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Abstract

Hospitality is a field in which guests' specific needs and wants should always be given serious consideration by hoteliers. Putting the guest at the centre of all business efforts contributes to generating customer value and enhancing a firm's competitiveness. Being customer-centric is paramount for hospitality establishments to create and sustain superior customer value. However, there is scant evidence in hospitality marketing literature of a clear understanding of the customer-centricity concept or of the possible effects of its implementation. Using a mixed-methods multiple case study approach, this research studies two different properties that, to some extent, are already engaged in customer-centricity practices through the use of advanced Customer Relationship Manager software. Results clearly show an increase in customer ratings, leading to possible profit implications; a cultural shift within the organizations studied connected with the customer-centricity phenomenon has also been reported.

Keywords: Customer-Centricity, Competitiveness, Consumer Value, CRM, Hoxell

1. Introduction

Customer-centricity is a concept discussed by academics and practitioners alike in recent years. It deals with a deeply embedded mindset and norms that make customer relationships the top priority within the organization (Day, 2003; Deshpande et al., 1993). Besides redefining an organization's orientation and culture (Jayachandran et al., 2005), customer-centricity encourages employees at all levels to engage with customers, aimed at generating value for them and for the organization (Lamberti, 2013). Even if this approach seems theoretically viable for most organizations, academics claim industry is lagging behind (Ulaga, 2018) and implementation of customer-centricity is not yet a reality in most sectors and for most companies.

This research takes place in a service industry, namely hospitality, where the customer-centricity concept could represent a competitive edge for organizations. In hospitality, the relationship between host and guests is crucial (Ariffin, 2013) for the final outcome of the service encounter being successful (Butcher, 2005). The success of any hospitality enterprise resides in the differential value the organization is able to provide to guests (e.g. Gallarza, Arteaga, Del Chiappa, & Gil-Saura, 2015). In this vein, if the organization is completely and genuinely oriented towards customers (Lamberti, 2013) in all its aspects (Shah et al., 2006), it will build effective customer relationships that will contribute to creating value for customers and their eventual positive behavioural responses (Gallarza and Gil Saura, 2006). In fact, satisfied customers will have a direct impact on firms' returns, leading to a series of relevant outcomes, such as improving (online) reputation (Buhalis & Inversini, 2014), transforming and improving key performance indicators and an organization's culture (e.g. Shah et al., 2006), lowering customers' acquisition costs and enhanced loyalty and so on (e.g. Sheth et al., 2000).

Therefore, this study aims at investigating the customer-centricity concept in the hospitality field, generating an initial understanding of the possible effects and implications of a customer-centred hospitality company. The paper discusses relevant literature related to customer-centricity and hospitality in the following paragraphs and develops a multiple case study approach using two business that are moving towards customer-centricity with the support of a digital CRM (Customer Relationship Management) tool.

2. <u>Literature Review</u>

<u>2.1 Customer-Centricity</u>

Customer-centricity and its relevance to firms' long-term success has been widely discussed for many years (Shah et al., 2006). Nonetheless, many companies are still struggling to build a customer-centric organization (Ulaga, 2018) with most managers still running a product-centric organization with merely a cosmetic gloss of customer focus (Galbraith, 2011). In recent years, scholars from different disciplines, such as marketing (e.g. Syam, Ruan, & Hess, 2005), organization (e.g. Galbraith, 2002), IT management (e.g. Wagner & Majchrzak, 2006) and innovation management (Selden & MacMillan, 2006), have referred to customer-centricity as an incumbent, yet challenging and ineluctable issue for organizations' competitiveness. Seth and colleagues (2000) asserted that customer-centric marketing focuses on the needs, wants and resources of customers from the initiation of the planning process. Moving from this understanding, Lamberti (2013) suggested that customer-centred firms manifest (i) interactive customer management, generating intelligence about customers; (ii) customer integration, involving, for example, customers in new product development; (iii) internal integration, with the firm coordinating all possible efforts to gather and share information about customers and (iv) external coordination, with the supply chain able to adapt to support customers' customization needs (Lamberti, 2013).

However, despite relevant literature produced over the years, it is still not clear (i) what the components of the construct really are (Lamberti, 2013), (ii) to what extent customer-centricity could be beneficial for organizations (Gummesson, 2008) and, above all, (iii) what the requirements and benefits are for actual customer-centricity implementation, both for customers and for businesses. Among the vast work produced about customer-centricity, three main contributions tackle these issues as follows:

> (1) Sheth, Sisodia and Sharma (2000) discussed the five trends reinforcing the transition towards customer-centricity, which are (a) intensifying pressures to improve marketing productivity, (b) increasing market diversity, (c) intensifying competition, (d) demanding and well-informed customers and consumers and (e) accelerating advances in technology. The authors also listed the consequences of

running a customer-centred business; these include wider scope of the marketing function, including supply management, co-creation of relevant and customized products/services and fixed-cost marketing (i.e. reducing transaction costs) enabled by the use of digital technologies (Sheth et al., 2000)

(2) Shah and colleagues (2006) describe the areas of intervention for reaching customer-centricity in practice; these include (i) leadership commitment: senior managers should work towards a 'customer-first' paradigm (Day, 1999); (ii) organization realignment: this should start with the marketing function steering the whole organization towards customers in a horizontal or hybrid way; (iii) systems and process support: these should be realigned towards a horizontal mindset to include all processes and activities that can potentially deliver value to customers; (iv) revised metrics: firms should include a series of new or updated customer-centric metrics as key performance indicators.

(3) Lamberti (2013) discusses the firm's antecedents of customer-centricity or, in other words, the characteristics of firms favouring customer-centricity. These are (i) individual factors, especially related to firms' leadership; (ii) intra-organizational factors related with internal cross-functional integration processes; (iii) inter-organizational and supply network factors, supporting a customer-centric philosophy and product delivery and (iv) infrastructural and system factors, promoting performance measurements as well as incentives focusing on customer-centricity.

