Customer Interaction Center as a Method for Achieving Customer Relationship Excellence

A Case Study at Carl Zeiss de Mexico

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Title: Customer Interaction Center as a method to boost sales, increase customer satisfaction and improve corporate reporting

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Abstract

Modern business environment forces companies to find new channels of interacting with customers pursuing their satisfaction and loyalty. This leads to major changes in companies’ mentality and behavior from being product-oriented to customer-oriented. These changes have formed and shaped modern model of after-sales and service operations, making it an additional source of revenue. Companies can gain additional competitive advantages and leave rivals far behind by putting customer at the center and agile entire company operations around him.

The present research is developed as a case study where customer interaction practices are reviewed in order to determine the actions necessary to achieve after-sales services excellence and increase customer satisfaction.

The thesis is written upon the literature and empirical research, where the most data was obtained through interview with company’s management, field observations and internal company databases at the Carl Zeiss group offices in Europe and Mexico.

Our conclusion shows that customer interaction center is a powerful tool to increase customer satisfaction. Also, we conclude that introduction of empowerment approach combined with high-skilled professional reps will increase a performance of after-sales service in industrial companies manufacturing long-lasting goods. Moreover, delegating some sales activities to CIC could have positive effect on revenue increase. In addition, to evaluate the progress of CIC and the entire company several KPIs should be implemented, such as Mean-Time-To-Repair, Net Promoter Score and, and Customer Management Assessment Tool (CMAT).
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Ilya and Pavel

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I  Introduction

1.1  Background

The switch in business mentality of most companies from being product-oriented to service-oriented and even further to customer-oriented has shaped modern after-sales and service operations, making it an additional source of revenue. Such a change put a customer at the center of companies’ attention. Producing excellent product is no longer enough for having a competitive advantage. That is why the importance of having excellent after-sales operations as a source of competitive advantage should not be underestimated (Gaiardelli et al., 2007). This applies not only for customer-oriented industries but for production industries as well. In fact, it is even more important in companies that produce sophisticated equipment, as common problem among such companies is over-engineering of the products, making them too complicated for regular users, leading to mistakes in its utilization and, consequently, resulting in breakdown accidents. In such cases customers want reliable support, quick reaction from the company and quality repair. That is the reason why companies are investing more and more into their service departments, training of field service engineers, and developing warranty contracts.

From personal experience of working in industrial companies, the common observation is that highly technological companies are often ignorant to put the user in the center of their attention. Instead, they tend to manufacture products that can solve complicated tasks but are not user-friendly. This tendency inevitably leads to frequent break-downs. Thus, it becomes vitally important not only to produce top-notch machine but also to offer a first-class support to the customer because the more sophisticated the product is, the harder it gets to repair it without professional support.

For the purpose of better serving customers a lot of companies create Customer Interaction Centers, which provide better quality of handling customer calls, improving internal logistics (spare parts, dispatching of engineers, etc.). The main idea behind establishing a dedicated center is to take away pressure from back office staff that is usually busy with several things at a time, which results in low quality of customer service. However, very often managers regard setting up such a service center as the answer to all questions. What value does such an investment bring both to customer and the company, and whether it helps to cut costs in the long run is not clear. There is also a question what are the potentials of Customer Interaction Center and what is required to supplement its operations.

In this research we tried to investigate the advantages and disadvantages of establishing Customer Interaction Center or similar dedicated service organizations in industrial companies on example of German optics manufacturer Carl Zeiss AG, with particular focus on its Sales and Service Center in Mexico. This particular case suited the purpose of our research because the organization faced problems typical to ones service departments face in the engineering companies: low customer satisfaction, slow response rate, inefficient dispatching of field service engineers (FSEs), high repair costs, and long Mean Time to Repair (MTTR).

1.2  Problem Discussion

Pursuing the goal of better serving customers’ service requests, many companies are setting up dedicated call service centers. Nowadays, in order to achieve excellent service quality it is required to have specially trained people to handle customer complaints. Also company
should have a single point of interaction with the customer as it is unacceptable to let customers wonder on their own choosing from dozens of numbers from company directory. Especially for large companies, dealing with high volume of requests daily, it is essential to create a uniform communication channel. This enables management to keep better track of call response quality, improve reporting, and learn the causes of customer dissatisfaction. However, upper management always looks at it through cost/revenue point, and such investments as CIC do not usually boast high yields, thus making it an unattractive option for management as with tight budgets they would rather prefer to spend money elsewhere.

For that reason, we would like to investigate the following:

*Does setting up Customer Interaction Center or similar types of service organizations help company to cut costs and increase revenue? Does it help to increase customer satisfaction? What are the values created by such an undertaking both to the company and the customer?*

### 1.3 Purpose

The purpose of the thesis is to see on a particular example how introduction of Customer Interaction Center concept can help a company to improve customer satisfaction, increase revenue, and help company to keep existing clients and create new ones. Authors tried to prove that investing into customer care is extremely important, even though the fruits of this effort are not seen immediately. In order to better comprehend the entire issue, we will take a closer look on a particular example of German optics manufacturer Carl Zeiss AG and its Sales and Service Center (SSC) in Mexico.

### 1.4 Delimitations

As mentioned earlier, our research focuses on a particular company Carl Zeiss AG, and its particular branch in Mexico. Our research is limited to one case due to time constraints and urgent need of the company to improve post-sales and service operations at this particular SSC. However, being present at the company gave us a first-hand experience on how decisions are made in the real business world, thus enabling us to apply the theory in practice. Unfortunately, we will not be able to expand our research to other companies but we believe that our findings will be applicable to companies with similar attributes as Carl Zeiss.
2 Literature Review

In this chapter the following topics will be discussed: the nature of service, value creation from the point of service provider and customer, issues of influence of customer interaction centers on customer satisfaction, service quality and customer relationship management. We will start from the service itself to understand the nature of it and clarify the differences from traditional good. In the next part we will proceed with changing in logic from the “traditional” goods dominant logic to the “modern” service dominant logic. This will give us an opportunity to understand how a producer should adjust all available resources to meet customer expectations and increase satisfaction. Also, we will focus on after sales logistics and CIC as a possible area of improvement to satisfy customers and achieve their loyalty. Finally, in the end we will discuss general issues in service quality management and customer relationship management (CRM).

2.1 The Nature of Service

The term “service” and its nature are really well discussed in an academic literature. There are a lot of different ways to treat service. For the purpose of thesis the most attention is given to definition by Leenders and Fearon (1999) in the book “Purchasing and Supply Management, 11th edition”.

In the book authors held a discussion regarding services, roles of sales and procurement departments. According to Leenders and Fearon (1999), there are two main types of services – equipment and human services. Equipment services can be offered by machinery or workforce or their combination. Usually they can be characterized by low payment rate and high value of technical assets. Typical examples are lending of estate or machinery, computer services, transportation and communication. The most important here is to understand technical specifications and requirement of assets before the stage of contracting. The providers of such services could be evaluated based on their technological level and value of assets as well as reference list. Usually these types of services provide in the supplier’s premises, but they could be served at customer’s location as well. Control and quality are oriented on a process with the results of assets usage.

In turn, human services have increased component of using labor force, for instance contract supervision, technical services, security, education, consulting, engineering, etc. In this type of service “human factor” plays the main role. There is clear division between services based on knowledge demanded. Thus, services, such as cleaning, with low or moderate professional skills tend to be minimized in costs and maximized in effectiveness. On the other hand knowledgeable services with demand for high professional skills will infer that purchaser has clear understanding of professional requirement and has the ability for intensive continuous communication with providers on all stages of a service.

Academics, such as Leenders and Fearon (1999), Lengley et al. (2008), Heinonen et al. (2010), Lusch, Vargo and O’Brian (2007) and others, listed difficulties associated with purchasing and providing different types of services. Each of them had analyzed problems of services from their areas of expertise, but all of them can be combined and summarized in the following groups: storing impossibility, difficulties in quality evaluation, immaterial nature.
One of the main characteristics of service is storing impossibilities. This issue arises due to a reason that the most of services are processes, which could not always be aligned with production and manufactured products. It leads to understanding that services must be well synchronized with a specific customer needs and the consequences of time lags while serving could be extremely negative and expensive. The storing impossibilities lead to difficulties in a quality evaluation. It means that there is no opportunity to check a service in advance and by delivery date it is sometimes too late to make changes. Thus, a service supplier should be confident in its ability to deliver service leaving customer satisfied.

The next feature of service also leads to difficulties in specification and quality evaluation. Services could have material and immaterial components, or variable and invariable parts. Variable component corresponds to effective and productive methods of customer satisfaction. On the other side, immaterial component refers to customer’s expectation regarding the service. This component is basically answering a question of how a service is done. Aspects of customer satisfaction and immaterial component of service reflects upon an issue of value creation for both, provider and customer.

2.2 Value Creation for Provider and Customer

The topic of value creation has been in the scope of academics since 1970s. However, the main developments and improvements were done in the last decade with fundamental works of Lusch and Vargo (2004, 2007, 2010), and further research by academics from different scientific school, such as Gronroos and Ravald (2010), Heinonen, Strandvik and Mickelsson (2010), Edvardsson et al. (2005), and Hoolbrook (2006).

To understand the logic behind value creation processes a framework proposed by Vargo and Lusch (2004) should be discussed. According to Gronroos and Ravald (2010), the research of Vargo and Lusch (2004, 2008) is a “result of 30 years of service marketing research” and fundamental concept of “value co-creation and the logic’s marketing implications”.

Goods-dominant (GD) logic was a cornerstone of commodities exchange. The basic idea of GD logic belongs to Adam Smith (1776) with his nation’s wealth, production of tangible goods and export, and later on Karl Marx in the book “Capital” (1867) with the model of additional value creation. The main focus in GD logic was on pricing mechanism and value-in-exchange. The idea that “service” can increase a product value and price had arisen in the middle of 20th century and became a powerful “tool for maximizing value” (Vargo and Lusch, 2007). There are still some discussion held regarding outlining service as a product (intangible good) and as a tool of value creation for tangible good (Vargo and Lusch, 2007, Rigopoulou et al., 2008). Service-dominant (SD) logic makes service superior in a process of providing benefits to a final consumer. This idea was initially developed in the US after the World War II when the researchers had started to analyze different markets, consumer behavior and the first attempts were done on the way to market segmentation. At that time, even markets were segmented, customers were targeted and promoted, the GD logic still remained, as everything was done with the only purpose to sell a right product to a right person, “market to” (Fig.1).
The further development of SD logic shows that customer could be considered as a “resource that is capable of acting on other resources, a collaborative partner who co-creates value with the firm” (Vargo and Lusch, 2004), “market with” philosophy.

SD logic views customer as a partner and focuses on a partner’s collaboration which allows strategic and tactic cooperation. Service flows, where services are provided directly and indirectly, are considered as products, conversation and dialog as a promotion, price is replaced by value generated and accumulated by both sides, and place is changed to networks and processes (Vargo and Lusch, 2007). Moreover, external environment forces, such as legal, social and technological, which were seen as barriers and conditions to adapt in GD logic, became resources for the firms to “draw upon for support by overcoming resistances and proactively co-creating these environments” (Vargo and Lusch, 2007).

Gronroos and Ravald (2010) continue discussion regarding value creation in the SD logic framework. Their main result is dividing value creation process into two distinct sub processes. The first is “the supplier’s process of providing resources for customer’s use” and the second is “the customer’s process of turning service into value.” Authors argue that marketing has a supportive role in customer’s value creation process. Also, services should not be provided only for “the sake of service,” but to enhance customer’s abilities to extract value out of this service as well as the suppliers’ abilities to create values for themselves. From this point of view, service supplier closely cooperating with customer becomes a value creation facilitator or “a value co-creator.” Basically, it means that initially supplier provides a ground for customer by offering service as a product and during the continuous interaction, for instance in forms of consultations, influences a customer’s decisions, becoming a value co-creator. Authors call this situation a “process of joint value creation.” It is a unique position when supplier can influence a final outcome of the whole process.

Heinonen et al. (2010) has tried to go one step further putting a customer in the center and proposed the Customer Dominant (CD) logic. Authors believe that CD is the next step from SD logic on the way of deep understanding of customer’s intentions. They argue that “the ultimate outcome of marketing should not be the service but customer experience and the resulting value-in-use for customers in their particular context.” In contrast to SD logic, where providers and customers are co-creators of value, CD logic operates with the term “value-in-use” and customer as a main user of this value. Value emerges during an interaction between supplier and customer, but a value-in-use is a main beneficial result for customer, which
could be accessed before service (from the past service interaction, in form of experience),
during service interaction and after it.

