BRIXCRM™

Optimising the Customer Service and Support Department

BSc Industrial Engineering and Management

Mick Beusenberg
m.beusenberg@student.utwente.nl

25-06-2021

UNIVERSITY OF TWENTE.

University of Twente
BSc Industrial Engineering and Management
Drienerlolaan 5
7522 NB Enschede
(053) 489 9111

BrixCRM
Haven Noordzijde 129
7602 EH Almelo
+31 88 10 20 600

Optimising the Customer Service and Support Department of BrixCRM

Supervisors

University of Twente
M.L. Monson
First supervisor

University of Twente
Dr. I. Seyran Topan
Second supervisor

BrixCRM
Thomas Raaijen
External supervisor

Preface

Before you lies the thesis “Optimising the Customer Service and Support Department of BrixCRM”. It includes the results of my research on finding the most effective way of delivering Customer Service and Support services by the Customer Service and Support (further referred to as CCS) department of BrixCRM. During my study Industrial Engineering and Management, I’ve learned that I have a preferred interest in customers and customer relations and finding the optimum benefits for an organisation and its customers; often known to be a balancing act. Therefore, I was fortunate that my project was focused on these subjects. This thesis concludes my bachelor Industrial Engineering and Management at the University of Twente.

The research is performed during my internship at the company BrixCRM. My company supervisor Thomas Raaijen introduced me to the company and her employees. We formulated the research question together. I conducted various meetings and interviews with the stakeholders of the CSS department to gain as much information as possible from different perspectives. It was a challenging but educational journey, and I would like to thank the whole team at BrixCRM for this experience and making me feel part of the team right from the start, which helped me a lot in getting the work done.

Most especially I thank my company supervisor Thomas Raaijen, for the great guidance during the past months. He made communication much easier for me and let me feel at ease right from the start. We discussed my activities almost daily, which helped me a lot to keep on track while working mostly at home in this special and peculiar time.

I also thank Mike Monson for taking the time and effort to be my first supervisor, and Ipek Seyran Topan to be my second supervisor, both from the University of Twente. They provided me with valuable feedback to improve this bachelor thesis.

Mick Beusenberg

Enschede, June 2021

Management summary

Research Question
Customer service and support (CSS) has never been valued as high as today. It is of great importance to manage your customers for the success of a business. BrixCRM is a small to medium-sized enterprise (SME) that implements and integrates effective, powerful, and innovative digital customer relationship management solutions together with offering professional advice to its clients. During the time that clients use the digital customer solutions, BrixCRM's team supports them to ensure the best possible customer experience. But BrixCRM is unsatisfied with their current CSS department. BrixCRM has the impression that they fail to derive full value from their CSS offering and miss out on opportunities and benefits. The goal of this research is to find a more effective way for BrixCRM to deliver CSS services by answering the following research question:

> ***"How can BrixCRM deliver more effective and efficient customer service and support services?"***

Method
Several steps are taken to find a solution to help BrixCRM solve their problem. A solution to improve the delivery of the CSS services is found by comparing the current situation and clients' perspectives with CSS best practices from a literature study. The current situation is analysed by interviewing BrixCRM employees. The client perspectives are obtained using a survey. The best practices show which factors can lead to an optimal CSS and provide BrixCRM with benefits referred to in literature. The comparison between the current situation and best practices from literature has shown deficits in the current situation and has given directions to design a more optimal CSS organisation for BrixCRM that is expected to be more effective and efficient.

Results
The aforementioned comparison shows that the shortcomings in BrixCRM's CSS department that need to be improved to obtain optimal CSS, are the poor organisational structure and the inefficient service products offering. Best practices from literature have been used to design a more optimal CSS.

The client survey shows that BrixCRM's clients are satisfied overall. However, there is a negative correlation between clients with no service agreements and the level of satisfaction, which means that clients with less or no fixed service agreements tend to be less satisfied with the CSS department of BrixCRM.

Solution
The solution presented in this study lies in a more standardised CSS model with CSS products, thus a clearer service product offering. The solution design consists of first: standard and clear products which imply different kinds of service and support for the client; second: recommended organisational structure improvements; and third: a restructured CSS process (BPM) for the CSS department, based on the standardised CSS model.

Main Conclusion
The new CSS model and process provide clarity and simplicity for both BrixCRM and its clients. With the standardised CSS products, structure for the CSS process and designated organisational structure, the chance of miscommunications will decrease. This will be favourable for the satisfaction level of both. Supported by literature, e.g. (Sheth, Jain, & Ambika, 2020), BrixCRM may expect to gain benefits from improved CSS such as customer loyalty, customer satisfaction, increased sales, enhanced business reputation, and competitive advantage.

Table of Contents

List of figures

List of tables

List of acronyms

SME = Small to medium-sized enterprise
CRM = Customer relationship management
CSS = Customer service and support
B2B = Business to business
KPIs = Key performance indicators
BPM = Business Process Model
SLR = Systematic literature review
CBA = Cost-benefit analysis
QMS = Quality management systems
RR = Response rate

1 General Introduction: Research Motivation

BrixCRM is a small to medium-sized enterprise (SME) with their headquarter located in Almelo and two other locations in Amsterdam and Eindhoven. They are active in the business of customer relationship management (CRM) in a Business-to-Business (B2B) environment. They help organisations to learn more about their customers and strengthen the relationship with their customers. BrixCRM does this by offering professional advice and implementing and integrating effective, powerful, and innovative digital customer relationship solutions. BrixCRM uses CRM tooling, such as SugarCRM, to create these digital solutions. SugarCRM is a software product from the company which is also called SugarCRM that delivers standard CRM tooling and is a partner of BrixCRM. BrixCRM analyses its clients' customers and modifies the CRM tooling to the specific needs of their clients. The result is that a client of BrixCRM is able to increase the value from and for their customers.

The name of the organisation BrixCRM already says it: their business is based on the idea of customer relationship management (CRM). Therefore, it is helpful to give some context about the concept of CRM. In the context of this research, it concerns internet-enabled technologies that allow organisations to build better relationships with their customers. Relationships with internet-enabled technologies with customers are easier to maintain. Thereby, the technologies can provide organisations with a lot more information about customers than in the offline world (Winer, 2001). In the modern economy, CRM has become indispensable as a strategy, a set of tactics, and a technology. A CRM system facilitates the collection, storage, and analysis of customer data and provides comprehensive insights about the customers (Sheth, Jain, & Ambika, 2020). The concept focuses on analysing the customer data to strengthen the relationship with the customers. The aim is to build a strong relationship to bond the customers to the organisation to improve profitability. A crucial part of CRM is identifying the different types of customers, so the organisation can then develop specific strategies for interacting with each individual customer. It comes down to the identification of customers that a firm can most profitably serve and building interactions between an organisation and the customers. The overall goal is to optimise the current and future value of customers for the organisation (Kumar & Reinartz, 2018).

Customer service and support is the key interconnection between an organisation and its clients. Never before has it been so important for a successful business (Sheth, Jain, & Ambika, 2020). Customer service and support is a key advantage for an organisation to differentiate themselves from the competition (Sheth, Jain, & Ambika, 2020). The competitiveness between organisations and rapidly changing economies that distinguish the modern world, mean there is no way around the need to manage your customer relationships (Kumar & Reinartz, 2018). Studies show that good customer service and support can lead to advantages such as customer loyalty, customer satisfaction, increased sales, enhanced business reputation, competitive advantage, improved employee morale and increased efficiency (Sheth, Jain, & Ambika, 2020). When a customer has a good service and support experience, the relationship between customer and organisation improves which in turn leads to true customer loyalty towards the organisation (Bove & Johson, 2000). Therefore, it is strange that customer service and support is still a neglected area by many businesses. They see it as a cost centre while it truly could be a strategic resource and revenue or profit centre (Sheth, Jain, & Ambika, 2020).

CSS is an offering of service-based processes to help clients obtain optimum benefits from the BrixCRM solution. BrixCRM does not have a clearly structured CSS department. They want to offer more professional CSS and determine whether more business opportunities lie within CSS. The research shows that some of the advantages mentioned previously are currently being missed out by BrixCRM. There is so much more knowledge they can generate out of the CSS. Efficient CSS can contribute to better insights into customer satisfaction, improve contact with clients, monitor client

base and identify new business opportunities (Sheth, Jain, & Ambika, 2020). With a more efficient CSS they can deliver better value for their clients.

While BrixCRM did not present me with a specific problem about a certain process within their business, they felt like their CSS department could be improved. BrixCRM started a CSS department in 2018. It suspects that there are more opportunities to be gained within the CSS department than it is achieving. The CSS defines how BrixCRM offers customer support services and how they deal with the process internally. BrixCRM is focused on creating happy customers for their clients. They want to set an example for their clients and the CSS offers important tools in creating happy clients. Their aim is to create more value through the CSS provided to their clients, so that the perceived level of service by the clients of BrixCRM is improved upon.

So, the scope of this research focuses on how the service and support services (CSS) of BrixCRM can be improved in order to gain the benefits mentioned above. The analysis leads towards a solution and recommendation designed specifically for BrixCRM.

2 Design of this Research: Problem, Methodology, and Deliverables

This chapter covers the design of the research. It starts by identifying the problems BrixCRM encounter within its CSS department in Section 2.1. The identification leads to the core problem that has to be solved in order to help BrixCRM better its CSS department. From the core problem the action problem and research question are derived in Section 2.2 and 2.3 respectively. In Section 2.4 the methodology of this research is described. After that, the empirical data collection (Section 2.5), deliverables (Section 2.6) and the structure of the report (Section 2.7) are discussed.

2.1 Problem Identification

Established in 2018, the CSS department of BrixCRM is found not to function according to expectations. BrixCRM wanted someone independent to investigate its CSS department and recommend improvements. For this problem definition, two sources of information are used; interviews with employees of BrixCRM were held and a survey with its clients was conducted. The interview questions are shown in Appendix 1 and the survey and survey results can be seen in Appendix 2 and 3.

- Details of the (internal) interviews that are held with stakeholders within BrixCRM can be found in Appendix 1. These stakeholders are employees that work as the first-and-second line support, and the operational manager of CSS. With respect to the problem identification, the following results are obtained: All employees who were interviewed mentioned that they are unsatisfied with the CSS. This dissatisfaction is caused by the feeling that their CSS department creates too little value for them and their clients. They believe that there are a lot more opportunities within the CSS department.
- The CSS department is not well-structured, and the lines of authority and management structure are unclear. This makes it hard to properly manage the CSS department.
- The service products (service agreements) are poorly defined. It is unclear what service agreements exist and what they contain. The service agreements with clients can differ a lot per client which creates confusion for BrixCRM's staff. On some occasions there are either no or only vague agreements with clients. The vague service contract agreements can possibly end up in unexpected bills for clients, lack of clear communication between BrixCRM and their clients and time wastage on peripheral matters. If the agreements are better formulated these time wastages can be decreased and the satisfaction of both the CSS staff and the clients can increase. The throughput time to solve an enquiry has therefore the potential to be improved as well. Occasionally, hours spent solving an enquiry cannot be invoiced due to these issues. All this comes down to the problem that the delivery of the CSS services is ineffective and inefficient.

The (external) survey shows that clients do not perceive the same problems as the organisation itself. Details of the client survey and responses are included in Appendix 2 and 3. However, with respect to the problem identification, clients note the vagueness regarding the service and support agreements (see Appendix 3). This problem clearly correlates with problems the employees of BrixCRM mentioned in the previous paragraphs.

To define the core problem of this study, a so-called problem cluster is created, and the criteria core problems must satisfy are used (Heerkens & van Winden, 2016). A problem cluster gives a visualisation of the problems and their correlations. It is used to bring order to the problem context and to identify the core problem (Heerkens & van Winden, 2016). The issues mentioned by the employees and clients of BrixCRM are used to create the problem cluster. Hereafter, the research question, and goal of this research are derived from the problem cluster.

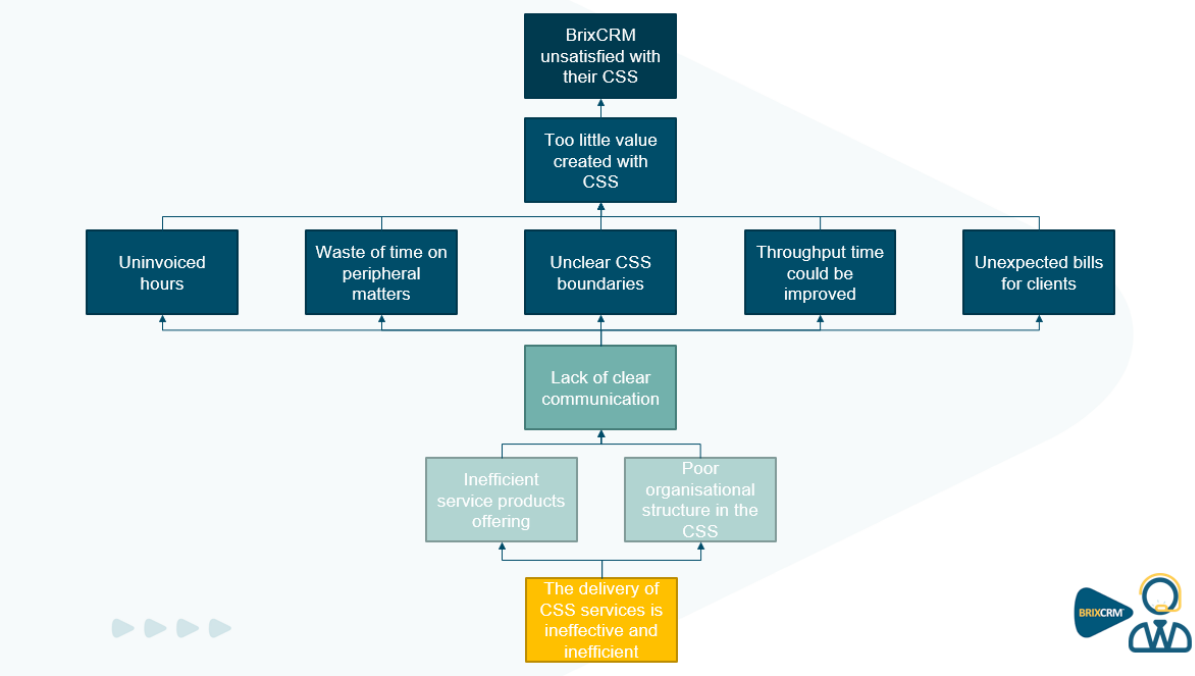

Figure 1: Problem cluster of the CSS of BrixCRM

The problem cluster in Figure 1 identifies the problems in the current CSS of BrixCRM. Relationships between problem areas are indicated by arrows: an arrow indicates if a problem is caused by another problem. The direction of the arrow indicates if a problem is the result of the problem where the arrow came from.

The lowest level in the problem cluster is that the delivery of BrixCRM's CSS services is ineffective and inefficient. This problem correlates with the poor organisational structure and the inefficient service products offering. The organisational structure refers to the structure, management, personnel, and skills within the organisation, required to deliver CSS. It is currently not well-structured internally to manage the personnel, skills, and clients in an efficient manner. The service products offering are the service agreements (contracts) with the clients. These agreements are currently vague and unclear.

The organisational structure and service products offering also correlate with the communication between BrixCRM and its clients. The communication influences the invoiced hours, wasted time, unclear CSS boundaries, throughput time and unexpected bills. These correlations all are positive, i.e., if the organisational structure is better and the service products offering is efficient, the communication can run smoothly, and the other problems can be solved. The uninvoiced hours, wasted time, unclear CSS boundaries, excessive throughput time, and unexpected bills result in too little value creation from the CSS department of BrixCRM. The lack of value creation causes that BrixCRM is unsatisfied with how their current CSS department is functioning.

The core problem of this research is the problem that is not caused by any other problem from the cluster. The problem cluster shows that the lowest problem correlates with all the other problems that are established. Solving the core problem (lowest problem) will positively affect the correlated problems. So, the core problem of this research is:

"The delivery of BrixCRM's customer service and support services is ineffective and inefficient."

2.2 Action Problem

BrixCRM set out to seek external advice on how to improve its CSS, both in terms of organisation as well as product offering. Actual implementation of proposed improvements falls outside the scope of this study. The core problem identified in section 2.1 is translated into an action problem to help to structure this study. An action problem is derived from the core problem (section 2.1), the norm, and the reality (Heerkens & van Winden, 2016).

The **norm** mentioned above describes the desired situation for BrixCRM. BrixCRM explained that any improvement or new knowledge would help them in the right direction to better their CSS department. The norm represents a solution that provides the organisation with an effective and efficient CSS department. The CSS department should be structured to deliver processes for solving service enquiries in which the personnel know what they need to do, when they need to perform it, and what skills are required to perform service and support services. The efficient service product offering provides the organisation with a form that states what service agreements to offer their clients. All these aspects will lead to a higher level of satisfaction by CSS agents and the clients.

The interviews with employees of BrixCRM and surveys with clients gave insights into the current situation at BrixCRM – the **reality**. Employees are missing a planning and organisational structure in their CSS and clear service offerings. They feel like they can offer a much more professional CSS towards their clients. A few years ago, an ex-employee designed a model for their so called 'Customer Service & Support'. This model is still being used sometimes, although employees of BrixCRM do not always know themselves what methods they are using for CSS. As a result, it is unclear for some clients what to expect from BrixCRM in terms of service and support. Overall, the clients of BrixCRM are quite satisfied, but internally BrixCRM sees room for improvement.

The reality for BrixCRM is that there are problems within the CSS department and the norm is that they want to deliver effective CSS services. So, the action problem is defined as:

"BrixCRM's suboptimal service and support delivery is caused by poor organisational structure and inefficient service products offering. BrixCRM seeks advice on how to improve effective and efficient customer service and support towards their clients."

2.3 Research Question and Goal

To solve the action problem, a research question is formulated as follows:

"How can BrixCRM deliver effective and efficient customer service and support services?"

The goal of the research is to analyse the CSS department and try to find the most effective and efficient way for BrixCRM to deliver CSS services. The analysis contains observations of the process as it is currently structured and performed. The analysis results in proposals for improvement areas for BrixCRM's CSS.

2.4 Research Methodology

In this section the problem-solving approach is formulated. The problem-solving approach is based on two tools from the book Solving Managerial Problems Systematically by Hans Heerkens and Arnold van Winden (Heerkens & van Winden, 2016). The first tool is the Managerial Problem-Solving Method (MPSM). The second tool is the D3 principle, which indicates 3 phases: "Discover", "Do", and "Decide".

Three main knowledge questions are defined to formulate an answer to the main research question. The research methodology is focused on answering the knowledge questions stated below. Sub-knowledge questions are answered to help formulate answers to the main knowledge questions. The knowledge questions also define the phases of this research.

KQ1: What is customer service and support?

The first phase is determining the purpose of the CSS for BrixCRM. This will be done through literature study and interviews with employees of BrixCRM. The first part of this phase is to determine what CSS means in general. The second part is defining CSS objectives in the B2B industries. A literature study will be conducted to define what an optimal CSS is. The definitions of customer service and customer support will indicate how BrixCRM should define their CSS offerings. The following questions support this research to formulate an answer for the first knowledge question.

- *What are the definitions of customer service and customer support?*
- *What are the success factors of good customer support in the B2B industries?*
- *What are the success factors of good customer service in the B2B industries?*
- *What are the benefits of optimal CSS in a B2B industry for BrixCRM?*

KQ2: How is the BrixCRM customer service and support currently designed and what aspects are underperforming?