These studies, effectively shed light on firms' road maps towards customer-centricity; they confirm firm's inner culture (i.e. the leadership function), along with external and internal forces, representing the most critical functions to make customer-centricity happen. A strong set of values and norms inspired by the leadership and spread across all departments could therefore place customer relationships as the top priority (Day, 2003), thereby effectively putting the customer at the centre of the organization's attention.
This should influence not only the actual organization of the firm (Sheth et al., 2000), its objectives and the means to accomplish them, but also its resource allocation (Jayachandran, Sharma, Kaufman, & Raman, 2005) and performance measurement (Lamberti, 2013).

Therefore, a customer-centric organization should establish a culture in which both managers and employees consider deep and meaningful customer relationships as a key asset of the firm (Shah et al., 2006) and utilize appropriate tools (i.e. Customer Relationship Management - CRM technology) to facilitate good relationships with customers. In fact, CRM technologies are seen in literature as one of the major enablers and accelerators of customer-centricity (Day, 2003).

2.2. Customer Relations and Value Creation

Creating meaningful relationships with customers is at the heart of (customer) value creation (Kumar & Reinartz, 2016). In fact, the overarching purpose of a sustainable business should be to create customer value and, subsequently, to 'extract' some of this value in the form of profit, thus creating value for the firm (Kumar & Reinartz, 2016). In a narrow sense, value can be understood as the overall assessment of the utility of an offering, according to perceptions of what is received and what is given (Zeithaml, Bitner, & Gremler, 2002). The customer value concept has been widely researched by academics, leading to a variety of researches where the concept appears blurred; this also encouraged practitioners to enter the discussion with a series of frameworks and definitions (e.g. Almquist, Senior, & Bloch, 2016) to make the customer value concept accessible and implementable. It is acknowledged in literature that generation of a clear understanding of the value construct could lead to explanation of different areas of consumer behaviour, such as product choice (e.g. Zeithaml et al., 2002), purchase intention (e.g. Dodds & Monroe, 1985) and repeat purchasing (e.g. Nilson, 1992). In this research, the definition by Kumar & Reinartz (2016), which sees customer value "as customers' net valuation of the perceived benefits accrued from an offering that is based on the costs they are willing to give up for the needs they are seeking to satisfy" (Kumar and Reinartz, 2016, p.37), is used. Within travel literature, Gallarza and Gil Saura (2006) proposed a classification of methodologies to understand value based on intra-variable approaches and inter-variable approaches. An intra-variable approach emphasizes the nature of the different dimensions of value and an inter-variable perspective uses means–end models for assessing the relationships between value and other variables. The same authors concluded that marketers need to consider customers' evaluations of their products in a holistic manner, assuming that antecedents (Lamberti, 2013) are important for understanding behavioral responses (Gallarza and Gil Saura, 2006). An additional layer to the concept of value is given

by the concept of value co-creation (Prahalad & Ramaswamy, 2004), which ties in strongly with customer-centricity; in fact, as Lamberti (2013) noted, customer-centricity, compared to market orientation, emphasizes that the products and services offered by the company are the instrumental part of the process of value co-creation engaging a firm's and customers' resources (Prahalad & Ramaswamy, 2004)

2.3 Guest Value in Hospitality

In a services industry, customer value might be perceived from the perspective of usage of products or service offerings (Gallarza et al., 2015). In the context of customer centricity, customer value can be understood as the ability of organizations to engage effectively with customers in delivering the desired experiences and assessing and managing the customer's evaluation (Paananen & Seppänen, 2013). Hospitality is no exception; the hotel industry has become very competitive and customers are increasingly sophisticated, demanding high levels of quality and value (Niininen, Buhalis, & March, 2007). A few studies have attempted to shed light on the value dimensions of a hospitality experience (e.g. Gil Saura, Arteaga Moreno, & Gallarza, 2013), pointing out elements such as efficiency, service quality, playfulness and aesthetics. However, what is clear in this context is that service quality could be considered an antecedent of perceived customer value and service satisfaction is the behavioral consequence of perceived value; to close the loop, loyalty can be seen as the final outcome (Gallarza et al., 2015). Paramount for the discourse of guest value generation in hospitality is the firm-guest relationship (Shah et al., 2006) and the co-creation of value (Prahalad & Ramaswamy, 2004). In a similar vein, Jayachandran et al. (2005) also regarded customer-relationship orientation and customer-centric management systems as antecedents to relational information processes. Therefore, Customer Relationship Management (CRM) technologies (Day, 2003) and changes to organizational orientation and culture (Lamberti, 2013), together with leadership and management systems (Shah et al., 2006) aimed towards customers, play a pivotal role in meeting guests' demands for unique and memorable experiences (Chathoth, Altinay, Harrington, Okumus, & Chan, 2013), along with co-created relevant services (Neuhofer, Buhalis, & Ladkin, 2015) to serve guests effectively through service personalization (Piccoli, Lui, & Grün, 2017).

2.4 CRM and Service Personalization

A CRM strategy is a cross-functional, customer-driven, (often) technology-integrated business process management strategy that maximizes relationships (Chen & Popovich, 2003). In fact, CRM strategies and tactics link front office and back office functions with the company's customer touchpoints (Fickel, 1999), supporting continuous data collection and understanding of customers towards managing their relationship effectively (Chen & Popovich, 2003). Generating a proper understanding of customers is one of the first steps towards customer centricity (Lamberti, 2013; Shah et al., 2006; Sheth et al., 2000). By employing these technologies, firms have the possibility to formulate specific marketing strategies and to execute specific marketing actions (Chen & Popovich, 2003), eventually involving cross-functional integration of processes, people and operations (Payne & Frow, 2005). In the hospitality field, the CRM concept has been widely discussed as a tool to foster relationship building and one-to-one guest engagement aimed at enabling loyalty and retention (e.g. Kasim & Minai, 2009). Research has also emphasized the inner complexity of the hospitality field, highlighting the need for effective alignment of processes, such as Information Technologies (IT) management, internal and external relationship management and knowledge management for successful CRM implementation (Sigala, 2005).

