

## Assessing customer centricity: a new framework for manufacturing companies

Bonetti D.\*, Adrodegari F.\*, Saccani N.\*

\* *Research Innovation for Smart Enterprise (RISE) Research Laboratory - Dipartimento di Ingegneria Meccanica e Industriale (DIMI), University of Brescia, Via Branze 38, 25123 - Brescia - Italy* ([daniela.bonetti@unibs.it](mailto:daniela.bonetti@unibs.it); [federico.adrodegari@unibs.it](mailto:federico.adrodegari@unibs.it); [nicola.saccani@unibs.it](mailto:nicola.saccani@unibs.it))

**Abstract:** As a direct result of the changeable market conditions, manufacturing companies are currently shifting their focus from goods to services. Given this process of servitization, customer's needs and preferences are becoming more and more relevant for companies. In this context, it becomes strategic and essential for companies to adopt a customer centricity approach: a strategy that puts customer needs at the center of all business processes and decisions. This paper aims to develop a new framework that identifies the elements characterizing the customer centricity paradigm in manufacturing companies and supports companies in the evaluation of the customer orientation level. Moreover, by applying the new framework in practice, this paper also discusses how it can help manufacturing companies in designing a structured customer centricity paradigm and in consistently identifying the actions needed to implement it.

**Keywords:** customer centricity; framework; capital good; servitization; customer life cycle.

### 1. Introduction

Markets are becoming extremely competitive and turbulent, and are continuously changing (Neu; Brown, 2005). In this context, manufacturing companies can no longer rely on the traditional product-focused business models, whose competitive dimensions are time, cost, quality or flexibility (Dimache; Roche, 2013). It is not surprising therefore that, also in capital goods sector, manufacturers are moving from product-centric offerings to services and solutions (Adrodegari and Saccani, 2017), enabling new sustainable competitive advantages (Neely, 2008). Moreover, to provide solutions that increasingly fit new and complex customers' needs, companies have started to modify their organizational structures, trying to become more aware and sensitive to their customers, developing a new "customer centric approach" (Gebauer et al., 2011). Literature reports several examples of companies that successfully implemented a customer-centric strategy. In particular, several studies show how the implementation of a greater customer focus can give to companies new advantages in terms of increased sales, customer retention rates and profit (Fader 2012). Despite this, few methods and tools have been developed and presented in literature, to support companies in developing a structured customer centricity strategy. This is even truer in the capital goods, where companies are traditionally focused on product design and production. As a consequence, although these companies recognize the need to become more customer-centric, several studies report that few of them have really understood in practice how to develop a customer centric approach (Galbraith, 2005; Shah et al., 2006). Thus, in order to fill this gap, this paper aims to develop a new framework that (i) identifies the elements characterizing the customer centricity strategy in manufacturing companies and (ii) supports companies in

assessing their current customer orientation level. Moreover, by applying the framework in practice, this paper also discusses (iii) how the proposed framework can support manufacturing companies in designing a concrete customer-centric strategy by identifying, planning and deploying the actions needed to implement it.

The remainder of the paper is structured as follows. The next section sets the background of this study. Section 3 describes the research methodology while section 4 provides the new customer centricity framework. Then, the main evidences of the application of this framework to six manufacturing companies are reported in section 5. Finally, section 6 draws some conclusive remarks.

### 2. Theoretical background

Although customer centricity has only recently been embraced by the business community, this concept has already been studied and analysed in the last century (Shah, et al., 2006). Only from the mid-1980s, however, the concept of customer centricity began to grow in importance in the scientific community, and several authors started reporting definitions with different facets of meaning. Wernerfelt, in 1984, affirmed that customer centricity helps companies and customers to co-create knowledge on needs and preferences. More recently, Matsuno and Mentzer (2000) added to this vision the importance of capturing and using information about customer needs. Then, over the year, the customer centricity concept has evolved and has been seen as an opportunity for companies to create a competitive advantage based on increasing customer satisfaction (Shah, et al., 2006). Recently, in 2012 Fader defined customer centricity as a business strategy: “*Customer centricity is a strategy that aligns a company's development and delivery of its products and services with the current and future needs of a select set of customers in order to maximize their long-term*

*financial value*” (Fader, 2012). Loshin and Reifer (2013) give a further definition that clarifies the customer centricity goals: “*The customer centricity represents a set of strategies that places the customer at the centre of an organization’s operations [...] and intended to help companies to better understand who their customers are, what they want, and how they can best benefit symbiotically*”. Considering and blending all these definitions, we can define the customer centricity as a corporate approach able of aligning the design, product and service development, and distribution with the customer needs, in order to build an enduring relationship and to improve the company performance.