In this section the current situation of BrixCRM is assessed. The situation analysis explains the problems BrixCRM encounters. First, the service & support model BrixCRM currently used will be explained. Next, it is important to know how this model is used in practice. Then the costs and benefits of the customer service & support model are highlighted. After that, the current CSS process is mapped in a business process model (BPM) by using Bizagi (Bizagi Modeler, 2020). Finally, the shortcomings of the current CSS are determined based on the gap between what the literature states as optimal CSS and the current situation at BrixCRM. The questions that are answered to provide an overall answer for the second knowledge question are:

- *Who are the stakeholders for the customer service & support?*
- *How is the current customer support service process structured?*
- *What are the costs and benefits of the currently used customer service & support model?*
- *What are the shortcomings in the current BrixCRM CSS organisation and offerings?*

KQ3: How should the underperforming aspects of the BrixCRM customer service and support be improved?

The results that are obtained from the literature study, the internal interviews and the client survey are used to design solutions to the problems. The solution will be evaluated at the end of this chapter in accordance with the success factors and benefits of optimal CSS. The sub-knowledge questions for the third knowledge question are:

- *What support service products should be in the support service portfolio?*
- *How can BrixCRM advise their clients on buying the most suitable CSS products?*
- *What are the costs and benefits of each service product in the portfolio?*
- *How should the CSS department be structured to deliver the proposed new products?*
- *What are the value and effects of the proposed solution?*

2.5 Empirical Data Collection

Data collection is an important part of this research. This research is a form of mixed methods research. This implies that the research involves both the collection and analysis of qualitative and quantitative data (Almalki, 2016). Qualitative data is expressed in words. It is meant to understand experiences, thoughts, and concepts. The aim of this type of research is to get in-depth insights in objectives that are not well understood. The qualitative data in this research is obtained through semi-structured interviews, interviews with open-ended interview questions and through literature study (Streefkerk, 2020). Quantitative data is expressed in numbers and graphs. Such data is used to test or confirm assumptions and theories. Quantitative data in this research is retrieved through a survey with closed-ended questions (Streefkerk, 2020). Qualitative data will be used more than quantitative data in this research.

Structured interviews with BrixCRM CSS staff

The method of data collection with the stakeholders from the organisation was direct communication. A lot of important information was gathered through interviews with several stakeholders. Employees of BrixCRM were interviewed through semi-structured interviews. Sometimes the interviews were one-on-one and on other occasions in meetings with multiple employees of BrixCRM. Data was recorded from the conversations of the semi-structured interviews. The records were shown to the employees to validate the findings. After they agreed upon the records, the data could be used for this research. Within these semi-structured interviews, I prepared questions to lead the conversation. The employees of BrixCRM could speak freely about the topics raised in the interviews. The semi-structured interviews and results are shown in Appendix 1.

Survey for BrixCRM clients

Information from clients of BrixCRM was obtained through a survey. Due to the COVID-19 pandemic it was hard to contact clients of BrixCRM in real life to ask them about their experiences with the CSS of BrixCRM. Therefore, I chose to develop a survey that encounters questions regarding the experiences of the clients. The survey consisted of open-ended questions and closed-ended questions.

The survey was divided into sections to offer more structure in the survey for the client. The first section was an introduction for the client. The second section covered some general questions about the client and their support agreement with BrixCRM. The third section asked the clients about their experiences with the current CSS of BrixCRM. This was done by asking them to provide their perspectives on scaled closed-ended statements. The clients could answer these questions on a scale from 1 to 10, from totally disagree (1) to totally agree (10). The aim of the fourth section was to gain more information about the CSS in practice. Questions in this section addressed how they currently contact BrixCRM for support and what they would like to see. At the end of the survey permission is requested by the researcher to contact the client for possibly further clarification of their answers. The survey and survey responses are shown in Appendix 2 and 3.

The survey was sent to clients that are closely connected to the CSS of BrixCRM. These clients were selected together with some consultants of BrixCRM in a consultant meeting.

Literature study

The third method of data collection used in this study is literature review. A literature study was conducted to gather scientific information on methods and practices about CSS. The literature study was used to support theories or concepts used in this research, to find out what the success factors of optimal CSS are, and what then the benefits of optimal CSS are.

The concept of a systematic literature review (SLR) was used for the sub-knowledge question about customer support. The SLR provided the information to answer the sub-knowledge question: *What are the success factors of good customer support in the B2B industries*? After that, the inclusion and exclusion criteria for the literature search were defined. This SLR was conducted with the database Scopus together with the search strategy PICO (Noort, 2020). The abbreviation PICO stands for Population, Intervention, Comparison and Outcome. This part of the study started with the search terms of the population and intervention. For the abovementioned sub-knowledge question these were success factors (population) and customer support (intervention). Table 1 displays the search matrix with synonyms, broader terms, and narrower terms for the key concepts. Table 2 displays the search catalogue of this SLR. Boolean operators as AND, "phrase search" and proximity operator W/7 are used. Documents that were found were compared (comparison) and eventually with the inclusion and exclusion criteria, the final list of references was obtained. These references were analysed to define the success factors that indicate good customer support in B2B industries (outcome). Table 3 displays how the selection was made from the 155 articles to the 5 relevant articles.

Table 1: Search matrix SLR

Key concepts	Related terms/synonyms	Broader terms	Narrower terms
Customer support	After-sales service	**customer experience**, customer value, customer service	
Success factors	KPI, key performance indicators	Performance measurement	

Table 2: Search catalogue SLR

Date of search	*Database*	*Scope*	*Search string*	*Number of results*
30-10-2020	Scopus	TITLE-ABS-KEY	(("customer experience" OR "customer support" OR "after-sales service") AND ("key performance indicators" OR "KPI" OR "success factors"))	103
30-10-2020	Scopus	TITLE-ABS-KEY	(("customer experience" OR "customer support" OR "after-sales service") W/7 success)	52

Table 3: Selection of articles

Total articles found	155
Exclusion criteria	-94
Inclusion criteria	-45
No access	-11
Total relevant articles	5

2.6 Deliverables

The goal of this study is to analyse the CSS department and its offerings and try to find the most effective way for BrixCRM to deliver CSS services. Main deliverables of this study are:

- A BPM of the current customer service & support process at BrixCRM. This provides insights in how BrixCRM has currently structured its CSS department, how it's managed, and which stakeholders are involved.

- A service product portfolio, which is a catalogue of the service agreements that are offered by BrixCRM to their clients. The portfolio is the catalogue for BrixCRM to offer the clients a choice of standard service products. Together with the service product portfolio, two BPMs are made. The first BPM is a decision support diagram that provides the sales team with a guideline to help identify what service product (from the new service product portfolio) fits the individual client best. Certain factors will be established that indicate what service offering fits a specific customer. The second BPM is a BPM of the newly designed CSS process. With the knowledge gained in this research, the improved CSS process is mapped into a BPM. The BPMs are supported by a cost-benefit analysis for the new CSS products that BrixCRM can establish with its clients. The prices used in the cost-benefit analysis are provided by the financial department of BrixCRM. The information gained from the cost-benefit analysis can influence the proposed CSS process and service product portfolio. If it occurs that the new service products do not cause enough benefits, the service product portfolio will be reviewed again. So, the costs and benefits will determine whether the different service products are worth implementing in the CSS of BrixCRM. The CSS process could change if certain service products have to be removed or implemented to improve the process.

- The final deliverable is this report. This report provides the rationales and knowledge to understand the techniques and procedures used. The goal of the report is to give the reader a guideline through the overall research process, the set of choices made, assumptions, outcomes and eventually to find the most effective and efficient way for BrixCRM to deliver CSS services.

2.7 Structure of this Thesis

After the general introduction in Chapter 1, the research goal and approach are explained and presented in Chapter 2.

Chapter 3 covers the literature study about CSS. This chapter is meant to gather detailed insights in the area of CSS. Included are definitions of CSS, how CSS should be performed, and what indicators imply optimal CSS. This chapter is focused on answering knowledge question KQ1: "*What is customer service and support?*".

Chapter 4 includes a detailed analysis of the current CSS of BrixCRM. The current situation at BrixCRM should be described before its CSS can be improved. This chapter includes several topics. It starts with a stakeholder analysis to clarify what parties are important during this research. Next is an analysis of the CSS model that BrixCRM currently uses and the associated costs and benefits. The current CSS process is described and mapped in a BPM, which is the first deliverable as mentioned in Section 2.6. The last section of Chapter 4 covers the shortcomings of the current CSS of BrixCRM, in fact answering knowledge question KQ2: "*How is the BrixCRM customer service and support currently designed and what aspects are underperforming?*"

The analyses reported in Chapters 3 and 4 provide the basis for designing an improved CSS for BrixCRM. This solution design is presented in Chapter 5 and is focused on answering knowledge question KQ3: *How should the underperforming aspects of the BrixCRM customer service and support be improved?* The solution design consists of the deliverables mentioned in Section 2.6: the

service product portfolio, a guideline that helps to recommend the right service product, a cost benefit analysis, and a BPM for the newly designed CSS process.

Finally, Chapter 6 presents the conclusions, discussion, and recommendations of this study. Within the scope and limitations of the study, this chapter focuses on the contributions the study offers BrixCRM. Recommendations on future research and possible implementation of the results are addressed.

3 Literature Study

The goal of the literature study reported in this chapter, is to determine what defines CSS for BrixCRM. Section 3.1 includes the defining of a concept for customer service and customer support from literature. In Section 3.2, key performance indicators (KPIs) for customer support and customer service that indicate good customer experience are derived from literature. Section 3.3 includes a discussion on what benefits may be expected from good CSS. Results from the literature study are combined with BrixCRM employee input to define the two main concepts of CSS: customer service and customer support. The focus of this chapter is to find answer to the KQ1 (see Section 2.4):

"What is customer service and support?"

3.1 Definition of Customer Service and Support

The definition used in this study for **customer service** is the assistance and advice provided by an organisation to ensure that the customer is satisfied with the product or service provided throughout the entire journey that the customer is in contact with the organisation. The rationale for this definition is explained as follows. The journey mentioned above consists of a variety of additional services with the sale of the product. Think of product introduction, delivery, implementation, maintenance, use, training, and assistance (Xin & Ming, 2016). Customer service is based on direct one-on-one contact between a customer and a representative of the organisation that supports the client during the journey of the customer at the organisation (Grant, 2020). The common definition found in literature of customer service is the process of taking care of a customer's needs by providing assistance before, during and after the purchase of a product. Customer service is a proactive service where the organisation does not wait for the customers to contact them with an enquiry, but they rather establish a dialogue with the customer prior to possible enquiries (Winer, 2001). Nowadays when customers buy products, they do not only pay attention to the quality level of the product itself, but also pay attention to the added value to products. Therefore, the service offered with the product is becoming more and more important (Xin & Ming, 2016).

The definition used in this study of **customer support**, also known in literature as after-sales service, is the service provided by an organisation after a customer has purchased a product. The rationale for this definition is explained as follows. Customer support mostly includes support like training, repair, upgrades, or warranty service. Customer support is seen as a reactive service when problems occur at a customer and they contact the organisation to solve it (Winer, 2001). Customer support can be a part of the marketing strategy of an organisation. The reason behind this is that it typically leads to a higher customer satisfaction. The aim of customer support is to ensure that a customer gets as much value out of its purchase as possible. Customer support can contribute to business advantages like customer loyalty and repeated sales. If customers are happy, they will tend to be repeat customers. Another advantage from customer support is positive word-of-mouth about an organisation. But if the customer support is not executed well, word-of-mouth can be negative which can hold back the growth of an organisation (Chen, 2020).

Although the two concepts have overlaps in terms of the aims, there are some characteristics that differ. The differences are mentioned below in Table 4 (Customer service vs customer support, 2021).

Table 4: Customer service versus customer support

Concept	Customer service	Customer support
Assistance	Assists customers to gain more value out of the product.	Assists customers with (technical) problem solving and troubleshooting.
Interaction	Implies proactive interaction with the customer and guides the customer throughout the whole journey.	Implies reactive interaction to customers enquiries whenever there occurs a question or problem with the product.
Aim	The aim is to create the highest customer satisfaction with the service objectives throughout the entire journey.	The aim is to create the highest customer satisfaction by ensuring that the product always works properly.
Skills	Agents employ mostly soft skills, no need for specific technological skills.	Agents employ both soft and hard (technological) skills.
Industry presence	Available in any industry that involves customer interaction.	Mostly available in tech and e-commerce organisations

3.2 Customer Service and Support Success Factors

Having explained what constitutes customer service and customer support in the previous section, the goal of this section is to find out what factors indicate successful CSS. Success factors are those things that must be done right to ensure the success for a business or business unit. These factors deserve special and continuous attention to guarantee high performance (Boynton & Zmud, 1984).

Basic success factors of customer service

There are some basics that imply good customer service. The first one is that organisations should **react timeously** to enquiries by customers. If a customer has to wait too long, it will damage the interaction before it even begins. The second basic is that customer service should be a **simple and convenient process** for the customers. A customer should not have to perform a lot of steps before the organisation will work on the service. The third basic of good customer service occurs when the customer has to be redirected to another department to solve the enquiry. If this is the case, the original representative should **follow up** with the customer to ensure that the customer has been assisted well (Grant, 2020).

Specific success factors of customer service

There are several factors found in literature that relate to providing exceptional customer service. A certain level of overlap is found in the different literature sources. These factors are explained below in such a way that they apply specifically to this research. The terminology may differ from the literature sources, but the underlying meaning is the same.

All success factors regarding customer service are relevant throughout the **whole journey** between the customer and the organisation, since customer service covers this whole journey as explained in the previous section. For customer service it is important to help customers adequately and on time (response time). The **availability of contact** persons (representatives) should be high to ensure this. Time is an important factor, but it can be less of a priority if the **quality** of the service provided is excellent (Zolkiewski & Lewis, 2007). Organisations should be **specific** about what will happen and when, and obviously they should make sure it then happens. The way in which customers are treated makes all the difference. Every enquiry from the customers should be handled professionally. Therefore, the representatives should possess a certain level of **communication skills** (Zolkiewski & Lewis, 2007). It is also required that the representative from the organisation that

handles the customer service has a certain level of **expertise** (Zolkiewski & Lewis, 2007). Of course, there will be situations that the representative does not know the solution or answer. In these cases, the representative should adequately redirect the customer. **Dependability** and **reliability** are two other key factors for good customer service (Zolkiewski & Lewis, 2007). If an agreement is made, it must be complied with. Never leave it to the customer to follow up, be **proactive** as an organisation (Hogg, 2015).

For this research, the following list of success factors represent good customer service in the B2B industry:

- The process of initiating an enquiry for the customer should be simple and convenient.
- CSS must be highly available and response times must be short.
- The solution to an enquiry should be of high quality.
- The CSS representatives should be aware of their attitude and have empathy. They should possess an adequate or high level of communication skills.
- The CSS representatives require a level of expertise (knowledge) about the products of the organisation.
- The organisation should be dependable and reliable in terms of their agreements.

Success factors for customer support

During this literature study it became clear that it is quite hard to find success factors specifically for the term “customer support”. The literature research had to go broader for success factors that indicate good customer experience. Customer experience is defined in this research as the evolution of the relationship between company and the customer. Customer experience originates from a set of interactions between the company and the customer (Gentile, Spiller, & Noci, 2007). Since the customer support of BrixCRM is about the interaction with the customers, the success factors for customer experience can be used for customer support as well. One of the articles (Mustafa, Razak, & Ling, 2019) states success factors for the customer satisfaction of customer service. The success factors formulated herein indicate good customer experience. Therefore, these success factors can be compared with the success factors found for customer experience.

There is a clear overlap in the different articles studied, similar to what was observed for customer service: they articulate the success factors differently, but the underlying meaning is the same. Success factors that are relevant for the customer support will be about the experience with reporting an enquiry, the way the enquiry is handled, and the deliverable from BrixCRM regarding the enquiry. For reporting an enquiry, the **service application process** of the customer support is key (Garg, Rahman, Qureshi, & Kumar, 2012). The service application process involves the navigation through the application process of reporting. The application should be convenient, simple, and easily accessible. (Mustafa, Razak, & Ling, 2019) (Patel, Xing, & Patel, 2011). The way that BrixCRM handles an enquiry and the contact with a client is defined in the success factor as **customer interaction**. **Service delivery** is important for both the solution approach and the deliverable of an organisation (Mustafa, Razak, & Ling, 2019). This success factor consists of the service process, customer interaction, solution quality and speed of delivery (Garg, Rahman, Qureshi, & Kumar, 2012) (Patel, Xing, & Patel, 2011) (Kettunen, et al., 2016). All these success factors result in excellent customer relationships (Kettunen, et al., 2016).

The list of success factors that induce good customers experience from customer support in the B2B industry generated in this research, is:

- Service application process
    - Easy navigation
    - Convenience
    - Simplicity

    - Accessibility
- Service delivery
    - Service process
    - Customer interaction
    - Solution quality
    - Speed

As the current study deals with the CSS department of BrixCRM, responsible for both support and service, both types of factors have to be considered. The literature studied showed a lot of overlap between these concepts. Hence, for this study, the success factors for CSS in the B2B industry such as applies to BrixCRM are:

- Simplicity
- Availability and accessibility (convenience)
- Speed (response time)
- Solution quality
- Dependability and reliability
- Communication (customer interaction)

3.3 Benefits of Optimal Customer Service and Support

In the previous section the success factors for a good CSS are determined. But what benefits can BrixCRM achieve when it optimises the CSS?

Good CSS gives customers the feeling that the organisation cares about developing a long-term **relationship** instead of only making a sale. CSS is the most important channel through which a customer continues a relationship with an organisation. The CSS is vital for an organisation's **competitive advantage** (Sheth, Jain, & Ambika, 2020). Providing excellent CSS can set an organisation apart from their competitors. By emphasizing CSS in the marketing strategy and backing it up will separate you from the competition (Joseph, 2019). If CSS is assigned the same status in terms of strategic importance as any other business unit, it can support other business units from the organisation, such as marketing, sales, quality, and business development. The resulting competitive advantage can eventually lead to **business growth** (Sheth, Jain, & Ambika, 2020).

One of the main benefits of good CSS is that it contributes to a higher level of **customer satisfaction**. Customers that are really satisfied tend to do business with an organisation more than once. **Loyal customers** will feel reluctant to quit or switch to another brand. Thus, it generates repeat business and therefore revenue. Good CSS can also improve the **employee morale**. If employees know that the organisation cares about their customers and treats them with respect, they will feel more connected to the principles of the organisation. Which can lead to a more pleasant work environment and makes the employees feel good about what they are doing. CSS staff that have a good connection with the customer will also receive information first-hand about customer needs. (Sheth, Jain, & Ambika, 2020) (Joseph, 2019). The interpersonal and technical skills of frontline CSS employees define customers' perceptions. It dictates what customers perceive about the CSS and maybe even about a large part of an entire organisation. The level of professionalism, skills and competence of CSS employees are key to attaining customer satisfaction (Sheth, Jain, & Ambika, 2020).

