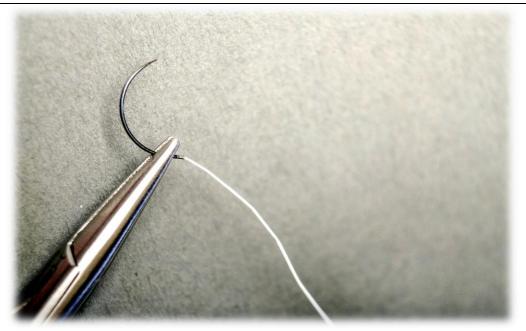


## **Brand Failure Management**

# and Securing Customer

## **Forgiveness in the Global**

## **Surgical Suture Industry**



SCHOOL OF SCIENCE & TECHNOLOGY

A thesis submitted for the degree of

Master of Science (MSc) in Strategic Product Design

Thessaloniki, Greece, 10/12/2019

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I hereby declare that the work submitted is mine and that where I have made use of another's work, I have attributed the source(s) according to the Regulations set in the Student's Handbook.

10/12/2019

Thessaloniki - Greece

#### Abstract

Service failures represent issues that occur within customer-firm exchange relationships and usually cause service failure and negative brand association. The construct of customer forgiveness is not easy to achieve, as it is a motivational process and requires a deep understanding of the transgression circumstances, service recovery, and broader marketplace realities.

In my research, I identified the actions a surgical manufacturer company has to undertake to secure customer forgiveness, the actions that a suture producing firm considers essential for reversing a potential negative impact on business, and the measures the employees need to adopt to limit the end-users' negative impressions about the product.

The research was conducted with the help of three executives of a Greek suture manufacturing company, Medipac SA using semi-structured interviews, analyzed by thematic analysis.

Our results showed that failure incidents of the company relate first to procedural problems and second to performance problems. A small part of the brand's failure is related to product placement strategies in new markets.

The company manages the brand failures with organized promotions, collaboration with the end-users and thorough investigations of errors. The company plans to make public the methods of use of its products, as well as its focus to quality and customer satisfaction.

Keywords: brand failure, customer forgiveness, suture, service, brand management

**Dimitrios Kapoulas** 

10/12/2019

#### Preface

The basis for this research originally stemmed from my passion for extending my knowledge on Branding, Marketing and Consumer Behavior disciplines. My scientific background is in Mechanical Engineering, 5-year studies in the Polytechnic School of AUTH that fulfilled me and helped me broaden my horizons further. The deep technical knowledge I gained from my first degree's curriculum has paved the way toward my becoming a well-organized professional with analytical skills and it has undoubtedly rooted deeply in me the merit of concrete thinking as well as the necessity of being consistent in every task assigned to me. Meanwhile in my leisure time, I used to exercise my professional skills through my involvement in a series of summer internship programs, my participation in specialized seminars related to important design tools or even my decision to work worker.

Nonetheless, from my childhood I have had an inherent curiosity to learn more things about the way people think, process, reflect and finally decide on what to buy to satisfy their needs. Furthermore, although a Math lover, the area of Psychology has always intrigued me since it covers a series of subjects related to human mind processes, emotions, perceptions, cognition, behaviors, brain functions, understanding the effects of conscious and unconscious and so forth. When I learnt about the existence of MSc program named "Strategic Product Design" (and especially about one of its streams named "Product Management") provided by the IHU establishment, I felt like I found out the right means by which I could fulfill this gap and so happened. I went through the program's curriculum and its inclusion of Psychology-related courses, like the "Consumer Behavior" or the "Marketing & Branding" ones, excited me much. The selection of this topic for my thesis has not been opted for randomly. Right after the completion of my studies in the Polytechnic School of AUTH, I got hired by a Greek suture manufacturing company as sales manager and since then, I have attempted many times to connect the theory I was taught with the real-life practice in the Greek industry. All the times I did so, I recognized the real value behind this discipline.