Recently, academic discussion of CRM in hospitality has moved towards the concept of services personalization (Piccoli, Lui, & Grün, 2017) and co-creation (Neuhofer et al., 2015). On one side, personalization through CRM technologies allows hotels to differentiate their services from competitors, engaging with specific guests in a new and innovative manner, thus enhancing guests'perceived value (Piccoli et al., 2017). On the other side, information aggregation, ubiquitous mobile devices and real-time synchronization could enable different levels of experiences, personalization and co-creation in hospitality (Neuhofer et al., 2015). Therefore, IT has brought the possibility of focusing on customer relationships by putting the guest at the centre of the hospitality organization (Sigala, 2005), enhancing personalization and co-creation of specific and unreplicable experiences (Piccoli et al., 2017; Neuhofer et al., 2015). According to Lamberti (2013), this would generate customer intelligence and integration towards increased customer-centricity; however, even if technology systems are increasingly adopted by hoteliers, is the hospitality industry ready for this shift towards guest-centricity in terms of leadership commitment, organization realignment and revised metrics (Shah et al., 2006)? Building on this, what would be the effects of putting the guest at the

centre of the hospitality experience using the unprecedented personalization possibilities (Piccoli et al., 2017) offered by smart technologies (Neuhofer et al., 2015)?

3. <u>Research Design</u>

This research aims at investigating customer centricity and its effect in a given services sector, namely hospitality. In order to do so, two properties have been used as case studies. The properties were selected because they implemented a CRM software called Hoxell (hoxell.com), which has already been studied in literature as a smart technology (Neuhofer et al., 2015) able to deliver personalized and memorable experiences (Piccoli et al., 2017) for co-creation of differential consumer value in hospitality (Piccoli, 2014). Hoxell has been built to connect with all the software already installed in hospitality firms (e.g. Property Management System), delivering organizations excellence through (i) constant monitoring of internal management processes and (ii) service personalization based on implicit and explicit customer preferences. Hoxell puts the customer at the centre of service delivery, gearing the organization towards clients (hoxell.com). Therefore, it is possible to argue that the properties under investigation already engage in some form of customer-centric experience by implementing both the operation and service personalization modules. The properties belong to two different hospitality segments. Hotel 1 is a city hotel with 200 rooms and which stays open all year around, while hotel 2 is a seasonal hotel with 65 rooms and which has high summer seasonality.

Moving from the work of Shah and colleagues (2006), it is possible to argue that implementation of hoxell.com technology indicates there is some sort of commitment to customer-centricity and customer intelligence (Lamberti, 2013) in the hotels under examination. The authors did not have any *a-priori* information about the level of customer-centricity of the properties, nor any real understanding of the leadership commitment, and organization (re)alignment, against which revised customer-centric key performance indicators could be gauged. Therefore, the first exploratory objective of the research is (1) *to understand the organization's awareness and commitment to customer-centricity.*

Additionally, available research stresses the importance of CRM practices within the hospitality sector (Geddie, DeFranco, & Geddie, 2002), leading to personalization and co-creation of value (Neuhofer et al., 2015; Piccoli et al., 2017); however, as Sigala (2005) underlines, there is an inner need for alignment between the IT infrastructure and

relationship/knowledge management. Therefore, the second objective of this research is (2) *to shed light on IT system usage and the organization's awareness of customer-centricity.*

Lastly, customer-centricity can lead to value creation and, ultimately, to competitive advantage (Sheth et al., 2000) and enhancing, for example, customer retention and profitability. As this research has been designed to gain better understanding of the possible benefits of customer-centricity in hospitality, the construct online reputation (Buhalis & Inversini, 2014) has been used as the proxy for generating a preliminary understanding of possible customer-centricty benefits. This choice was motivated by two factors: the inaccessibility of revenue data for the selected hotels and the positive correlation between the tripadvisor.com reputation/ranking and a price increase. In fact, Anderson (2012) posits that a 1 percent increase in a hotel's online reputation score leads to (i) 0.89 percent increase in the average daily rate, (ii) 0.54 percent increase in occupation and (iii) 1.42 percent increase in revenue per available room. Therefore, the third and fourth objectives of this research are focused on customer-centricity benefits: (3) *to assess reputation changes after the introduction of Hoxell within organizations* and (4) *to investigate the relationship between Hoxell usage and hotel reputation.*

In order to reach these four objectives, a multi case study methodology has been designed in which two properties adopting hoxell.com were studied and the following data collected for each property:

(i) Semi-structured Interviews: A series of semi-structured interviews have been conducted with representatives of the organizations involved in the study. The main objective of the interviews was to shed light on the perception of customer-centricity within the organization (management and operations). Due to the relatively small size of the organizations in the sample, two representatives (management and operations) have been interviewed. The interview protocol consisted of 11 questions and was based on the model presented by Shah and colleagues (2006); therefore, the designed questions focussed around management's perception of leadership commitment to customer-centricity, organization realignment, systems and process support and customer-centric metrics and/or key performance indicators. Data was analysed with a theory-based

thematic coding analysis moving from the literature related to customer-centricity to elicit the organization's involvement in customer-centricity.