Another advantage of good CSS is that it enhances the **business reputation**. Customers tend to talk about their experiences when dealing with a business. If an organisation makes sure their CSS delivery is strong, it affects the customers, and they are likely to tell their associates about their good experience. This type of marketing, known as word-of-mouth marketing, has no extra costs for an organisation but it can help by retaining existing customers and acquiring new ones. High quality

products and CSS can offset the effect of higher prices. By offering a better customer experience, customers feel valued and wanted and this will lead to customer loyalty (Joseph, 2019). Repeat customers can lead to a decrease of marketing expenses and creates repeat business and word of mouth marketing (Sheth, Jain, & Ambika, 2020).

It will be beneficial for an organisation that the CSS also becomes a customer **insight centre**. Information is collected, archived, and analysed to identify what customers seek in their business. CRM tools can support an organisation to manage lasting customer relationships. CRM tools and technologies can facilitate interactions with the customers across different service touch points. Customer data can give comprehensive views and insights in what the specific needs of customers are (Sheth, Jain, & Ambika, 2020).

3.4 Customer Service and Support at BrixCRM

For BrixCRM, customer service starts at first contact with a potential customer. For BrixCRM all contact in a proactive role is considered customer service. Customer service is present during the whole life cycle of the customer at BrixCRM. Customer support can start at the end of a project. A customer goes through the process of analysis, advice, and implementation of a CRM application and strategy. After completing these steps, the customer ends up in the support phase. The phase of support can differ for every customer. Customers can choose what customer support offering they prefer through the dialogue with the sales department.

The difference between customer support and customer service for BrixCRM lies in the way service is offered towards customers. It depends on the phase of the client journey at BrixCRM that the client is in (see Figure 2). Based on the definitions above; this difference is also matching the literature research findings from this study on these two concepts. Customer service is always offered to customers in the phases of analysis, advice, and implementation. In the last phase of the client journey at BrixCRM, which is support, a customer can choose if they prefer customer service and customer support or just customer support. Service provided by BrixCRM in a proactive role is categorised as customer service, and help provided in a reactive role is categorised under customer support. Clear definitions for customer support and customer service of BrixCRM is required to indicate whether a service product offered by BrixCRM belongs to the customer service or customer support (see next page).

Figure 2: Client journey at BrixCRM

The definition of Customer Service for BrixCRM is as follows:

> ***"Customer service embodies all proactive services provided throughout the whole life cycle of the customer at BrixCRM - so, before, during and after purchase of a BrixCRM product."***

The definition of Customer Support for BrixCRM is as follows:

> ***"Customer support is the set of all activities provided by BrixCRM as a reaction to an enquiry of the customer during the entire product use cycle. Customer support aims to improve on the implemented solution and to optimise the customer experience."***

3.5 Conclusion of Literature Study

The literature study showed what success factors indicate optimal CSS and what the benefits will be when an organisation succeeds in delivering it. The success factors and benefits of optimal CSS found in the literature are shown in Table 5 and Table 6 respectively below. Further in this research the findings from the literature will be compared to the current situation at BrixCRM. The gap between what is required to obtain optimal CSS and the reality will be the basis for the solution presented to BrixCRM.

Table 5: CSS success factors

Simplicity
Availability and accessibility (convenience)
Speed (response time)
Solution quality
Dependability and reliability
Communication (customer interaction)

Table 6: CSS benefits

Competitive advantage
Enhanced business reputation
Increased customer satisfaction
Loyal customers (repeat business)
Improved employee morale (satisfaction)
Customer data

4 BrixCRM Customer Service and Support Analysis

Since BrixCRM is growing over the past years, CSS is becoming more and more important. They want to offer more professional CSS for their clients. Their CSS is relatively new and has never been thoroughly researched before. In this chapter, the current situation of BrixCRM will be analysed and discussed. The current situation needs to be described thoroughly, since the goal of this research is to improve upon this situation.

This chapter is divided into the following sections. Section 4.1 covers the stakeholder analysis for this research. For the following sections it is important to identify the main stakeholders that deal with the CSS of BrixCRM. Section 4.2 explains what the service and support offerings from the current customer service & support model encompasses. After that, the cost and benefits of the customer service & support model are evaluated in Section 4.3. In Section 4.4 it is explained how and with what characteristics the BPM for the CSS process will be designed. Then the current customer service & support process is described in Section 4.5. This section clarifies the structure of how and by whom the service & support model is applied in practice by BrixCRM. With the characteristics that are explained in Section 4.4, the BPM of the current customer service & support process will be visualised and explained. Finally in Section 4.6, the conclusions of this chapter addressing the shortcomings in the current CSS department of BrixCRM. This chapter will formulate an answer to the KQ2 as defined in Section 2.4:

> **"How is the BrixCRM customer service and support currently designed and what aspects are underperforming?"**

4.1 Stakeholder Analysis

A stakeholder analysis is made to get a good overview of who is involved in the research or affected by the research. They are grouped according to the level of participation, interest, and influence.

The stakeholder analysis offers multiple benefits. The first benefit is to list key organisational players. The key players must be involved in the research to help guide the research to a successful outcome. The second benefit is to gain early alignment with all stakeholders on goals. Their view on the purpose of the research will be important to determine objectives and plans in the early stage of the research. The third benefit is to address conflicts or issues. If the goal of BrixCRM is known in an early stage, conflicts can be avoided right away (ProductPlan, 2021).

The principle of a stakeholder onion is used to conduct the stakeholder analysis (Alexander, 2005). In the stakeholder onion, the CSS process of BrixCRM is centred. From the inside out the stakeholders are getting less involved in the process of CSS within BrixCRM. The stakeholder onion is shown in Figure 3 and described below.

Figure 3: Stakeholder onion of BrixCRM

The first inner layer around the centre contains the stakeholders that directly interact with the CSS process of BrixCRM. The “end users” mentioned are clients that use the CSS offered by BrixCRM. They encounter problems and contact BrixCRM’s CSS team. First line support is the first kind of support offered to the customer when they encounter a problem. Some problems cannot be fixed by the first line support due to complexity. In these cases, the problem will be escalated to the second line support for resolution. The first- and second-line support are employees of BrixCRM. Another stakeholder type in the first layer are the account managers. Account managers are part of the sales team. They are directly involved in the CSS process since they close contracts on CSS with the customers. The last stakeholder in the first layer is the operational manager of CSS. BrixCRM is currently figuring out what they want to offer and accomplish with their CSS. The operational manager is responsible for design and execution of the CSS process.

The second layer of the stakeholder onion contains the stakeholders that may not directly interact with the CSS process but benefit from it or are responsible for it. The CEO and COO of BrixCRM are responsible for BrixCRM’s CSS. They benefit from a good CSS process, but they are not directly related to the day-to-day process itself. The same holds for the remaining management members of BrixCRM. They benefit from a well-structured CSS process but do not interact directly with it. The last stakeholder in this layer is the customer administrator. Some customers have a customer administrator. This administrator is a member of the staff of the customers themselves. The administrator can remedy some problems. But if the problems are too advanced, they still contact BrixCRM.

The third layer is the wider environment that deals with the CSS process. These stakeholders are administration and internal sales. Administration staff of BrixCRM are involved, because they administer the number of hours first- and second-line support have worked solving a problem. The involvement of the administration staff differs from customer to customer in terms of the agreed contract between them and BrixCRM. The last stakeholder is the sales team. The sales team has interest in a well-structured CSS as they are the people that sell the service agreements from CSS to the clients. A well-structured CSS will provide more clarity for the sales team in what they can sell to clients.

After creating this stakeholder model, it was verified and agreed upon with BrixCRM.

4.2 Analysis of The Service & Support Model

About two years ago, an ex-employee of BrixCRM designed a model for the customer service & support (Figure 4). The model was revealed as a result of the interviews that were conducted with some of the stakeholders (see Appendix 1). This model is still being used for the current customer service & support. Clients can choose what kind of service or support system they prefer. The sales team of BrixCRM drafts a contract with the client after the client has been through the whole process of analysis, advice, and implementation.

The customer service & support model is shown in the figure below. The model contains 4 rows with the different types of service and support. Each row (type of support) has several agreements the customer can choose from. Customers are free to choose multiple types of service offerings.

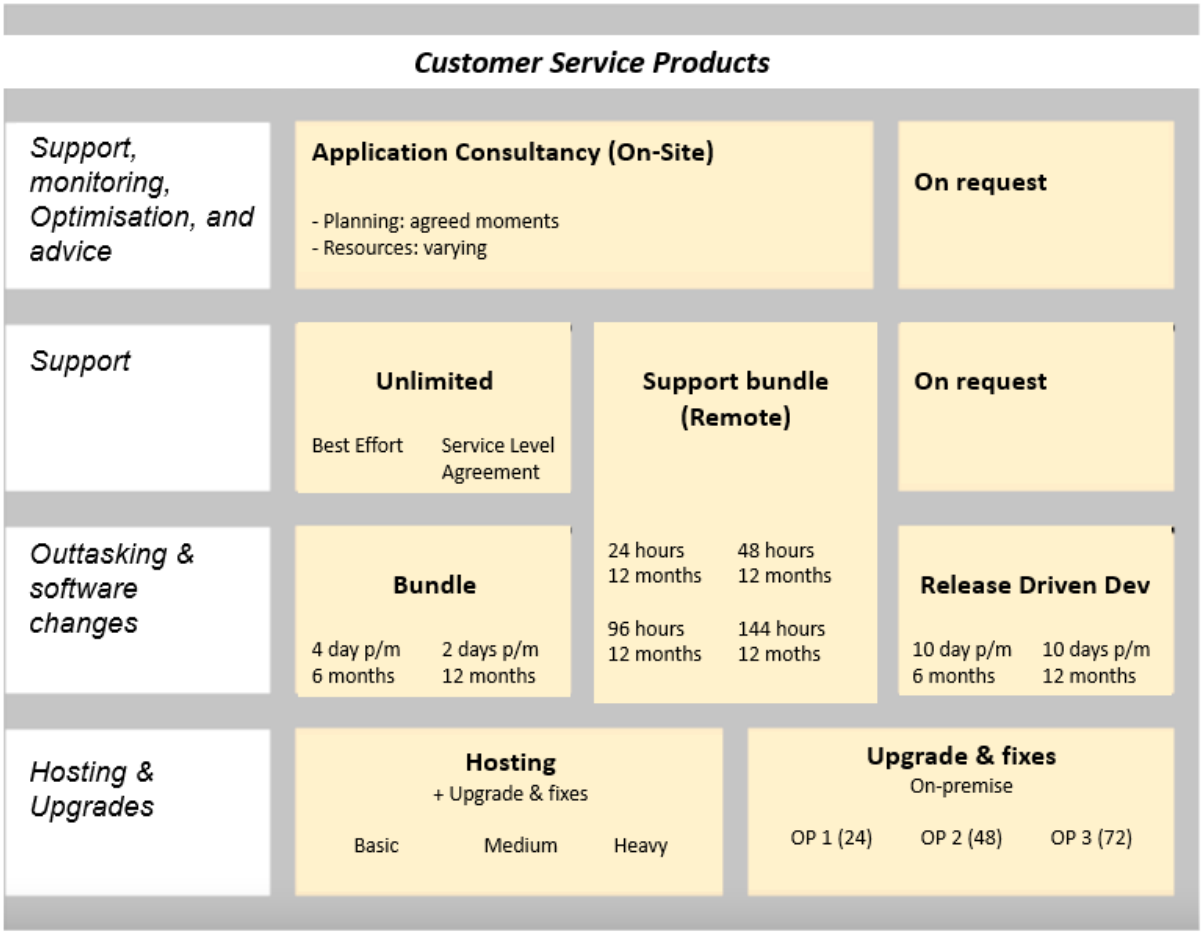

Figure 4: Current customer service & support model of BrixCRM

The first service and support type includes 'support, monitoring, optimisation and advice'. Within this type clients can choose between application consultancy or on request.

- Application consultancy entails setting appointments on an agreed upon regular basis. BrixCRM will visit the client to help and support where necessary. The client pays a fixed amount for this type of service and support.
- The other agreement is on request. The client can contact BrixCRM if they encounter a problem or question. BrixCRM will fix the problem or question as soon as possible. Clients will be billed per hour that BrixCRM has to work to remedy the problem or question.

The second type of service & support is called ‘support’. In this type there are 3 agreements for the clients:

- The first agreement is unlimited service and support. In this agreement the client pays a fixed fee and receives support without a limitation in support requests to BrixCRM. Within this agreement there is a difference between Best Effort or a Service Level Agreement (SLA). In Best Effort, BrixCRM will help the client to the best of its abilities without any agreements. And within an SLA, the services should be provided to the client as per agreement. The client and BrixCRM agree upon service levels regarding quality, availability, responsibilities, and response time.
- The second agreement is a support bundle. BrixCRM and the client agree upon an X number of hours on this card for a duration of 6 or 12 months. These hours can be used by the client whenever a problem or question occurs. The hourly rate will be a bit lower in comparison to the third agreement.
- The third agreement is again at request but now for service type support. The client can contact BrixCRM with a support request and BrixCRM will help and fix the enquiry as soon as possible against an hourly rate.

The third type in the model is ‘Outtasking & software changes’:

- The first agreement in this type is a Bundle. This bundle comes in two types but is not limited to these types: 4 days per month for a duration of 6 months or 2 days per month for a duration of 12 months. On these agreed days BrixCRM will be available to help, guide and fix enquiries for this client.
- The second agreement option is again a support bundle. this has the same conditions as mentioned before for the service type support. Instead of using the X number of hours on this card for support they can be used for Out tasking & software changes.
- The third option is Release Driven Development. This agreement states the availability of 10 days a month for a duration of 6 of 12 months from BrixCRM. BrixCRM will work 10 days each month towards a new release of the implemented CRM tooling (often a version of SugarCRM) for and with the client.

The fourth and last type of the service & model support is ‘Hosting & Upgrades’.

- A client can decide to host the applications at BrixCRM. If there are security fixes from SugarCRM (customer relationship management platform), BrixCRM will perform these fixes for their clients. Once a year BrixCRM will deploy a big upgrade for this client. For other problems and questions, they will pay an hourly rate.
- In the agreement ‘Upgrade & fixes’, a client chooses to install SugarCRM themselves. If there are upgrades from SugarCRM, BrixCRM will test these for the client and from there the client installs the new upgrade itself. There are some options for the hosting of data. A client can choose to host themselves (on-premise), host at BrixCRM or host at SugarCRM.

4.3 Costs-Benefits Analysis of the Customer Service & Support Model

A cost-benefit analysis (CBA) is known as a process that organisations use to analyse decisions, projects, systems, or determine value for intangibles. The model is built by identifying the benefits of a situation with the associated costs. Organisations rely on a CBA to support decision making because it provides an evidence-based view of the options being evaluated. It is essential for organisations to get the most out of a business unit (Kenton, 2020) (Layard & Stephen, 1994). The purpose of a CBA is providing a procedure for evaluating different decisions in terms of their consequences (Drèze & Stern, 1987).

The costs and benefits of the current CSS department with the customer service & support model for BrixCRM (Figure 4) should be determined before it can be compared to the new situation which is

evaluated in Section 5.3. Results from the internal interviews (Appendix 1) are used. The values used and displayed for the financial part of the CBA are fictional, since the real rates that are charged are confidential to BrixCRM. They are proportional to each other to ensure the validity and reliability of the CBA.

The costs of the CSS for BrixCRM consist of two elements. The first one is the costs that occur for solving an enquiry for a client. The second element is the one-time investment for setting up and implementing the CSS department. Costs associated with the second element will not be elaborated further because this is outside the scope of this research.

All types of service and support products can be split up in two categories: cover service offerings and direct service offerings. Cover service offerings are the product offerings that are prepaid. The costs of this kind of service are associated with the availability of service providers (CSS employees). Clients are entitled to an 'x' number of hours of service per year, so BrixCRM has to make sure they can guarantee to execute these hours of service. Direct service offerings are the product offerings that are executed on demand. The costs also differ if the enquiry of a client must be solved by a technical consultant instead of a regular consultant. More complex enquiries must be passed to a technical consultant in order to solve them. So, the costs will differ between these two categories.

The costs of cover service offerings consist of three components:

- A percentage of the salary of the CSS employees for the time that they work on cover service and/or support.
- The overhead costs for the time that the CSS employee works on the cover service and/or support. Overhead costs can consist out of all kinds of costs outside salary for an organisation like rent of the office, electricity, equipment, etc.
- Costs that may occur and should be taken into account for the availability for the hours that are promised to the client in a cover service offering. BrixCRM staff should be available when the client needs them for the agreed time in the contract.

The costs of direct service offerings also consist of three components.

- Costs of actual hours expended times labour rate.
- The overhead costs for the time that the CSS employee works on the direct service and/or support.
- Costs for an average amount of uninvoiced hours due to factors like employee illness, internal miscommunication, etc.

The benefits of the CSS for BrixCRM consist of tangibles and intangibles. The tangible benefits are the financial elements. The general financial benefit is revenue generated minus the costs. The revenue for the CSS products is hours times the hourly invoiced rate for that particular service or support. For the cover service offerings, the revenue is the value of the prepaid hours. For the direct service offerings, the revenue is the value of paid hours for the CSS task.

The financial benefits differ between the types of CSS products. For the service products offerings that categorise as cover service offerings the hourly rates will be lower than for the service products categorised as direct service offerings. Since it can occur that a client will not use the whole capacity of the agreed number of hours, but they did already pay for the hours. If a client does not utilise the whole capacity, BrixCRM has the possibility to use these hours to work on other tasks. Which can be categorised as a benefit. The hourly invoiced rate per type of CSS products from Figure 4 are (a profit margin is already included in these rates):

1. Support, monitoring, optimalisation, and advice
    a. Application consultancy = €140,25

    b. On request = €165,75
2. Support
    a. Unlimited = €127,5
    b. Support bundle (Remote) = €140,25
    c. On request = 153
3. Outtasking & software changes
    a. Bundle = € 140,25
    b. Support bundle = €140,25
    c. Release Driven Dev = €140,25
4. Hosting & Upgrades
    a. Hosting = €140,25
    b. Upgrade & fixes = €140,25

Common intangible benefits are determined on the basis of the literature study. The literature study in Section 3.3 showed that optimal CSS can lead to competitive advantage, enhanced business reputation, increased customer satisfaction, loyal customers (repeat business), improved employee morale (satisfaction), and customer data. From the interviews (Appendix 1) and the client survey (Appendix 2 & 3) it appeared that BrixCRM feels like they create too little value with their CSS department and their employees are unsatisfied with this part of the organisation. The survey showed that overall, the clients are satisfied with the service and support received. These observations imply that currently BrixCRM is missing out on some of these intangible benefits; The employee satisfaction could be improved and by improving their CSS department they could also start to gain more of the other benefits.

4.4 Definition of the CSS BPM Elements

The previous information, especially the information from Section 4.2, is used to design the BPM. This visualisation helps to thoroughly understand the process. The BPM is designed with lanes as a swim lane diagram. Each line represents a department of the entire customer support service process. The BPM is divided with these 2 lanes: one lane representing the first line support and in the other lane representing the second line support. In this way, it is clear what support activities belong to the first line support and what activities belong to the second line support. The entire CSS of BrixCRM is represented as a pool. The 2 departments of first- and second-line support are placed within this pool of the entire process.

Besides the pool and lane symbols, many other symbols are used. For this BPM, the symbols for the event, activity, gateway, sequence flow, message flow and data object are used (Figure 5). The meanings of the symbols are quite straightforward. The events represent occurrences at the beginning and end of a process, activities describe actions, a gateway splits the process into multiple options. Connecting objects connect flow objects with each other or with artifacts, and data objects are used to visualise data that is used or stored.