Lastly, this thesis is aimed at all scientists and professionals seeking out some specific representation of how brand failures are reflected in real conditions and how customer forgiveness can be attained in the context of a manufacturing firm operations.

#### Acknowledgements

Many an effort has been exerted towards writing and delivering my dissertation thesis and I am very proud that I have coped with every challenge set during my MSc journey. I feel very grateful that I completed its preparation with success and herein, I need to stress the contribution and valuable support of some individuals who played a vital role to this.

First and foremost, I have to start particularly by expressing my deep sense of thankfulness to my supervisor, Ms. Nicoletta Siamagka, for the continuous support and the central guidelines she provided me with throughout the writing of my thesis as well as for her patience and tolerance she repeatedly showed until I completed it. Her contribution is deeply appreciated and has been fairly determining to my work.

I would like also to acknowledge my colleagues and my Managing Director, Mr. Kazantzidis, for their kind willingness to help me carry out the interview for the suture brand failures and the excellent cooperation we have held so far. Through their knowledge and experience, I have learnt plenty of new things about the surgical suture sector helping to become a complete Sales Manager in this amazing company.

Additionally, I would like to express my sincere gratitude to the whole Academic staff of the two educational establishments through which I opted to follow my dreams: The Mechanical Engineering Department of the Aristotle University of Thessaloniki and the International Hellenic University. The educational context, deep knowledge and the intellectual skills they imparted me have been the most valuable means in my arduous efforts to every success I have enjoyed so far. When it comes specifically to my thesis, I would like also to express my thanks to Prof. Polaris (IHU) for the very first intriguing impressions he created in my mind about the Marketing science during his lectures in the "Marketing & Branding" course.

Last but not least, I am eternally grateful to my parents whose ultimate love, moral support, personal attention and care have been always with me in whatever I pursue. They have been always supporting my emotionally and financially to follow all my dreams. They always believed in me and wanted the best for me. This, as well as many other such journeys in my life, would not have been possible without their precious support.

Abstract	4
Preface	5
Acknowledgements	6
List of tables	9
List of figures1	0
1. Introduction 1	1
1.1 Background1	1
1.2 Focus and scope1	2
1.3 Value of the Research	3
1.4 Research Aims and Objectives1	4
2. Literature Review	4
2.1 Brand Management and Brand Failure Management1	4
2.2 Brand Relationship Quality in Response to Service Failure	6
2.3 Brand Failure and Securing Customer Forgiveness1	8
2.4 The Global Surgical Suture Market2	1
2.5 General and Special Suture Specifications	3
2.6 Brand Management in Surgical Suture Industry2	8
3. Methodology	0
3.1 Research aims-questions	0
3.2 Research design	1
3.3 Population - Sample	1
3.4 Procedure - Method of data collection	1
3.5 Analysis tools	1
3.6 Moral issues	5
3.7 Reliability and validity of data	5
4. Results	5

### Table of contents

5. Conclusion	67
Bibliography	
Appendices	71

### List of tables

Table 1. Axes and questions	33
Table 2. Degree of brand management importance and methods of brand	manage-
ment	36
<b>Table 3.</b> Degree of importance of brand failures and causes	42
<b>Table 4.</b> Treatment of failures and associated gains from processing failures	44
<b>Table 5.</b> Types of damage, the most common brand failure	50
Table 6. Modes of handling	52
Table 7. Attribution of liability for suture brand failures and failure prevent	ion mea-
sures	56
<b>Table 8.</b> Default actions in case of failure	61
<b>Table 9.</b> Efforts to reduce brand failures	65

### List of figures

Figure 1. Medipac SA logo	13
Figure 2. Conceptual model of trust repair	20
Figure 3. The role of consumer forgiveness in the service transactional model	20
Figure 4. How the concepts in the frame of reference relate to each other	21
Figure 5. Classification of Suture Materials	26