### 2.3 After-Sales Service and Support

The issues of post-purchase processes and after-sales services are much less discussed and
analyzed between the academics. Asugman, Johnson and McCullough (1997) were one of the
first who had pointed out the problem of after-sales services during an internationalization of
a company. They believe that whole range of after-sales activities and services, which are
used on a domestic market as a strategic tool to gain competitive advantage can be used with
the same success on an international scale. They have defined after sales services as “those
activities in which a firm engages after purchase of its products that minimize potential prob-
lems related to product use and maximize the value of the consumption experience.” One of
the most important implications of their study is that newly internationalized companies
should establish after-sales services to enhance sales on an export market and use this tool as
a competitive advantage.

Morschett et al. (2008) discuss circumstances and criteria to determine firm’s choice for its
after sales services and support on a foreign market. Authors outline following levels of de-
terminants: transaction-specific (TS), firm-specific (FS) and country specific (CS). The main
result of their research is that country-specific determinant has crucial influence on after sales
entry mode. There are several reasons such as demand fluctuations, country-specific risks, in-
ternational risks, geographical cultural distance, etc. At the same time in most cases company
has well-established partnerships in a targeted market, which also leads to “integrative
modes” (Morschett et al., 2008). Moreover, international companies usually have an interna-
tional supply chain that also gives an advantage to cooperative form of entry mode. On the
other hand, transaction-specific determinants as difficulties in quality evaluation increase an
attractiveness of own after-sales network on an export market, but it leads to dramatically in-
creased company’s structure and management issues, or, so to say, firm-specific determi-
nants. Thus, after sales services as international competitive advantage should also be interna-
tional and cooperative.

In the other article by Morschett (2006) firm-specific issues during internationalization of af-
ter sales services are discussed. The research is based only on the manufacturing companies,
which leads to some limitations. Nevertheless, the main result of this research allows con-
cluding on existence of following relationship: “Manufacturing companies tend to implement
wholly-owned after-sales operations in a foreign market, when they:

- Seek global integration of their activities as compared to a multinational orientation;
- Emphasize service as their most important competitive advantage;
- Have more international experience; and
- Already have manufacturing facilities in the foreign market available.” (Morschett,
  2006)

Also, according to Morschett (2006), there are clear positive relationships between company
size as well as price orientation and wholly-owned after sales services on a foreign market.

Baker et al. (2008) research a value of branding in selling ancillary and after-sales services.
They argue that these add-ons or additional services can be sold in generic or in branded
form. The result of their study has clearly shown that branding is positively correlated with
customers’ willingness to purchase ancillary and after sales services. Also, it was proven that demand for branded services is less responsive to price fluctuation for the primary goods. The other important finding is that an additional economics value can be achieved through licensing of after sales and supplementary services.

Saccani et al. (2006) in the article “The role and performance measurement of after sales in the durable consumer goods industries: an empirical study” discuss how improving after sales could lead to improved company’s image and increased customer satisfaction. Moreover, authors clearly stated an ultimate purpose of after sales services (Saccani et al., 2006):

- Research, development and continuous improvement of products – a feedback received through after sales services, through call centers in particular, could serve as a base for product improvements;
- Increased sales – obtained information about customers and their behavior will allow to more careful market analysis and customer addressing;
- Marketing – all information obtained will help to improve CRM tool and as a result continuously increase customer satisfaction.

The feedback received through providing after-sales services is creating value for the company. If the information received from the customer is interpreted correctly it should help the company to improve in multiple areas of the business. Information is intangible revenue that is generated through the after-sales activities. Business intelligence of the company should utilize the information to analyze current performance and suggest ways to evaluate current practices and suggest improvements if necessary.

2.4 Customer Interaction Center and Customer Satisfaction

When pursuing customer satisfaction companies introduce new ways of communication channels with their customers especially in a segment of high value-added and durable products, such as online remote assistance and control, online self-assistance guidelines, and automated feedback from a product. Nevertheless, a demand for a customer interaction centers as a CRM tool is still very high. Moreover, technologies have allowed organizing efficient CICs at an affordable price.

Askin et al. (2007) in the article “The modern call center: Multi-disciplinary perspective on operation management research” discuss attributes and challenges of an efficient call center. They argue that a call center is the most effective customer-facing channel, which deals with all possible inquiries from consumer side. It leads to several challenges faced by call center managers, such as accurate forecasting and capacity planning, queuing and shift scheduling. In more details they pointed an issue of staffing, as a call center operator is the first who faces customer and creates an impression and opinion about a company. So, personnel should be properly analyzed and given a proper training before they face the customer inquiries.

The other important issue is a proper measurement of call center performance. Robinson and Morley (2006) have conducted a study “Call center management: responsibilities and performance.” The main finding is a conflict of strategic intents between service users and call centers’ management. The organizations are mostly viewing call centers as a way to reduce costs and a customer servicing as a secondary target. On the other hand, management of the call centers focuses primarily on the customer service and satisfaction. Through the inter-
views authors found out that this misalignment of target leads to misunderstandings between service users and service providers resulting in not fully satisfied customers. Another important finding is that managers of call centers pays more attention to quantity KPIs, such as number of calls per agent, occupancy rate, call duration, warm up time (post call work), etc., rather than quality KPIs, for instance customer satisfaction index or level of service. It seems to be fair for call centers as quantitative KPIs are a base line for service pricing, but the service users are looking for improved level of service and sales, and increased customer satisfaction combined with low cost. So, according to the result of interviews, a Balanced Scorecard (BS) methodology could be a huge step forward to increase call centers performance. The BS allows to measure performance across different dimensions considering finance, customer service, productivity and staff performance. Also, it will keep a balance among long- and short-term targets, external and internal, lagging and leading, financial and non financial measures.

KPIs could measure an overall performance of Customer Interaction Centers (CICs). The managers of such centers may report numbers such as 90% of satisfied clients, but the modern business environment dictates individual servicing and satisfying of each customer. Erik Linask (2011) in his article for Customer Interaction Solutions focuses on issues of satisfying every individual client at the contact center. He pointed out five areas to improve pursuing client’s satisfaction. So, according to Linask (2011), the first thing to look at is “continuity with customer service organizations.” The issue here is the number of times when callers have to provide account information during a single interaction. This situation usually arises while switching between operators or transferring a call to higher-level specialist. Sometimes this situation is really frustrating. The possible solution is an implementation of a proper agent desktop system, which allows switching calls from operator to operator with personal data and comments on a query. The second point is a proper interactive voice response (IVR) design. Author argues that this is not a function of technology, but a misunderstanding of customer’s needs while interacting with CIC, and he sees the first choice of every IVR should be a choice between talking to an operator or using self-servicing system. The next is location of CIC as most customers will be more satisfied talking to native-speakers. The fourth step to improve quality of call center customer service is an appropriate staffing. Managers should plan a staff capacity of CIC to meet a 60 seconds time of respond as longer time on the line leads to customer dissatisfaction. The solution is to increase agility of call center through outsourcing during “hot period”, launching a new product for instance, or introducing a virtual contact center technology via Internet. It will help to handle increased number of incoming queries and reduce customer-waiting time to respond. Appropriate staffing leads to an appropriate coaching of call centers’ agent. Manager should decrease a time of query resolving through an empowering front agents or quick passing to next level, which allows the previous level agent handle more calls. These steps will reduce waiting time and increase overall happiness of customers.

Moving a step forward from general issues of customer satisfaction Rosemary Batt and Lisa Moynihan (2002) have done an analysis of different types of customer interaction centers. Authors pointed out three models or concepts of a modern CIC: the classic mass production model, the professional service model and the mass customization model. According to the proposed framework, the first concept aimed to maximize the number of served clients and minimize costs. Managers of such centers are focused on mechanization of processes through advanced technologies using. As a result reps a trying to pass queries as fast as possible to increase quantity of served clients affecting a customer satisfaction. The professional service model in contrast sets a quality of an offered service as a primary target. The technological advantages are used as complement to highly skilled staff. The model aims to establish long-
term relationships among providers and customers treating perfectly well every incoming query. Batt and Moynihan (2002) argue that this concept could be characterized as team-based, knowledgeable with cognitive argumentation. The high performance is achieved through the use of highly qualified personnel on the front line resulting in high costs, but increased customer happiness. The last concept of mass customization is varieties of different combinations of the previous two. The remarkable thing here is that such CICs have high degree of agility and could serve different types of customers. By adjusting the settings managers can find proper cost-benefit proportions to satisfy both, internal targets and level and degree of satisfied customers.

2.5 Quality Management and Customer Relationship Management (CRM)

The rapid widespread of CIC has led to arisen issues of quality inside the companies. Handling thousands of incoming queries in the call centers forced managers to use standard “production-line” approach, which is very similar to the mass production (Gilmore, 2001). This method of CIC management has proved an ability to carry enormous flow of customers, but the quality of servicing them sometimes is far from even satisfactory. In the past few years managers have moved to “empowerment” approach, which allows reps to make decisions to satisfy customer’s query immediately. As a result, the expectations of employees on their jobs have drastically improved and consequently customer satisfaction has increased. The comparison analysis of “production-line” and “empowerment” approaches of managing CIC is given in Table 2.1 below.

<table>
<thead>
<tr>
<th>Contingency</th>
<th>Production-line approach</th>
<th>Empowerment approach</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Basic business strategy</strong></td>
<td>Low cost, high volume</td>
<td>Differentiation, customization and personalization</td>
</tr>
<tr>
<td><strong>Tie to customer</strong></td>
<td>Transaction, short time period</td>
<td>Relationship, long time period</td>
</tr>
<tr>
<td><strong>Technology</strong></td>
<td>Routine, simple</td>
<td>Non-routine, complex</td>
</tr>
<tr>
<td><strong>Business environment</strong></td>
<td>Predictable, few surprises</td>
<td>Unpredictable, many surprises</td>
</tr>
<tr>
<td><strong>Types of people</strong></td>
<td>Theory X managers, employees with low growth needs, low social needs, and weak interpersonal skills</td>
<td>Theory Y managers, employees with high growth needs, high social needs, and strong interpersonal skills</td>
</tr>
</tbody>
</table>

Many managerial problems in the CICs could be overcome by applying different approaches. According to Gilmore (2001), different combinations of production-line and empowerment methods will be beneficial managing the call centers. The production line approach suites best for delivering tangible services as enormous number of incoming calls, time of response, length of call, problem resolution in specified time, standardized responses. In turn, empowerment method can offer individual customer service, accessibility to relevant information,
responsiveness to individual problem, seeing query through the completion. And both of them are able to provide quality of the service.

Terziovski (2006) has studied a relationship between quality management practices and customer satisfaction. The reason of this research was an evidential variability in applying quality management programs. The main finding of Terziovski (2006) was a conclusion that some quality management practices have a “significant and positive effect on productivity and customer satisfaction.” So, productivity can be increased if managers will pursue continuous improvement incorporated with simultaneous approach, align operations with business mission and build up a sustainable corporate culture based on flexibility of employee. And, eliminating barriers between individuals and different departments combined with unity of purpose will positively effect on customer satisfaction. Both practices should be supported with a process of resolving of external customer complaints (Terziovski, 2006).

Stone et al. (2003) came up with a framework to measure the effectiveness and efficiency of applied methodology. In the research “The quality of customer information management in customer life cycle management” authors showed how well different companies reach good standards in customer servicing. Their Customer Management Assessment Tool (CMAT) allows proper ranking of CRM system. This model covers all main elements of CRM system, but it infers that management knows the market and plan where they want to be. The overview of CMAT is given below.

Figure 2.2. CMAT Overview. Source: Stone et al., 2003.
Table 2.2. CMAT Scoring process. Source: Stone et al., 2003.

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>No real progress: nothing/very little happening, possibly isolated small initiatives</td>
<td>0-14</td>
</tr>
<tr>
<td>Isolated activity: something happening, non-systematic, not broadly deployed</td>
<td>15-29</td>
</tr>
<tr>
<td>Some commitment and some progress: concept understood, plan to implement, resource allocated</td>
<td>30-49</td>
</tr>
<tr>
<td>Full commitment and real progress: plans exist, resources allocated, implementation begun</td>
<td>50-69</td>
</tr>
<tr>
<td>Clear evidence and being implemented: doing it, can be seen, no evidence of effect yet</td>
<td>70-89</td>
</tr>
<tr>
<td>Fully implemented and having an effect: company is doing it, it can be seen, proper evidence it is working</td>
<td>90-100</td>
</tr>
</tbody>
</table>

Table 2.3. CMAT Assessment scores. Source: Stone et al., 2003.