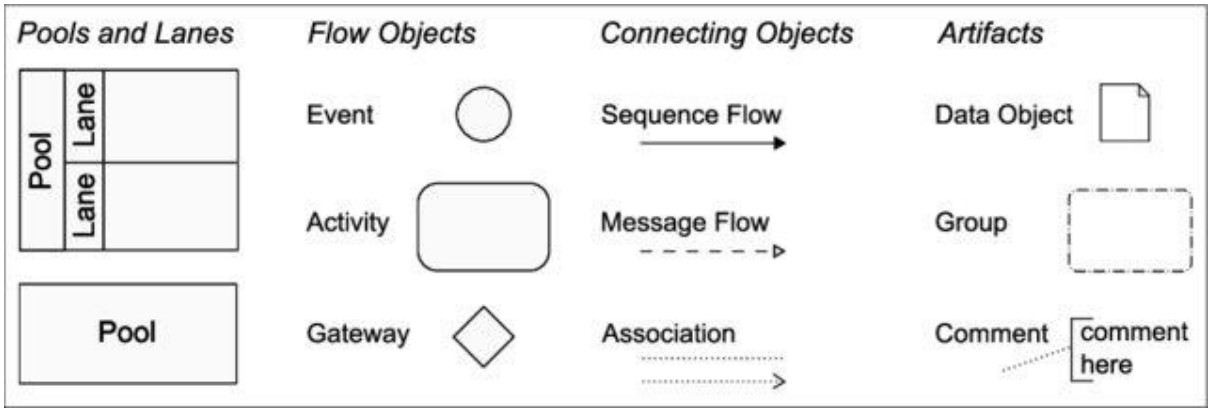

Figure 5: Bizagi symbols (Müller & Rogge-Solti, 2011)

4.5 The CSS Process BPM

In Section 4.2 the current customer service & support model is described. The current section explains how the CSS is structured within BrixCRM. The explanation is based on the information provided by the stakeholders in the interviews (see Appendix 1). The structure indicates how the service & support model from Figure 4 is executed in practice. This is an important part of the structure of the CSS of BrixCRM. The service & support model is used as a guide for the employees of BrixCRM as well as for the clients to visualise what CSS products BrixCRM can offer.

An issue that currently occurs at BrixCRM is that the model is unclear and therefore not always used. Clients have all kinds of different service agreements with BrixCRM. There are so many possibilities that the overview is lost for the service and support agreements. BrixCRM offers all kind of agreements to their clients. Even with the service & support model there is no clear structure on what agreements to offer to which clients. Every client could have some specific service agreement. This causes issues like employees that are unsatisfied, less productivity and possibly less revenue.

Figure 6 shows the BPM of the current CSS process that is made in Bizagi (Bizagi Modeler, 2020) with the gathered information from the previous sections and the interviews that are reported in Appendix 1. The top lane represents the first line support of BrixCRM. This support covers all the simple enquiries from customers. Cases that take less than one hour to fix are considered as first line support. The process starts with an email or phone call from a customer. If the enquiry originates via email, a case is created in the SugarCRM application of the support department of BrixCRM. The cases are stored in the SugarCRM cases module for customer support. However, if the enquiry originates via a phonecall, the problem is first analysed during the phonecall. After that, a case is created in the SugarCRM application. Both routes come together after these two steps and the support agent should contact the administration. We end up at the first gateway with the question: Can the first line support solve the enquiry? If the answer is yes, the support agent continues to the second gateway with the question: Can the enquiry be solved within one hour? If the answer is again yes, the support agent fixes the enquiry and continues to the end of the process.

We go back to the first gateway covering the question: Can the first line support fix the enquiry? The second possibility is ‘no’. If this is the case, the enquiry is too complicated for the basic customer support agent and the enquiry will be passed onto second line support. We move on to the next gateway covering the question: Can the enquiry be solved within one hour? If the answer is yes, then the developer will be contacted and he or she will analyse the enquiry, fix the request, and get back to the client which will lead to the end of the process. But, if the answer is ‘no’, a technical consultant will be contacted. He or she will analyse the enquiry and contact the client about the duration and approach to solve the enquiry.

We then enter the gateway with the question: Does the client agree with the duration and approach? If the answer is ‘no’, the process will be ended, and the enquiry will not be solved for the client. If the answer is ‘yes’, the administration will be contacted about the extra time that has to be spent on the enquiry. A ticket for the enquiry will be created in Jira. Jira is an issue and project tracking software that is used by BrixCRM to manage the cases from client’s enquiries.

From there, there are 3 possibilities. The first and shortest route consists of fixing the enquiry, notifying the client, and closing the case. This route will be followed if the enquiry requires a database modification. The second possibility is the bottom row and takes a longer route. This route is meant for larger enquiries that require code modifications. After the enquiry is fixed by the technical consultant, the solution will be checked by testers from BrixCRM. Then the solution needs acceptance from the client. BrixCRM has to receive approval from the client before they can go into deployment. If everything adds up the client will be notified, and the case will be closed; the process is ended. The third possibility is the time box approach. In this approach, BrixCRM and the client agree upon an ‘x’ number of hours that will be spent on trying to solve the enquiry. In the BPM we then move to the gateway with the question: Will the enquiry be fixed on time? If the answer is ‘no’, the enquiry remains unsolved, but the process will be ended. But if the answer is ‘yes’, the long route will be followed from here. The enquiry is fixed, the solution will be checked by BrixCRM, the solution will be tested by the acceptance team of the client, BrixCRM has to receive approval from the client, the solution goes into deployment, and then the client is notified; the process is then ended.

Going back to the second gateway from the first line support. We mentioned what happens if the answer is ‘yes’ to the question if the enquiry can be solved within one hour. But if the enquiry can not be solved within one hour, but still the support agent can solve the enquiry, we also end up in second line support. The support agent starts with thoroughly analysing the enquiry. After that, he or she will contact the client about the duration and approach to solve the enquiry. If the client does not agree with the approach or duration the process will be ended and the enquiry stays unsolved. When the client agrees upon the provided approach and duration, the administration is contacted about the extra hours that will be spent to solve the enquiry. Then the enquiry will be fixed, followed by the notification of the client, and the case is closed.

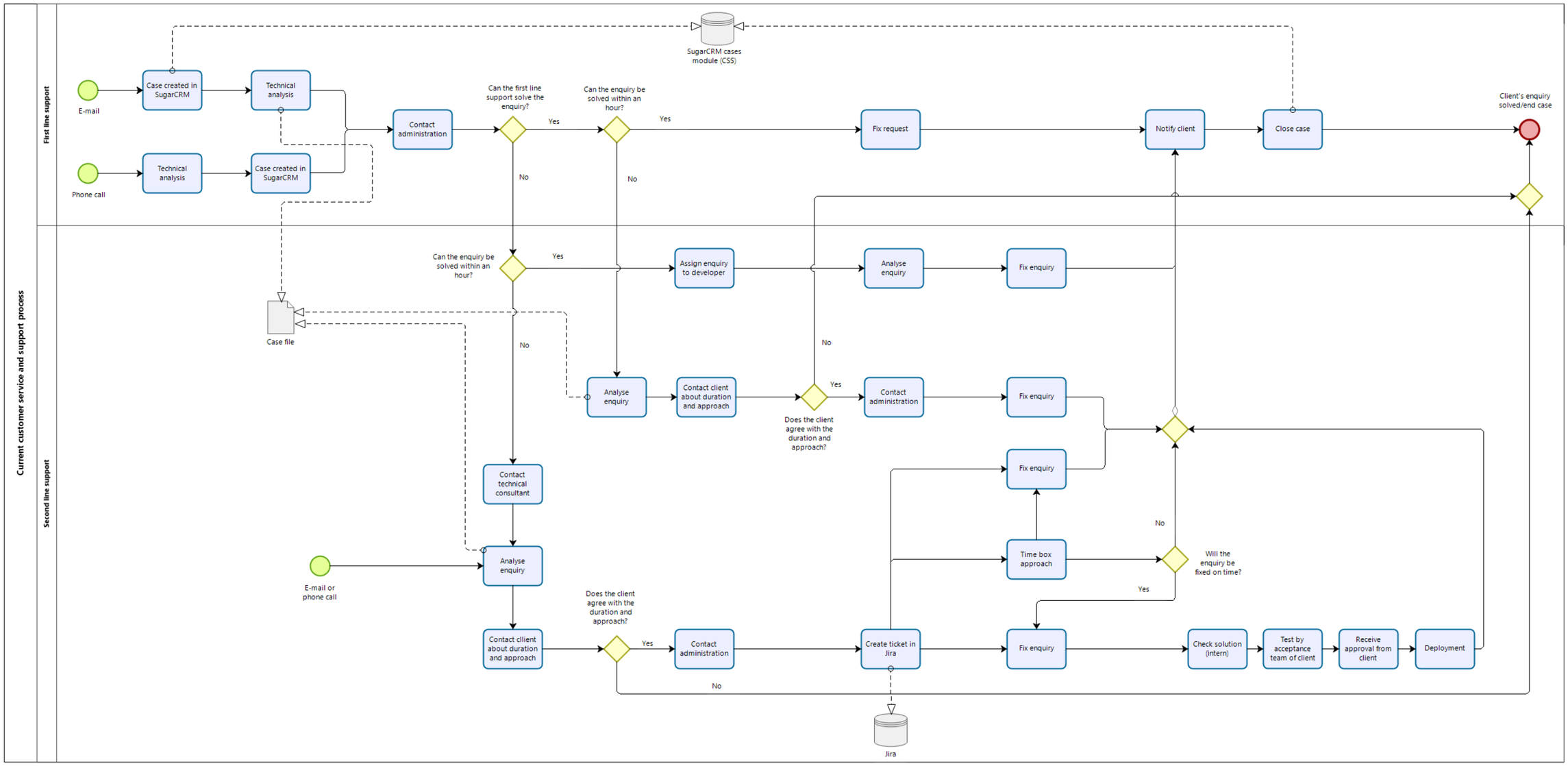

Figure 6: BPM of the current customer service and support process

4.6 Shortcomings in the Current CSS Process

To improve the CSS of BrixCRM it is necessary to identify the shortcomings in the current process. The analysis performed in this study provided insight into what the current CSS department of BrixCRM looks like. The literature study showed what factors indicate optimal CSS. The shortcomings in the CSS are determined by combining the results of the analysis of the existing CSS process and results from the literature study. A shortcoming can be identified if there is a gap between the current situation and the factors that indicate optimal CSS.

The service & support model analysed in Section 4.2 and process visualisation in Section 4.5 provide evidence of inefficient service products offering at the organisation. The model shows that there are a lot of different service agreements. The employees of BrixCRM also mentioned that it sometimes can be vague what service agreements to use and what is agreed with some clients. This also causes vagueness in the communications with clients and sometimes between colleagues. There are agreements active at clients that are not even in the service & support model which makes it even harder to understand for the employees.

The costs-benefits analysis of the service & support model show the rates of all these agreements. Since it is not clear what the content of every single agreement is, clients are less likely to agree on a service contract with BrixCRM. BrixCRM is trying to provide so much that it makes it difficult for itself to provide the right services. Looking at the benefits relative to the costs, BrixCRM states that it is satisfied with the revenue they turn over per hour. So, the shortcoming for BrixCRM does not lie in the amount of revenue generated.

The results from the interviews showed that there is a lack of organisational structure in the CSS department. The CSS of BrixCRM is relatively new and there are no dedicated CSS personnel. Currently, no dedicated CSS personnel are needed since BrixCRM does not encounter enough support and service enquiries to hire dedicated CSS personnel. Furthermore, there is no clear structure of management in the CSS department. The part-time CSS personnel do not know exactly where, what and to whom they should report, so the lines of communication are unclear.

The vagueness of the types of agreements shows that a new service product portfolio should be designed to obtain the benefits of optimal CSS (section 3.3). The current CSS process can not be efficient anymore since the current CSS process is not product oriented. So, a new CSS process should be designed for the new CSS products. The BPM shows that the employees of BrixCRM must perform some steps that are time consuming whilst it could be done differently. For some enquiries they must contact the client during the process of solving the enquiry to ask permission or discuss some steps. This could be done in a smarter way which will be explained in the next chapter. The idea of developing a new service product offering and the BPM is to highlight the shortcomings in the organisational structure of the CSS department.

To conclude, the shortcomings that are shown by all the sections of the CCS analysis is that there are problems in the vagueness of the types of agreements, how they should be used and delivered, and that the CSS department is not well-structured (inefficient service products offering and poor organisational structure). So, the analysis clearly shows that the ineffective and inefficient delivery of CSS services is due to the inefficient service products offering and poor organisational structure. There are a lot of agreements and some of these agreements suffer from a level of vagueness which makes it difficult to structure the CSS department simply and clearly. The shortcomings show that the CSS is currently not optimal. In the next section a solution is designed to help BrixCRM solve these shortcomings.

5 Solution Design

The analysis of the current CSS process of BrixCRM clearly identified shortcomings. The literature study showed what factors indicate optimal CSS and the benefits that could be gained out of it. It turns out there is a gap between what optimal CSS is and what BrixCRM is currently performing. In Section 5.1 a recommendation for the organisational structure of the CSS department will be discussed. This section covers what BrixCRM could do to solve their poor organisational structure. Section 5.2 introduces a new idea for the different service agreements is presented. It provides the employees of BrixCRM and their clients with a clear overview of more standardised agreements. In Section 5.3, a guideline is developed that helps the sales team to identify what service agreement fits the specific client best. In Section 5.4, the cost-benefit analysis (CBA) is elaborated. This CBA indicates whether new agreements should replace old agreements. It can provide perspective on a new organizational structure. The last section (5.5) of this chapter covers the BPM of the newly designed CSS process. The BPM shows how the process should be structured to work in the most optimal way to gain the most benefits. The goal of this chapter is to find a solution for BrixCRM's CSS department in response to the KQ3 of this research:

> **"How should the underperforming aspects of the BrixCRM customer service and support be improved?"**

5.1 Organisational structure of the CSS Department

BrixCRM suffers from a poor organisational structure as mentioned in Section 4.6. They have no dedicated CSS personnel, and the CSS department is relatively new. That should not be an excuse for the lack of organisational structure. There are four aspects for the organisational structure that are involved while setting up a successful CSS department; the function of the CSS department, the right CSS personnel and tools, an efficient structure and procedure to solve enquiries, and measuring customer service performance (Luenendonk, 2019).

The first aspect to consider for setting up the organisational structure is establishing what the function is of the CSS department (Luenendonk, 2019). For BrixCRM the main function is to solve the enquiries that occur at the clients while they are using the CRM application. The aim is to help them as quick as possible so that the clients can maximise the value of their application. To better the delivery of the services, the service product offerings is standardised (Section 5.2).

A CSS department relies more that any other department on quality workforce. It is of great importance for the success of the CSS department that the CSS personnel have the right set of skills, mindset and tools to help the clients. Which is the second aspect to set up the organisational structure. The right set of skills depends on the function and field of your business (Luenendonk, 2019). BrixCRM is active in the industry and their CSS tasks are mainly technical issues. Some skills that a CSS representative for BrixCRM should have are (Salesforce, 2021) (Helpscout, 2021):

- Clear communication skills
- Empathy
- Adaptability (creativity)
- Self-control
- Taking responsibility
- Patience
- Effective listening
- Time management
- Knowledge
- Problem solving skills

Some skills can be developed naturally and enhanced by training. But, for an organisation it is crucial to regularly provide employees with the opportunity to develop these skills through training. The training should be to improve knowledge about the business' products and services as well as on developing the soft skills. For CSS personnel to deliver the best possible service and support it is necessary to have the right tools and technology. BrixCRM must be available via phone, e-mail, website and social media (Luenendonk, 2019).

The third aspect is creating an efficient structure and procedure for solving clients' enquiries and questions. The structure and procedure generate confidence for the CSS personnel, which will turn out in better CSS services. It would be beneficial for BrixCRM to have a designated organisational structure for the CSS department. The lines of communication become standard and simpler. The personnel know exactly what is expected of them, when and to whom to report to, and what information must be shared. A manager (also non-dedicated) is required that can run the CSS department. The reporting structure should be small and direct. This limits the delay in waiting times for the clients (Quain, 2018). A proper procedure for CSS tasks will help CSS personnel solve enquiries much quicker (Luenendonk, 2019). In Section 5.5 a BPM for the new CSS process will be presented. This BPM provides the CSS personnel with an overview on how to move the enquiry through the department to help the client as soon as possible.

The fourth aspect is measuring the customer service performance. The department should have objectives that drive better performance. The objectives should be measurable to check if the department is successful. The most crucial objective is customer satisfaction. Direct feedback from the clients will add a lot of value to an organisation. The focus should not only be on the clients but also on the employees. CSS representatives know the best what the challenging aspects of operating the CSS are (Luenendonk, 2019). BrixCRM could make a personalised list of CSS objectives they want to measure to check how their CSS department is performing.

5.2 New Proposed Service Product Portfolio

A service product portfolio is a visualisation that describes the CSS products of BrixCRM. The service product portfolio as proposed in this study is visualised in Figure 7 below. It is based on the factors that indicate optimal CSS (section 3.2) which eventually can lead to the benefits of optimal CSS (section 3.3). BrixCRM can use the new proposed service product portfolio to present and explain their service and support offerings to their clients. In this way they have a clear overview from which their clients can choose what kind of service and/or support they prefer.