Hence, customer centricity is based on the idea that customer needs “come first”, i.e. the company should put all its effort into troubleshooting its customers and creating a product of value for the customer itself. Following this line of reasoning, a company can be defined as customer centric if it properly integrates the customer experience program throughout its organization (Hayes, 2013): this integration has many forms, but the underlying idea is that the knowledge and importance of the client must be shared and communicated extensively throughout the company. This also means that customer centric companies use customer feedback and customer satisfaction metrics to build their decision-making and incentive their programs (Manning, et al., 2012).

Over the years, the customer centricity approach has been generally discussed and explained to the managerial community in comparison with the traditional product centricity approach (e.g. Galbraith, 2005; Shah, et al., 2006). In particular, compared to the traditional model, the adoption of a customer centric approach, provides a series of important benefits that can enable new sustainable competitive advantages based on (Gumesson, 2008; Loshin, Reifer, 2013; Shah, et al., 2006; Galbraith, 2005): the development of new trust relationship; a better comprehension of customer needs; an increased customer experience and customer loyalty; an improvement in customer relationship management; a performance improvement in terms of productivity, profit and market share; and decreased sensibility of clients to prices.

At the same time, literature also recognized many challenges related to the development of a customer-centric approach, such as (Gumesson, 2008; Loshin, Reifer, 2013; Shah, et al., 2006; Galbraith, 2005): difficulties in developing an efficient collaboration with the client; cultural issues; necessity of specific investment and training courses; necessity of a reorganization of the company structure; difficulties in collecting data; issues in defining the KPI referred to external aspects as client satisfaction (qualitative and subjective measurement); need of tools to measure how the customer orientation affects the organization performance.

As a matter of fact, the transition from a product-centric approach to a customer-centric one, is very complex as it involves a radical change in many aspects of the company (Galbraith, 2005; Shah, et al., 2006). It is not surprising therefore that, although literature recognizes the importance of a customer-centric approach in today’s competitive market, several studies also reports that few companies have really understood in practice how to

develop a customer centricity approach. This is also due to the fact that little attention has been devoted in literature to the description and formalization of specific customer-centricity frameworks and even fewer works are currently offering tools or methods that can be used by companies.

### 3. Research process and method

The research process was structured in two steps: 1) the development of the customer centricity framework, based on the existing literature analysis, and 2) the application of this framework to an empirical case, which allowed to both refine it and assess its managerial usefulness. This process (Figure 1) is described in the following sections.

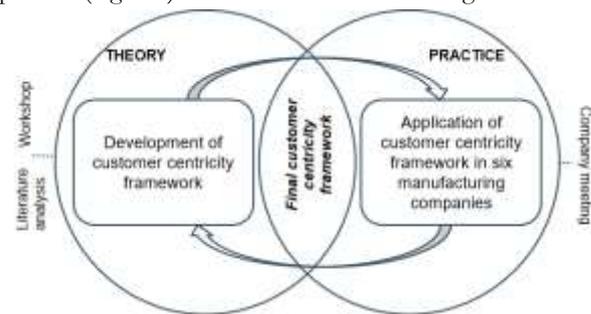


Figure 1 The main activities of the research process

#### 3.1 Conceptual development

In order to develop the framework proposed in this paper, a critical analysis of the literature related to the customer-centricity and similar topics (such as customer experience and customer relationship management) was necessary. This process has been carried out using an approach that is commonly employed when a relevant research is spread across a number of different literature streams (e.g. Rapaccini; Visintin, 2015; Adrodegari et al., 2017). The analysis started with recently published reviews in the marketing and operations management fields (e.g. Galbraith, 2005; Shah, et al., 2006; Lamberti, 2013; Loshin; Reifer, 2013) using keywords such as: customer centricity, customer experience, customer relationship management, customer satisfaction, customer retention; combined with other keywords such as: maturity model, measurement, framework. Afterwards, the most cited papers have been read and their most relevant references evaluated. Moreover, in order to gain a first insight into the current knowledge on the specific topic of this research, the research focused on papers that propose or adopt a structured model for developing or evaluating the customer centricity.