#### **1. Introduction**

#### **1.1 Background**

A famous quote by Stephen Hawking says that "We all live in an imperfect world and one of the basic rules of the Universe is that nothing is perfect. Perfection simply doesn't exist." (Nguyen, 2015, pp. 31). Failures could be regarded as an example of this contextual approach and human failures in all aspects of life seem to be an integral and unavoidable part of people's journey in this exciting world. When it comes to the modern world and the industries having been born by the human intelligence and versatility towards improving the quality of mankind life, the term "failure" can take specific meanings. All the industries are dominated by enormous series of brands, the public is perpetually informed about their release, their existence and the scientific work behind their management has been extensive the last decades. In modern scientific literature, brands have been attributed with lots of traits, definitions and even with an identity that renders them more than a sold tangible or intangible offering. Nowadays, brands can have personalities (Brand Personification), like individuals, shape purchasing behaviors as well as promote the development of emotional bonds between them and consumers (Franzen & Moriarty, 2015, pp. 228 -249). Failures can also be a part of their life span. In connection to this thesis topic, the failures and the failure management processing in light of a specific marketable product category is being examined: This is the surgical suture article.

Brand failures can have multiple forms, granted the vast variety of products and services being offered in the complicated world we live now. An international marketplace, teeming with countless commercialized products and services, rules our everyday life decisions and shapes our consumption patterns and lifestyle. The term "brand" has gained specific value since Marketing as well as Psychology sciences are evolving day-by-day. Brand failures represent one the most crucial topics in Brand Management, as it is claimed that around 80% of new products fail right after their being introduced into the market while 10% of them reach an end after five years of circulation (Haig M., 2005, pp.5). However, what about the treatment needed on behalf of the product or service provider after the occurrence of such a brand failure incident?

Brand success and brand failure depend on trust and relationships between brand and consumer, brand image, brand quality promise and brand promotion, as the customer is

the only one who can decide the course of a trademark. Trust relationships, when created, lead to interactions that develop a brand awareness. This bond, when disturbed, leads to a distorted perception of the brand (brand failure), the competition, or the market (Pahwa, 2019).

Brand equity usually entails favorable predispositions that may result in repeated buying preference (or any buying behavior). Another benefit of brand equity occurs when a healthcare organization fails in service. The brand's previous integrity is recognized as a dominant advantage that covers the entire failure and recovery process. Customers exposed to a failure seem to be more satisfied and more willing to return to high-reliability brands than low-reliability brands. In healthcare, patients do not always complain when they perceive a service failure, and the organization does not discover that it should be involved in service failure recovery actions (Ginter et al, 2018).

#### **1.2 Focus and scope**

Considering that every sales occasion, and especially every post-sales service scheme, concerns humans, we can infer that business is firmly linked to human interactions. Failures in the offering quality per se or its consolidation in a commercial society are transmitted to those interactions and people who market them are the direct complaint recipients. Nowadays, a more contemporary notion embraced by more and more marketeers defines that products (or services) have their own personalities, lifecycles and consumers develop a certain relationship with them. Surgical sutures are an example of this, with surgeons, as final users, being very attached to them. Surgical operations are an integral part of the surgical process concerning wound closures and necessary for treating many human diseases. By definition, "Surgical suture is a medical device used to hold body tissues together after an injury or surgery" (Surgical suture, n.d.). Failures in those special articles could potentially ruin the brand-user relationship and cause irreversible damage to manufacturers. Hence, suture brand failure management seems to require careful handling. The purpose of this dissertation is to identify the actions a surgical suture manufacturer has to undertake in an attempt to secure customer forgiveness and limit the negative reactance on the consumer's part. This dissertation will also seek to interrogate to what extent a suture producing firm can cope with the negative impact on business a suture failure can potentially create and what measures salespeople can adopt to communicate latent massages to the end-users so as to limit the negative impressions about the product per se.



Figure 1. Medipac SA logo.

For the purposes of this research, a Greek company, the first one reported to produce surgical sutures in the country, whose name is Medipac SA (https://www.medipac.gr/) contributed to the research conducted. The logo of the company is shown in **Figure 1**.