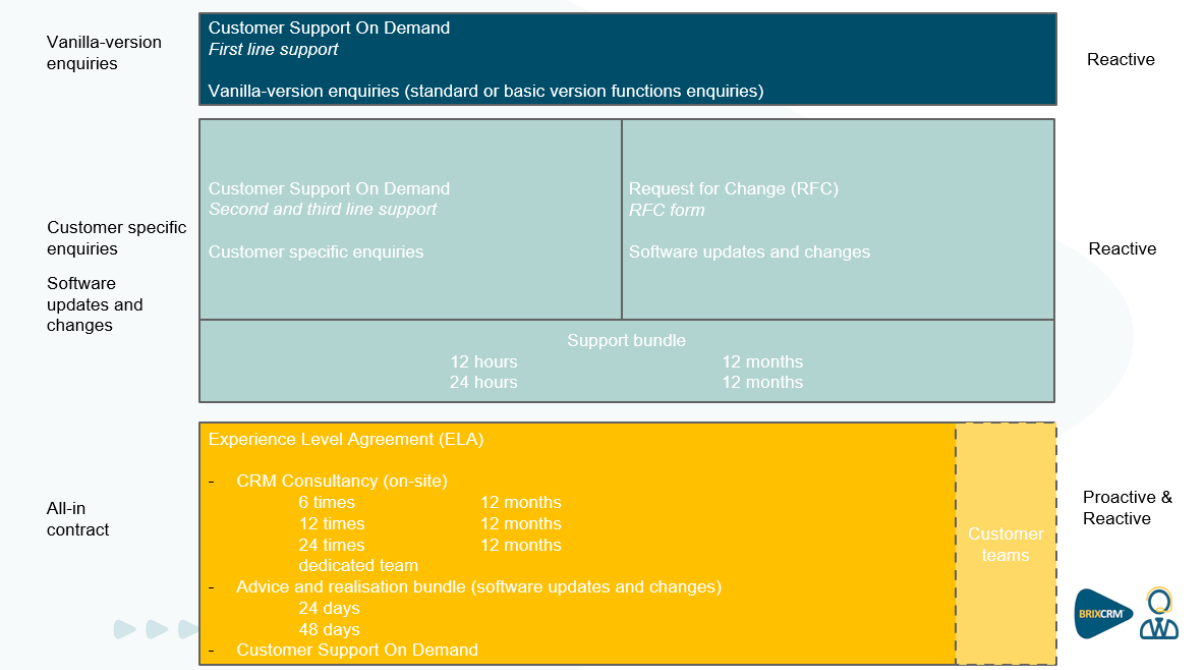

Figure 7: New proposed service product portfolio of BrixCRM

The first service offering of BrixCRM is the **reactive customer support on demand**. Within this service offering there are levels of service graded on complexity. There are several types of customer support on demand:

- The first type is first-line support which entails all the enquiries which do not require adjustments and research. Instead, the enquiries can immediately be remedied (probably on the phone). It copes with all enquiries proceeding from the so-called vanilla version of the offered solution from BrixCRM towards a client. Vanilla version applications are the standard or basic versions or functions that BrixCRM has not customised for a client. So, knowledge about customer specific solutions is no requirement for this service. This service is free of charge for the clients that agree upon an Experience Level Agreement ELA. Other clients will be charged a certain fee per hour.
- The second type is the second- and third-line support. These support lines deal with enquiries that require deeper research (mostly customer specific) and are not free of charge. BrixCRM can always spend one hour on the enquiry without permission of the client. If BrixCRM needs more time to fix the enquiry the client should give written permission.
- The third type of customer support on demand is the service offering Request for Change (RFC). The RFC will contain a form that the client can fill in to describe the change they want. The form is the basis of this approach. After the client fills in the RFC from, it will be checked by BrixCRM staff for misunderstandings and flaws. Then the form will be validated by the staff as clear and executable. After that it will be complemented with the risk analysis for potential risks that could occur for a certain approach BrixCRM and the client agree upon. And lastly, an estimation of the costs for the requested change(s) will be made. The client must sign the RFC form to start the procedure for the requested change. If all these steps are completed the RFC will be planned and executed.
- There is the possibility is to purchase a support bundle at BrixCRM. A support bundle contains prepaid customer support on demand. A client buys an x number of hours they can use at any time to get support from BrixCRM. BrixCRM can spend one hour without permission of the client, above the hour they need written permission from the client to continue the support. The support bundle is valid for a period of twelve months. The unused hours will be cancelled at the end of this period.

The second service offering is the most complex one: A **proactive and reactive Experience Level Agreement** (ELA) between BrixCRM and the client. BrixCRM does not see the process of advice, implementation, guiding and support as a one-time process but as a continuous one. Clients can compile their own CRM experience-package to maximise the experience from their CRM application. The package always consists of three standard service components, but these components can differ in terms of prepaid hours. The three components of an ELA are:

- The first component is CRM consultancy. CRM consultancy is periodic consultancy on site at the client. An CRM consultant visits the client on the planned days to optimise the CRM application for and with the client. CRM consultancy is a proactive service. It contains monitoring, supporting, and advising the application together with the users. In this way the application will continuously fit the client's wishes. Most of the tasks for the consultant are categorised as second line customer support.
- The second component of the ELA is the advice and realisation bundle. Insights gathered through CRM consultancy about a CRM application of the client should be applied as soon as possible. It should not be put aside until the next periodic consultancy appointment with the client. This bundle is meant to fix software updates and changes. The client chooses between a bundle of 24 days or 48 days that can be spent on these updates and changes that occur during the usage of the CRM application. The hours from this bundle are mainly meant for third line customer support.
- The third component to complete the ELA is customer support on demand. As previously described, first line customer support on demand is available and free for all clients of BrixCRM. Second- and third-line customer support on demand are included in the CRM consultancy part and the advice and realisation bundle.

Elements for effective service and support agreements

It is important for BrixCRM to know what elements are required to devise effective quality management systems (QMS) for service and support agreements. (McLay, Everett, & Keith-Storey, 2016) state "QMS form part of an overall organisational architecture that ensures provision of products and services in an efficient and effective manner." BrixCRM can use these elements to set up the details of the different service contracts.

certain elements must be met to design an effective QMS for service and support agreements. These elements are the foundation for the successful delivery of services (McLay, Everett, & Keith-Storey, 2016) and are described below:

- Organisational capability: The capability of an organisation is the value it provides to the customer in terms of skills, knowledge, processes, and products. An organisation should not make any promises to a customer outside the scope of its capabilities.
- Customer requirements: These requirements are the customer needs in terms of quality, delivery and cost for a certain service or product.
- Industry responsibilities: Responsibilities for an organisation such as international standards, regulations, and statutes.
- Governance directives: These are directives in terms of equity, ethical business conduct, transparency, accountability, and commitment.
- Quality methods: By applying quality methods (e.g. Benchmarking & Innovation, Value adding, Cost of Quality) an organisation can monitor, measure and possibly improve their performances based upon customer perspectives and requirements.

5.3 Decision Support Diagram for Customer Service and Support Products

The sales team of BrixCRM oversees the support service agreements made with clients. By itself, the service product portfolio is not enough for the BrixCRM sales team. It will be helpful for sales to know what characteristics of a client determine what the best fitted support service agreement is.

The process of determination starts when the project of creating a CRM application is still ongoing. The service products from the service product portfolio can be separated by two factors: complexity and frequency of expected enquiries. These two factors are fundamental for determining the most suitable service product for a client.

The complexity of the application can either be a standard application (SugarCRM) or a customer specific application. The standard applications are applications that BrixCRM did not change to match the requirements of a specific customer. The customer specific applications are changed by BrixCRM to suit the individual client.

The distinguishment between high and low frequency of enquiries must be made to give an extra indication to BrixCRM's employees. The CSS model shown in Figure 7 has been made in discussion with BrixCRM. The trade-off between the different CSS products differs for standard applications and customer specific applications.

Standard applications
It shows that the lowest number of hours on a support bundle is 12 hours per year. This indicates that the border is at 12 hours per year. If the expected frequency of enquiries is below 12 hours, BrixCRM will recommend the client to request CSS ad-hoc. And if the expected frequency of enquiries is 12 hours or more per year, the client is recommended to agree upon a support bundle or ELA. The costs presented in Section 5.4 show the same trade-off:
12 hours of CSS support bundle → 140,25 * 12 = €1683
12 hours of CSS ad-hoc → 153 * 12 = €1836
11 hours of CSS ad-hoc → 153 * 11 = €1683
So, when a client uses less than 12 hours of CSS it will cost the same or even less when less hours of CSS are necessary.

Customer specific applications
If the client has a customer specific application the distinguishment should be made between ad-hoc, support bundle and an ELA. The only time ad-hoc will be chosen is when a client is certain they will not need some help during the usage of the application. The lowest number of hours on an ELA for the same tasks (technical enquiries) as on the support bundle is 96 hours. The CRM consultancy on-site is omitted in this comparison because CRM consultancy is mainly for other tasks. The costs (see Section 5.4) for an ELA or support bundle are:
96 hours ELA → 127,50 * 96 = €12240
96 hours support bundle → 137,50 * 96 = €13200
88 hours support bundle → 137,50 * 88 = €12100
So, if the expected number of hours for enquiry fixes will be 88 hours or less it will be beneficial to choose a support bundle over an ELA. But in that case the client does not have the advantages of a CRM consultant on-site. And if the probability occurs that they need more help it can cost them a lot more money.

As shown in Figure 8 the decision support diagram starts when the project is in progress at BrixCRM. If the application is a standard application, two options are possible for the second factor of the frequency of enquiries. If the frequency of expected enquiries is low, BrixCRM will recommend the client to choose for ad-hoc customer support service. But if the frequency of expected enquiries is high, BrixCRM will recommend the client to choose for a support bundle with a x number of hours of prepaid support service per year.

On the other hand, if the application's complexity is customer specific, the decision support diagram takes a different route. Again, a gateway is possible with a route to the low frequency of expected

enquiries and high frequency of expected enquiries. The route of the low frequency of expected enquiries has the same options as for the standard application. A client can choose whether they prefer ad-hoc support service or a support bundle. The support bundle will be beneficial in terms of costs per hour for the client.

The last case is that a client has a customer specific application and a high frequency of expected enquiries. In this case the client will be recommended to contract an Experience Level Agreement (ELA) with BrixCRM. An ELA covers all the different kinds of customer services and support.

A second swim lane is shown at the bottom of Figure 8. This is for the last support service offering of BrixCRM, the Request for Change (RFC). If BrixCRM experiences a big volume enquiry from a client, they will use their new concept of an RFC described in section 5.1.

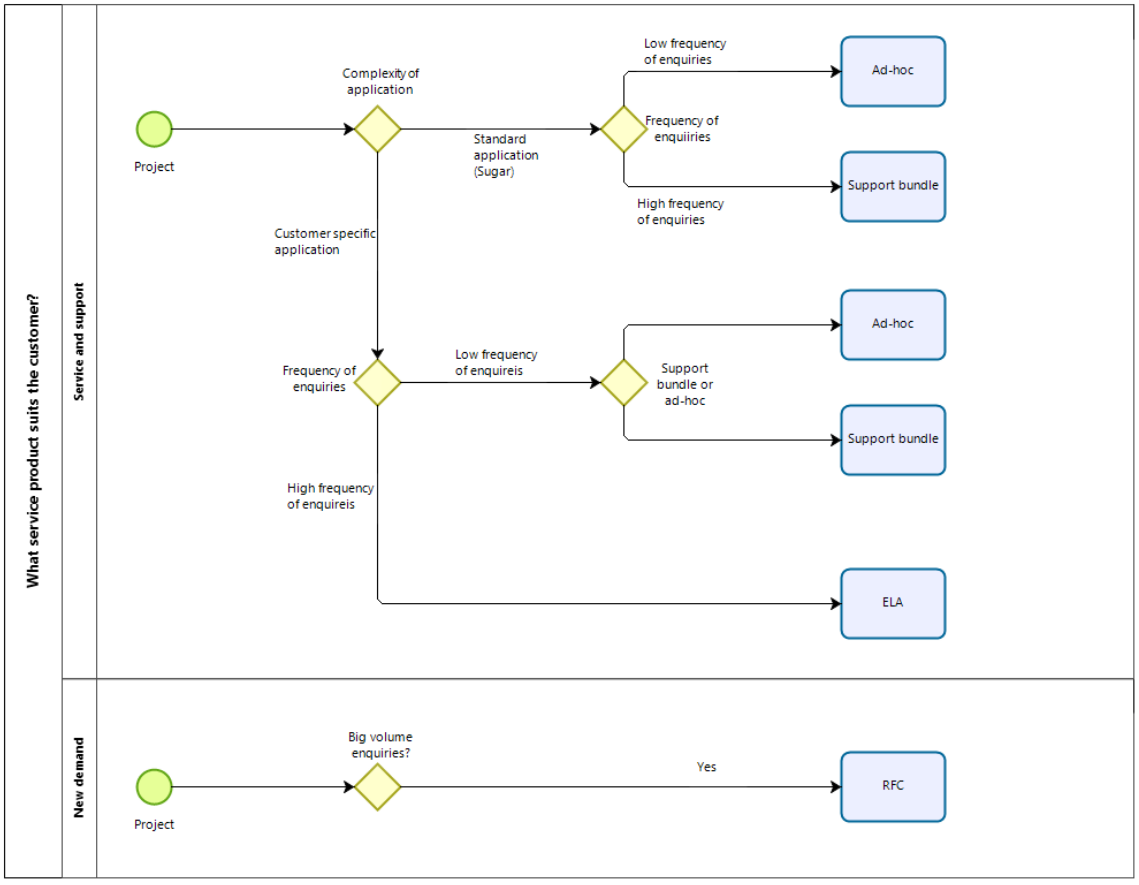

Figure 8: Decision support diagram

5.4 Cost-Benefit Analysis of the New Service Product Portfolio

In Section 4.3, the costs and benefits of the current situation at BrixCRM are described. The costs for the CSS services will not change for the new situation since the same employees will work on the enquiries and the overheads remain the same. The costs can change if the amount of CSS tasks increases or decreases, but this cannot be determined. The only extra cost that could occur for BrixCRM are the costs for setting up and implementing a new situation for the CSS department.

The benefits differ since a new set of CSS products is created. The benefits again consist of tangibles and intangibles. The tangible benefits for a CSS task are again the revenue generated with CSS task minus the costs of that CSS task. The revenues are the hourly invoiced rates (including a profit margin) that are charged to the clients. These rates differ per CSS product. The more comprehensive

the product such as an ELA, the lower the hourly invoiced rate will be. This will provide advantages for both BrixCRM and its clients. The predetermined products (support bundles and ELA's) give BrixCRM more financial assurance since the client pays upfront service and/or support.

BrixCRM will take these hours into account in their planning. And therefore, the response time for the client will likely decrease. Prepaid service product offerings are beneficial for BrixCRM because they have the financial assurance and there is a chance that the hours will not be utilised by the clients for CSS. Then the possibility occurs for BrixCRM to use these hours for other tasks. The advantage for the client is the lower hourly invoiced rate in comparison to on-demand services. But a disadvantage is the risk when they do not utilise all prepaid hours, the hours will be lost after the agreed time.

The hourly invoiced rate (including a profit margin) per CSS product for the new situation are:

1. Customer support on demand (first line support) = €153 or 0 (ELA)
2. Customer support on demand (second line support) = €153
3. Support bundle = €140,25
4. Request for Change (RFC) = €140,25
5. Experience Level Agreement (ELA)
    a. Periodic CRM consultancy on site = prepaid hours * hourly rate
        i. 48 * €132,50
        ii. 96 * €130,50
        iii. 192 * €128,50
        iv. 384 * €126,50
    b. Advice and realisation bundle = prepaid hours * hourly rate
        i. 96/192/284 * €127,50

In comparison to the old model from Section 4.3, the costs are the same with the new model. If a consultant can solve the enquiry, it will be a bit cheaper for BrixCRM then when a technical consultant must solve the enquiry. The differences lie in the higher benefits generated from the CSS department. The new service and support model offers more standardised service agreements for BrixCRM's clients. By standardising the choice of CSS products, BrixCRM builds more structure and clarity in their CSS department. For both parties, BrixCRM and its clients, it is much clearer what is offered and what can be expected from these products.

It appears that first line customer support rarely occurs in real life. The two CSS agents estimate these cases on average below 0.1 times a week (see Appendix 1). In the new model, the first line customer support for vanilla version questions will be free of charge for clients with an ELA. For other clients the invoiced rate will be 153 euros per hour. The number of cases for the first line customer support could increase a little bit when these are free of charge for the clients that accepted an ELA. But almost every question that occurs will go to the periodic on-site consultant. So BrixCRM will not lose a big part of revenue when they provide this free service towards some clients. And the advantage of more financial assurance beforehand of an ELA is expected to weigh higher to BrixCRM.

The costs and benefits of the support bundle will not change. The RFC will not directly provide more revenue because of a higher fee. But instead, it will provide BrixCRM and the clients with more clarity. Everything that has to do with a certain enquiry will be included in the RFC form. The chance of miscommunications will decrease because the expectations of the client will be recorded in the RFC form. The RFC form will also include any risks that could be caused by the solution. The RFC form defines the boundaries of the solution and if the client agrees with these terms, they can not complain afterwards if these risks become visible.

The rates invoiced to the clients are decreased relative to the old model. In the old model ELA's and SLA's (Service Level Agreement) were set up with the clients. These contracts could differ a lot from client to client. There was not enough clarity in the invoiced rates. The new model only offers ELA's and standardised agreements with the clients. Therefore, the new model offers financial assurance, and more clarity.

From the CBA it appears that the new model provides BrixCRM and their clients with standardisation and clarity in the CSS department. Standardisation and clarity can lead to speed, availability, dependability & reliability, simplicity, and good communication from the CSS department. These factors are success factors for optimal CSS as showed in section 3.2. So, by applying the new model BrixCRM could start to gain the benefits such as more invoiced hours, financial assurance and the benefits found in the literature in described in Section 3.3.

5.5 BPM of the Newly Designed Customer Service and Support Process

In the previous sections it is shown that the CSS can become more standardised. BrixCRM will provide less choice in service products, but in this way, they can guarantee better quality of the solutions. The standardisation provides the CSS process with simplicity. The interaction between BrixCRM and its clients improves because the CSS process is easier and more accessible. With stricter contracts, clients agree upon the risks and the problem-solving approach method and then the problem solvers can go to work. By doing this there will be less unnecessary back and forth contact which reduces time waste and is expected to increase the speed of solving the enquiry, leading to more satisfied clients and BrixCRM employees. The better CSS process will make the process simpler and better executable which is much more convenient and effective. BrixCRM stores its cases in a SugarCRM model; this will stay unchanged. It is beneficial to store the solved cases somewhere. For example, in the cases module the organisation can see per specific client if they have a lot of enquiries. The client probably struggles in certain areas and BrixCRM can respond adequately by advising the right products and service. BrixCRM can use their own expertise on CRM to offer the best possible service and support towards its clients.

The explanation of the symbols that are used to create the BPM can be found in Figure 5 in Section 4.4. The new CSS BPM which is visualised in Figure 9 is divided into four lanes. The four lanes all represent one of the service products.

1) The first lane is the customer support first line. First line customer support is where almost all the enquiries enter the system. Same as before, this can be via e-mail or by phone. The enquiries are analysed, and a case is created in the SugarCRM cases module of the CSS. First line customer support only covers the simple vanilla version questions.
    a) The first possibility is that the enquiry is a vanilla version, the BPM leads to the question if the client has an ELA. If they do, the vanilla version questions are free of charge. If a customer does not have an ELA, they will be charged. Then the enquiry will be fixed, the client will be notified, and the case will be closed which is the end of the process.
    b) The second possibility is that the enquiry is not a vanilla version. In this case the questions appear if the client has an ELA. If they do not have an ELA, another question appears which asks if the enquiry requires software updates and changes. If it does not the enquiry can be solved by the second- and third-line customer support.

2) There are two paths in the second- and third-line customer support. One if the CSS representative can solve the enquiry themselves (second line) and the other if a technical consultant must be involved (third line). The paths are almost the same except for the CSS representative to contact the technical consultant. And for enquiries that require more

technical solutions a ticket is created in Jira. Jira is an issue and project tracking software that is used by BrixCRM to manage the cases from client's enquiries. The client is always asked if they agree to the duration and problem-solving approach. If they do not agree there are two possibilities. The first one is that the client does not prioritise this problem and the process will be stopped. The other option is that the client does not agree with the duration and/or approach. If this is the case, the process goes back to the analysis stage and another solution has to be formulated. This solution will probably be easier and therefore cheaper, but there is a chance that there occur side effects. In case that these effects occur, clients must request a new enquiry if they want them to be solved. After that the administration is contacted to validate the worked hours, the enquiry will be fixed, the client will be notified, and this will lead to the end of the process with the closed case.

