, about 30,000 families go camping every week, or nearly 100,000 people per week. Campers have many expenses during a single camp activity. The average cost per campsite is about NT\$1000, food is about NT\$2500, and other costs are about NT\$3000. The camping industry has an enormous market of about NT\$130 million each year.

This case firm provides many different marketing strategies based on IoT to connect the campers and campsite owners (see Fig. 2). Aside from the basic marketing strategies of PC websites and smartphone-version websites, EasyCamp has built LINE APPs to offer 24-h service for campers. It utilizes Facebook, by using Ads and Pages to build up a large fan base and to actively operate groups made up of campers.

For other IoT marketing strategies, EasyCamp has launched an online system to help all campers easily find and search for camps. Since there is no campsite platform in Taiwan, without EasyCamp, campers would have to search individual Facebook or websites of the campsites one by one. Previous users' experiences were hard to obtain, but for certain their search cost was really high. Booking a campsite is the first marketing strategy of EasyCamp.

Many campers do not have time to purchase food, while other do not have enough experience to know how to prepare suitable food for camping. Therefore, EasyCamp cooperates with local farmers to provide fresh and organic farm products under the aspect of corporate social responsibility, allowing campers to experience local products and the unique local culture. Food constitutes the second marketing strategy of EasyCamp.

First-time campers probably do not have any proper equipment to go camping, while others tend not to buy much equipment. EasyCamp has built a platform to help those consumers rent all the equipment needed for any campsite. EasyCamp also promotes one kind of activity called "no-equipment camping". Therefore, rental is the company's third marketing strategy.

To reach and expand out for new campers, EasyCamp shares a lot of camping knowledge and camping activities through IoT on YouTube, Facebook, and Instagram. EasyCamp produces videos such as teaching campers how to cook with hot red wine and milk beer during winter camping. Sharing is the fourth marketing strategy of EasyCamp.

EasyCamp also aims high to create a new marketing strategy model. The firm cooperates with enterprises to help them hold employees' annual travel activities or enterprise family days. The benefit for an enterprise is that this kind of activity can create informal communications and relationships among employees in that specific enterprise as well as increase the overall camping population.

Another creativity marketing strategy is cooperating with





Fig. 2. IoT marketing strategies of the case study.

automobile brand producers, such as New COLT Plus (see Fig. 3). The firm uses the online community power of the automobile brand to connect with existing brand owners and to search for new ones.

Increasing the awareness of consumer of this automobile brand also increases the overall camping population.

#### 4.2. Case 2: Delta electronics

Delta Electronics Inc. was founded in 1971 by Bruce Cheng and today is one of the global leaders in power and thermal management solutions. The company is engaged in the research and development, manufacturing, design, and sale of electronic control systems, digital displays, communication devices, consumer electronics, renewable energy applications, energy-saving lighting applications, EV charging, and energy technology service products. Its business segments include Power and Components Business, Energy Management Business, and Smart Green Life Business. The first business provides global power management as well as cooling plans and management. The second business includes energy automation plans for factories and buildings. The third business is involved in the manufacturing of network devices, conferencing and visual imaging systems, LED lighting plans, medical devices, Innergie power consumption products, and Vivitek high-definition projectors.

The company also offers consulting services for building management and control solutions. The company's sales coverage is Taiwan, China, the United States, and other countries. The Delta Group's mission is "To provide innovative, clean and energy-efficient solutions for a better tomorrow" and to address sensitive topics such as key environmental problems and global climate change. The company over the last couple years has shifted its focus from being a product provider into offering solutions. It now covers innovative power electronics, energy management, and smart green life, encouraging the development and broad application of smart, creative, and energy-efficient solutions.

Delta has become a leading thermal and power management solutions provider in Asia, Europe, the Americas, and emerging markets. Its solid corporate culture targets the pursuit of sustainability, which is spread around all its business units, through innovation and development of new products and technologies, especially those with high efficiency and energy savings. It delivers superior performance by making use of its global value networks and by collaborating with other companies to achieve mutual goals.



Fig. 3. Creative IoT marketing strategies of this case firm.