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analysis and planning – knowing which customers you have, which you want, planning to win and keep customers</td>
<td>0-100</td>
</tr>
<tr>
<td>The proposition – why customers should join, stay and buy more</td>
<td>0-100</td>
</tr>
<tr>
<td>People and organization – structure, motivation, communication, etc.</td>
<td>0-100</td>
</tr>
<tr>
<td>Information and technology – systems and data</td>
<td>0-100</td>
</tr>
<tr>
<td>Process management – methodical approaches to all aspects of CRM</td>
<td>0-100</td>
</tr>
<tr>
<td>Customer management activity – the actual process of managing customers</td>
<td>0-100</td>
</tr>
<tr>
<td>Measuring the effect – what was planned, was implemented, what results were achieved</td>
<td>0-100</td>
</tr>
<tr>
<td>Understanding the customer experience – knowing what the company and its competitors do to customers, seen from the customers point of view</td>
<td>0-100</td>
</tr>
</tbody>
</table>

By using this tool authors have assessed CRM practices in the US and Europe. The main finding is that European CRM practices outperform the US. Stone et al. (2003) provided following explanation of satisfactory performance of the US companies with huge investment in different CRM tools and their combinations:
• European businesses usually have executives in ownership and leadership, which is mostly absent in the US;
• Too much attention to the planning stage in the US leads to slowing CRM initiatives on the strategy phase;
• CRM initiatives usually spread between different structural divisions in the US companies, which badly effects on implementing and execution of initiative;
• Lack of CRM corporate education;
• Poor implementation results in poor performance.

Table 2.4. Comparison of CMAT Scores for EU and US business. Source: Stone et al., 2003.

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>US</td>
</tr>
<tr>
<td>Analysis and planning</td>
<td>48</td>
</tr>
<tr>
<td>The proposition</td>
<td>37</td>
</tr>
<tr>
<td>People and organization</td>
<td>45</td>
</tr>
<tr>
<td>Information and technology</td>
<td>42</td>
</tr>
<tr>
<td>Process management</td>
<td>39</td>
</tr>
<tr>
<td>Customer management activity</td>
<td>40</td>
</tr>
<tr>
<td>Measuring the effect</td>
<td>50</td>
</tr>
<tr>
<td>The customer experience</td>
<td>35</td>
</tr>
<tr>
<td>Total average</td>
<td>42</td>
</tr>
</tbody>
</table>

According to Stone et al. (2003), the most challenging issues for companies is to get insured that they have all required data accessible in a good quality. Also, authors proposed several points that companies should implement pursuing effectiveness of CRM practices:

• Managers should identify data, set clear goals and schedule customer management activities;
• Managers should be ensure in data quality from both resources, internal and external, and structure content;
• Managers should identify and possibly close a gap between existing and required information;
• Managers should use only accurate data to implement a CRM practice and possibly develop and accelerate a process.

CMAT methodology could help companies to set business priorities, map the activities and show return on investments.
2.6 Key Performance Indicators (KPIs)

There is an old business saying that if you cannot measure something, you cannot manage it. That is why companies strive to introduce specific performance indicators or KPIs to evaluate their performance in certain aspects (Farris et al., 2010). It is a common measure of operational progress. Choosing the right KPIs is extremely important as company’s choice will eventually affect not only current performance but forecasting and planning as well. KPIs differ depending on the nature of business activities. Careful selection of relevant KPIs is also important as frequently remuneration is based on performance indicators as well as future initiatives on improvement. The closer look will be taken at three following KPIs:

- Mean Time to Repair (MTTR)
- Net Promoter Score (NPS)
- Customer Satisfaction Index (CSI)

Mean-time-to-repair (MTTR) is a key performance indicator, which measures the maintainability of repairable items (BusinessDictionary.com, 2012). It measures average time required to repair failed equipment. MTTR could be expressed in a following way:

\[
MTTR = \frac{\text{total corrective work time}}{\text{total number of corrective actions during certain period}}
\]

Usually MTTR does not include time required to deliver spare parts or other administrative downtimes. So, in general MTTR means a time required to fix a failed equipment plus time to deliver necessary parts, if required.

Net Promoter Score (NPS) is a key performance indicator, which is often a part of the company’s Balanced Scorecard. NPS history goes back to Fred Reichheld’s (2003) article called “The One Number You Need to Grow” in Harvard Business Review. His studies showed that the most effective approach to the customer was to ask him/her one simple question based on a scale from 0 to 10, “How likely is it that you would recommend our company to a friend or colleague?” with 10 being ‘extremely likely’ and 0 – ‘not likely at all’. Than the respondents are divided into three groups: Promoters (values 9-10), Passives (7-8), and Detractors (0-6). Then the Net Promoter Score (NPS) is calculated which equals to a difference between percentage of promoters and percentage of detractors. It was proven by Reichheld (2003) that the change in NPS correlates with company’s revenue growth. Thus, promoters are company’s loyal customers, and the goal after receiving the feedback is to turn a detractor into promoter, i.e. converting unsatisfied customer into a loyal one. This is done by so called ‘detractor call’ where the manager is trying to dig deeper to identify the main reason of customer’s dissatisfaction and find a resolution to the problem.

Customer Satisfaction Index (CSI) is a key performance indicator, which measures how products and service meet customers’ expectations. It can be expressed as a number of customers with positive experience of using company’s services or products (Farris et al., 2010). CSI is usually included in a Balanced Scorecard. A proper measurement of CSI allows company to analyze how well it performs providing services or product on a market. There are several different strategies to calculate CSI. The most common way is an extensive survey among customers with a set of statements with scale from 1 to 10. During the survey customer evaluates personal perception on using the company’s products and services as well as expectations from them.
3 Methodology

This chapter is aimed to provide an overview of methodology approaches used. We begin with general issues of choosing a right research and case study approaches and move to methods of data collection. We discuss interviews and questionnaires as an appropriate method of data collection. Also, we look into issue of research credibility.

3.1 Research Method

According to Thornhill, Lewis and Saunders (2009), before planning the steps for data collection, it is important to decide what research method is going to shape the design of the entire work. We used a case study as our research method. We investigated a case of a particular company, Carl Zeiss AG. Case study allows a researcher to take a closer look at a particular organization and base conclusions on this particular case, as we time and resource constraints it is usually hard to examine several entities at a time. This leads to certain limitations of the research.

3.2 Case Study as Research Method

According to Merriam (1988) qualitative case study gives an opportunity to focus on certain situation, which will make the study more comprehensive for the reader. A case study comes especially handy when there is a time constraint as it gives a deep understanding of the situation. The main goal is to collect as much information as possible through different sources to perform complete and objective analysis. In other words, case study is an approach for doing research using an analysis of certain trend reflected upon real world context with a help of multiple sources of information (Robson, 2007).

Two types of approaches are available for the case study research. Those are qualitative and quantitative methods. Quantitative methods are mainly used to analyze numerical data with the help of statistics, regression analysis, etc. The collection result is numerical and standardized data and the analysis conducted through the use of diagrams and statistics (Thornhill, Lewis and Saunders 2009). Qualitative methods, in contrast, are used when it is necessary to analyze non-numerical data, and give an understanding about relationships or interactions through communication with people. The qualitative data is derived from the meanings expressed verbally. The collection data is non-standardized which requires categorization and conceptualization in interpreting the results (Thornhill, Lewis and Saunders 2009).

For this research we have chosen qualitative method as a primary approach to collect data. For the purpose of the research we investigated the business case of Carl Zeiss de Mexico. Due to time constraints and company requirements we were able to investigate and apply our proposals based on one business entity Carl Zeiss Sales and Service Center in Mexico. On the other hand, it gave us opportunity to conduct an in-depth analysis. Furthermore, the company provided us with opportunity to fly over to Mexico. It was to a great benefit to the thesis as we were able to conduct face-to-face interviews and personal observations.
3.3 Data Collection

When gathering information it is important to remember four major relevant points: observation, source of information, interpretation, and usefulness and applicability of the data to responding to the research questions (Robson, 2007). It is important to distinguish between primary and secondary data. Primary data is the one authors are collecting themselves, whereas secondary data has been already collected by someone else, and authors are just retrieving it for the purpose of their work. In our study, both primary and secondary data will is used. For the primary data collection we used interviews and surveys with managers of Carl Zeiss both in Mexico and at corporate headquarters. We were granted access to corporate Business Warehouse where all the relevant data is stored. We also went through corporate reporting, training materials, and regulations to better understand established processes within the organization, come up with the new ones, and improve the existing ones. Personal observations are another important part of our data collection. Being employed by the company gave us an opportunity to have a first-hand experience of company culture, environment and everyday operations. We think, that our own reflections will add to research objectivity. Providing personal reflections on how company operates decreases chances of presenting the situation as the company wants others to see it.

3.3.1 Interviews

Interviews are the most straightforward way to collect information from knowledgeable people. Directly approaching those who might contribute to the research guarantees an immediate feedback from the respondents leaving minimal chance of information loss. Also during face-to-face conversations a trust might be built between the parties possibly leading to higher willingness to share information. In addition to that, comparing to questionnaires, the respondent can share his/her feelings and experiences.

Choosing between different types of the interview (structured, semi-structured, unstructured) we decided to pick semi-structured way of conducting interviews. This enabled us to follow the protocol of the interview but at the same time allow some deviation to go in-depth and ask for clarifications or explanations if necessary (Thornhill et al., 2009).

As a part of case study, a series of interviews were conducted with Carl Zeiss management in Mexico. Interview as a research tool helps to understand the vision of the situation from the interviewee’s perspective (Merriam, 1988). Interview comparing to questionnaire gives more flexibility for both parties as during the course of the interview area of a particular interest might be given more attention and discussed in more detailed way. It is important to avoid leading questions to keep away from bias as interviewee might be forced to give an answer desired by the interviewer. In order to prepare the respondent for the interview, an interview guide (see Appendix A) should be sent upfront as it gives more time for a person to prepare, and eliminate certain questions he/she finds inappropriate or cannot answer due to confidentiality issues.

3.3.2 Secondary Data

Secondary data in comparison to primary data is not collected directly by researcher; rather, it was collected previously by someone else (Bailey, 2007). Interpreting secondary data saves time and resources for the researcher, especially when dealing with large amount of data.
which would be expensive and time-consuming to collect by researchers themselves. In this regard, company databases came very handy as data is migrated there regularly and constant updates provide reliable and up-to-date information. There was no need to collect this data on our own because the process is done automatically through the computer software such as SAP CRM. The quality of data was verified through company’s internal control, which was sufficient proof for the research.

### 3.3.3 Questionnaires

A structure of the questionnaire can differ depending on the desired outcome. Questionnaires are mainly used for gathering quantitative data when it is necessary to analyze a big number of respondents. However, this method is also used when the respondents are remote and cannot be easily reached. Although, closed questions provide data, which is more straightforward and easy to analyze, for the purpose of our study we asked open questions because we wanted to understand people’s perception of the situation, so we left them more freedom when answering the questions. Questionnaires help to collect descriptive and explanatory information (Thornhill et al., 2009). Through the collected answers it is possible to grasp attitude and opinions as well as understand better organizational practices. The higher number of respondents contributes to higher credibility of our findings as it improves the objectivity of the results. In our research the questionnaire is used as a part of Customer Management Assessment Tool (CMAT). For the purpose of CMAT assessment we utilized scaled questions (0 to 10 scale) in order to get a score for the final assessment.

### 3.4 Research Quality

Case study as a research method helps to achieve high quality of the research conducted as it presents real life case, thus, proving the relevance of the theory to the real world. Also the presence of the authors inside the company gives an opportunity to have a closer look to company operations providing better understanding of the context, leaving less room for misinterpretation of the information. Furthermore, there is no need to fill in the blanks when something is not clear as there is always an opportunity to ask company employees for explanations.

Nevertheless, there might be certain disadvantages associated with the research method chosen. It sometimes occurs that authors tend to simplify things they do not want to pay close attention to and inflate certain issues they want reader to notice. Such tendency to juggle facts and pick only those that fit should be avoided. Furthermore, in some cases researchers may base their conclusions on questionable findings. To avoid both problems, we worked in close collaboration with company management to restrain ourselves from ambiguous results and doubtful conclusions. Another frequent problem associated with case study is that at times it is hard to generalize the results based just on one example. To eliminate potential mistakes, we stated in part 1.4 Delimitations that our research will be conducted based on the example of only one company due to time constraints. However, our conclusions would be backed up by previous research from peer-reviewed publications, thus adding to overall quality of research.
3.5 Research Credibility: Validity & Reliability

A concept of triangulation is a good approach to make sure that your findings are valid and reliable (Merriam, 1988). The meaning of this method is to check the validity of the data through multiple sources to verify the results. In our research we use questionnaires and interviews as well as data retrieved from corporate reporting. To confirm that our interpretations of the answers received during the interview are correct, we give our work for review and approval to the respondents. This helps to eliminate any potential errors that might appear in case of misinterpretation of responses during the course of the interview. Also our interpretation of the data analysis is monitored by departmental management which makes sure we do not allow any discrepancies into our conclusions.
4 Main Empirical Findings

This chapter presents the results of the thesis’s case study. All the information collected from the company, obtained through business trip to Mexico and carried out in the interview is presented here. Also, a description of the main KPIs is given in this chapter, such as mean-time-to-repair, contract coverage and net promoter score. The main information is presented in tables and figures.