In 2005, Galbraith proposed *The customer centric organization model*, an organization model that describes, using five dimensions and 13 variables, how to be a customer centric company making comparisons with a product centric one. Then, in 2010, Sohrabi et al., formulated the *Customer Relationship Management Maturity Model*, composed of nine *critical factors* for the CRM analysis. Each factor is operationalized by a set of 22 items and each item is evaluated through 6 levels of maturity. Afterwards, Hechtkopf (2012) proposed the *Customer centricity framework*, that analyses different areas of a company with

a set of questions and evaluates each of these answers with a score scale. In 2012, a *Customer Experience Management Model* and a *Model for Customer Relationship Management implementation* were proposed. The first one provided a set of features that the company must have to be customer oriented (Manning et al., 2012). The second model is structured in nine big groups of critical factors, that represent the different transformation areas to approach the customer relationship management (Vazifehdust et al., 2012). Hollander et al. (2013) developed a *Customer Centric Maturity Model* with ten organizational areas, characterized by five stages of maturity. Finally, Burn (2016) proposed *The Customer Experience Management Maturity Model*, an articulated model that includes 30 practices organized into six competencies of customer experience management. Each competence is composed of a set of practices that defines the “current state” of the company regarding the customer experience management.

Through this literature analysis, a first version of the customer centricity framework was developed. The framework is structured in two levels: the first level consists of five dimensions that can accurately describe the organization; the second level specifies the first level dimensions through a specific set of variables. To derive these variables, we first analysed the relevant elements addressed by the selected similar models (see Sections 3.1). At the same time, as a systematization of the current knowledge on the topic could not rely only on the sources adopting a model-based approach, we also searched for relevant literature that deals with each customer centricity and related topics, such as: customer experience, customer satisfaction, customer loyalty, customer retention, customer lifetime value, customer relationship management and, obviously, customer centricity. Afterwards, the research was restricted adopting other keywords, to better delimit the context of our interest, such as industries, manufacturing, machinery and capital. Then, in order to supply an objective measure of the customer orientation of the company, the framework considers, for each variable of each dimension, three different levels of customer centricity: *high customer orientation level*; *medium customer orientation level*; and *low customer orientation level*. These levels allow a company to evaluate each business variable and to give a macro-indication of its level of customer centricity, useful also for comparison with other organizations. Then, each of these levels has been defined specifically for each variable of the framework.

### 3.2 Empirical application

The framework has been applied in six manufacturing companies, in order to test its comprehensiveness and managerial applicability. All of these companies had the objectives of increasing customer satisfaction, customer loyalty, customer experience and customer intimacy. They also desired to spread a customer-oriented culture among all employees and to understand and implement tools and practices for managing customer information. Finally, all the companies interviewed want to improve KPIs related to customer centric strategy, such as customer satisfaction

rate, customer retention rate, customer life value, and so on.

In order to enhance the reliability and validity of the data collection and elaboration activities (Voss, et al., 2002), a specific research protocol has been designed. Following the suggestion by Yin (2009), the developed protocol, is composed of five main steps, namely: 1) *define and design*, where we analysed literature; defined the research objectives, the sample of our analysis, and the main tools used for the collecting and analysing data; 2) *data preparation*, where we built a database to map information from companies’ interviews; 3) *data collection*, that consist of a preliminary questionnaire and two series of inter-view in each company; 4) *data analysis* both with a single case analysis and cross-case analysis; 5) *data elaboration* and benchmarking results and preparation of reports.

Moreover, specific tools have been developed in order to support the Data collection phase of the research, as a *preliminary questionnaire* used to gather useful information about the companies (corporate data; customer segmentation; product segmentation; services portfolio; business processes; and informative system); a *second questionnaire*, helpful in defining the area of analysis (selection of strategic customer segments for the company and its products) and the customer’s lifecycle phases and a *third questionnaire* useful to map in detail each customer’s lifecycle phase in terms of activities, involved resources, practices and tools for collecting, analysing, sharing and disseminating data, and indicators for measuring performance.

## 4 Customer centricity framework

### 4.1 Customer centricity framework structure

The *Figure 2* summarises the two-level hierarchical framework. In fact, as mentioned above, the proposed customer centricity framework is structured in two levels:

*The first level* uses five dimensions that are commonly used in literature to describe the organization (Galbraith, 2005; Sohrabi, et al., 2010). These dimensions are: strategy, processes, resources, technologies and performance.