(ii) Tripadvisor Reviews: All the reviews for the two properties have been downloaded from tripAdvisor.com (up until October 1st 2017). The number of reviews downloaded for the period/organization totalled 3,346. Each organization's review set was divided into two subsets: (i) reviews posted by guests before Hoxell installation and (ii) reviews posted by guests after Hoxell installation. Two different analyses were performed on these sets of reviews:

- *Regression analysis* is used to assess the impact of the introduction of Hoxell on online reputation scores. In particular, the rating score of the review is regressed on a dummy variable (Hoxell) that takes value 1 for reviews posted after Hoxell installation and 0 otherwise (Regression 1). An additional regression is performed to analyse the monthly trend of the rating, respectively before (Month pre-Hoxell) and after (Month post-Hoxell) the installation of Hoxell (Regression 2). The empirical analysis is based on estimation of ordered logistic regressions in order to account for the ordered categorical scale of the dependent variable. Formally, the five-point rating scale (y_i) is linked to a latent variable (y_i^*) through threshold parameters (μ_k) such as:

$$\begin{cases} y_i = 1 \ if \ y_i^* \leq \mu_0, \\ y_i = 2 \ if \ \mu_0 \leq y_i^* \leq \mu_1, \\ y_i = 3 \ if \ \mu_1 \leq y_i^* \leq \mu_2, \\ y_i = 4 \ if \ \mu_2 \leq y_i^* \leq \mu_3, \\ y_i = 5 \ if \ y_i^* > \mu_3. \end{cases}$$

The logistic regression is then expressed as $y_i^* = \alpha + \beta X + \varepsilon_i$, where α is the constant term, β is the coefficient associated with the independent variables x (i.e., Hoxell in Regression 1, and Month pre-Hoxell and Month post-Hoxell in Regression 2). The error term (ε_i) is assumed to follow the Extreme Value distribution and the threshold parameter μ_0 is normalized to zero (Greene, 2003). The threshold parameters are estimated along with the constant term and the coefficients associated with the independent variables through the maximum likelihood estimator.

- *Automatic text analysis* (semantic similarity analysis) was conducted using Iramuteq (http://www.iramuteq.org/) with the semantic similarity analysis technique (belonging to social representation theory – Levidow & Upham, 2017). This was developed by Flament (1981) in order to investigate the proximity and relations among elements (i.e. lemmas) of a given cluster of content. It does so by calculating a contingency coefficient between the elements of the cluster, which is called a similarity index (Flament, 1981). The semantic similarity analysis has, as output, a connected and cyclical graph (the maximum tree of the system), in which all elements are linked together and there is only one way to move from one element to another (Clemence, Doise & Lorenzi-Cioldi, 2014).

(iii) *CRM access*: hoxell.com usage was studied to have a *gross grain* measure of the use of the platform by employees in different organizations. Employees access the CRM via mobile devices when they are in-house (i.e. each member of the organization carries a tablet or smartphone to access data about customers in real time); therefore, as an indication of the usages, the access via mobile devices within the hotel was considered. Thus, all the usages were filtered according to (i) device and (ii) location. Unfortunately, it was not possible to extablish whether or not external factors (other than seasonality) affected access to the platform.

Two different studies were performed on this data:
- *Comparison of Hoxell usage and perception of customer-centricity by organizations*. Results of the in-depth interviews were confronted in an exploratory way with the CRM accesses to give a general perception of the organizations' commitment and the actual usage of the platform.

- *Regression analysis* was used to investigate the relationship between platform usage and average rating after Hoxell introduction. In particular, an ordinary least squares regression is used to regress the monthly average rating on the number of monthly accesses (*Hoxell usage*) to the Hoxell platform (Regression 3). Aimed at obtaining further insight into the impact of Hoxell usage on online reputation, an additional regression estimates the relationship between the number of monthly accesses to the

Hoxell platform and the monthly rate of excellent ratings (Regression 4). Considering that the dependent variable for Regression 4 is a proportion (i.e. monthly rate of excellent ratings), the analysis is performed through estimation of a binomial generalized linear model with logit link function (McCullagh and Nelder, 1989). In particular, the dependent variable is treated as a binomial random variable, where the number of ratings and the number of excellent ratings represent, respectively, the number of trials and the number of successees. The probability of success (θ_i) on any single trial is estimated using the logit link as follows: $\theta_i = \frac{\exp(\beta x)}{1+\exp(\beta x)}$, where β is the coefficient associated with the independent variable *x* (i.e. Hoxell usage).

3.1 Sample Organizations

The sample presents two different organizations labelled with the codes 'Hotel 1' and 'Hotel 2'. Table 1 presents the descriptive statistics for the sample. The properties under consideration differ greatly in terms of type of hotel (city vs. holiday), opening period (all year vs. seasonal), number of rooms (from 200 to 65), number of reviews available on tripadvisor.com (from 2,646 to 700), monthly ratings (pre and post hoxell installation) and proportion of excellent ratings. The main common characteristic among the sample is the constant use of Hoxell as a CRM digital tool for a considerable amount of time. Both organizations use the front-end and back-end modules provided by the company; however, no real insights on the actual use of the tool by the organizations has been investigated (e.g. 20% of full potential or 100% of full potential).

	Hotel 1 (200 rooms, all-year)		Hotel 2 (65 rooms, seasonal)	
	Pre-Hoxell	Post-Hoxell	Pre-Hoxell	Post-Hoxell
Time period (mm/yy)	01/12 – 05/16	06/16 – 09/17	05/15 – 04/16	05/16 – 09/17
Ratings				
Cases	1964	682	260	440
Mean	3.90	4.07	4.63	4.75
Std. dev.	0.98	0.96	0.60	0.53
Monthly ratings				
Months	53	16	12	16
Cases per month	37.1	42.6	21.7	27.5

Mean	3.89	4.02	4.62	4.73
Std. dev.	0.21	0.19	0.23	0.12
Monthly proportion of excellent ratings				
Mean	28%	36%	67%	78%
Std. dev.	11%	7%	18%	8%
Monthly Hoxell accesses				
Mean		3480.5		985.2
Std. dev.		597.7		297.4
Monthly Hoxell accesses (by hotel size)				
Mean		17.4		15.2
Std. dev.		3.0		4.6