The company's consolidated worldwide sales revenue in 2016 was US\$7.782 billion, maintaining an annual growth rate of 31% since 1971. It has twenty-two sales offices and nine R&D laboratories around the world, which collaborate toward the success of many businesses in diverse fields. The company invests 6–7% of annual sales revenues on R&D, with R&D facilities in Taiwan, China, Europe, India, Japan, Singapore, Thailand, and the U.S. The business unit that contributes to R&D specializes in innovative components that utilize IoT technology and targets the home appliance industry. This business had sales revenue in 2016 of US\$200 million, making it a perfect case for our study.

The respondent who took part in our research and answered the interview questions has been the head of project management at this business unit for almost 3 years. This manager is directly involved with projects that particularly apply IoT solutions for home appliances.

Delta Electronics offers a diversified number of products and solutions around the globe. According to the project manager, in this business unit it is possible to see that “Companies looking for innovative home appliance solutions such as Bosh and Whirlpool are interested in our products and currently have ongoing projects with us. The demand for products that allow connectivity and remote control are increasing; companies have been looking for ways to make their products smarter and convenient for the final user.”

Understanding customers' needs and behavior is essential for businesses. In order to do this effectively, gathering information and analyzing it are crucial steps to the development of successful strategies. The use of technology to acquire information has become common, and demand is rapidly increasing for the development of innovative solutions that are interesting to the user and convenient for the supplier to gather smart information. Project manager stated: “The demand for interactive home appliance solutions, such as smart refrigerators that can be controlled with mobile phones, has grown a lot. The seller wants to offer high-quality and innovative products to be ahead of the competition and establish new differentiation standards; meanwhile, it acquires information about the way the product is used, customer habits, and insights for new products”.

## 5. Analysis and discussion

### 5.1. Analysis of Case 1: EasyCamp

The use of innovative technologies has created opportunities to explore market segments in new ways. It is widely known among researchers that new technologies contribute to the optimization of processes and enlarge cost reductions. EasyCamp has grown its business by exploring a well-established business market through a technological approach. The company visualized a great opportunity for combining the camping market segment with e-commerce technology.

Its new business model offers the platform for customers to shop online for camping spots and accessories and to book online a camping spot in advance and order equipment and other things that might be needed. EasyCamp offers convenience to the consumers and along with this has built an important database that can be used to explore the camping market in Taiwan. This creative business idea offers a new perspective to camping marketing by creating space for the development of long-lasting relationship marketing strategies that until just recently were not explored.

Customers traditionally would research and call a campsite and book it only after taking into account the information given by the manager of the campsite. The customer did not have access to comprehensive information about the location nor the things that might be needed to set up a campsite. EasyCamp's website provides enough information to improve the customer experience and at the same time offers more information to campsite owners to learn more about the business itself.

According to the interview, there are many campsite businesses in the Taiwan market, but only some of them are fully explored, mostly

because the businesses are conducted by elderly people or people who have little to no contact with technology. The interviewee also said that the firm's innovative business idea came from the intention to connect people in a more convenient manner to explore the outdoors.

“Analyzing the data obtained from our clients inspired us to add more products to our website, because we got a better understanding of their needs; it also helped us to plan our marketing strategies, especially talking about expansion of the business.”

The challenges involving the implementation of disruptive technologies to business started to be discussed in research many years ago, with most drawbacks encountered related to user interaction, data security, and unauthorized remote access. In this business case, the interviewee stated that “it's a challenge to introduce the business concept and teach the campsite owners how to use it.” Thus, we can infer that the introduction of new technologies might present similar challenges when it comes to introducing them to users who have reduced contact with technology.

### 5.2. Analysis of Case 2: Delta electronics

According to the respondent, the company's products are not unique; there are other companies that offer similar products and solutions. However, because clients are strictly concerned about “price, quality, and on-time delivery” when making a decision regarding a supplier, the project manager said: “we have to guarantee the quality, which is our main differential as a supplier”. This dynamic also applies to the relationship between seller and final buyer, as “the customer expects to buy what is the best available in the market; high-quality products with the newest technologies.” Therefore, in order to establish a strong and long-lasting relationship it is essential to offer more than just warranties; it is also important to cultivate trust. The project manager further noted: “The use of new technologies like IoT to access customer preferences and patterns of behavior has created a whole new world to be explored; it makes possible to be even closer to the customers and understand better what their needs are. It positively impacts the relationship.”