3) We go back to the question if the enquiry does require software updates and changes. If the answer is 'yes' to this question, so an enquiry is more difficult and probably larger, an RFC will be used. The standard RFC form will be shared with the client and they will fill in the form with their enquiry. Then the form is validated, completed and estimations about the price and duration are made. The client must agree to continue the process, otherwise there are again two possibilities.
   a) The first one is that the process is ended if the client feels like they do not need the solution and want to work around it.
   b) The other option is that they disagree on the duration and/or approach.

   Then the process goes back to the previous step (validation, completion, and estimations) and another approach will be elaborated (easier and cheaper). An RFC reduces the possibility of miscommunications, all the information about the risks, approach, duration, and prices are included and both parties agree upon it upfront. To continue, a ticket is created in Jira, the RFC is planned, and the enquiry is fixed. Because these enquiries are more complex the solution will be checked. After that the solution is tested by an acceptance team of the client and BrixCRM must receive approval from the client. Lastly the solution will go into deployment and subsequently the client is notified, and the case is closed.

4) The last possibility is that the enquiry is not concerning a vanilla version (the enquiry is not about standard or basic versions), and the client has an ELA. The CSS representative will work according to the ELA. This will probably happen only occasionally because the consultant on-site will fix a lot of the enquiries when he or she is working with the client. Enquiries can also come straight from the client to the designated consultant as shown in the BPM. The enquiry is analysed, and the administration will be contacted. After that, the question arises if the enquiry from the client needs software updates and changes. If the enquire is not that complex the consultant on site can probably fix it and the standard procedure is followed. If the enquiry does require a certain level of complexity the lowest path is followed. A technical consultant is contacted and in these cases the hours from advice and realisation bundle will be used. The procedure is the same as for the RFC except that there is no RFC form involved. The solution should be checked internally and tested by an acceptance team of the client. After that BrixCRM should receive permission to move the solution to deployment. Lastly, when the deployment is finished, the client is informed that the enquiry is solved, and the case is closed.

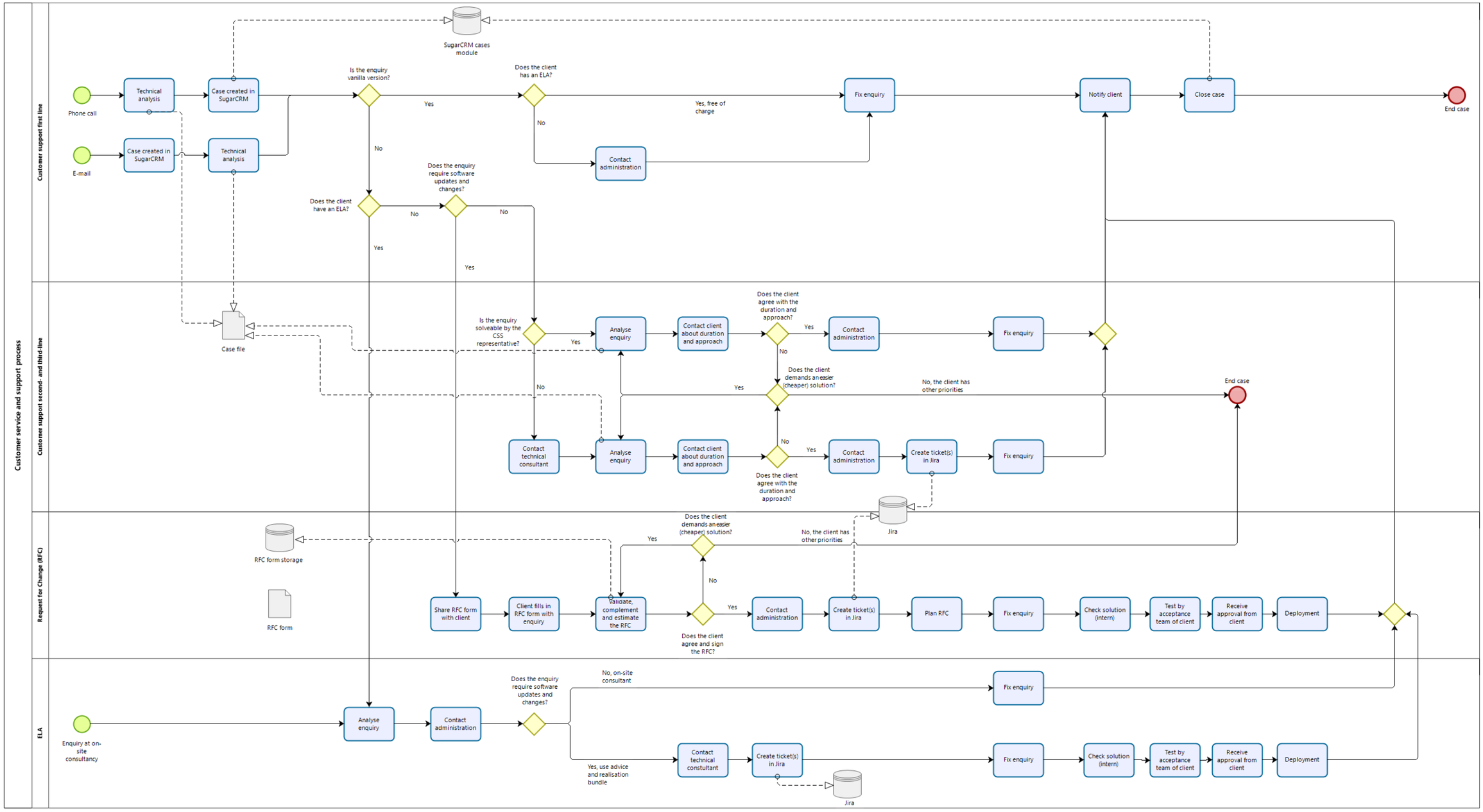

Figure 9: BPM of the newly designed customer service and support process

5.6 Evaluation of Solution Design

The proposed solution will help BrixCRM solve the two main shortcomings: poor organisational structure and inefficient service products offering. The solution presented in the previous sections consists of an organisational structure, a new service product portfolio and a BPM of the new CSS process.

BrixCRM should have a designated organisational structure even though they currently do not have dedicated CSS personnel. The part-time CSS representatives should report to a manager on a regular basis to discuss what is going on and what could be improved. The organisational structure as explained in Section 5.1 provides clearness within the department and therefore provides simplicity, clear communication channels, availability and accessibility. This will lead particularly to the increase of employee morale.

The function of the CSS department is to solve the enquiries as good and as soon as possible. This is done by means of the new standardised service product portfolio. The standardised model provides simplicity to both the clients and the organisation. It also makes it easier for the organisation to guarantee quality of the delivered solutions. Because BrixCRM offers a less diverse variety of products it is clearer for the clients what every product means and what to expect. It will be beneficial for the communication between the organisation and its clients if both parties know what they expect from each other. These factors will lead to the increase of the customer satisfaction as well as the increase of the employee morale.

The BPM of the new CSS process is based on the new model with standardised CSS products (Figure 7). With this process a high delivery speed level can be achieved since it is clear what steps must be taken within the organisation to solve the enquiry. The process provides simplicity within the organisation and therefore causes less miscommunications. The employees know exactly where and what kind of customer data should be stored. BrixCRM can gain a lot of valuable information out of the customer data to further improve their business.

The combination of the three elements from the solution will lead to higher customer satisfaction and more loyal customers. If customers appreciate that the CSS department of BrixCRM is doing a great job, their business reputation will be enhanced, and they can have a competitive advantage.

6 Conclusions

This chapter reviews, summarises, and discusses the steps taken in this research. Section 6.1 deals with the 3 knowledge questions (KQs) and answering the main research question as presented in the beginning of this thesis (Section 2.3). Section 6.1 is called “Conclusions” as it relates most to the knowledge content of this study. Section 6.2 includes the discussions, dealing with the research process and methodology. It also covers a discussion on the limitations of this study. Finally, in Section 6.3, the added value of the research result is discussed and recommendations to BrixCRM are made regarding implementation of the results and possible areas future research.

6.1 Conclusions

The main research question defined at the beginning of this study was:

“How can BrixCRM deliver effective and efficient customer service and support services?”

The first objective of this study was finding the right information about customer service and customer support. Obviously, the following knowledge question was stated: “**What is customer service and support?**”. These concepts are firstly researched through a literature study to clearly state what they contain. Success factors of good CSS were determined in order to improve the customer service and support (CSS). The factors that indicate good CSS are simplicity, availability, and accessibility (convenience), speed (response time), solution quality, dependability and reliability, and communication (customer interaction).

These success factors were then compared to the current situation at BrixCRM to pinpoint the aspects at which the CSS department is currently underperforming. The benefits that result from these success factors were identified. The benefits of optimal CSS found in this study are competitive advantage, enhanced business reputation, increased customer satisfaction, loyal customers (repeat business), improved employee morale (satisfaction), and customer data. All these combined can lead to business growth. Also, definitions are given which state what the concepts of customer service and customer support mean for BrixCRM. The difference between these two concepts mainly lies in the proactive role (service) versus the reactive role (support). Customer service is executed throughout the whole client journey (in every business unit) of a client’s interaction with BrixCRM. Customer support is executed after the sales of an application when any enquiry arises. The understanding of the differences between these concepts has been a help to better explain the CSS structure of BrixCRM, which was needed for the design of an improved CSS.

A thorough analysis was made of the current situation of the CSS department of BrixCRM. The focus lay in answering the following knowledge question: “**How is the customer service & support currently designed and what aspects are underperforming?**”. The current CSS model covering the service agreements and its costs and benefits was analysed. Thereafter, a BPM was mapped from the current CSS process. The shortcomings of the existing CSS became apparent when comparing the current situation with the success factors mentioned above. It appeared that the CSS’s biggest shortcomings lie in the vagueness of the types of service agreements, how they should be used and delivered, and the poor organisational structure of the CSS department. Not only does this lead to ineffective and inefficient CSS, but it also results in dissatisfaction of the staff of BrixCRM. Precious time is wasted on peripheral matters. This time should better be spent on advising and trying to fix the enquiries of the clients.

The final step in this study was to design an improved CSS. The focus here lay in answering the question: “**How should the underperforming aspects of the BrixCRM customer service and support be improved?**”. The goal was to set up a solution that would obtain effective and efficient delivery

of the CSS services by BrixCRM. The newly proposed service product portfolio is standardised, simpler, and consistent and will provide BrixCRM and its clients with a clear overview of the services that can be offered. The newly designed CSS model gives BrixCRM's employees something to hold on. It provides some level of standardisation which causes less confusion for BrixCRM and its clients. The guideline (Figure 8) can be used by the sales team to estimate what new service agreements suit a specific client. This is done based on two factors: complexity and frequency of expected enquiries. The cost-benefit analysis shows that the new model indeed provides more benefits than the old model. The costs will almost be identical since the hourly rates to solve an enquiry for BrixCRM will not change. The benefits for BrixCRM will not be in more revenue due to higher hourly rate. The opposite may even be true in some cases: for certain agreements the invoiced hourly rates will decrease. However, the benefits for BrixCRM lie in other areas. The standardisation and clarity provided by the new model can lead to the utilisation of the benefits from optimal CSS found in literate described in Section 3.3 and the benefits of more invoiced hours and financial assurance.

To deliver the CSS services effectively and efficiently, BrixCRM should use the new model with the new CSS products, structure the CSS process as is shown in the BPM in Figure 9 and aim for a designated organisational structure. The agreements and CSS process provide the standardisation, clearness and simplicity that is required for BrixCRM to offer the best possible CSS to their clients. The BPM shows how the CSS process could be well-structured in collaboration with the new model. In Chapter 5 the designed solution is presented and evaluated in accordance with the success factors and benefits that are commonly known for CSS. This answers the main research question: **"How can BrixCRM deliver effective and efficient customer service and support services?".**

6.2 Discussion

The results from the survey implied that overall, the clients of BrixCRM are satisfied with the delivered CSS. The results showed that some clients were not sufficiently satisfied. They also showed that these clients had no or less fixed service agreements with the organisation. This outcome from the survey corresponds to what was expected. The other problem of BrixCRM lies in the poor organisation structure of the CSS department. This partially caused communication problem that is also identified from the survey results. The literature provided information about what is necessary to obtain optimal CSS. It also confirmed the expectation that BrixCRM's problems lie in the unclearness and lack of simplicity and overview in the CSS.

Limitations of this study

A survey is used for this research to test the opinion of the clients about the CSS department of BrixCRM. The organisation works with around 25 to 30 clients at the moment. From these clients only 9 clients could be invited to participate in the the survey. This is due to the fact that some clients do not work with the CSS department enough to provide relevant feedback and other clients could not be contacted due to confidential circumstances coming from BrixCRM. 6 of the 9 clients responded to the survey. A response rate of 67% is high for an online survey and is regarded as sufficient to validate the internal perspective on CSS. The validation of any perspective should always be disputed due to a bias; validity bias (Norris, 1997). Unfortunately, on the other hand, the sample size is low prohibiting statistical analyses and generalisation of the conclusions.

This research required perspectives and experiences from different people. Within BrixCRM the employees that work with CSS were interviewed. They all had their perspective on what the CSS is and what it should be. There is always a certain margin that the researcher interpreted the perspectives a bit differently that meant by them; interpreter bias (Kaptchuk, 2003). The same holds for the survey responses. Some questions were answered on the basis of a scale which makes it quite clear. But other questions and reasonings could have been interpreted differently by the interviewee and interviewer. The validity of the research could be affected by this.

In the beginning of the year 2020, the COVID-19 pandemic hit the world. Unfortunately, this also partially affected this research. Company visits became impossible and going to the office was prohibited. Everything had to be done at home and via conference calls (Google Meet) or chat applications (Slack, etc.). This made communication with fellow colleagues and clients more difficult. It was a pity that it became extremely difficult to really get to know the organisation having to work from home.

As a researcher I am limited to a certain area of data. A part of the literature is not within my scope. When conducting the literature study, I did not have access to all the sources I found. Accessed literature was limited to English or Dutch language. As CSS is a global challenge it is assumed that cultural and organisational global differences are not taken into account. However, it can be assumed that many researchers publish their findings in English, as it is the foremost language for academia.

Furthermore, I was limited to a timeline of 10 weeks for the data collection and analysis of this bachelor thesis assignment. This made it difficult to verythoroughly investigate the subject. The literature study had to be stopped because of the time limit of the research. This affected the quality of the literature study in comparison to an unlimited time to review literature. The time limit also affected the quality of the analysis of the survey responses. If I would have had more time, I could have gotten in personal contact with the respondents to ask for further explanation on their answers.

6.3 Recommendations

From this study, it appeared that the main issues of the underperforming CSS department at BrixCRM are due to the inefficient service products offering and poor organisational structure. The recommendation for BrixCRM is to take the new designed solution as presented in Chapter 5 into account and implement it into their business. Its focus should be on the CSS department as much as on any other business units. It can be a profit centre if they prioritise it as much as any other business unit. CSS should not be seen as a cost centre but a profit centre.

BrixCRM has the vision to grow over time. They are striving to expand their application portfolio to serve a broader and more diverse client base. This also means that their product portfolio outside of CSS products will grow. Their growth will imply that the client base will probably grow. Therefore, their CSS department will become more and more important in the future. Eventually, if this growth will be realised and the client base will become large, BrixCRM can start to hire dedicated CSS staff. These employees will have the full focus on the CSS section of the organisation. The expertise in the CSS field will become higher which can lead to better customer experiences. If the growth persists and the client base becomes even bigger, I recommend employing a chief customer service and support officer (CCSSO). It is important that the CSS is controlled at a higher level and this person should directly report to the CEO or COO. Clients are becoming very demanding, and competition is continuously increasing. Good relationships with clients are required to obtain competitive advantage. Furthermore, it also costs more money to acquire new clients than to ensure loyal and satisfied clients (Sheth, Jain, & Ambika, 2020).

Contribution

This study provided insights in the CSS department of BrixCRM. Thereby it provided what the product proposition, the process, and the organisational structure should be to account for all the success factors of optimal CSS. This will lead to obtaining the benefits (discussed in Section 3.3) out of the activities of the CSS department. The end goal of creating happy customers and satisfied employees will be reached. If BrixCRM's CSS department continues to work as it currently does, it

will miss out on the potential opportunities and benefits. This is quite unnecessary because the problems they encounter are considered not hard to solve.

6.4 Further Research

When providing the best possible CSS solution to a client, BrixCRM is advised to also research previous years or months of CSS work that was executed. This will provide insights in the volume of the cases and types of cases (simple versus difficult enquiries). This way, BrixCRM can estimate what would suit the client the best. It could be done based on a report which includes the cases and the hours spent. This would mean that all cases must be administered and archived. Also, I would recommend interacting more with clients about their experiences with the CSS specifically. After all, the clients are the people for whom the CSS is meant. They know better than anybody what they want from the CSS department and this is obviously what an organisation should deliver.

Recommendations for further research includes both investigating more clients and doing further in-depth analysis of the client survey responses. The more feedback BrixCRM receives, the better they can improve upon experiences. In this research only six client survey responses could be used, so there is room to investigate more client experiences. As already mentioned above, it is considered worthwhile to analyse the data that is obtained and archived from old CSS cases. There lies much information in these data. From the client surveys BrixCRM can find information about what customers seek in CSS. By researching the case data, information about what clients need to retain the optimal digital solution can be determined. BrixCRM can then feedback to the client with new advice and ideas.

Bibliography

Alexander, I. F. (2005). A Taxonomy of Stakholders: Human Roles in System Development. *International Journal of Technology and Human Interaction, 1*(1), 23-59. From Human Roles in System Development.

Almalki, S. (2016). Integrating Quantitative and Qualitative Data in Mixed Methods Research--Challenges and Benefits. *Journal of Education and Learning, 5*(3), 288-296.

Baruch, Y., & Holton, B. C. (2008). Survey response rate levels and trends in organizational research. *Human Relations, 61*(8), 1139-1160.

Bizagi Modeler. (2020, November 12). From Bizagi: https://www.bizagi.com/en/platform/modeler

Bove, L. L., & Johson, L. W. (2000). A customer-service worker relationship model. *International Journal of Service Industry Management, 11*(5), 491-511.

Boynton, A. C., & Zmud, R. W. (1984). An Assessment of Critical Success Factors. *Sloan Management Review, 25*(4), 17-27.

Chen, J. (2020, June 21). *Investopedia*. From After-Sales Service Support: https://www.investopedia.com/terms/a/aftersales-support.asp

Customer service vs customer support. (2021, January 21). From LiveAgent: https://www.liveagent.com/academy/customer-service-vs-customer-support/

Drèze, J., & Stern, N. (1987). The theory of cost-benefit analysis. *Handbook of Public Economics, 2*, 910-985.

Garg, R., Rahman, Z., Qureshi, M., & Kumar, I. (2012). Identifying and ranking critical success factors of customer experience in banks: An analytic hierarchy process (AHP) approach. *Journal of Modelling in Management*, 201-220. doi:10.1108/17465661211242813

Gentile, C., Spiller, N., & Noci, G. (2007). How to Sustain the Customer Experience: An Overview of Experience Components that Co-create Value With the Customer. *European Management Journal*, 395-410. doi:10.1016/j.emj.2007.08.005

Grant, M. (2020, July 1). *Investopedia*. From Customer Service: https://www.investopedia.com/terms/c/customer-service.asp

Heerkens, H., & van Winden, A. (2016). *Solving Managerial Problems Systematically.* Enschede: Noordhoff Uitgevers bv.