Table 1. Sample Organizations and Descriptive Statistics

4. **Results**

4.1 Organizations' Awareness of Customers Centricity

The first set of results is aimed at measuring the organization's subjective perception of customer-centricity. Two main issues emerged from the semi-structured interviews. Hospitality is a domain where guests' needs and wants and, ultimately, guest value (e.g. Gallarza and Gil Saura, 2006) is central in the overall 'competitiveness' discourse and customer-centricity seems to be at the core of both properties under investigation. Being customer-centric, *"is at the heart of the actual concept of hospitality"* (Manager Hotel 2); managers agree that there should be *"a maniacal attention to the customers and to the details they ask us every day"* (Manager Hotel 2), *"regardless of the tariff, without distinction of who pays more and who pays less"* (Manager Hotel 1). Two core themes emerged from the interview analysis:

(1) Broad Organization Involvement: Besides a clear focus on guests, managers also stressed the importance of staff in delivering a 'guest-centered experience': *"for employees, being 'customer-centered' means recognizing the client's needs and anticipating their desires"* (Manager Hotel 2). Everything starts from the front desk

(i.e. from the service encounter – Warhurst, Nickson, & Dutton, 2005) but moves up to every function within the business, from restaurants to housekeeping (Operation Hotel 1). No one can hide anymore (Manager Hotel 2), everyone should collaborate in delivering the best customer experience ever (Manager Hotel 1): "[…] *employees need to understand they are 'on stage' and need to perform their character well every day […] Nowadays, the hotel plays as an orchestra, where each and every member has got the possibility of meeting our customers and play a crucial part in their stay"* (Manager Hotel 2). The digital platform (i.e. Hoxell) allows strong connectivity among all staff members of the organization and guests. This allows collection of an unprecedented amount of information (i.e. in the form of expressed or unexpressed preferences), maximizing the possibilities for a fruitful host-guest engagement towards the delivery of a brilliant and customer-centred guest experience (Operations, Hotel 1).

(2) Change in the Organization's Culture: The introduction of Hoxell started a process of change for the organizational culture. Leadership needs to be fully committed to customer-centricity as *"[…] the example given by the directors is crucial to lead the way for employees"* (Manager Hotel 2) as *"the psychological involvement of every single staff member who works in any sector of our hotel makes a difference to the client"* (Operation, Hotel 1); this is because *"[…] the digital tool is only a part: the fundamental issue is that this is supported by information and training processes both about the actual technology and about the desired outcome of the introduction"* (Manager Hotel 1)*.* The introduction of Hoxell, along with a strong leadership commitment, has *"ensured a participatory approach to the guest-centered culture"* (Manager Hotel 1) where all staff members interact on the same platform, which is updated in real time supporting *"[…] unity between departments, resulting in stronger teamwork"* (Operation, Hotel 1). The introduction of Hoxell contributed to the digital transformation of the properties (i.e. moving towards paperless businesses) but had an impact also on success metrics in which customer satisfaction is paramount for each department: *"web reputation became a crucial metric and we have been witnessing a sort of correlation between our efforts in what we can call guest-centricity and guests' appreciation through online reviews"* (Manager Hotel 2).

In the last part of the semi-structured interviews, managers were asked to rate their commitment to customer-centricity, following Shah and colleagues' (2006) customer-centricity framework. The interviewer simply asked them to rank on a scale from 1 to 7 (1 being the lowest rank) the importance of various elements of customer-centricity for their organization (Figure 1)
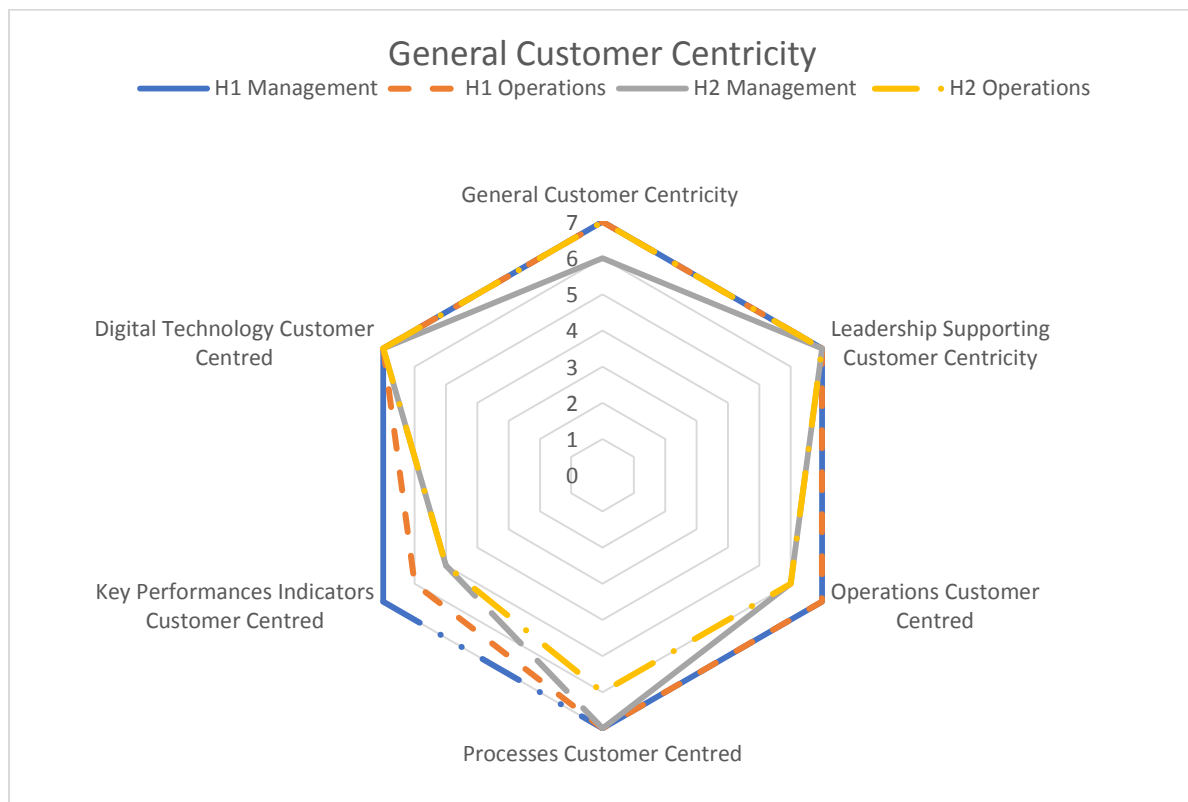