There are other aspects that should be taken into account when exploring new IoT solutions, especially related to the security of the data obtained, as well as how to manipulate and posteriorly utilize the data. The security of data has been pointed out by many researchers as the greatest concern when it comes to IoT. Regarding this topic, the respondent said that it is mostly a seller concern, however, “development of solutions that allow connectivity also includes security measurements”. In a business-to-business context, when creating innovative projects, information covering the scope of the project and the capabilities are considered extremely important for the development of any relationship.

In order to achieve and sustain any competitive advantage, there are some aspects that can be considered crucial, and among them, quality and terms of sale are the most frequently noted. Understanding the market, customers' needs, and their criteria of supplier choice is essential for any business that wants to succeed. The respondent brought out the importance of developing relationships through relationship marketing strategies, highlighting that the quality of any relationship is built along this way: “the effort to make the relationship work comes from both sides, sometimes through warranties, but if there is an interest on keeping the relationship going, it goes beyond papers; both sides need to rely on each other. Trust is needed.”

Looking into the future, the company's representative expects to successfully conclude the ongoing projects and create more innovative products to introduce new technologies to the market. “IoT solutions have started to make their way into people's lives; the more people rely on technologies, the more solutions are needed”. Along with this, he expects to continue the development of relationships with buyers, strengthening them along the way and creating new opportunities to be explored. “It is important to continue improving the work that has been

done and work toward creating new projects that aim to grow the relationship and revenue”.

### 5.3. Discussions of the comparison between the two cases

The cases investigated in this research provide complementary information on exploring IoT technologies to establish innovative relationship marketing strategies. EasyCamp and Delta share similar objectives as both recognize the important trend of IoT and for further creating new business strategies. However, the two cases utilize IoT in relationship marketing in different ways. Since EasyCamp is a young, small, and innovative company, it uses e-commerce services to explore new market segments. Though traditional campers usually prepare all of the camping equipment themselves, EasyCamp provides a new platform and new technology through IoT to create a new business solution that taps an existent market in an innovative way. It integrates car rental companies, food providers, and camping equipment companies and also targets the new market segment of families who are first-time campers. EasyCamp also offers services to enterprises that hold their employees' annual travel activities.

As to the second case, Delta is a firmly established and large company in home appliance, electronics, etc., which is an existing and mature market. It applies IoT to improve its existent products that focus on the same market, proposes new solutions and complete services to their customers, and also strengthens customer relationships. In sum, we can conclude that operating in a mature industry as Delta does, IoT can conservatively enhance its current customer services and help solidify its relationship marketing strategies. Managers are already noticing IoT's influence on people's lives and habits, and companies need to think of innovative ways to capture this ongoing trend. However, in a new industry like camping for EasyCamp, IoT can completely overwhelm the traditional business model. Firms thus have to create an innovative one to expand into new customer segments.

## 6. Conclusion

IoT is becoming more common nowadays, leading toward the convergence of a static Internet into a fully integrated communication platform. The greatest enabling factor to this paradigm is the combination of several technologies and communication solutions. Companies are thus exploring IoT technologies to establish innovative businesses and to create new creative solutions for existing business models. This scenario sets up opportunities for firms and marketing strategists to explore highly contextual and tailored approaches to consumers, especially based on their past behaviors. The importance of combining the aspects of IoT and relationship marketing can be highlighted, especially when it is well executed and in the context of a strong establishment of trust regarding data usage. The combination can help generate new market opportunities and offer a ground to build up competitive advantages. The real influence of IoT in relationship marketing lies in the ability of marketers to come up with new solutions and to optimize communication with customers in a much broader way, regardless of touch points or stages in the overall customer life cycle.

The case firms studied herein show similar patterns when it comes to exploring aspects to develop stronger relationships between them and their customers and also present indicators of developing more assertive products for tapping their current market even further. We thus infer that IoT presents great opportunities to establish new businesses, offers a new channel to gain customers, and smartly establishes

long-term relationships with them. Therefore, the strategic combination of IoT solutions and relationship marketing also assists in forecasting customer needs, and collecting big data from many customers also make it possible to see more information about their profiles. One point that continually comes up is the importance of improving customer trust, taking into account that stronger trust leads to stronger relationships and consequently improved business performance. This study also notes that a stronger bond implies higher quality of information obtained, thus showing an alignment with relationship marketing theory and also adding an important aspect to the relevance of the data provided by customers. Longer-term relationships have proven that more relevant data can be mined, especially in the context where customers are willing to give direct feedbacks to the firms, leading to high-quality information that better supports business strategies.