Helpscout. (2021, June 02). From 21 Key Customer Service Skills (and How to Develop Them): https://www.helpscout.com/blog/customer-service-skills/

Hogg, B. (2015, October 31). *Customer Think*. From Seven Critical Success Factors to Exceptional Customer Service: https://customerthink.com/seven-critical-success-factors-to-exceptional-customer-service/

Joseph, C. (2019, March 1). *Smallbusiness*. From What Are the Benefits of Delivering Excellent Customer Service?: https://smallbusiness.chron.com/benefits-delivering-excellent-customer-service-2086.html

Kaptchuk, T. J. (2003). Effect of interpretive bias on research evidence. *BMJ*, 1453-1455. doi:10.1136/bmj.326.7404.1453

Kenton, W. (2020, July 7). *Investopedia*. From Cost-Benefit Analysis: https://www.investopedia.com/terms/c/cost-benefitanalysis.asp

Kettunen, P., Ämmälä, M., Sauvola, T., Teppola, S., Partanen, J., & Rontti, S. (2016). Towards Continuous Customer Satisfaction and Experience Management: A Measurement Framework Design Case in Wireless B2B Industry. *Springer International Publishing*, 598-608.

Kumar, V., & Reinartz, W. (2018). *Customer Relationship Mangement.* Berlin: Springer-Verlag. doi:10.1007/978-3-662-55381-7

Layard, R., & Stephen, G. (1994). Cost-benefit analysis. In R. L. Glaister, *Cost-benefit analysis* (pp. 1-56). Cambridge: Cambridge University Press.

Luenendonk, M. (2019, September 23). *Cleverism*. From How to Build a Successful Customer Service Department: https://www.cleverism.com/how-to-build-successful-customer-service-department/

McLay, A., Everett, R., & Keith-Storey, A. (2016). Devising a quality management system for new service-support contracts in industry. *International Journal of Agile Systems and Management, 9*(4), 340-362. doi:10.1504/IJASM.2016.10002501

Müller, R., & Rogge-Solti, A. (2011). BPMN for Healthcare Processes. From https://www.researchgate.net/publication/220805177_BPMN_for_healthcare_processes

Mustafa, N., Razak, S. F., & Ling, L. S. (2019). A Proposed Cloud Based Solution for Customer Satisfaction in Telecommunication Industry. *International Conference on Research and Innovation in Information Systems (ICRIIS)*, 1-6. doi:10.1109/ICRIIS48246.2019.9073658

Noort, P. D. (2020, October 1). *Canvas.* From Slides and additional info SLR: https://canvas.utwente.nl/courses/6737/pages/slides-and-additional-info-2?module_item_id=182486

Norris, N. (1997). Error, bias and validity in qualitative research. *Educational Action Research, 5*(1), 172-176. doi: https://doi.org/10.1080/09650799700200020

Patel, S., Xing, Y., & Patel, D. (2011). A Performance Measurement Framework For UK Contact Centres. *PACIS 2011 Proceedings*, 1-13.

ProductPlan. (2021, 01 10). From Stakeholder Analysis: https://www.productplan.com/glossary/stakeholder-analysis/#:~:text=A%20stakeholder%20analysis%20is%20a,of%20these%20stakeholder%20groups%20throughout

Quain, S. (2018, October 2018). *Smallbusiness*. From Customer Service Organizational Structure: https://smallbusiness.chron.com/customer-service-organization-structure-2760.html

Salesforce. (2021, June 02). From Customer service skills list: https://www.salesforce.com/products/service-cloud/best-practices/important-customer-service-skills-list/

Sheth, J., Jain, V., & Ambika, A. (2020). Repositioning the customer support services: the next frontier of competitive advantage. *European Journal of Marketing, 54*(7), 1787-1804.

Streefkerk, R. (2020, October 20). *Scribbr.com*. From Qualitative vs. quantitative research: https://www.scribbr.com/methodology/qualitative-quantitative-research/#:~:text=Quantitative%20research%20deals%20with%20numbers%20and%20statistics%2C%20while%20qualitative%20research,ideas%20and%20experiences%20in%20depth.

Winer, R. S. (2001). A Framework for Customer Relationship Management. *California Management Review, 43*(4), 89-105.

Xin, W., & Ming, X. (2016). Literature Review of Customer Service Value and Building Customer Value Model under the Internet Service Situation. *International Business Research, 9*(4), 118-122.

Zolkiewski, J., & Lewis, B. (2007). An Assessment of Customer Service in Business-to-Business Relationships, a Literature Review and Methodological Issues. *Journal of Services Marketing, 21*(5), 313-325.

Appendices

Appendix 1: Interviews

Interviews are conducted with some of the stakeholders of the service and support department of BrixCRM. The stakeholders that are involved in these interviews are the stakeholders from the first layer of the stakeholder onion that is explained in section 4.1. These stakeholders are employees that work as the first-and-second line support and the operational manager of CSS. The account managers are not involved because they do not carry out the service and support. Therefore, they can not provide the relevant information about the process that is required for the research. The goal of these interviews was to gather information about the current CSS department of BrixCRM. The stakeholders were asked about the structure of the process and their experiences with the process. Four stakeholders that currently work the closest within the CSS department were interviewed to develop the best possible view of the process. Due to the COVID-19 measures, not all interviews could be conducted in real life. Luckily, some interviews could be conducted in real life at the office of BrixCRM. But unfortunately, not everyone could be at the office at the same time, so some of the interviews were conducted via Google Meet. The interviews were semi-structed with some interview questions that were prepared in advance:

1. What is your function at the service and support of BrixCRM?
2. How does the customer service and support currently work?
3. In what ways can a client contact the support service of BrixCRM?
4. What tasks are included in the service and support process?
5. Are there service agreements with clients?
6. Is there a list with standard service agreements?
7. In what way generates the service and support department revenue (financial benefits)?
    a. What are the costs of services provided by BrixCRM?'

Appendix 2: Survey

The goal of the survey is to gain information in the field of CSS from the client's perspective. The survey is drawn up in Google Forms. It is executed in Dutch since all the contact persons from the clients that are contacted are from the Netherlands. The survey is kept succinctly and clear to keep the attention of the clients because they are asked a favour to help the researcher and BrixCRM. If the survey would be too long the percentage of possible respondents would decrease. BrixCRM works with around twenty-five to thirty clients at the moment. Eleven of these clients are the clients that currently have to deal with the CSS department of BrixCRM. This list was set up during a consultant meet-up with the consultants that have close contact with the client. Two of the clients could not be contacted for the survey during confident circumstances. The other nine clients have a service and/or support agreement or come to BrixCRM with ad-hoc enquiries. The nine clients of BrixCRM are asked to fill in the survey. They could provide the best opinions of experiences with BrixCRM's service and support. Six of the nine clients filled in the survey which gives a response rate (RR) of 67%.

The clients are contacted via the customer support channel of BrixCRM. An e-mail template has been drafted together with three consultants and sent towards the clients. The e-mail contains a short introduction about the researcher, the goal of the research and the client is thanked in advance. It is displayed below.

Beste,

Om te beginnen een korte introductie over mezelf. Ik ben Mick Beusenberg en ik studeer *Industrial Engineering and Management* aan de Universiteit Twente. Ik ben momenteel bezig met mijn afstudeeronderzoek bij BrixCRM. Het onderzoek is gericht op het optimaliseren van de customer support afdeling van BrixCRM. Ik hoop dat u de tijd en moeite wilt nemen om mij te helpen met mijn afstudeeronderzoek, doormiddel van een survey, die ik hiervoor heb opgesteld.

Het doel van deze survey is om vanuit het klantperspectief, inzichten te verkrijgen aangaande de customer support afdeling van BrixCRM. Hiertoe zal uw mening worden gevraagd. Uw persoonlijke gegevens worden niet buiten BrixCRM gedeeld. De survey zal naar schatting 5 à 10 minuten van uw tijd vragen. Als u mij wilt helpen met mijn onderzoek vindt u hieronder de link naar de survey.

https://forms.gle/tAZHUioSmscbcLjt6

Mocht u vragen hebben wat betreft de survey of iets dat is gerelateerd aan mijn onderzoek, neemt u dan gerust contact met mij op via een van de twee onderstaande kanalen. Bij voorkeur niet via het reguliere Support e-mailadres.
E-mail: mick.beusenberg@brixcrm.nl
Telefoon: 06-55069287

Bij voorbaat bedankt voor uw tijd en moeite!

Met vriendelijke groet,

Mick Beusenberg

BrixCRM Customer Service
+31 88 10 20 650
support@brixcrm.nl

Figure 10: Email template survey

The survey is divided into five sections. It starts with a short introduction to again thank the respondent and then provide them one more time with some general information about the survey and the goal of the survey.

Figure 11: Survey section 1

After the introduction, the respondent is directed to the second section which contains some general questions. The first question asks the respondent what organisation they represent. This question is included because the last question asks if the researcher can contact the respondent for further clarification if necessary. And since Google Forms is anonymous, in this way the respondents that are okay with further contact can be traced. The following two questions are about what service or support agreement the client has with BrixCRM and what they expect to get from BrixCRM with this agreement.

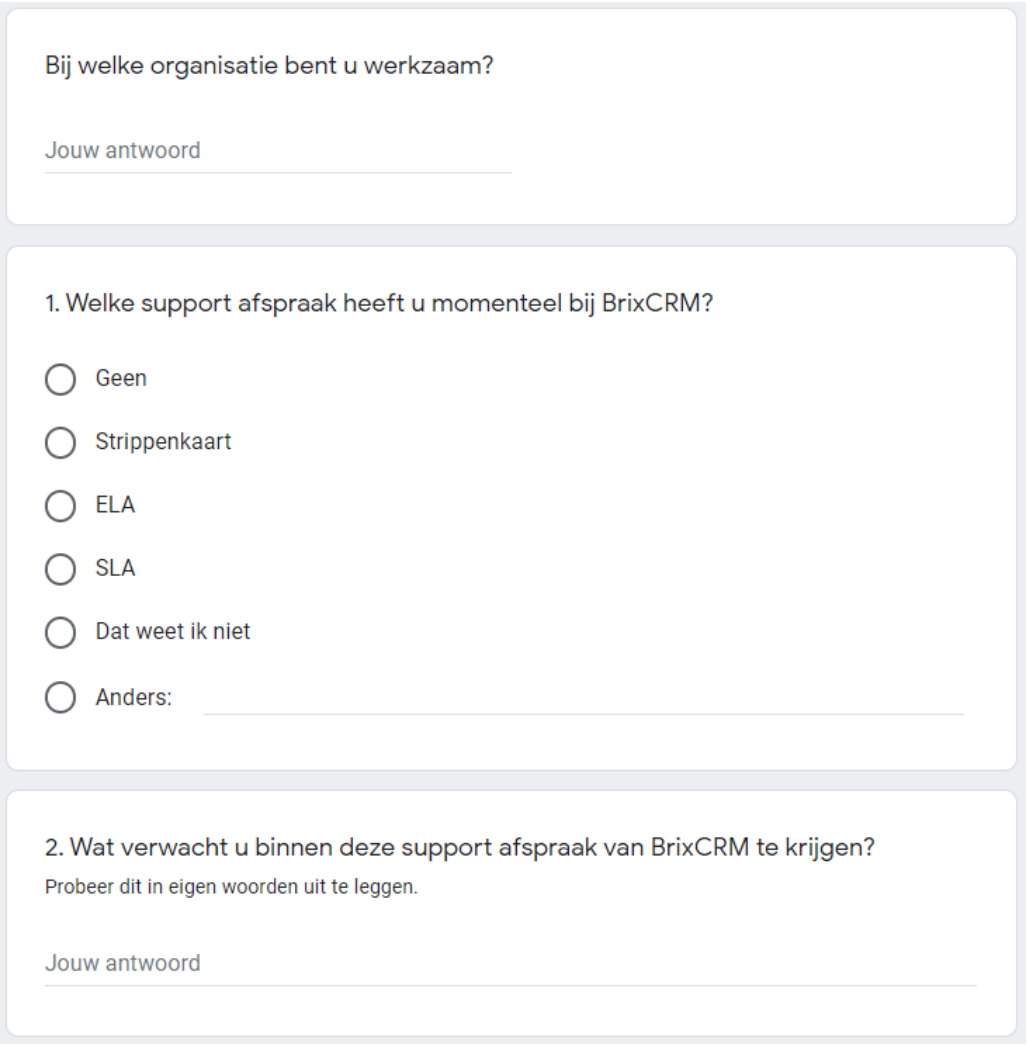

Figure 12: Survey section 2

Section 3 is about the client's experiences with the service and support of BrixCRM. The questions measure the level of satisfaction of the client. The level of satisfaction is measured in terms of the service agreement, the received service and support, the response time to solve an enquiry and the quality of the provided solution or advice towards an enquiry from BrixCRM. The respondent can give an answer on a scale from 1-10. The scale ranges from very unsatisfied up to very satisfied. Where 1-2 stands for very unsatisfied, 3-4 for unsatisfied, 5-6 for neutral, 7-8 for satisfied, and 9-10 for very satisfied.

Hoe ervaart u customer support?

De volgende vragen gaan over uw ervaringen met de customer support afdeling van BrixCRM.

3. Hoe tevreden bent u met uw customer support afspraak met BrixCRM.

Geef uw antwoord op een schaal van 1 tot 10

	1	2	3	4	5	6	7	8	9	10	
Geheel mee oneens	○	○	○	○	○	○	○	○	○	○	Geheel mee eens

Wat is de reden voor uw keuze?

Jouw antwoord

4. Hoe tevreden bent u met de ontvangen customer support vanuit BrixCRM.

Geef uw antwoord op een schaal van 1 tot 10

	1	2	3	4	5	6	7	8	9	10	
Geheel mee oneens	○	○	○	○	○	○	○	○	○	○	Geheel mee eens

Figure 13: Survey section 3 1/2

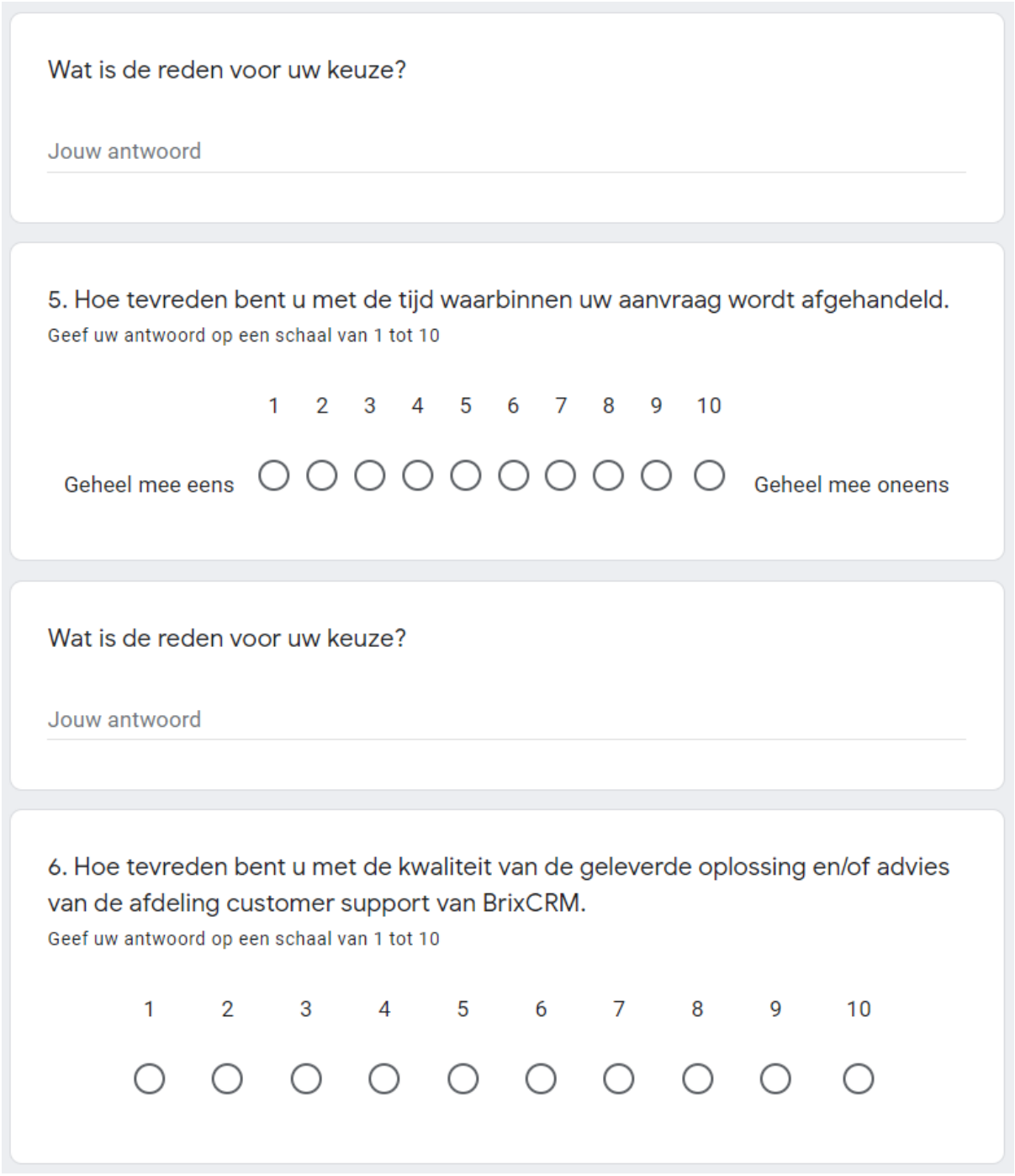

Figure 14: Survey section 3 2/2

The second to last section covers the questions about how the CSS works in practice. The first question is about how and with whom the client contacts BrixCRM if they encounter an enquiry with their application. With a follow-up question about if they want to see this different and if so how. The next question covers the idea of an increased customer experience if the client would have one contact person, even though this would mean that this person would not be full-time available. The last question of the survey is an open question that asks the respondent if there is anything, they would specifically want to see in the CSS department of BrixCRM.