*The second level* operationalize the first level dimensions through a set of 34 variables derived from literature, that correspond to the most relevant aspects that need be characterized in order to describe and evaluate the customer centricity in manufacturing companies.

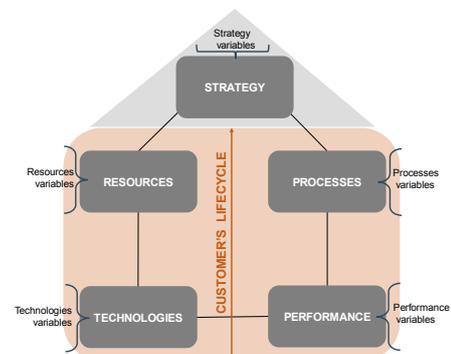


Figure 2 Customer centricity framework

In addition, model variables belonging to resources, processes, technologies, and performances dimensions are investigated along the different stages of the customer's lifecycle (Deloitte, 2012). This allows assessing the different phases of interaction with the customer. The customer's lifecycle phases have been identified from the literature and adapted to the context of our project. The main phases can be defined as: *needs assessment; research; evaluation/selection; acquisition; product installation; utilization; maintenance; end of life*.

#### 4.2 Level I: Dimensions

The five dimensions of the model have been selected based on similar works found in the literature, in order to cover entirely all the organizational areas of a company.

On one hand, from the literature emerged that some models are focused only on certain areas, neglecting others of relevant importance. As an example, Burns, 2016, and Manning, et al. 2012, do not investigate aspects such as resources involved and technologies to be used. Galbraith, 2005, proposes CRM to manage customer relations but does not deal with the technologies that can support the whole organization in a customer-orientated way; Hechtkopf, 2011, and Vazifehdust, et al., 2012, do not handle processes and procedures to be implemented in the company).

On the other hand, other authors propose many "areas of inquiry", that sometimes are not distinguishable and partially overlap, resulting in a more complex model (e.g. Sohrabi, et al., 2010; Hollander, et al., 2013).

For these reasons, five dimensions have been chosen to represent an organization as simply but as accurately as possible. These dimensions are: **1. Strategy:** this dimension investigates the strategic choices that characterize an organization. In particular, all the aspects that define the strategic plan of a company are analysed (Galbraith, 2005; Sohrabi, et al., 2010; Manning, et al. 2012; Hollander, et al., 2013; Burns, 2016). **2. Resources:** this dimension investigates all the resources that directly or indirectly interact with the customer and that result useful in collecting information. In addition, the level of customer control, the skills and competences of the resources involved in the interaction and the decision-making autonomy delegated to the frontline, are examined during the different phases of the customer's lifecycle (Galbraith, 2005; Sohrabi, et al., 2010; Hollander, et al., 2013). **3. Processes:** this dimension explores the main activities and processes of the company. Also, all the procedures, whether they are in a formalized form or not, leading business activities and customer interactions, and managing the information from customers are analysed (Galbraith, 2005; Sohrabi, et al., 2010; Hollander, et al., 2013). **4. Technologies:** this dimension identifies all tools and information systems used by the company to collect customer information, analyse and streamline the data, share the results within the company itself and issue information to its customers (Sohrabi, et al., 2010; Hechtkopf, 2011; Vazifehdust, et al., 2012; Hollander, et al., 2013). **5. Performance:** in this dimension, the performance indicators related to the customer's lifecycle

and its specific phases are analysed (Galbraith, 2005; Sohrabi, et al., 2010; Manning, et al. 2012; Burns, 2016).

#### 4.3 Level II: variables

As mentioned above, each of the dimensions introduced has been operationalized through a set of variables derived from the literature, in order to evaluate the customer orientation of manufacturing companies.

The selected variables are briefly described in the remainder of this Section for each dimension.