#### **1.3 Value of the Research**

Philosophy and Psychology are strongly concerned with the concept of forgiveness, but lately this concept also concerns the business sector. However, there are not enough studies dealing with customer response strategies in product/service failure cases. Specifically, the conceptual framework derived from the two theories of forgiveness and response usually focuses on planning, methodology and the approach of reversing the negative climate. In our research, a literature review on forgiveness, service failure, and service recovery was conducted to create a conceptual exploration of the role of forgiveness in the field of healthcare industry. While previous consumer behavior studies have investigated into consumer emotional and behavioral situations following service incidents, the majority of them ignored a critical intrinsic psychological aspect that has a long-term impact on service outcomes: the effects of the failure on the functioning and processes of the organization, as well as corrective actions which focus on restoring consumer relations. Thus, the focus of this study is to design a conceptual framework for consumer forgiveness, which identifies the various stages through which organizations achieve forgiveness. A number of processes and corporate policies can facilitate the process of forgiving consumers and identify the goals of the organization in relation to its customers. Originality/Value - This work is one of the first attempts to incorporate the idea of forgiveness from the field of psychology into quality management research, highlighting the role of forgiveness as a coping strategy in the business sector.

#### **1.4 Research Aims and Objectives**

The purpose of this paper is to explore the strategies that the company undertakes to avoid Brand failure and achieve forgiveness within the surgical suture industry. Research will benefit from this study, as it underlines the need for knowledge about how organizations respond to the failures of the service and the impact a service failure has on the brand.

The following research questions act as guidance and direction of the research, providing the basis

of the study, and will be answered to fulfill the purpose of the thesis:

- 1. To which degree the Brand Management is considered as one of the vital tools for development and improvement by the organization?
- 2. What does a suture brand failure mean and which factors are responsible for a Suture Brand Failure?
- 3. How would the organization avoid or handle a Brand Failure?
- 4. Which would be the corrective actions in case of a systematic defect in the final product?

#### 2. Literature Review

#### 2.1 Brand Management and Brand Failure Management

A brand is a name that motivates shoppers. The definition captures the essence of a brand: a name that has the power to influence shoppers. Of course, this is not a choice of the name itself. Certainly, a well-known name helps: it is what is recognized and causes spontaneous associations. What really makes a name a brand is the attractiveness, the saliency, the intensity and the trust associated with those associations. Are the benefits that the name brings, exclusive and reliable? We live in a global economy that focuses on credibility: There are so many options and opacity that consumers cannot spend their time comparing products before making a choice. It is timely and practically impossible, and even if they did, they cannot be sure that they will be able to determine the right product or service for them (Kapferer, 2008).

Branding is the beginning of the communication and recognition process. Before preparing any marketing and advertisement, business images related to the organization and its products must be developed. Therefore, great care must be taken to ensure that the brand is treated as a whole, regardless of the promotion of communication methods. Since

branding efforts are the beginning of all marketing communications, any neglected introduction will negatively impact upcoming advertisement and other forms of promotion. Even after proper preparation, however, the branding efforts do not stop. Instead, they continue indefinitely as a means of ensuring that the branding promises remain meaningful and relevant, which is essential due to the ever-changing nature of the environment and associated challenges. Trademarks really need to evolve as environments evolve. Today's successful brand expression can become unsuccessful over time as preferences, policies and other variables change, requiring vigilance in monitoring brand performance and willingness to introduce updates and improvements as needed to ensure better customer relationship building (Elrod & Fortenberry, 2018).