4.1 Company Background

The Carl Zeiss Group is an international leading company in producing and developing optics and optoelectronics. It employs around 24,000 people and in the last year company has generated 4.237 billion Euros. The group is represented in more than 30 countries headquartering in Oberkochen (The Carl Zeiss Group Official website, 2012)

Carl Zeiss was founded in 1846 as a workshop for optics and mechanics in Jena. Later in 1866 collaboration with Ernst Abbe had allowed the company to extend operations into production of advanced optics, such as microscope. During the period from 1872-1990 the company had done impressive research changing the industry of high performance optics. In 1990 after the re-uniting of Germany the companies were consolidated under the umbrella of Carl Zeiss Foundation with headquarters in Oberkochen. From that point a modern history of a company begins. In 1996 the company celebrated 150 years anniversary as a truly international and leading advanced optics manufacturer. During the last decades Carl Zeiss became world-leading producer in the areas of microscopy and industrial metrology, high-performance lenses, surgical microscopes and instruments for ophthalmic diagnosis and therapy. The company’s primary focus was on semiconductor technology and microelectronics, life sciences, eye care, industrial metrology. Through mergers and acquisitions the company had transformed to worldwide public enterprise – the Carl Zeiss Group solely owned by the Carl Zeiss Foundation.

The company consists of six business groups. Semiconductor Manufacturing Technology (SMT), Industrial Metrology (IMT), Microscopy and Medical Technology (Meditech) comprise industrial sector of the company which mainly focuses on B2B operations, dealing with organizations, companies and institutions rather than individual customers. Vision Care and Consumer Optics/Optronics can be described as B2C business groups.
The focus of our research is on the industrial sector as the concept of CIC is more applicable to dealing with complex and expensive machinery which requires extensive customer support.

4.1.1 Carl Zeiss Group Operations in Mexico

In 1900 Carl Zeiss started the first sales operations in Mexico. It led to setting House Schultz, SA, which was an exclusive representative of Carl Zeiss. Later the representative had changed a name to Carl Zeiss de Mexico and started assembling of microscopes for the Mexican market. In 1978 the group had transferred CZ Göttingen, which main focus on mechanical engineering, to Mexico. Through these structural changes Carl Zeiss had obtained an ability of full cycle activities for the Central America and the Caribbean markets, from the research and design to after sales services. In the end of 1990s Tech & Training center was launched to empower research activities and customer’s services. In 2004 the Mexican division of the Carl Zeiss Group has obtained the certification of Environmental Management System under ISO 14001.

At the present time Carl Zeiss de Mexico serves the Central Americas, the Caribbean as well as the South Americas markets. It offers advanced solutions to specific customer need in the fields of optical microscopy and electronics, industrial metrology and medical systems (The Carl Zeiss Group Official website, 2012).
4.1.2 **Problems of Carl Zeiss de Mexico**

After over 30 years experience of operation on the Central American market the company started to focus on after sales customer service excellence, where they have faced some difficulties. Mexican branch has been struggling with keeping up to corporate excellence in sales and services since the operations were switched to be done in SAP CRM system - customer relationship management application developed by German business solution provider SAP. Even after extensive preparations and training preceding the go-live event, the organization has been struggling on a number of issues, being resistant to new standards and processes. A number of visits from corporate management responsible for customer relationship excellence did not change much. Change management techniques did not yield much positive result. The key issues organization is dealing with today include:

- Bad quality of data maintenance;
- Poor SAP CRM utilization;
- Inefficient dispatching of field service engineers (FSEs) which leads to high mean time to repair (MTTR);
- High cost collection per service order / service contract;
- Low sales of service contracts;
- Poor customer satisfaction;
- No single point of interaction between the organization and the customer;
- Back-office is occupied with handling customer calls on top of their duties;
- Slow customer request processing.

From the investigation it can be concluded that the problems arise due to miscommunication between corporate headquarters and local organization, cultural issues that are neglected when analyzing the situation, for instance low number of service contracts sold can be explained by Mexican perception of German products being of exceptional quality that never brake. The problems described result in poor evaluation of the company by customers, contributing to the negative image of Carl Zeiss being not a customer-oriented company. This is reflected in customer surveys and resulting scores of customer satisfaction KPIs such as NPS (Net Promoter Score) and CSI (Customer Satisfaction Index).

Mexican management asked for set-up of Customer Interaction Center as it was done in other Carl Zeiss Sales and Service organizations, and brought positive results: better customer satisfaction, better response time, and lower costs. In order to analyze necessity and feasibility of such an initiative the authors of the thesis took a closer look into operations in Mexico.

4.2 **Service Reporting Data**

At Carl Zeiss service reporting data is currently available for all entities where SAP CRM solution is in place. Currently, four Sales and Service Organizations have SAP CRM successfully installed: CZ Meditec US, CZ UK, CZ Mexico, and CZ Scandinavia. Once a month all relevant information gets extracted from the local systems and is pulled into consolidated reports in so called Business Warehouse. After that reports on a number of KPIs are available for managerial review. For the purpose of the thesis we analyzed data only from CZ Meditec US, CZ UK, and CZ Mexico because CZ Scandinavia had CRM roll-out just in February of this year so the amount of data is not sufficient for a solid analysis and comparison.
4.2.1 Mean-Time-to-Repair

One of the main indicators to measure service quality is Mean-Time-to-Repair (MTTR). It measures how much does it take on average for the service order to be competed from the time of first interaction between the customer and the service personnel until the service ticket is closed. With the SAP CRM tool being introduced to Mexico in 2010, it became easier to systematically update the information on MTTR for company reporting. From the figures accumulated from 2010 up until now we can see that within 19 days after the customer complaint only 55% of all tickets are closed.

Comparing to other service organizations for which reporting is currently available (Meditec US, Carl Zeiss UK) Mexican performance is very poor. It is worth adding that both Meditec US and SSC UK have dedicated Customer Interaction Center: 4-5 full-time specially trained customer care agents with main focus on handling customer calls. In comparison, in Mexican SSC handling customer calls is delegated to back-office on top of their primary administrative responsibilities. This results in better reaction time for 19-day completion date compliance for CZ UK is 71% and for CZ Meditec US even higher – 85%.
Keeping in mind that the training sales and service employees receive worldwide is uniform (under upper management initiative called “One Zeiss”) the presence of CIC seems to be a logical explanation of such a difference in MTTR numbers.
4.2.2 Contract Coverage

Another interesting KPI to look at when analyzing SSCs is contract coverage percentage. It shows what proportion of installed bases is covered by service contracts sold to the customers on top of standard warranty they receive when purchasing Zeiss product. Once again CZ Mexico is lagging behind in this category behind CZ Meditec US and CZ UK. Mexican SSC was able to achieve just 2.8% overall coverage, in comparison contract coverage of CZ Meditec US is more than twice higher at 5.8%, meanwhile UK SSC leads with remarkable 12.7%.

Figure 4.5. Contract Coverage CZ Mexico.

<table>
<thead>
<tr>
<th>Fiscal year</th>
<th>Base</th>
<th>% Cov.</th>
<th>Contr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEG019</td>
<td>25,584</td>
<td>2.0 %</td>
<td>461</td>
</tr>
<tr>
<td>VEG011</td>
<td>82,472</td>
<td>2.0 %</td>
<td>2,465</td>
</tr>
<tr>
<td>VEG012</td>
<td>66,905</td>
<td>2.0 %</td>
<td>1,159</td>
</tr>
<tr>
<td>Overall</td>
<td>84,328</td>
<td>2.8 %</td>
<td>1,269</td>
</tr>
</tbody>
</table>

Figure 4.6. Contract Coverage CZ Meditec US.

<table>
<thead>
<tr>
<th>Fiscal year</th>
<th>Base</th>
<th>% Cov.</th>
<th>Contr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEG016</td>
<td>1,737,516</td>
<td>2.6 %</td>
<td>46,670</td>
</tr>
<tr>
<td>VEG011</td>
<td>1,646,164</td>
<td>2.0 %</td>
<td>147,430</td>
</tr>
<tr>
<td>VEG012</td>
<td>1,133,028</td>
<td>6.7 %</td>
<td>75,599</td>
</tr>
<tr>
<td>Overall</td>
<td>1,673,648</td>
<td>5.9 %</td>
<td>10,668</td>
</tr>
</tbody>
</table>

Figure 4.7. Contract Coverage CZ UK.

<table>
<thead>
<tr>
<th>Fiscal year</th>
<th>Base</th>
<th>% Cov.</th>
<th>Contr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEG010</td>
<td>220</td>
<td>0.0 %</td>
<td>0</td>
</tr>
<tr>
<td>VEG011</td>
<td>178,770</td>
<td>9.2 %</td>
<td>18,074</td>
</tr>
<tr>
<td>VEG012</td>
<td>112,882</td>
<td>18.1 %</td>
<td>18,114</td>
</tr>
<tr>
<td>Overall</td>
<td>32,352</td>
<td>92.7 %</td>
<td>17,290</td>
</tr>
</tbody>
</table>

Both in US and UK customer care agents at CIC are taking over sales activities when they have idle time. Thus, contract sales are much higher than in Mexico. This is an example how to turn pure service center into the profit center bringing some return on initial investment. Also from the figures we can see that in the US and UK volumes of installed bases are much higher, yet they are able to maintain a fare contract coverage percentage.
4.2.3 Net Promoter Score (NPS)

NPS became a standard practice at Carl Zeiss from fiscal year 2009/2010 when every SSC became obliged to send out NPS questionnaires to the customers after one of the following service events:

1. Installation
2. Service order
3. 1 year after installation

A very high priority is given to interpretation of survey results, especially to number of detractors as they are ‘unhappy customers’. So called detractor reasons are captured during the phone call during which the customer explains what exactly did not satisfy him.

All NPS records are getting stored into Business Warehouse (BW) and the relevant reports are available for the review. In those countries where SAP CRM is in place, NPS information is extracted once a month and stored in BW. Other countries are supposed to send the results manually by providing Excel spreadsheet.

After retrieving NPS information for SSC in Mexico we found out that the two main issues for the unsatisfied customers are either problem with service process or with service personnel. After conducting a deeper analysis it turned out that customers were not happy because of one or more following issues:

- They were not able to reach the service desk.
- Service representative was unavailable.
- It took too long to repair the machine.
- Service rep was rude to the customer.

This is a clear sign that the job of the service team is fragmentized, and they are not working as a team. Dispatching is pretty bad which leads to long repair times. Back office personnel were not available to pick up the phone due to other activities. In comparison to SSC Meditec US and SSC UK where such a thing is unheard of, it is observed that SSC Mexico is struggling a lot with the way the service organization is currently operating. In this regard, their request for having a dedicated CIC just like in US or UK is understandable.

To assess NPS situation better a self-assessment was sent to Carl Zeiss Mexico (see Appendix B). NPS process owners were asked to evaluate their current practices and compliance with Carl Zeiss norms and standards. The results confirmed the information extracted from Business Warehouse reporting. High NPS score is not reflecting the realistic situation that is taking place within the organization. NPS practices are poor; there is no follow-up done. Managerial involvement is minimal. There is no information exchange done inside the company. KPI is only done to fill in the check mark; there is no real effort put into it. The reasons for that are vague understanding of NPS relevance, no clear roles assigned, thus NPS feedback does not receive proper analysis which results in continuous struggle with improving customer satisfaction. Company is failing in keeping their promises to the customer which damages the image of the entire company. There is a need of headquarters help in local affairs, and a call for CIC set-up as a first step in an attempt to achieve Customer Relationship Excellence.
4.3 Interviews

A number of interviews was carried out to better understand the entire process of CIC set-up, its operational side as well as value creation to customer and the company. All interviewees had some previous knowledge and experience in the topic of CIC. All of them currently or in the recent past worked in service organization themselves gaining first-hand knowledge which adds credibility to their responses (see interview guide in Appendix A).

4.3.1 Bernd Ayernschmalz, Corporate Business Process Expert in Service

The first respondent was Bernd Ayernschmalz who is now Corporate Business Process Expert in Service at Customer Relationship Excellence department of Carl Zeiss. Before switching to his current role, he was actively involved into setting up CIC at Carl Zeiss Meditec AG in Germany.

Before setting-up CIC for CZ Meditec in Germany, the organization experienced problems similar to the ones Mexican SSC is currently experiencing. There was no uniform way to handle customer calls; that jeopardized reporting between back-office and field service engineers as customer was free to choose whom to call. This damaged a quality of the data on service reporting: service ticket maintenance, dispatching of FSEs, repair scheduling, etc.