Starting from the **Strategy** dimension, one of the first important aspect to investigate are the different segmentation-criteria for customers and products, employed and shared within the company (Kocoure, et al., 2004; Galbraith, 2005; Hollander, et al, 2013), the type of relationship with the customer, in terms of duration and degree of formalization, and the business functions that interact with them (Shah, et al., 2006; Hechtkopf, 2011). Then, it is important to know the figures dedicated to the customers, e.g. key account manager, and also the figures dedicated to the products, such as Product manager or Product specialist (Shah, et al., 2006). The dimension investigates also the management involvement in troubleshooting customer problems and the ability of the company to communicate closeness to the clients (Ross, 2009; Hayes, 2013; He, et al., 2015); the methods characterizing the selection process of the internal staff and the partners, who will manage relationship with the customers (Ross, 2009) and the training of the whole staff involved, in any way, with the customer (Galbraith, 2005); and the incentive systems used to stimulate business staff to exhibit a customer-oriented behaviour (Galbraith, 2005; Hechtkopf, 2011; Hayes, 2013). Finally, some variables investigate how the company manages customer experience (Hechtkopf, 2011; Hayes, 2013; Ukko; Pekkola, 2015), how it performs corrective and improving actions (Ukko; Pekkola, 2015), how it monitors the customer throughout the whole lifecycle (Shah, et al., 2006) and how it designs products and services tailored to customer needs (Day, 2000; Kocoure, et al., 2004; He, et al., 2015).

The other four dimensions, instead, are analysed along the customer's lifecycle, providing details about each single phase. The **Resource** dimension investigates: the main capabilities and skills of the resources involved in the various phases of the customer lifecycle (Galbraith 2005; Hayes, 2013); their level of customer control (Gebauer et al., 2011) and the main channels through which data is collected along the lifecycle (Ross, 2009; Loshin; Reifer, 2013; Ukko; Pekkola 2015). In the **Processes**, the main activities of the various phases (Manning, et al. 2012) and the formalization of the different business procedures are investigated (Kocoure, et al., 2004). Then, the dimension collects information on business practices useful for data collection, analyse collected data, share them within the company, and spread them outward, providing the customer with the power to access certain corporate information (Galbraith, 2005; Ross, 2009; Loshin; Reifer, 2013). The **Technologies** dimension investigates the ICT tools used in the company to collect, analyse, share, and issue customer information throughout the lifecycle

(Galbraith, 2005; Shah, et al., 2006; Hechtkopf, 2011; Loshin; Reifer, 2013). Lastly, in the **Performance** dimension, performance indicators, measured during the customer's lifecycle and its specific phases (Shah, et al., 2006; Ross, 2009; Sohrabi, et al., 2010; Hechtkopf, 2011; Hayes, 2013; Hollander, et al., 2013), are analysed.

**5 Case studies results**

With the application of the customer centricity framework on the company sample considered, a cross-examination of the collected data has been carried out.

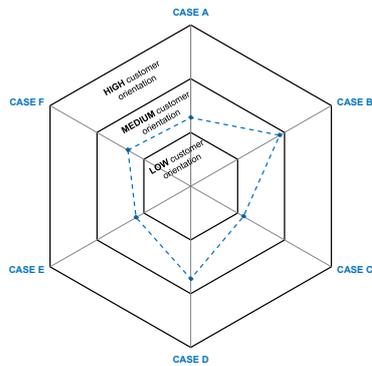
The objective of the cross-case analysis is twofold: on one hand, it is useful to test the validity of the proposed framework; on the other hand, starting from the best business practices, it is possible to provide some improvement points that will provide concretely help to manufacturing companies that pursue a customer centricity strategy.

For each case study analysed, all the variables have been evaluated based on the information collected during the interviews, using the levels reported in the customer orientation model (see Section 3.1). The results are shown in the two Sections below: the first Section performs the strategic dimension analysis; the second one shows the results of companies, in the remaining dimensions of the framework, throughout the customer lifecycle perspective.

**5.1 Strategy: main evidences**

The strategic dimension variables define cross-sectional aspects of the organization and how these aspects take in consideration the customers' perspective and needs.

Overall, the evaluation of the strategy dimensions shows that the sample of companies under analysis is positioned in an intermediate level of customer orientation.



**Figure 3 Sample orientation in the strategy dimension**

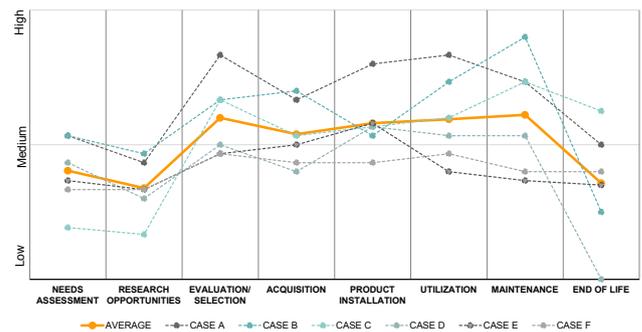
More in detail, the *classification of customers* variable represents one of the more critical aspect: in fact, companies rarely use life-cycle segmentation criteria (e.g. Customer Lifetime Value or customer satisfaction) or, more in general, customer-oriented criteria (e.g. a classification of loyal customers). In addition, there is generally no sharing of such customer segmentation criteria within the company. Another critical variable, is the *management of the customer experience* that is extremely critical in almost all the companies under analysis: there is often a low customer satisfaction, as well as a system of analysis and re-processing of customer satisfaction data and the development of corrective actions, outcomes of