Figure 1: Managers' Rating of Customer-Centricity Aspects in Hospitality

In a nutshell, Figure 1 shows that managers in the sample have the same perception of the importance of customer centricity in their property and, as leaders, they feel supportive towards the 'guest-first philosophy'. Managers feel that the organization's operations, processes and key performance indicators in their business can be improved in a guest-centred way.

4.2 IT System Usage and the Organization's Commitment to Customer-Centricity

The second set of results, assess (i) the actual commitment to customer-centricity by organizations through an objective metric (i.e use of Hoxell platform) and (ii) how commitment affects awareness towards customer-centricity.

Hotel 1's average rating for customer-centricity perception (management and operations) is 6.8/7, which is higher than hotel 2's (6.3/7). Hotel 1 also has more accesses to the Hoxell platform (3,480 accesses on average per month) in the period considered, while Hotel 2 has 985 accesses per month in the same period. However, when normalizing access to the Hoxell platform (than to hotel size - please see Table 1) it is possible to note that there is a slightly higher mean for Hotel 1 (17,4) than for Hotel 2 (15.2). The results show that greater distance of perception is related to the importance of the customer-centered key performance indicators for which the respondents of hotel 2 express an average evaluation of 5 versus 7 expressed by the respondents of hotel 1. Therefore, regarding our case studies, it is possible to argue that the more a hotel uses the digital advanced CRM tool (i.e. hoxell.com), the more the hotel increases the perception of customer-centricity for what concerns the managers. Regression 3 (please see below) also proves that there is a relationship between Hoxell usage and customer satisfaction. The results show that commitment to CRM supports cultural change and awareness towards customer-centricity key dimensions.

4.3 Guest Reviews

The third set of results clarifies the relationship between customer-centricity and benefits for both customers and businesses. In order to investigate the impact of CRM on the properties in terms of reputation, the downloaded reviews were split into two different groups: before installation of the CRM and after installation (dates, as communicated by the CRM company itself, are indicated in table 1). There is an increase in the average rating for the organizations in the sample.

4.3.1 Regression Analysis

Table 2 reports the results of the ordered logistic regressions performed on the rating scores. Considering interpretation of logistic regression coefficients is not straightforward (Greene and Hensher, 2010), Table 2 reports also the marginal effects ($ME_{y=5}$), indicating the change in the probability of observing the highest rating (i.e. a score of 5) given a one-unit increase in the independent variable. Regarding Regression 1, the introduction of Hoxell into hotel operations is associated with a positive and statistically significant (p-value < 0.01) impact on the rating scores of both hotels. In particular, after the installation of Hoxell, the probability of receiving a 5-star rating increased by 8.0% and 9.8% for Hotel 1 and Hotel 2, respectively.

Turning to the results of Regression 2, it is interesting to note that, before the installation of Hoxell, neither hotel experienced any significant trend for the ratings over time. However, after the installation of Hoxell, Hotel 1 exhibits a positive and significant (p-value < 0.01) monthly trend, indicating a 0.7% monthly increase in the probability of observing a 5-star rating. In contrast, the monthly trend of Hotel 2's ratings after the installation of Hoxell is not statistically significant.

	Regression 1 (Rating scores)				Regression 2 (Rating scores)			
	Hotel 1		Hotel 2		Hotel 1		Hotel 2	
	Coeff. $(ME_{y=5})$	p-value	Coeff. $(ME_{y=5})$	p-value	Coeff. $(ME_{y=5})$	p-value	Coeff. $(ME_{y=5})$	p-value
Constant	3.425	(0.000)	6.262	(0.000)	3.434	(0.000)	6.607	(0.000)
Hoxell	0.363 *(8.0%)*	(0.000)	0.508 *(9.8%)*	(0.004)				
Month pre-Hoxell					0.001 *(0.01%)*	(0.801)	-0.043 *(-0.8%)*	(0.124)
Month post-Hoxell					0.031 *(0.7%)*	(0.006)	0.013 *(0.2%)*	(0.543)
Threshold μ_1	1.142	(0.000)	1.955	(0.000)	1.142	(0.000)	1.955	(0.000)
Threshold μ_2	2.421	(0.000)	3.025	(0.000)	2.419	(0.000)	3.024	(0.000)
Threshold μ_3	4.335	(0.000)	5.482	(0.000)	4.328	(0.000)	5.477	(0.000)

Table 2. Regression Analysis of Rating Data

Table 3 illustrates the results of the regression analysis conducted on the monthly average ratings. The estimates for Regression 3 indicate a positive and statistically significant effect of the intensity of Hoxell usage on the average monthly ratings for Hotel 1, though marginal in size. In fact, an increase of 100 accesses to the Hoxell platform is associated with a 0.016 increase in the average rating score. In contrast, no significant relation is observed in terms of intensity of Hoxell usage for Hotel 2. Looking at the impact of the intensity of Hoxell usage on the rate of excellent ratings, the estimation for Regression 4 indicates a positive effect for both Hotel 1 (p-value = 0.051) and Hotel 2 (p-value = 0.058). The exponential of the coefficient reflects the change in the odds of observing an excellent rating given a unit increase in Hoxell usage. In particular, an increase of 100 accesses to the Hoxell platform is associated with a

2.7% and 8.1% increase in the odds of registering an excellent rating for Hotel 1 and Hotel 2, respectively.