Just in two months after setting-up CIC the answer rate went up from 50% to 95% as customer handling was delegated from back office to customer care representatives who are solely responsible for handling customer calls. Customers were educated to call the toll-free number instead of calling FSE or back-office employee they knew from previous interactions. This was done through mailing out of stickers with relevant contact information that a customer can stick to Carl Zeiss machine they own. This stabilized the process flow as now it was following a logical flow:

1. Customer calls the toll-free number.
2. Customer care agent creates a service ticket and dispatches it to the FSE.
3. FSE follows-up with a phone call to a customer to schedule an appointment.
4. FSE makes a repair and reports back to customer care agent.
5. Customer care agent fills out all the relevant info (spare parts used, labor costs, etc.) and bills the customer.
6. Once the payment is received customer care agent closes a ticket.

However, according to Bernd Ayernschmalz there is a certain drawback at this particular CIC as it was outsourced to an external company. “This can be regarded only as interim solution because customer care should be retained within the company as it is the core competency,” Mr. Ayernschmalz emphasized. Even though the external company received two month training and after that three month supervision by CZ manager, it is still not enough to fully understand the nuances of complicated products such as optical instruments. So ideally it should be transferred to be done in-house in the future.

Regarding the dilemma of turning CIC into a profit center Mr. Ayernschmalz expressed the following possibilities for generating revenue:
• Charge customer if he/she prefers a phone fix rather than scheduling an appointment with FSE.

• Delegate some sales activities to CIC to do in the idle time, for example service contract sales (creating quotes) or lead generation for sales.

4.3.2 Richard Doy, Carl Zeiss Meditec AG Manager for Europe, Middle East, Africa Region

Interview with Richard Doy gave an explanation to the outsourcing decision for German CIC. He explained that by lack of space for adding extra head count, but he also agreed to the fact that in long-term perspective it should be brought back inside the organization, and resources for that should be planned accordingly.

One thing he did not agree upon with Mr. Ayernschmalz is delegation of sales activities to CIC. Mr. Doy expressed his worries that the quality of service activities, hence customer satisfaction will experience a negative effect if sales activities would be added on top of responsibilities of customer care agents.

He also proposed two interesting and very important initiatives that are worth taking into consideration. “With regards to problems with service personnel in Mexico, it would be beneficial to organize informal social events for better team building between FSEs and customer care agents. They should act as a team; this is very important,” Mr. Doy said. Another proposal was to organize CIC based on regional basis: one for Americas, one for Europe, Middle East and Africa, and one for Asia and Pacific. That would help to train organizations in a uniform way providing top-quality service worldwide. From the company’s perspective it is much easier to do as there will be no longer a necessity to deal with individual local organizations, and provide training and control for each.

4.3.3 Steffen Lang, Director Technical Service, CZ Industrial Metrology (IMT) GmbH

Another example of successful CIC set-up came up in the interview with Steffen Lang who is a Director of Technical Service at another CZ entity IMT GmbH in Germany. This is one of the oldest CICs at within the CZ company, and it can be regarded as one of the most successful ones in customer satisfaction. According to Steffen Lang on average customer call is answered within 20 seconds in 80% of the cases with the average waiting time being around 30 seconds. Results of return customer questionnaires confirm great progress the organization was able to achieve. Customers said that in 85% of the cases they were able to reach CIC. However, when the customer call is not answered or dropped it gets registered by special software making the customer number available for customer care agent to call back. “Such results would have been impossible to achieve without proper training. We put a big emphasis not only on technical but also on soft skills of our customer care agents and FSEs. As a result we are getting 85% rating on friendliness scale from our customers,” concluded Mr. Lang.
According to him, customer care agents should put the following four things on top of their list:

- Ensure accessibility
- Provide right routing
- Prepare right documentation
- Maintain customer contacts up to date

When discussing responsibilities that should be assigned to customer care agents at CIC, Mr. Lang agreed with Richard Doy that sales activities should be delegated only in particular cases, when service organization was able to achieve such a maturity stage at which service process is sustainable and is running smoothly.

### 4.3.4 Dan Phillips, SAP CRM Key User – Sales, Microscopy & Medical Divisions, Carl Zeiss Ltd., UK

Sales and Service Center in the UK is perceived as a best practice among all CZ organizations. They were able to create a benchmark for other companies to follow it. CIC was set up there at the same time as SAP CRM roll out which made it twice as difficult on one hand, but on the other hand it gave an opportunity to create better integration between the two. In less than two years it was able to become an example of how CIC might be effectively used both for service and sales activities. Dan Phillips, who was one of the CIC pioneers in the UK, explained that the key to combining both service and sales activities is to understand what a customer care agent is most suited for. Also delegating of sales activities to customer care agents creates a job rotation, thus reducing boredom of handling customer calls. “I would say 60% of the time agents are handling the calls, other 40% they dedicate to proactive calling and creating leads,” Mr. Phillips explained. For example, customer care agent in UK qualifies 30 leads per month whereas a sales rep does around 60. Customer care agents make a significant contribution to the company’s monthly revenue which can definitely be regarded as return on initial investment spent on setting up CIC.

“We decided to hire people from outside Zeiss but with previous customer care experience as we thought it is easier to learn information about the products because interpersonal skills are harder to teach, it is rather something you are born with. It was hard at the beginning but as we see now it was a right decision,” Mr. Phillips noted. As a result, an organization receives a constant positive feedback on their improvements, among which is increased visibility of the logistics problem. The complaints concerning spare parts availability reduced significantly making it easier for FSEs and convenient for customers as now it takes less time to repair a machine.

### 4.3.5 Manuel Wenderoth, Business Processing Expert, Global Service & Customer Care, Carl Zeiss Meditec AG

To get a final understanding of the process requirements and following reporting for the CIC we talked to Manuel Wenderoth, who was involved in a number of CIC Projects at Carl Zeiss Meditec AG. According to him to set-up a successful CIC it takes the following:
• Keep customer at the center of attention
• Right combination of skills (technical + interpersonal)
• Structure teams in such way that they use their full potential (as in the UK example)
• Customer education (new way of doing things is better)
• FSE education (get used to new process structure)

To analyze the performance of CIC the following reports should be designed and implemented:
• How long does it take for customer to get an answer on the phone
• Number of unanswered calls
• Number of calls during off-hours and on the weekends
• Resolution time/MTTR (how long does it take from customer call to dispatching, from call to final fix, etc.)

4.4 CMAT Assessment

To assess Customer Relationship Management (CRM), CMAT Questionnaire (see Appendix C) was sent to CRM managers of Carl Zeiss SSCs in the US, the UK and Mexico. Along with questionnaire a brief explanation was sent describing the CMAT, how it works, how it might help to assess current condition of CRM at the respective locations, and what it will help to identify. We emphasized the fact that this initiative is designed with the sole purpose to help the companies and not to punish them for possible underperformance. We asked managers to reflect realistic situation within the organizations without hiding of problematic points as the survey is their chance to evaluate their current practices, and get help from the headquarters if survey identified that certain areas were in need of assistance.

The following table represents the result of the assessment of each SSC and their comparison to the EU and US average from the Stone et al. (2003) study.
Table 4.1. CMAT Assessment Carl Zeiss. Adopted from Stone et. al., 2003.

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Carl Zeiss Meditec US</th>
<th>Carl Zeiss UK</th>
<th>Carl Zeiss MX</th>
<th>EU Average</th>
<th>US Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analysis and planning</td>
<td>51</td>
<td>56</td>
<td>27</td>
<td>53</td>
<td>48</td>
</tr>
<tr>
<td>The proposition</td>
<td>53</td>
<td>68</td>
<td>34</td>
<td>62</td>
<td>37</td>
</tr>
<tr>
<td>People and organization</td>
<td>49</td>
<td>70</td>
<td>31</td>
<td>62</td>
<td>45</td>
</tr>
<tr>
<td>Information and technology</td>
<td>45</td>
<td>62</td>
<td>33</td>
<td>51</td>
<td>42</td>
</tr>
<tr>
<td>Process management</td>
<td>47</td>
<td>60</td>
<td>24</td>
<td>51</td>
<td>39</td>
</tr>
<tr>
<td>Customer management activity</td>
<td>39</td>
<td>58</td>
<td>29</td>
<td>52</td>
<td>40</td>
</tr>
<tr>
<td>Measuring the effect</td>
<td>43</td>
<td>57</td>
<td>29</td>
<td>58</td>
<td>50</td>
</tr>
<tr>
<td>The customer experience</td>
<td>34</td>
<td>57</td>
<td>25</td>
<td>41</td>
<td>35</td>
</tr>
<tr>
<td>Total average</td>
<td>45</td>
<td>61</td>
<td>29</td>
<td>54</td>
<td>42</td>
</tr>
</tbody>
</table>

From the consolidated results of the survey presented in the table it is clearly seen that SSC organizations in the US and the UK that have CIC at their disposal boast above average numbers for their respective geographic regions. Another alarming indicator for CZ Mexico is that the managerial evaluation of CRM practices is way lower than those in the US and the UK. This is a clear sign of underperformance by Mexican unit.

According to CMAT scoring process, CZ Mexico falls under the category “Isolated activity: something happening, non-systematic, not broadly deployed,” whereas US organization finds itself in “Some commitment and some progress: concept understood, plan to implement, resources allocated,” and SSC UK is qualified as “Full commitment and real progress: plans exist, resources allocated, implementation begun.” The description matches the real situation of things and confirms the findings of the NPS self-assessment. The organization lacks structure and commitment to provide high standards of CRM.

4.5 Field Observations

As a part of our presence at Carl Zeiss we had a chance to travel to Mexico to get better understanding of the organization’s struggles and problems that have to be solved for improving of organizational performance. We flew over with two departmental managers, and spent 10 days in Mexico City, participating in trainings and seminars. We hold a number of discussions with local managers and employees responsible for CRM of the organization. The findings are summarized in form of field observations because otherwise it would take another paper just to describe all the conversations we had, and visits we have made. Summary of questions addressed during the meetings can be found in Appendix D.
Currently there are three separate service organizations handling customer complaints, one for each business group Meditec, Microscopy and IMT (Industrial Metrology). There is only one person responsible for handling all calls. Furthermore, it is not even a trained customer care agent, but a back-office employee handling calls on top of his/her duties. That limits phone line availability, resulting in being able to take only one call while others are ignored creating frustration for customer whose call is not answered. What makes it even more complicated to analyze effectiveness of current call lines is absence of any kind of software that monitors calling activity (number of calls, length of the call, response time, etc.).

As Oliver Wolf, Manager for Quality and Information Technology, pointed out, the current service process flow has a lot of drawbacks. For example, when FSE arrives to the customer site with several Zeiss products after repairing one machine he is frequently asked by customer to take a look at another one. Thus, he performs extra work for free not charging customer anything and not reporting it anywhere. “Once we have Customer Interaction Center, there would be a new process rule that even if FSE is reached by customer directly, he needs to ask him to call service center first, so the ticket is created, and only then gets dispatched to FSE,” claims Mr. Wolf. Very careful customer education will be required as Mexicans do not like multiple points of contact; they prefer to deal with just one person though the entire process.

Ideally, CZ management in Mexico would like to follow UK example. Two organizations are similar in size and set-up, and the success story of the UK of organization is definitely an attractive example to be reproduced. Four permanent employees should be able to cover the volume of incoming calls. Mr. Wolf also said there is lack of customer service experience from within the organization at the moment, so customer care agents with relevant experience would be hired from outside the company, and they will receive extensive training about Zeiss products.

Another important feedback we received is lack of reporting available. Currently, the activity of customer care agents is not monitored; there are no figures available for managerial analysis. Set-up of CIC should facilitate this task as software installed will help to capture all the relevant information about handling of customer complaints. Along with this management will receive appropriate training on how to use Business Warehouse to generate and interpret the reports.

Overall, it seemed that Mexican organization is very enthusiastic about the change. They are still struggling with SAP CRM system and Customer Interaction Center would be of great benefit for them as it will help to stabilize the service ticket processing by establishing a uniform way of handling the complaints. They are also eager to start handling some sales activities as the UK SSC does. However, they can proceed to this stage only once their main activities are running smoothly. According to managerial forecast, it should take them from five to six months to implement all the changes and achieve certain stability.
5 Analysis

This chapter provides an analysis of the empirical findings. As a result possible managerial implications are proposed confirmed by theoretical research from the literature review chapter. The following themes are under consideration in this part: customer interaction center, proper reporting and ways of revenue generation, also possible improvement to increase customer satisfaction.