the results obtained. It is very common for the companies to not have a *figure responsible* of collecting feedback efficiently. Often, companies do not *collect this information* because they do not define control points of the client status along its while lifecycle, but only in few phases (e.g. often companies lose customer control when the product warranty is over). Finally, another critical issue that emphasizes the lack of a customer orientation strategy, regards the *incentive systems* present in the companies of the sample. These systems, when are present, are not related in any way to the feedback received from customers on the services provided (e.g. received assistance, installation service, etc.).

**5.2 Customer lifecycle: main evidences**

In *Figure 4* it is shown the trend of the individual companies within the sample throughout the different lifecycle phases and the average case trend, obtained combining the mean values of the single companies at each phase. In particular, the graph returns two important results:

- The orientation of individual companies at each phase of the customer's lifecycle;
- Average sample orientation along the customer's lifecycle.



**Figure 4 Sample orientation along the customer's lifecycle**

From the orientation of individual companies, it is possible to evaluate in which phases the single company better meet the customer's need and demands, namely phases with a high customer centricity level; and in which phases company needs serious improvements in order to increase their level of customer orientation. However, from the average sample orientation, it is possible to give evidence of the undeveloped phases in terms of customer orientation. In particular, the graph shows that in the first two phases of the customer's lifecycle (*Needs assessment and Research*), the level of customer centricity is very low. In these phases, in fact, sample companies showed: a low level of *processes' and procedures' formalization*; a low level of *customer control*; the lack of adequate *channels* for collecting customer information and satisfaction; the lack of *formalized and structured practices* for analysing, sharing and disseminating data; the lack of proper *measurement* of performance and their sharing at company level. Finally, another important issue, that emerged from the interviews, regards the *End of life* phase which, in all the companies of the sample, is still underdeveloped in terms of *activities, processes, procedures and dedicated resources*.

### 5.3 Practical guidelines

Despite the critical issues outlined above, the analysis carried out on the sample has also highlighted some best practices already employed in the companies that can represent tips for manufacturing companies that aims to increase the level of customer orientation. Thus, starting from these evidences along with the literature analysis and examples, the managerial reports and our expertise as researcher, we derive a list of practical guidelines (Table 1) that can help companies in implementing a customer centricity strategy.

**Table 1 Guidelines for customer centricity implementation**

<p><b>Strategy</b></p> <ul style="list-style-type: none"> <li>• Development of segmentation-criteria customer-oriented or based upon the customer lifecycle.</li> <li>• Sharing, among the different functions within the company, of a segmentation criteria customer oriented.</li> <li>• Active contribution of the client during the design phase</li> <li>• Active contribution of the client during the design phase (co-design).</li> <li>• Development of formalized contracts for service (e.g. contracts based on performance and usage).</li> <li>• Creation of a multifunctional team dedicated to a certain segment of customers, its satisfaction and to provide a long-lasting relationship between the company and the customer</li> <li>• Development of advanced outcome model (e.g. pay per use or pay per performance)</li> <li>• Proactive attitude of the management with respect to the clients (e.g. customer support while defining the solution; visits proactively to the customer; etc.).</li> <li>• Establish a figure in charge of collecting and processing customer feedback systematically, making it visible and comprehensible to the company's members</li> <li>• Development of incentive systems related to the feedback received from customers (e.g. satisfaction on the service received).</li> </ul> <p><b>Resource</b></p> <ul style="list-style-type: none"> <li>• Definition of contracts regarding helpdesk services to promote a continuous relationship with the clients.</li> <li>• Development of customer-oriented channels to collect information (e.g. dedicated phone line, satisfaction questionnaire, software for remote monitoring).</li> </ul> <p><b>Processes</b></p> <ul style="list-style-type: none"> <li>• Development of formalized practices for the periodical data analysis (e.g. Periodical company meetings)</li> </ul> <p><b>Technologies</b></p> <ul style="list-style-type: none"> <li>• Utilization of tools to carry out complex cross analysis of the information received from the data collection, in order to provide outcomes useful to support the management decisions.</li> <li>• Development of appropriate tools for information sharing between company members (e.g. Internal portal, interactive pages, etc.).</li> <li>• Development of dedicated tools for the spread of data outside the company (e.g. Web channel)</li> </ul> <p><b>Performance</b></p> <ul style="list-style-type: none"> <li>• Development of key performance indicators based on the relationship built with the client (e.g. client response time; mapping of loss causes; delivery time of spare pieces; customer loyalty, client satisfaction indicator; purchase opportunities; etc.).</li> </ul>
--