	Regression 3 (Average monthly ratings)				Regression 4 (Share excellent ratings)			
	Hotel 1		Hotel 2		Hotel 1		Hotel 2	
	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
Constant	3.452	(0.000)	4.674	(0.000)	-1.466	(0.002)	0.502	(0.238)
Hoxell usage (hundreds)	0.016	(0.041)	0.005	(0.629)	0.262	(0.051)	0.078	(0.058)

Table 3. Regression Analysis of Monthly Rating Data

4.3.3 Automated Text Analysis

One other study was performed on the actual text of the reviews: review text was processed with an automatic text analysis tool called Iramuteq. This tool allowed finding semantic similarity and connections among lemmas (Figures 2a, 2b, 3a and 3b).
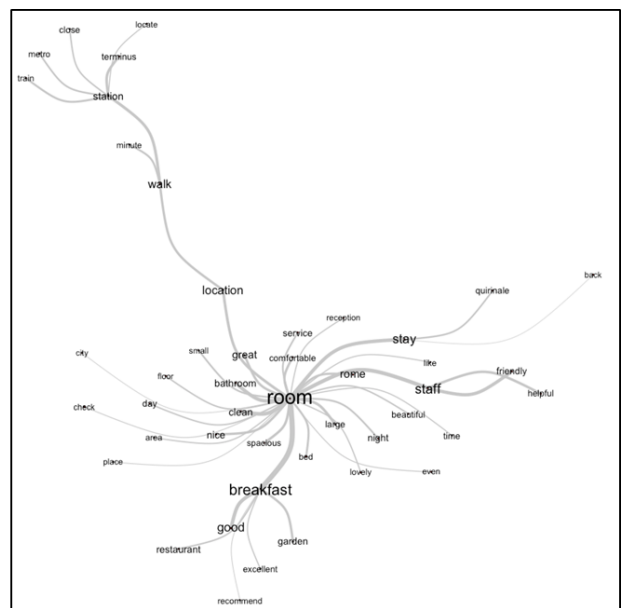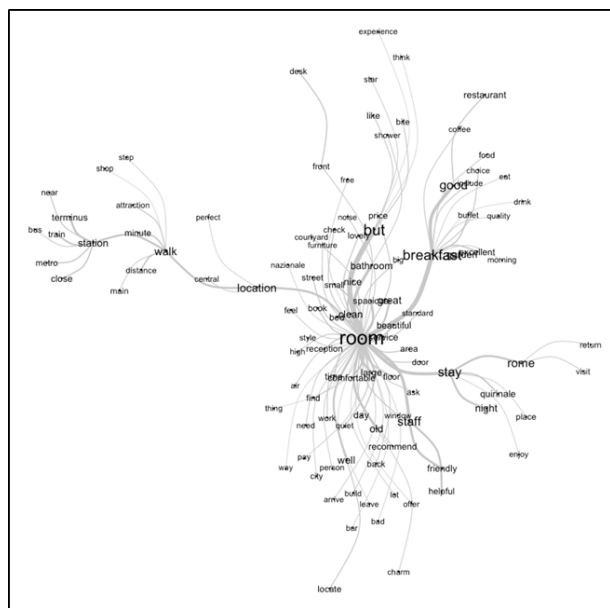

Fig. 2a Hotel 1 Pre-Hoxell (1,964 Reviews Analysed)   Figure 2b - Hotel 1 Post-Hoxell (682 Reviews Analysed)

There is little shift in lemmas' semantic associations in hotel 1. The room remains the core of the textual element of the reviews before and after Hoxell's introduction. Breakfast and staff seem to be two other popular clusters of discussion. The average rating increased 3.93% post-

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Hoxell introduction. It is only possible to assume that the tool helped the organization in performing better without losing their key competences and values.
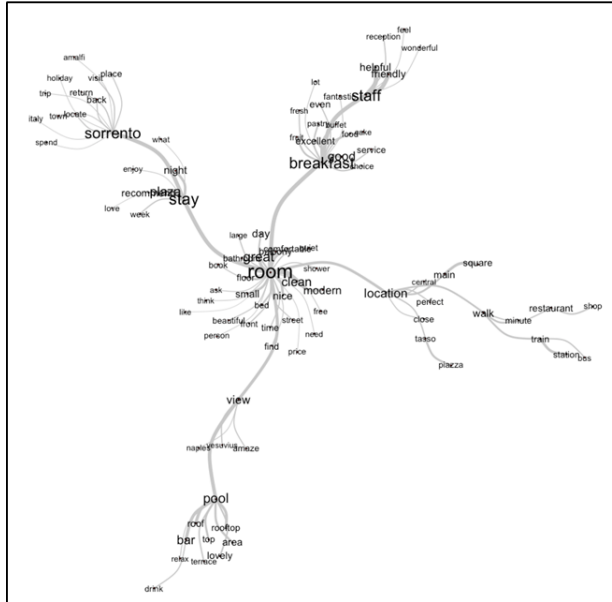

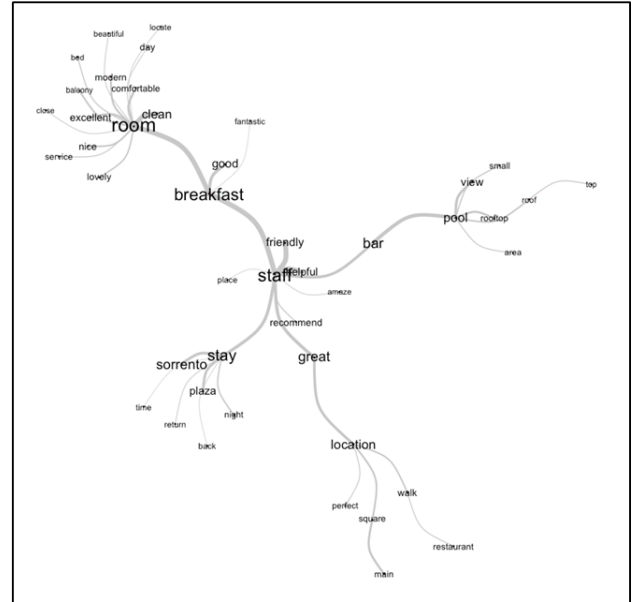Fig. 3a Hotel 2 – Pre-Hoxell (260 Reviews Analysed)