5.1 Customer Interaction Center Set-up

Before choosing right set-up for CIC it is important to understand that Carl Zeiss products are very sophisticated and expensive machines that require vast knowledge from service personnel in order to understand the nature of the problem customer is dealing with. Batt and Moynihan (2002) propose for such kind of business to go with the professional service model. This includes utilization of state-of-the-art technology by highly skilled staff. In Mexican case roll-out of SAP CRM system was implemented to facilitate delegation of ticket handling process. However, from what we have seen the process is still cumbersome and takes a lot of time to execute certain functionalities, so before setting up CIC the processes need to be stabilized, and this is something for the IT department to take care of. Along with this powerful software certain performance indicators should be adopted in interaction center to capture information that would be relevant for managerial review such as number of calls per agent, occupancy rate, call duration, warm up time (post call work), etc. This should facilitate the reporting and analysis which are currently impossible to produce because of technology absence. With CRM tool along with phone software, managers will be able to review the performance of the team as a whole and individual performance as well.

The priority in staffing according to Batt and Moynihan (2002) should be given to highly-skilled professionals. In our case we would suggest to hire people with previous customer service experience from outside the company and conduct an in-depth training about Carl Zeiss products. It is hard to find a person form within the company willing to do routine job of handling calls. Furthermore, from our interviews with experts we drew a conclusion that it is easier to hire a person with good interpersonal skills and give them technical training about the products than to try to force customer-oriented mentality to FSEs or back-office clerks. Customer-dominated mentality that Carl Zeiss is trying to put into practice requires highly skilled customer service reps to serve all the needs of the customer and leave him satisfied. Thus, six months long training proposed by Mexican management should be extensive covering all technical nuances associated with the products so that customer care agents have full understanding of customer problem.

5.2 Revenue Generation

According to Robinson and Morley (2006) management of CIC is mainly focused on the level of customer service quality and satisfaction. Thus, they are often reluctant to see extra opportunities in utilizing CIC for more than just handling customer calls. The idea of turning CIC from purely service organization to an entity with some sales activities should restructure the way of managerial thinking. CIC previously regarded as an expense to a company, should now be capable of bringing some cash into the company. First, management should
identify idle time periods throughout the week, and allocate sales functions accordingly to fill in the spare time. The major opportunities include but are not limited to:

- Charging for phone fixes. If customer does not want to schedule FSE visit, and wants a quick phone fix, he will be asked to pay for the time spent on the line as an opportunity cost to customer care agent who is unable to handle calls during the phone fix.

- Contract sales. Customer care agents having access to CRM system are able to see the contracts that are close to their expiration date. The proactive calling to remind the customer of the end of contract service can be done to sell a contract extension.

- Lead generation. Carl Zeiss UK example shows that a service organization can be pretty competitive in generating leads. Of course, the volume of the leads is not the same as of sales team but if the lead qualifies all the way through the sales funnel, it is put on the record of the customer care agent who generated it. This revenue can be regarded as return on investment for CIC set-up.

According to Asugman, Johnson and McCullough (1997), establishment of such after sales activities enhances sales and might become a competitive advantage of the organization as it can generate more sales by utilizing customer care agents as sales reps. Furthermore, proactive selling positively affects customer satisfaction as customer feels taken care of and does not need to worry about expiration date of the warranty.

5.3 Customer Satisfaction and Value Creation

Carl Zeiss present service approach puts customer at the center as Mr. Wenderoth pointed out in the interview. Thus, Heinonen et al. (2010) concept of Customer Dominant logic can be applied in our case. The focus in Customer Dominant logic is not on the service itself but rather on customer experience. This is what Carl Zeiss is looking for. Management wants customer care agents to make sure that customer is happy after the interaction regardless of the situation. That is why it is vitally important to give customer care agent well-rounded knowledge about products so he/she finds the way out of any problematic situation. This corresponds to so called variable component of the service when service organization provides productive methods of customer satisfaction. However, the invariable or immaterial part which represents customer expectations of the service is harder to analyze and to prepare for. That is why customer care agents should go beyond standard phone call handling, performing post-service follow-ups.

This is when NPS report comes very handy as customer care agent can see dissatisfied customers (detractors) and follow-up with a phone call to investigate what was the problem with the service performed and how the company can improve. It is a valuable feedback that NPS report provides. Overall, the key to customer satisfaction is being proactive. Following-up not only on detractors but passives as well who are neutral in their evaluation of the service performed. Passives are important group that should not be disregarded. They can easily become detractors if in the long run they do not feel an adequate support they deserve. However, with proactive attitude customer care agent might turn a passive into an advocate of the company’s product and services.

In Customer Dominant logic value is created during the process of the interaction between the customer and the service rep. For customer the value is in exceeding his expectations and getting the top service. For the company, the value lies in experience of interaction with the
customer and learning from it. According to Vargo and Lusch (2007), service flows, where services are provided directly and indirectly, are considered as products, conversation and dialog as a promotion, price is replaced by value generated and accumulated by both sides, and place is changed to networks and processes.

Another important value that is created for the customer by CIC is single point of contact. This is what Carl Zeiss is currently trying to pursue. To have one phone number, a single point of interaction between the service organization and the customer. Customer gets a simple way to get in touch with the service rep, rather than several number for customer rep, FSE, etc. For the company the value comes from well-established stable process flow:

1. Customer calls the toll-free number
2. Customer care agent creates a service ticket and dispatches it to the FSE.
3. FSE follows-up with a phone call to a customer to schedule an appointment.
4. FSE makes a repair and reports back to customer care agent.
5. Customer care agent fills out all the relevant info (spare parts used, labor costs, etc.) and bills the customer.
6. Once the payment is received customer care agent closes a ticket.

5.4 CIC and Service Quality

Gilmore (2001) suggested two approaches for successful CIC management. Production-line approach is easier to implement as it resembles an assembly line that deals with large number of calls and when it is necessary to finish a call as soon as possible. This approach does not require extensive education of customer care agents as business environment is predictable and there are few deviations from the standard transaction. It is a good option when dealing with a standard product, and when basic customer satisfaction is sufficient.

The second approach proposed by Gilmore (2001) is empowerment. Empowerment should be chosen when dealing with services for customizable products where more flexibility is necessary when dealing with the customers. In our case, CZ Mexico has four different business groups offering completely different products. Thus, it is necessary to have more sensitive technique when serving a customer. There is no limited number of typical problems that customers experience; therefore there is a need for individual approach in each case. That would require hiring highly skilled customer care agents with excellent interpersonal skills, and providing them with thorough training about company’s products. The interviews conducted confirm that an empowerment approach is preferred among Carl Zeiss CICs as it helps to achieve more personal approach to each customer, and build long-lasting relationships with customer which is necessary for the company selling long-lasting goods. It is especially important when company tries to follow customer-centric strategy for its service operations as it is in Carl Zeiss case.

The quality of the service will vary depending on the approach chosen. Consequently, customer satisfaction will vary (Terziovski, 2006). It is hard to offer high quality standards with a product-line approach, thus the company willing to pursue supreme customer service should go for empowerment approach. However, to achieve excellent customer satisfaction, the entire organization should follow the culture of empowerment and strive for constant
search to improve current customer management program (Terziovski, 2006). Making CRM approach an internal culture within the organization will result positively on customer satisfaction.

5.5 CMAT Assessment

CMAT survey showed a number of problematic areas not only for Mexican organization, but for units in the US and the UK that are more successful in their CRM practices, yet fail to guarantee 100% excellence.

Analysis of the results:

By implementing the CMAT methodology to assess existing CRM tool Carl Zeiss Mexico and the whole group can achieve following results:

1. Revenue increases due to:
   - Increased volume and mix of new customers – proper analysis and customer targeting will provide an opportunity to address company’s services to different customer groups involving them into customer lifecycle.
   - Main focus on profitable customers – clear customer differentiation will allow to concentrate focus on loyal customers using all of company services.
   - Extending the use of existing products – to find new channels of service application.
   - Cross-selling the use of new products – to sell service in packages instead of separate subscription.

2. Cost decreases due to:
   - Reducing costs per serve by proper allocating service to value – to allocate inquiries to proper specialist without middle chain and minimize involvement of resources.
   - Increasing of self-care services – introduce new ways of remote assistance, such as on-line support, extensive on-line description of all possible difficulties and solutions, distance problem solving guiding before or instead of engineer dispatch.
   - Achieving higher returns on lower marketing services – right addressing of service will allow cost cutting through less marketing activities.
   - Reducing fraud – proper analysis of customer servicing process will allow determining and avoiding situations where unfair behavior from customer and/or employee side is possible.

The results mentioned above are achievable only if the assessment will be implemented on a regular basis. For proper implementation of CMAT tool we suggest to use three-stages framework proposed by Stone et al. (2003):

- Carl Zeiss should develop a marketing and customer analytics vision, implement blueprint of ranked and prioritized business cases.
- Carl Zeiss should implement a step-by-step approach where processes divided in small pieces and tested via pilots and only succeeded practices will be allowed larger investments.
- Carl Zeiss should map a development of full customer service architecture, enabling analytics and review business processes.
Also, a following value-generation framework should be implemented to achieve set goals:

**Figure 5.1. Value-generating action. Adopted from Stone et al., 2003.**

<table>
<thead>
<tr>
<th>Customer interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial inquiry</td>
</tr>
<tr>
<td>Company process</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Respond to the interest</th>
<th>Provide with personal package</th>
<th>Provide context sensitive help</th>
<th>Personalize services just for customer</th>
<th>Recommend how to make billing easier</th>
<th>Provide high level service</th>
<th>Offer better service package before customer ask</th>
</tr>
</thead>
<tbody>
<tr>
<td>Show importance</td>
<td>Provide with info on relevant services</td>
<td>Import customer setting from previous service provider</td>
<td>Help customer to customize set-up</td>
<td>Tell about new billing channels</td>
<td>Provide context-sensitive help</td>
<td>Listen to “unhappy” inquiries</td>
</tr>
<tr>
<td>Provide relevant info</td>
<td>Provide with a good price</td>
<td>Personalize based on stated preferences</td>
<td>Provide with relevant interesting offers</td>
<td>Increase credit limit without asking</td>
<td>Educate how to get more out of offer</td>
<td>Learn from it</td>
</tr>
<tr>
<td>Respect the permission</td>
<td>Provide with personalization of services</td>
<td>Listen to customer</td>
<td>Tell more about existing service plan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide with consistency across channels</td>
<td>Provide instant decision</td>
<td>Educate how to make more effective use of services</td>
<td>Tell more about better tariffs or service packages</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The framework given above should be incorporated with changes in following areas of customer management:

- Customer interaction and communication management: contact strategy, change management, technical implementation.
- Data management: data availability, content tagging, process management.
- Sales management: continuous offers optimization.

In addition to changes in customer management, Carl Zeiss should implement approach of moving customers across different categories. The overview of explicit service level model is presented below:
The approach showed above allows moving customers across segments and services increasing value-generation and customer satisfaction. The general prerequisites for this model are outlined by Stone et al. (2003):

- Modeling of care and service system to proper analysis of current cost in a value-generation chain and planning of different value-generation configurations.
- Determining a management and delivery of service packages.
- Defining new service packages.
- Integrating analytics into operational process.
- Ensuring consistent delivery.

### 5.6 Reporting

Setting-up CIC alone will not yield desired results. The ultimate goal is constant improvement of customer service on daily basis. This can be achieved only with meaningful and regular reporting on CIC performance. Saccani et al. (2006) highlighted that investing into customer service for companies that produce durable goods help them to improve their company’s image and increase customer satisfaction. It helps to identify systematic problems with the product, and prevent them from reoccurring by carrying out preventive maintenance. Also customer feedback helps to identify what changes and product improvements are desirable by end users.

Robinson and Morley (2006) advise to follow Balanced Scorecard approach when measuring CIC performance. Authors claim that BS will represent a multi-dimensional picture on CIC performance. Operational reports should include all phone-related data, i.e. number of unanswered calls, customer waiting time, call length, customer care agent availability. One of the key indicators that show whether the service process improved is resolution time. SAP CRM system gives an opportunity to analyze MTTR on different steps of service process. For example, management can see how long it takes from creation of the ticket till it gets dispatched.
to FSE; or how long does it take FSE to travel to the customer site. All this valuable information can be retrieved via Business Warehouse.

Certainly, NPS being a part of corporate balanced score card should be taken into consideration. However, only high score number do not show the true picture as this information can be manipulated at times, especially if the bonus system is tied to NPS results. Thus, as Erik Linask (2011) pointed out, it is important to maintain individual servicing of each customer to let him/her feel a personal touch. It is especially important to react to detractors as they are the ones that can harm company’s reputation. Detractor calls should be performed to understand the nature of the problem customer faced during the service process. It is crucial to document so called detractor reasons, so that the problem receives further analysis and follow-up by management.