The introduction of IoT in relationship marketing, or in businesses overall, does have its drawbacks, especially when it comes to guaranteeing the security of information usage, protecting it from leakage, and not mishandling it. This study also sees that data security is crucial, and any problem that may happen with customer data will impact the relationship between a firm and its customers. The findings also show that under the concern about the security of their personal information, customers might not be willing to engage in online platforms they are not familiar with, which highlights the importance of firms building trust with their current and potential customers in order to overcome this obstacle. IoT provides a greater scenario to better listen to customers' aspirations and to create strong engagement points, subsequently enhancing the customer experience through efficient relationship marketing strategies.

This study brings out relevant theoretical contributions after investigating the combination of relationship marketing and IoT in order to reinforce strategic decisions based on data analysis. The study shows how IoT technology grants access to not so clear or hidden information regarding products and how users interact with them. This creates opportunities to explore not only existent businesses, but also to create new and more innovative ones.

The most relevant contribution of this study is the importance at understanding and exploring crescent disruptive technologies, without losing attention to the involvement on the part of human beings. Greater access to data leads to a larger amount of information available to practitioners to make better strategic decisions. Along with this, understanding intrinsic information regarding customers' shopping behavior and preferences is essential to relationship marketing strategies. Combining RM with IoT is thus a way to create and explore data in order to develop better products and have stronger and more reliable relationships with customers.

The theoretical contributions of this study are relevant to the two theoretical approaches, and the practical conclusions are aligned with practices already applied in many different business fields. However, there is a drawback related to the small number of cases investigated and the qualitative approach used herein. Different geolocations might also perceive technology impacts differently. Therefore, future researchers can explore the combination of relationship marketing and IoT by utilizing different research methods, like quantitative ones, and also seek out different companies from different countries and cultures.

There is no doubt that IoT technology's main strength is the high impact that it is having on several different aspects of day-to-day life and on potential users' behavior. Therefore, it is a very interesting innovative subject to be further examined in the future.

**Appendix A. Appendix 1: Semi-structured interview questions**

Basic business characteristics	
Industry Firms established (Y) Sales revenue Employees	
Basic interviewee characteristics	
Country of origin Area - know-how Time length in job position	
Open question	
Could you tell me a little bit about your company? Who are the customers of your company? What are the marketing strategies utilized by your company?	
Relationship characteristics	
How well does the product meet the buyers' needs? In the market segment that you act are there many competitor firms? Have you encountered problems obtaining and understanding buyers' needs? What would you attribute these problems to? Have you encountered problems explaining policies, services, and product characteristics to buyers? What would you attribute these problems to?	
IOT	
Application/Impact	In your opinion what are the main Social and Cultural Impacts of Internet of Things (IoT)? How has the Internet of Things (IoT) made a difference to your businesses? What are the main opportunities created by the Internet of Things (IoT) for your business? What effect do you believe the Internet of Things (IoT) will have on people's daily lives? What impacts will the Internet of Things (IoT) have on performance of your business? How is the Internet of Things (IoT) associated with your relationship marketing strategies? Has your company ever encountered issues related to privacy and security (IoT)? How does your company deal with security and data protection? Is there any plan?
Relationship marketing	
RM	Are there any relationship marketing strategies in your business? How are these strategies developed? What are these strategies based on?
Relationship quality	Do you have a database with your customers' data? How do you maintain relationships with your customers? Is there any satisfaction quality control in your company? How satisfied are your customers with the product/service offered? How well are their needs handled? Can you recall any costumers' unpleasant experiences? How did they get solved? How satisfied are you with ease of communication with your customers? Have you ever encountered any language barrier issues? How did it get sorted out?
Satisfaction with performance	Are your costumers satisfied with the product/services provided? Are you satisfied with the amount of business conducted?

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