### 6. Conclusion

In this paper, starting from the existing literature on the subject, a framework made up of 34 variables is developed. This framework is capable of defining customer centricity concept in manufacturing companies (see *Section 4*). Moreover, in order to provide companies an objective measure of their customer orientation level, for each variable, three “customer centricity levels”, retrieved from the literature and integrated with empirical evidences observed during the application of the framework on the sample (see *Section 3.1* and *Section 5*), have been defined.

Finally, a further contribution of this work is represented by the guidelines (see *Section 5.3*), useful to implement the customer centricity in manufacturing companies. Therefore, these guidelines represent a significant practical contribution of this paper, as they represent a concrete support to companies which are increasingly adopting a customer centricity approach within their organization.

To sum up, the tools developed to support the use of the framework and the customer centricity framework itself, can be used by companies to analyse their critical issues in a customer orientation perspective. Managers can also follow the suggested guidelines in order to improve the customer orientation level of their company and consolidate the relationships with their customers.

Nevertheless, this study comes with limitations, some of which offer fruitful avenues for research. In the first place, the extension of the empirical research to different sectors would allow to generalize what has been discovered in this work. In the second place, after verifying the adoption of the guidelines by the companies, is possible to validate the suggestions and integrate them with other best practices. Finally, investigating the reactions and satisfaction among the customer, of new, more customer-centric, business practices, can be helpful for further corrections and improvements.

### References

- Adrodegari, F., & Saccani, N. (2017). Business models for the service transformation of industrial firms. *The Service Industries Journal*, 37(1), 57-83.
- Adrodegari, F.; Saccani, N.; Kowalkowski, C.; Vilo, J. (2017) PSS business model conceptualization and application. *Production Planning and Control*, 28, 1251–1263. <sup>[1]</sup><sub>[5P]</sub>
- Baines, T.S.; Lightfoot H.W.; Benedettini, O.; Kay, J.M. (2009). The servitization of manufacturing. *Journal of Manufacturing Technology Management*, Vol. 20, Iss 5, pp. 547 – 567.
- Brax, S. (2005). A manufacturer becoming service provider—challenges and a para-dox. *Managing Service Quality: An International Journal*, 15(2), 142-155.
- Burns, M. (2016). The Customer Experience Management Maturity Model. Forrester Research Report. Available at: [http://www.euteco-nps.it/wp-content/uploads/2016/04/Forrester\\_The-Customer-Experience-Management-Maturity-Model.pdf](http://www.euteco-nps.it/wp-content/uploads/2016/04/Forrester_The-Customer-Experience-Management-Maturity-Model.pdf).
- Day, G. S. (2000). Managing market relationships. *Journal of the academy of marketing science*, 28(1), 24-30.