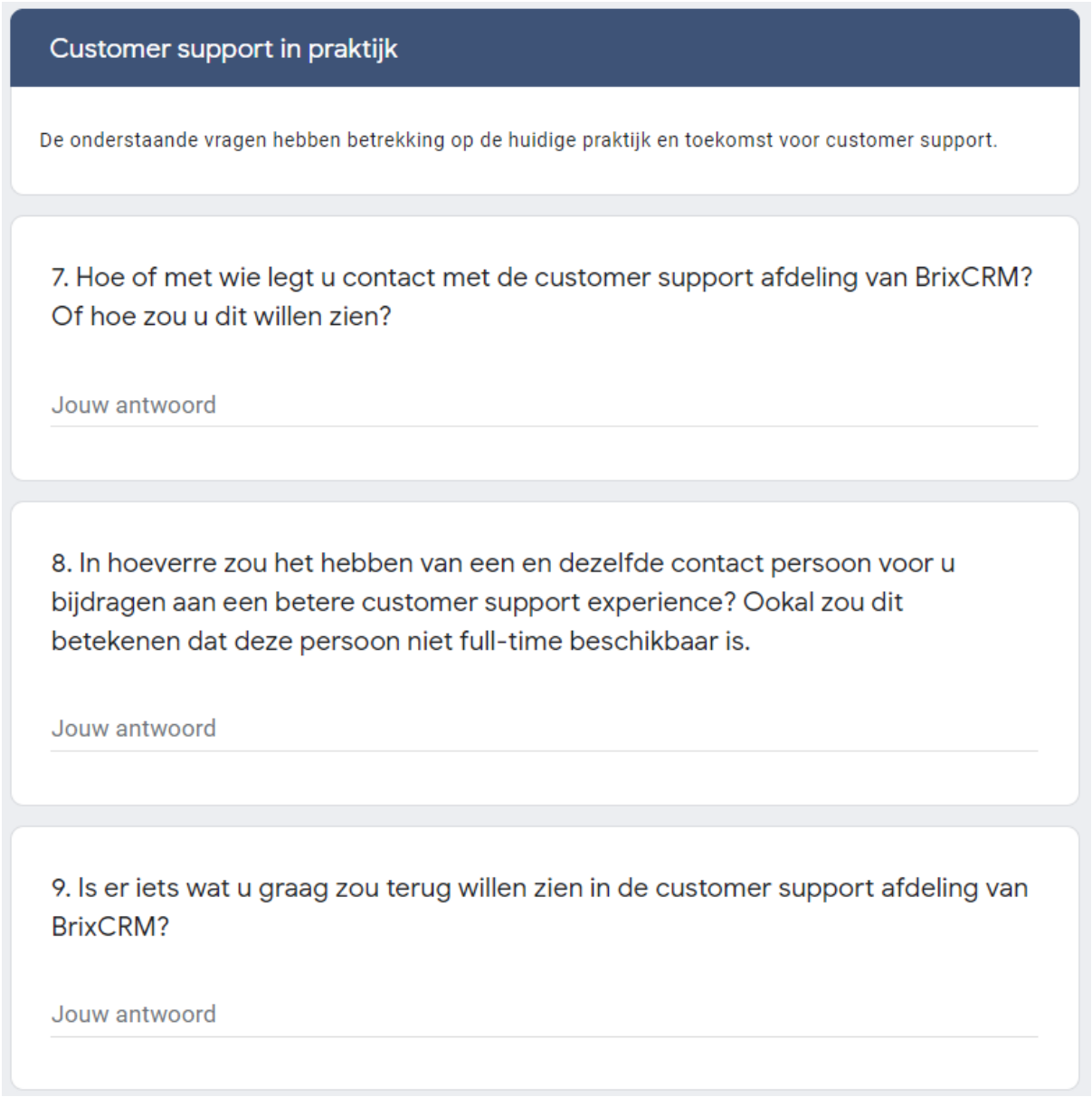

Figure 15: Survey section 4

The last section starts with the question if the respondent may be contacted if further clarification is necessary for the research. And the survey ends with one last thanks for the time and effort of the respondent.

Figure 16: Survey section 5

Appendix 3: Survey results

The results are visualised by graphs. The results from the open questions that followed up the closed questions will be explained based on the graphs. The open questions that are self-contained will be explained textual. Every researcher wishes a response rate of 100%, unfortunately this rarely happens in reality. Therefore, it is necessary to check what level of response rate should be accomplished to provide validity of the data. As mentioned before, BrixCRM works with around 25 to 30 clients. From these clients around nine work closely with the service and support department and they are asked to fill in the survey. The sample size is nine and six of these clients filled in the survey. This gives a response rate on the survey of 67%. The average response rate for studies that collected data from organisations was 35.7% (Baruch & Holton, 2008). For data collection from individuals the experienced average response rate is likely to be higher (52.7%). The benchmark for the response rate of surveys conducted at the organisational level is approximately 35-40% (Baruch & Holton, 2008). This study is conducted at the organisational level since the survey is filled in by representatives from the client's organisations. The response rate of the conducted survey is 67% and therefore above the benchmark of 35-40%. This provides the research with a level of validity.

The circle graph from figure 17 displays what service and support agreement the respondents currently have with BrixCRM. The results are widely spread between no agreement, an SLA, a project with BrixCRM with one contact person and two respondents who have a support bundle (strippenkaart).

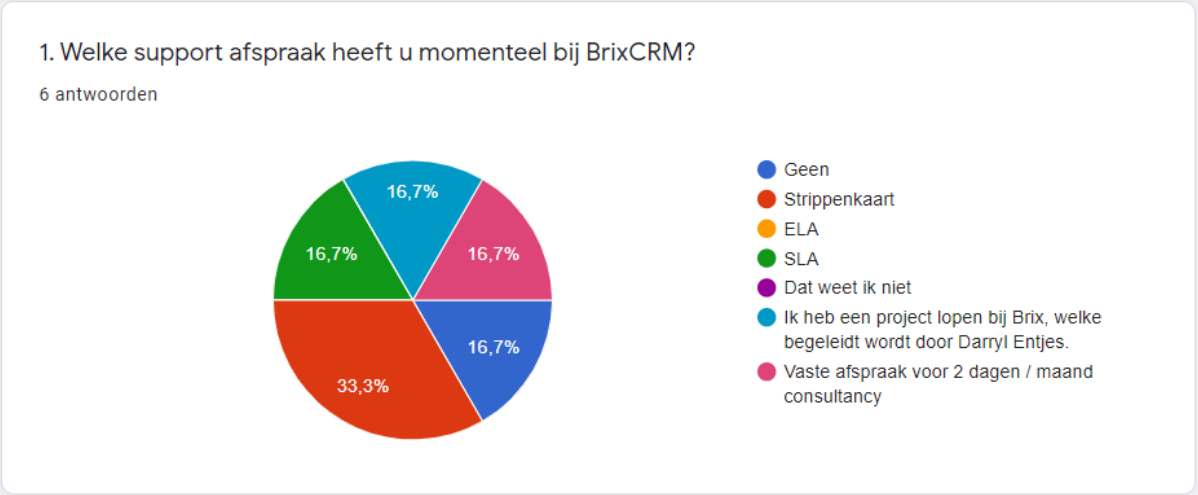

Figure 17: Circle graph service and support agreements

The results from the bar graph in figure 18 are quite diverse. The graph shows that three respondents state that they rate their CSS agreement with a nine. These three respondents are very satisfied with their current CSS agreement. They say that everything runs smoothly as it is now. A bit lower on the scale two respondents rated the agreement with a six and a seven. Which means one of the respondents was just satisfied and the other is neutral with their service and support agreement. The given reason is that the agreement is fine unless there is room for flexibility. The lowest score given for the agreement by a respondent is a four. This indicates that this client is unsatisfied with their current service and support agreement. The reason for this is that this respondent perceives unclearness in terms of enquiries and invoices.

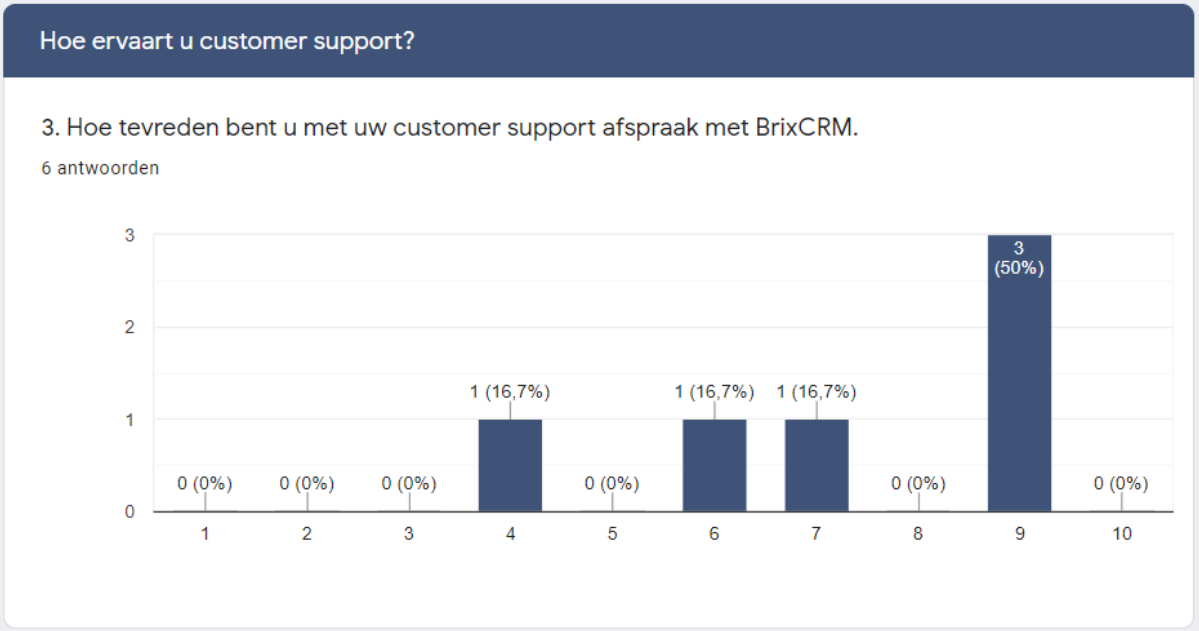

Figure 18: Level of satisfaction of customer service and support agreement

The next graph displays the level of satisfaction from the clients with the received CSS from BrixCRM. Overall, they are pretty satisfied with the received CSS. All the comments were positive on how the CSS department handles enquiries from clients. Figure 19 shows that three respondents rate the received CSS with an eight, so they are satisfied at the moment. The other three respondents are very satisfied and rate the received service and support with a nine.

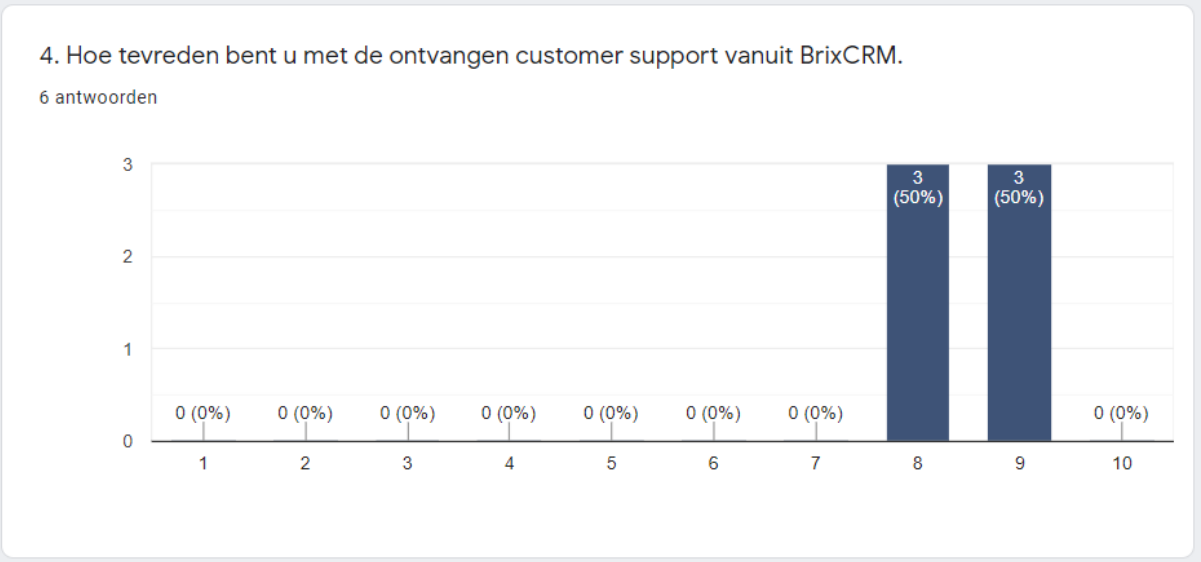

Figure 19: Level of satisfaction with the received customer service and support

Figure 20 shows the scores that the clients gave the time that it takes for BrixCRM to solve an enquiry (response time). Four out of the six clients rated the response time with an eight which indicates that they are satisfied. The other two respondents rated the response time with a nine and a ten. They feel very satisfied with how quick BrixCRM solves their enquiry. The comments made by the clients vary from good enough until very good, quick response, as soon as possible. So, the clients are overall satisfied with the response time.

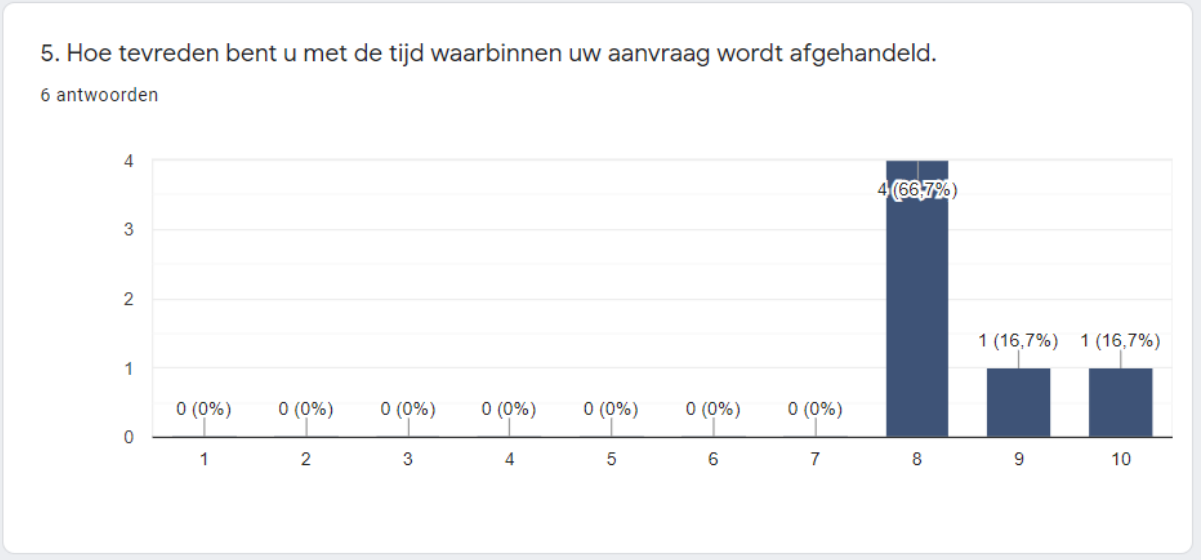

Figure 20: Level of satisfaction with the response time

The last bar graph that is shown below in figure 21 displays the level of satisfaction of the clients with the quality of the provided solutions and/or advice from the CSS department of BrixCRM. Five of the clients feel satisfied with the quality of the service and support as four rate the quality with an eight and one with a seven. And one of the clients is very satisfied with the quality as it scored a nine.

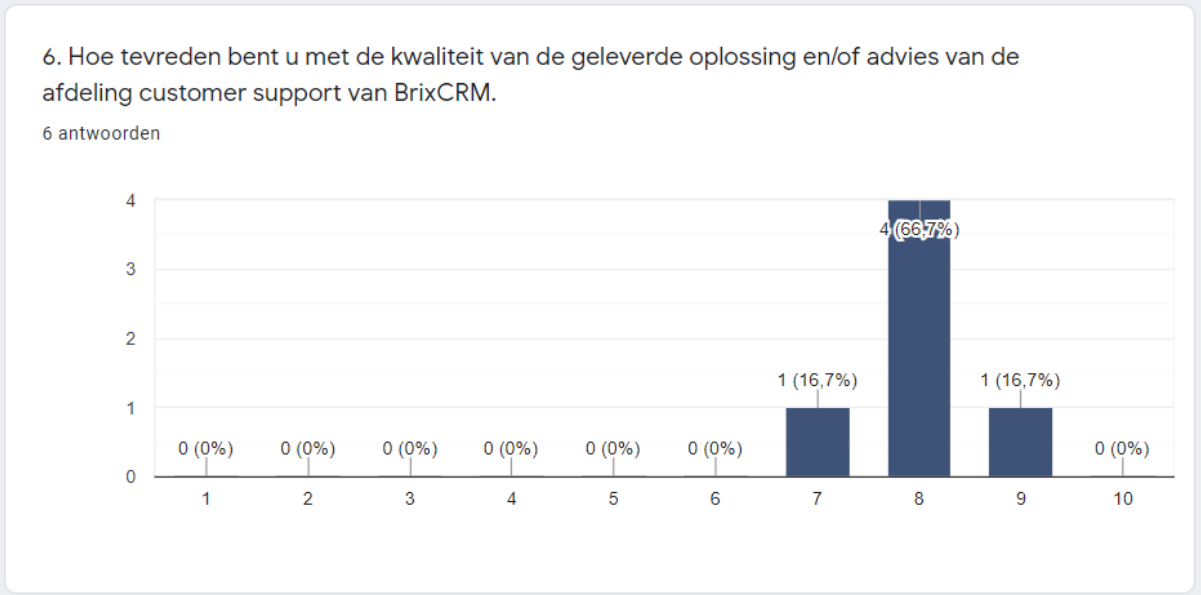

Figure 21: Level of satisfaction with the quality of the provided solution and/or advice from the customer service and support department of BrixCRM

Table 8 below shows the Excel spreadsheet from the part of the questions that are just described on the basis of the graphs above. No hard conclusions can be made on the basis of this data because the sample size is a bit low, even though the response rate is relatively high. Therefore, assumptions are made on the basis of the six respondents. If a client has an agreement with BrixCRM that requires a higher level of planned interaction, think of an SLA, ELA or in this case an ongoing project, they are likely to rate their level of satisfaction on the different subjects higher. The lower scores tend to come from clients with no agreements or less fixed agreements like a support bundle (strippenkaart). The conclusion is that the customer experience increases if the service and support agreement has a higher level of planned service. Planning what, when and how the service and support is offered will increase the customer experience for the clients of BrixCRM. The value of service and support received has the lowest grade from the client with no agreement. It seems that if the client and BrixCRM have a clear contract the perceived level of service increases.

Table 7: Spreadsheet survey answers

1.Welke support afspraal	2.Wat verwacht u binnen	3.Hoe tevreden bent u m	Wat is de reden voor uw	4.Hoe tevreden bent u m	Wat is de reden voor uw	5.Hoe tevreden bent u m	Wat is de reden voor uw	6.Hoe tevreden bent u m
SLA	Dat Brix de afgesproken	9	Alles loopt voorspoedig,	9	Verstoringen worden ade	10	Altijd zo snel mogelijk.	8
Strippenkaart	snelle support bij bugs er	7	we willen naar een ELA to	8	snelle response en prettig	8	snelle response	8
Ik heb een project lopen	Ik zal dee survey voor je	9	ik heb niet direct een sup	9	Afdeling die altijd netjes c	9	Ik krijg altijd snel antwoor	9
Strippenkaart	Bij problemen met Sugar	9	Deze afspraak is door on	9	We werden steeds goed	8	Meestal werden de aanvr	8
Geen	Geen verwachtingen.	4	Het is onduidelijk wannee	8	Prima.	8	Goed genoeg.	8
Vaste afspraak voor 2 da	Een combinatie van vraa	6	Het principe is prima zola	8	Er zit veel maatwerk in or	8	Daan en met name Marc	7

Question eight from the survey asks what extent it would contribute to a higher customer experience for the client if they would have one contact person at BrixCRM. Even if this would mean that this contact person is not full-time available. The shared answer is that it would be beneficial for the experience with the service and support department. For some of the clients it is a must-have since they have a lot of customization and not everyone at BrixCRM has the right knowledge of certain cases. The other answer that is given is that it does not matter if all the contact persons are up to date with their knowledge to respond adequately. This eventually comes down to the same as the preference of one contact person. The clients want one or multiple contact persons that can help them quickly and adequately.