5.7 Managerial Implications

Management of Carl Zeiss is strongly recommended to proceed with setting up Customer Interaction Center in Mexico. Previous experience has shown that Sales and Service Center benefits a lot from having a dedicated department for customer interaction. Better reaction time, improved customer satisfaction, better controlling and reporting, and extra revenue are among the factors that create positive impact. The investment in CIC is justified by increased value both for the company and the customer. Management should set-up a financial plan with fixed brake-even point. However, financial returns might take some time as customer care agents need to learn how to delegate sales activities. The priority should be given to monitoring KPIs associated with internal operations (MTTR) and customer satisfaction (NPS, CSI). The organization needs to be evaluated on these performance indicators first, with financial evaluation coming at later point of CIC functioning. To control the progress of CIC introduction Mexican management should utilize CMAT to make sure that CIC is having a positive impact, moving in the right direction. CMAT should be considered as a tool to assess organizational maturity, upon which managerial decisions should be made such as introduction of new practices and delegation of new activities.
6 Conclusion

In present difficult financial times companies tend to cut their budgets on supporting activities such as advertising, research, and customer care. What they fail to realize is the fact that with proper approach customer care can help them cut costs, increase revenue, and even improve overall company image. The solution proposed in this research is Customer Interaction Center (CIC). The concept goes beyond the conventional call center which is mainly reactive in nature, instead offering a proactive way of interaction with the customer. It helps to create value to both sides of the transaction – customer and company. Through CIC customer gets fast, reliable and professional support; whilst the company gets important feedback that helps to improve current practices and come up with new ones to serve customer better.

The present research is applicable for industrial companies manufacturing long-lasting goods. The specific attribute of this particular segment is a need to build long-lasting relationships with the customers as the product life-cycle of the product is long. Thus, customer care and support play a vital role in maintaining customer loyalty. CIC provides high level of customer support by taking personal approach to each individual customer. This should be done through empowerment approach of CIC functioning.

To ensure high quality of service provided the organization should hire highly-skilled professionals that would combine both good customer care skills and thorough knowledge of the product range to make sure that customer care agent will provide professional assistance and will be able to answer product-specific products. This is a must when a company wants to follow customer-centric approach. So called empowerment requires more time, training and resources invested into service personnel, but the payback at the end will be high customer satisfaction that conventional product-line approach is not able to achieve.

Due to high qualification of customer care agents in CIC certain sales activities can be delegated to them once a mature level of service support is guaranteed. This provides additional revenue for the company, which creates return on investment, thus justifying initial budget spent on setting up CIC. It is an important psychological aspect as management usually is reluctant to spend money on projects that provide intangible value and does not bring any money back into the company. Creating leads, selling service contracts and charging for phone fixes are just a few areas that can bring additional revenue to the company.

To ensure better control over CIC performance and the pay-off it provides management should have relevant KPIs implemented and overviewed on regular basis. Even though each company may come up with its own standards for performance indicators, the general suggestion is to monitor Mean Time to Repair (MTTR), and relevant customer satisfaction indicators (in our case Net Promoter Score and Customer Satisfaction Index). Those reports should be analyzed and communicated internally within the organization on regular basis to ensure constant improvement of customer experience.

Last but not least, top management should introduce Customer Management Assessment Tool (CMAT) in order keep up with high standards of performance in all relevant areas of customer relationship management. CIC being a single point of contact for customer interaction with the company should operate under CMAT framework. The tool should help to identify areas that require improvement to achieve customer relationship excellence. The research has shown that even successful CRM organizations are usually far from being 100% excellent in all areas of CRM. Under CMAT framework, company identifies problematic issues and carries out consistent search for performance improvement.
7 Future Research

The hierarchy of the thesis suggests clear guidance for the future research. The changing of companies’ logic form Good Dominant to Service Dominant and further to Customer Dominant is not well studied yet as it is a new concept. Companies which have applied this way of orientation have not yet experienced the major benefits from it. Moreover, this concept infers new channels of achieving customer satisfaction through advanced corporate and technological management. The thesis is an attempt to analyze the impact of introducing of advanced CRM practices at a chosen industrial company. So, moving to the next level, these practices should be tested on different companies across different industries. The other issue that has not been covered is a possibility of setting a global customer interaction center, which is a challenging aim to investigate. It could be a perfect direction for future research as it will be unique and demanding in terms of globalization and increased customers’ expectation on companies’ ability to support 24/7 around the globe. Also, the cultural issues were not in the scope of our work, but could be considered as a field for analysis. Namely, how does customer relationship management varies across countries and cultures. The thesis has provided with an insight on valuable topics for future academic and professional research.
References


Appendix A

Interview Guide

1. What is your personal attitude towards CIC concept?
2. Where do you see the main value-creating potentials of CIC?
3. What are the potential ways to successfully implement CIC concept worldwide?
4. Are there any successful examples within CZ that might become best practice scenarios for further CIC implementation?
5. What competencies will CIC require from local organizations?
6. What are the necessary complementary measures to support CIC set-up?
7. What are the possible drawbacks of CIC set-up?
8. How do you picture proceeding from CIC concept towards an operational phase?
9. What tasks should be delegated to CIC?
10. How to measure CIC performance?
11. How does CIC affect service logistics?
12. How does CIC affect customer satisfaction?
13. Where do you see the main challenge to the CIC concept?
14. What are the alternatives to CIC?
15. How should the ideal service organization operate?
Appendix B

NPS Level Check

Introduction of the Carl Zeiss NPS Maturity Framework

After almost 2 years of active Net Promoter Score (NPS) practice at Carl Zeiss, much valuable information has been gained on how to improve our performance to and for our customers. From an internal view a stable survey process has been established. Besides observing a positive development of NPS scores, an excellent organization strives to deeply understand root causes for trends and wants to learn about even better performance potential. The following model of NPS maturity shows the guiding principles in 3 consecutive steps of using NPS to become a truly customer-oriented organization.

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Basic NPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has/Does my organization…</td>
<td>established the SSC roles required for performing surveys and performing the detractor calls</td>
</tr>
<tr>
<td></td>
<td>train all roles on the NPS process</td>
</tr>
<tr>
<td></td>
<td>perform service, installation and 1 year surveys in a significantly high volume</td>
</tr>
<tr>
<td></td>
<td>perform detractor calls</td>
</tr>
<tr>
<td></td>
<td>have contact with the NPS corporate functions (BG Admins, Subsidiary Controlling) to discuss implementation issues</td>
</tr>
<tr>
<td></td>
<td>regularly access BW reports</td>
</tr>
<tr>
<td></td>
<td>relate detractor feedback to internal performance and identify potential improvement areas</td>
</tr>
<tr>
<td></td>
<td>communicate NPS results internally and engage organization in awareness sessions</td>
</tr>
<tr>
<td></td>
<td>establish plan for becoming NPS Advanced</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level 2</th>
<th>Advanced NPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has/Does my organization…</td>
<td>set, communicate, and track differentiated NPS targets (NPS, process compliance, trainings, audits, etc)</td>
</tr>
<tr>
<td></td>
<td>correlate NPS with other metrics to monitor business processes</td>
</tr>
<tr>
<td></td>
<td>monitor and track improvement initiatives and projects</td>
</tr>
<tr>
<td></td>
<td>establish a robust and self-improving process with SBU contact persons for correcting detractor issues and process weaknesses</td>
</tr>
<tr>
<td></td>
<td>implemented clear strategies for dealing with “passives”</td>
</tr>
<tr>
<td></td>
<td>establish a process for briefing sales reps and service technicians with relevant NPS and detractor information – e.g. before customer visits</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level 3</th>
<th>Excellent NPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has/Does my organization…</td>
<td>set, communicate, and track differentiated NPS targets (NPS, process compliance, trainings, audits, etc)</td>
</tr>
<tr>
<td></td>
<td>correlate NPS with other metrics to monitor business processes</td>
</tr>
<tr>
<td></td>
<td>monitor and track improvement initiatives and projects</td>
</tr>
<tr>
<td></td>
<td>establish a robust and self-improving process with SBU contact persons for correcting detractor issues and process weaknesses</td>
</tr>
<tr>
<td></td>
<td>implemented clear strategies for dealing with “passives”</td>
</tr>
<tr>
<td></td>
<td>establish a process for briefing sales reps and service technicians with relevant NPS and detractor information – e.g. before customer visits</td>
</tr>
</tbody>
</table>

For further systematic development of NPS maturity in Carl Zeiss the CRE organization has defined a roadmap of 3 horizons. Improvements of methodology and tools, best practice sharing and qualified training and coaching activities will be established in order to foster a customer-focused culture in Carl Zeiss.
Part 1: Self Assessment of NPS Maturity

The self assessment of NPS practices based on the maturity model shall help to discover gaps in the implementation of NPS and the level of adoption per Sales and Service Company.

Your judgement also gives hints where and how to focus with supporting initiatives.

**Level 1- Basic NPS**

Please assess your performance for each criterion, and then check the appropriate box.

<table>
<thead>
<tr>
<th>Has/Does my organization…</th>
<th>Yes</th>
<th>No</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>established the SSC roles required for performing surveys and performing the detractor calls</td>
<td>☒</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>train all roles on the NPS process</td>
<td>☒</td>
<td>☐</td>
<td>Surveys are SSC centralized</td>
</tr>
<tr>
<td>perform service, installation and 1 year surveys in a significantly high volume</td>
<td>☒</td>
<td>☐</td>
<td>Done, except for 1 year surveys, just started</td>
</tr>
<tr>
<td>perform detractor calls</td>
<td>☒</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>have contact with the NPS corporate functions (BG Admins, Subsidiary Controlling) to discuss implementation issues</td>
<td>☐</td>
<td>☒</td>
<td></td>
</tr>
<tr>
<td>regularly access BW reports</td>
<td>☒</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>relate detractor feedback to internal performance and identify potential improvement areas</td>
<td>☐</td>
<td>☒</td>
<td>Only calls are performed, but nothing happens afterwards</td>
</tr>
<tr>
<td>communicate NPS results internally and engage organization in awareness sessions</td>
<td>☐</td>
<td>☒</td>
<td>Done, but there are not any awareness sessions being undertaken</td>
</tr>
<tr>
<td>establish plan for becoming NPS Advanced</td>
<td>☐</td>
<td>☒</td>
<td>Task for CRE manager</td>
</tr>
</tbody>
</table>
## Level 2- Advanced NPS

If your organization has already developed good practices beyond basic level please continue and share within the NPS community:

<table>
<thead>
<tr>
<th>Has/Does my organization…</th>
<th>Yes</th>
<th>No</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>perform all surveys for all business units</td>
<td>☐</td>
<td>☒</td>
<td>Partially done</td>
</tr>
<tr>
<td>perform detractor calls for every detractor</td>
<td>☒</td>
<td>☐</td>
<td>PC manager call</td>
</tr>
<tr>
<td>perform detailed report analysis from the BW reports (e.g. investigate detractor reasons)</td>
<td>☐</td>
<td>☒</td>
<td>Starting now, will be done by CRE manager</td>
</tr>
<tr>
<td>have clearly defined corrective actions for individual detractors, based on severity of “mistake” and/or customer importance</td>
<td>☐</td>
<td>☒</td>
<td></td>
</tr>
<tr>
<td>regularly discuss NPS and detractor development with SBUs</td>
<td>☐</td>
<td>☒</td>
<td></td>
</tr>
<tr>
<td>inform the organization appropriately about NPS and detractor situations</td>
<td>☐</td>
<td>☒</td>
<td>NPS only at management level</td>
</tr>
<tr>
<td>regularly discuss issues with customer contact persons and implement measures to improve the customer experience</td>
<td>☐</td>
<td>☒</td>
<td>on a case by case bases</td>
</tr>
<tr>
<td>establish plan for becoming NPS Excellent</td>
<td>☐</td>
<td>☒</td>
<td>Task for CRE manager</td>
</tr>
</tbody>
</table>
### Level 3- Excellent NPS

Finally, whether your organization has even achieved excellence level in some aspects, you can assess against the following criteria:

<table>
<thead>
<tr>
<th>Has/Does my organization…</th>
<th>Yes</th>
<th>No</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>set, communicate, and track differentiated NPS targets (NPS, process compliance, trainings, audits, etc)</td>
<td>☐</td>
<td>☒</td>
<td>Partially done at management level, objective is communicated, but training and audit is not established</td>
</tr>
<tr>
<td>correlate NPS with other metrics to monitor business processes</td>
<td>☐</td>
<td>☒</td>
<td></td>
</tr>
<tr>
<td>monitor and track improvement initiatives and projects</td>
<td>☐</td>
<td>☒</td>
<td></td>
</tr>
<tr>
<td>set up internal NPS tracking and monitoring indicators visible to the organization</td>
<td>☐</td>
<td>☒</td>
<td></td>
</tr>
<tr>
<td>linked NPS and detractor information into the local CAPA process</td>
<td>☐</td>
<td>☒</td>
<td></td>
</tr>
<tr>
<td>established a robust and self-improving process with SBU contact persons for correcting detractor issues and process weaknesses</td>
<td>☐</td>
<td>☒</td>
<td></td>
</tr>
<tr>
<td>implemented clear strategies for dealing with “passives”</td>
<td>☐</td>
<td>☒</td>
<td></td>
</tr>
<tr>
<td>establish a process for briefing sales reps and service technicians with relevant NPS and detractor information – e.g. before customer visits</td>
<td>☐</td>
<td>☒</td>
<td></td>
</tr>
</tbody>
</table>
Part 2: Sharing your practical experience

At the end of the first level of implementation – "NPS Basics" anchored – we as a customer oriented company should leverage learning and practices and start to develop a deeper understanding of how to influence positively customer’s experience of doing business with Carl Zeiss.