Fig. 3ba Hotel 2 – Post-Hoxell (440 Reviews Analysed)

The comparison of the lemmas' semantic associations before and after Hoxell installation for Hotel 2 gave more insights of the shift in the organization's culture. After Hoxell was installed in the property, the staff assumed a stronger central role in the discussions on social media. The core clusters remain the same but the one related to staff seems to gain popularity and centrality within the review discourses.

Discussion and Conclusions

This research discusses the concept of customer-centricity applied to the hospiatlity sector with a mixed-method, multiple case study approach. Two properties implementing an advanced CRM system (i.e. Hoxell), already recognized in literature as a personalization tool able to empower customers (Piccoli et al., 2017) and enhance host-guest relationships towards experience co-creation (Neuhofer et al., 2015), have been studied.

The importance of customer-centricity for business competitiveness has been widely discussed in the literature; however, beyond academic definitions, the creation of truly customer-centric organizations is still a difficult challenge (Ulaga, 2018). The new generation

of CRMs can offer support towards organizations' evolution; yet, especially in the services sector, organizations should be geared towards customer-centricty and should have tangible benefits from it.

This study moves from these premises and tackles the relationship among customer-centricty perception, CRM implementation and organization reputation (i.e. evaluation scores). With reference to the first relationship, through in-depth interviews, the study highlights two key features of the customer-centric organization: (i) the ability to involve all levels of the company in service delivery by sharing an unprecedented amount of information and (ii) changes in organizational culture. Results present a strong commitment from the management towards guest-centricity (i.e. interviews) with areas of improvement related to processes, organization and key performance indicators.

However, interviewees collectively praised the advent of the digital tool's ability to put firms' collaborators 'on stage' to contribute to customers-centricity and the ultimate creation of guests' value. With reference to the tool's usage, our data shows that the organization that makes the greatest use of CRM is characterized by a higher awareness of the importance of customer-centric metrics. The learning process, enabled by CRM, on which this exploratory study has focused, is worthy of further investigation in subsequent studies using larger samples.

With reference to the second relationship Hoxell, as an advanced CRM, was demonstrated to be crucial for the properties under investigation implementing guest-centricity. This is in line with literature in the field, which posits that CRM technology enhances effective customer relationships (Chen & Popovich, 2003). In our study, there is a clear relationship between the introduction into hotel operations and the actual fluctuation of guest ratings on tripadvisor.com.

An interesting pattern emerged from the regression analysis. Before the installation of Hoxell, neither of the two hotels considered in the study experienced a significant improvement in guest ratings over time. The introduction of Hoxell into hotel operations brought a significant but differentiated improvement. In fact, although both hotels experienced an increase in the

rating scores, the increase has been gradual over time for Hotel 1, whereas Hotel 2 manifested a positive shift in the rating scores. Moreover, the results further suggest an incremental positive effect associated with the intensity of Hoxell usage, especially in relation to the ability of hotels to secure excellent guest ratings.

In general, this result can be related with the possibility to monetize this incremental guest rating: as stated by Anderson (2012), a 1 percent increase in a hotel's online reputation score leads to (i) 0.89 percent increase in average daily rate, (ii) 0.54 percent increase in occupation and (iii) 1.42 percent increase in revenue per available room. Therefore, it is possible to argue that implementation of Hoxell with the intent of enhancing customer-centricity could, in the medium-long run, result in increased average daily rate, occupation and, ultimately, revenue per available room.

Additionally, there was a clear indication of a possible cultural shift in the properties under investigation; this is demonstrated by the automated text analysis conducted for the online reviews for the two cases studied. Hotel 2 particularly showed a clear shift in topic-centrality from the actual 'room' cluster (i.e. the physical assets of the hotel) to the 'staff' cluster (i.e. the experience enablers within a hospitality establishment), supporting a more active role for the staff delivering the service experience. This connects with the managers' interviews in which interviewees clearly described the importance of staff empowerment towards augmenting guest contact points to deliver a tailor-made, customer-centric experience.

Therefore, this research contributes to literature by linking CRM software usage with customer-centricity and guest ratings (i.e. proxy for online reputation) in a service environment where the use of an advanced CRM for organization management and service personalization could bring some relevant advantages to hospitality establishments. This is achieved by improving guest ratings (possibly impacting on financial metrics) and by contributing in shifting the organization's culture (where managers lead the way and staff gain power towards satisfying guests' expectations).

Limitations mainly concern two issues: (i) on one side, it was not possible to control external events influencing hotel ratings on tripadvisor.com (it is important here to note that macro

external events, such as the change in management/ownership of a property, could be communicated to tripadvisor.com and old reviews could be removed - Tripadvisor.com, 2019). Therefore, study of the reviews assumed they all stayed the same over the period of time under investigation. (ii) On the other side, the nature of the research is exploratory. The link between software usage, customer-centricity culture and online reputation seems to be promising and interesting. A confirmatory study, which is part of the authors' future work agenda, will confirm the relationship between the three constructs. This study could also support a tendency related to customer-centricity and competitive barriers: the more an organization engages in customer-centricty and in advanced CRM usage, the more it can influence the perceptions of customers by directing their attention to those aspects of the service related to interpersonal relationships (i.e. hospitality staff), thus making it more difficult for competitors to imitate.

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