- Deloitte (2012). Customer-centricity: Embedding it into your organisation’s DNA. Available at: [https://www2.deloitte.com/content/dam/Deloitte/ireland/pdf/Documents/Strategy/2014\\_customer\\_centricity\\_deloitte\\_ireland.pdf](https://www2.deloitte.com/content/dam/Deloitte/ireland/pdf/Documents/Strategy/2014_customer_centricity_deloitte_ireland.pdf).
- Dimache, A.; Roche, T. (2013). A decision methodology to support servitization of manufacturing. *International Journal of Operations & Production Management*, 33(11/12), 1435-1457.
- Fader, P. (2012). *Customer centricity: Focus on the right customers for strategic advantage*. Wharton digital press.
- Galbraith, J. R. (2011). *Designing the customer-centric organization: A guide to strategy, structure, and process*. John Wiley & Sons.
- Gebauer, H.; Gustafsson, A.; Witell, L. (2011). Competitive advantage through service differentiation by manufacturing companies. *Journal of business research*, 64(12), 1270-1280.
- Hayes, B. E. (2013). TCE: Total Customer Experience/Building Business Through Customer-centric Measurement and Analytics. Business Over Broadway.
- He, Y.; Sun, H.; Lai, K. K.; Chen, Y. (2015). Organizational empowerment and service strategy in manufacturing. *Service Business*, 9(3), 445-462.
- Hechtkopf, B. (2011). Implementing and Measuring a Customer Centricity Framework, Kobie Marketing Report. Available at: <http://www.kobie.com/thought-leadership/implementing-and-measuring-a-customer-centricity-framework.pdf>.
- Hollander, D.; Hertz, K.; Wassink, B.H. (2013). The Journey Toward Greater Customer Centricity, Ernst&Young Report. Available at: [http://www.ey.com/Publication/vwLUAssets/The\\_journey\\_toward\\_greater\\_customer\\_centricity\\_-\\_US/\\$FILE/Customer\\_Centricity\\_Paper\\_29\\_April\\_Final\\_US.pdf](http://www.ey.com/Publication/vwLUAssets/The_journey_toward_greater_customer_centricity_-_US/$FILE/Customer_Centricity_Paper_29_April_Final_US.pdf).
- Kocoure, P.; Hyde, P.; Jones, J.; Tipping, A.; Egol M.; Ribeiro, F.; (2004). The Customer Centric Organization: From Pushing Products to Winning Customers, Booz Allen Hamilton Report. [http://www.booz.com/media/file/The\\_Customer\\_Centric\\_Organization.pdf](http://www.booz.com/media/file/The_Customer_Centric_Organization.pdf).
- Lamberti, L. (2013). Customer centricity: the construct and the operational antecedents. *Journal of Strategic marketing*, 21(7), 588-612.
- Loshin, D.; Reifer, A. (2013). *Using information to develop a culture of customer centricity: customer centricity, analytics, and information utilization*. Elsevier.
- Manning, H.; Bodine, K; Bernoff, J. (2012). Outside in. The power of putting customers at the center of your business. *Houghton Mifflin Harcourt*.
- Matsuno, K.; Mentzer, J. T. (2000). The effects of strategy type on the market orientation-performance relationship. *Journal of marketing*, 64(4), 1-16.
- Neely, A. (2008). Exploring the financial consequences of the servitization of manufacturing. *Operations Management Research*, 1(2), 103-118.
- Neu, W. A.; Brown, S. W. (2005). Forming successful business-to-business services in goods-dominant firms. *Journal of Service Research*, 8(1), 3-17.
- Oliva, R.; Kallenberg, R. (2003). Managing the transition from products to services. *International journal of service industry management*, 14(2), 160-172.
- Rapaccini, M.; and Visintin, F. (2015). Devising hybrid solutions: an exploratory framework. *Production Planning & Control*, 26(8), 654-672.
- Ross, B. (2009). Ten tips to winning at consumer centricity: for retailers and manufacturers. *Journal of Consumer Marketing*, 26(6), 450-454.
- Shah, D.; Rust, R. T.; Parasuraman, A.; Staelin, R.; Day, G. S. (2006). The path to customer centricity. *Journal of service research*, 9(2), 113-124.
- Sohrabi, B.; Haghghi, M.; Khanlari, A. (2010). Customer relationship management Sohrabi, B., Haghghi, M., & Khanlari, A. (2010). Customer relationship management maturity model (CRM3): A model for stepwise implementation. *Journal of Human Sciences*, 7(1), 1-20.
- Ukko, J.; Pekkola, S. (2015). A framework for a customer approach to performance measurement in a service context. *International Journal of Services and Operations Management*, 22(2), 210-220.
- Vazifehdust, H.; Shahnavaizi, A.; Jourshari, M. R. T., Fataneh, S. S. (2012). Investigation critical success factors of customer relationship management implementation. *World Applied Sciences Journal*, 18(8), 1052-1064.
- Voss, C.; Tsikriktsis, N.; Frohlich, M. (2002). Case research in operations management. *International journal of operations & production management*, 22(2), 195-219.
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic management journal*, 5(2), 171-180.
- Yin, R. K. (2009). *Case study research: Design and Methods*. SAGE publications. Thousand oaks.