Please share your observations and thinking along the following questions to the best of your ability.

**NPS quantitative results and qualitative feedback:**
What do you think are your strengths reflected by the number and kinds of promoters?

<table>
<thead>
<tr>
<th>Strength / Capability</th>
<th>How to measure?</th>
<th>How to make it sustainable?</th>
</tr>
</thead>
<tbody>
<tr>
<td>product</td>
<td>market share</td>
<td>customer oriented products</td>
</tr>
<tr>
<td>customer expectation fulfillment</td>
<td>number of promoters</td>
<td>implement. of sales and service excellence guidebooks</td>
</tr>
<tr>
<td>consulting attitude</td>
<td>number of promoters</td>
<td>training on sales and service excellence guidebooks</td>
</tr>
</tbody>
</table>

Looking into the detractor feedback, what are your main weaknesses?

<table>
<thead>
<tr>
<th>Weakness / Missing capability</th>
<th>How to measure?</th>
<th>How to improve?</th>
</tr>
</thead>
<tbody>
<tr>
<td>promise and not fullfill</td>
<td>number of detractors</td>
<td>training on sales and service excellence guidebooks</td>
</tr>
<tr>
<td>spare part delivery</td>
<td>delivery time</td>
<td>CPO</td>
</tr>
<tr>
<td>professionalism, image, discipline,</td>
<td>NPS surveys</td>
<td>hiring profile, communication, consequences, training</td>
</tr>
<tr>
<td>respect</td>
<td>number of detractors</td>
<td>retention programme, hiring profile, training</td>
</tr>
</tbody>
</table>

Understanding motives of the passives, how would you change them into promoters?

<table>
<thead>
<tr>
<th>Potential reasons for passiveness</th>
<th>Countermeasures to turn around</th>
</tr>
</thead>
<tbody>
<tr>
<td>no gathering of information by SSC,</td>
<td>surveys</td>
</tr>
<tr>
<td>therefore no analysis</td>
<td></td>
</tr>
<tr>
<td>no passion, indifference by the customer</td>
<td>events, communication, customer involvement, application training</td>
</tr>
<tr>
<td>customer not affected by serious problems</td>
<td>analyze survey answers</td>
</tr>
<tr>
<td>no clear differentiation from competitors</td>
<td>CRE</td>
</tr>
</tbody>
</table>

**NPS Process**

**Survey events:**
From your current experience: Do you agree with the choice of the 3 survey triggering events? (1 – after installation, 2 – per relevant service order, 3 – after 1 year/end of warranty)

☑ Agree ☐ Disagree

Which adjustments or other events of customer interaction do you recommend in order to better learn about our customer’s perception?

Call some promoters and passives – gather and analyze information
Media:
Currently we use the Quality-Letter approach. Do you recommend to keep on going or do you suggest to choose other media, like a web-based survey? Keep in mind that actual return rates are quite high, up to 30%, which is outstanding compared to average web survey return rates of 3 to 10%.

- Keep paper-based survey  
  Why:

- Switch to web-based survey  
  Why:

- Combine the two  
  Why:

- Phone the customer instead  
  Why: most effective way to get an answer

- Other suggestion:
  

Tools:
Please give feedback to help us improving the current tools.

Excel-Survey Tool:
How do you rate the handling of the current Excel-Survey:

<table>
<thead>
<tr>
<th>Very poor</th>
<th>Cumbersome</th>
<th>Acceptable</th>
<th>Satisfying</th>
</tr>
</thead>
<tbody>
<tr>
<td>☒</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Do you feel able to double the survey volume based on this tool? ☐ YES ☒ NO

Result Reports in the Excel Survey Tool:
Do you use the report section in the excel tool at all? ☐ YES ☒ NO

How do you rate the value of metrics and information in the Excel tool?

<table>
<thead>
<tr>
<th>not relevant</th>
<th>little relevant</th>
<th>Acceptable</th>
<th>highly appreciated</th>
</tr>
</thead>
<tbody>
<tr>
<td>☒</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Result Reports in SAP Business Warehouse
Do you use the SAP BW NPS report at all? ☒ YES ☐ NO

How do you rate the value of metrics and information in SAP BW?

<table>
<thead>
<tr>
<th>not relevant</th>
<th>little relevant</th>
<th>Acceptable</th>
<th>highly appreciated</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td></td>
<td>☒</td>
<td></td>
</tr>
</tbody>
</table>

What in particularly should be changed or improved in the current process and toolset?

Correct NPS process in CRM to generate NPS surveys automatically for ALL events

CSI metrics:
How relevant are the additional indicators of the CSI for your local business control:

<table>
<thead>
<tr>
<th>Not relevant</th>
<th>Little relevant</th>
<th>Acceptable</th>
<th>highly appreciated</th>
</tr>
</thead>
<tbody>
<tr>
<td>☒</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How do you use them in your management practice?

At this moment no CSI data pulled out of CRM into BW, therefore no analysis can be done.

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Local procedures:

What have you established as smart local procedures to run a smooth NPS process and to cope with the effort involved?

Dedicated, independent and objective resource, telephone surveys, manual track of surveys in Excell, CRE manager position with clear responsibilities attached to NPS

Preparing the next level

As a general observation: In order to achieve significance of our NPS measures there must be a steep increase and a substantial stabilization of the survey volume. (see also implementation report – 2.1 survey activity)

As a thumb rule: Minimum 20% of our customer interaction should be covered by the NPS surveys to have a representative sample.

Please derive accordingly your survey volume target for FY 11/12:

<table>
<thead>
<tr>
<th>Survey event</th>
<th>Volume FY 10/11 avg per month</th>
<th>Targeted volume FY 11/12</th>
<th>Hint</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation</td>
<td>5</td>
<td>180</td>
<td>derive from last year’s sale</td>
</tr>
<tr>
<td>Service incident</td>
<td>54</td>
<td>720</td>
<td>derive from last year’s avg. service orders / month</td>
</tr>
<tr>
<td>1-year</td>
<td>0</td>
<td>120</td>
<td>derive from last year’s sale</td>
</tr>
</tbody>
</table>

To further foster the adoption of the NPS as our joined approach towards a customer-centric business, what do you expect from the corporate CRE organization and/or the BG organization?

Corporate CRE:

do not turn the tool into the goal, set up Customer Interaction Center

BG support:

Implement corrective actions (where applicable) using the results, Indication that NPS results are used to correct problems

Finally please reconfirm the responsible managers and co-workers in your organization:

<table>
<thead>
<tr>
<th></th>
<th>IMT</th>
<th>MED</th>
<th>MIC</th>
<th>NTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPS Process Owner</td>
<td>CRE manager</td>
<td>CRE manager</td>
<td>CRE manager</td>
<td>CRE manager</td>
</tr>
<tr>
<td>NPS Care Manager</td>
<td>Max Busch</td>
<td>Paul Barber</td>
<td>Ralf Walleczek</td>
<td>Ralf Walleczek</td>
</tr>
<tr>
<td>NPS Admin</td>
<td>Sandra Sánchez</td>
<td>Sandra Sánchez</td>
<td>Sandra Sánchez</td>
<td>Sandra Sánchez</td>
</tr>
</tbody>
</table>

Thank you for your feedback and your support!
Appendix C

CMAT Survey (adopted from Stone et al., 2003)

Please, rate the following statements on scale from 10 to 0 (10 being the highest and 0 not occurring at all) as it applies to your organization

**Analysis and Planning**

Staff clearly understands what customer data needs to be collected and how it should be stored.

10 9 8 7 6 5 4 3 2 1 0

You regularly validate customer records.

10 9 8 7 6 5 4 3 2 1 0

Sufficient and appropriate data is available in a form which allows detailed customer analysis.

10 9 8 7 6 5 4 3 2 1 0

You performed detailed analysis of these customer data, using structured analytical models.

10 9 8 7 6 5 4 3 2 1 0

You used a universal customer identifier for related services within the organization.

10 9 8 7 6 5 4 3 2 1 0

**The Proposition**

Organization has clearly defined departmental customer and service strategy.

10 9 8 7 6 5 4 3 2 1 0

There is a proactive strategy of selling after-sales services.

10 9 8 7 6 5 4 3 2 1 0

The strategy addresses the needs of each customer segment.

10 9 8 7 6 5 4 3 2 1 0

There is a regular check for contracts close to expiration date.

10 9 8 7 6 5 4 3 2 1 0

You use service activities as an opportunity to sell additional services.

10 9 8 7 6 5 4 3 2 1 0
People and Organization

Senior management roles are effective to drive customer service improvement for the organization.

10 9 8 7 6 5 4 3 2 1 0

The roles and responsibilities are clearly defined within the department.

10 9 8 7 6 5 4 3 2 1 0

The organization has adopted a mechanism for continuous improvement of business processes.

10 9 8 7 6 5 4 3 2 1 0

Front line staff encouraged to suggest improvements to the processes that are used to manage customers.

10 9 8 7 6 5 4 3 2 1 0

There is a regular training held to explain new processes and practices.

10 9 8 7 6 5 4 3 2 1 0

Information and Technology

Organization has implemented real time update for sharing of transactional and other dynamic data across multiple systems.

10 9 8 7 6 5 4 3 2 1 0

Organization has implemented measures to prevent individual customer records being changed by feeds from other system inadvertently.

10 9 8 7 6 5 4 3 2 1 0

There are regular checks on quality of data stored in the system.

10 9 8 7 6 5 4 3 2 1 0

Your customer management related systems are integrated.

10 9 8 7 6 5 4 3 2 1 0

Organization has implemented regular reviews to ensure compliance with data security and personal data protection requirements.

10 9 8 7 6 5 4 3 2 1 0
**Process Management**

Your customer management practices aligned with best practices.

| 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |

Industry benchmarks are used as a tool to identify improvements in business processes.

| 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |

Management understands the relative costs of servicing customers.

| 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |

There is a designated Customer Service governance structure to undertake the customer management activities.

| 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |

You have introduced KPIs to measure process efficiency.

| 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |

**Customer Management Activity**

Organization defined communication standards and protocols.

| 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |

You’ve conducted spot checks on compliance with standards and protocols.

| 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |

There a single point of contact with a customer.

| 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |

Customer communication is coordinated across the organization so that customers view the organization as an integrated unit.

| 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |

You regularly inform customers of the progress of their complaints or service requests.

| 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
Measuring the Effect

You investigate the root causes of complaints and take proactive action to prevent reoccurrence.

You defined a set of performance metrics at departmental level that are related to customer experience.

You developed tailored service offerings or improvements as a result of customer feedback.

Improvement initiatives are analyzed regularly after the implementation.

Overall, improvements helped significantly to improve Customer Relationship Management.

Understanding the Customer Experience

Customers are engaged in regular activities to propose improvements.

Customers are satisfied with the responsiveness of the organization.

Customers are satisfied with your process efficiency.

There is a follow-up for those customers who expressed negative feedback.

Customers are satisfied with company improvements.
Appendix D

Summary of questions discussed at Carl Zeiss Mexico

1. What are the current problems your service organization is struggling with?
2. How is the service process set up presently?
3. What is the customer feedback you are currently receiving?
4. How many calls are you currently handling?
5. Do you have any reporting in place measuring call efficiency (waiting time, number of dropped calls, etc.)?
6. How do you want to set up CIC?
7. What tasks do you want to delegate to CIC?
8. What competencies will CIC require from your local organizations?
9. What are the necessary complementary measures to support CIC set-up?
10. What are the possible drawbacks of CIC set-up?
11. How would you measure CIC performance?
12. What hiring option would you choose for CIC?
13. What are the cultural nuances to keep in mind?
14. Are you willing to delegate some sales activities to CCAs?
15. What support from headquarters would you require?