There is extensive literature on brands and branding, but research on brand failure is very limited. From the relevant literature we can draw some conclusions. While most of the studies talk about the factors that make a brand successful, not enough data is provided on the factors that lead to brand failure. The work recovered in this area focuses on how successful the big brands are and what aspects help them to achieve excellence. The most comprehensive work on brand failure has been done by Matt Haig. According to the author, there are seven critical errors that could lead to a brand failure (Haig, 2005). Haig summarized these failures as: 1) Brand Amnesia, when the brand forgets what it stands for and tries to change itself, 2) Brand Ego, when the Brand is considered to represent a separate value and seek to differentiate itself into other irrelevant areas, 3) Brand Megalomania is the result of the ego and it is the result of an extension of the brand into many categories, 4) Brand Deception is the mistake that the brand represents what it is not, 5) Brand Fatigue happens when the brand is not adapted to developments and remains without renewal, 6) Brand Paranoia, tries to change it to resemble its competitors, out of fear for the competitors, 7) Brand Irrelevance, when the brand does not change as the consumer needs change, especially in evolving markets. Several other studies have touched on this issue. Brand failures can be categorized into two major categories. a) Failure of strategic/organizational level. b) Failure at product/brand level. Failure at the strategic/organizational level involves the mismatch between organizational strategy and its resources. A product from an organization will only be successful if the organization management fits into the organization of the market. A failure at the brand/product level occurs when the brand no longer satisfies the customer, on a functional or emotional level (Saeed & Siddiqui, 2016).

#### 2.2 Brand Relationship Quality in Response to Service Failure

Customers who have a strong relationship with a service provider or brand, represent the key to quality corporate programs. Research suggests that organizations with strong customer relationships are more profitable and flexible in adapting to the market. Despite the growing interest in customer relationship management (CRM), research to date has not examined the effects of relationship endurance or qualty, when customers face service failure problems. Understanding how the relationship bonds affect affiliate responses to service failures is important because service failures have the potential to turn valuable customers into "enemies", a development that could have a serious impact on a company's reputation. and its long-term survival. Understanding the role of the impact of relationship bonds, is important for both theoretical and managerial reasons. In theory, controllability of the effect of relationship, can predict customer reactions to service failures. From a managerial standpoint, understanding relationships provides information on how company's best customers are likely to respond to service difficulties (Grégoire & Fisher, 2006).

Quality of service is the key component that determines the organization's relationships with the customers. It represents an important aspect of the relationship bonds and it is often a tool used by consumers to judge the performance of a business. Businesses that gain reputation and a higher market share for superior customer service is more likely to gain competitive advantage in highly competitive environments. Because service failures are almost unavoidable, quality of service becomes the most important determinant of customer satisfaction and loyalty. From the seriousness of service failure to all customers, quality management and is becoming increasingly critical by most businesses to achieve market diversification and competitive advantage (Lai & Chou, 2015).

The company's reputation regarding the quality of its services determines the customer's expectation. Previous studies indicate that customers maintain different levels of expectations, depending on brand reputation. For highly reputed brands, customers have higher expectations and consider them to provide excellent service. The findings of many researches confirm that customers are positively associated with brand reputation and this affects their perception of service performance and quality. In such cases, how brand reputation affects service failure assessment is an important managerial issue. So far, little research has focused on the role of brand reputation in evaluating the effects of service failure. Service failure causes an internalizing process of coping with clients attempt to

alleviate the stress associated with negative experiences. During service failure, clients engage in a range of coping strategies such as active response, avoidance and support seeking to overcome the negative situation. However, the stress recorded depends on the expectations of the firm's customers. This suggests that customers may use different coping strategies depending on brand-related expectations. Nevertheless, there is little systematic research into the relationship between brand reputation, customer response strategies and service failure results (Sengupta et al, 2015).

Consumers tend to compare the perceived performance of a product/service against their previous expectations. If the result of the comparison turns out to be worse than expected (negative disconfirmation), better than expected (positive disconfirmation) or the same as expected (zero disconfirmation or confirmation), the customer will proceed with the satisfaction evaluation. During the service recovery, the disconfirmation still exists and includes three stages, Service Recovery Satisfaction (SRS), Service Recovery Expectation (SRE), and Service Recovery Performance (SRP). A customer who has suffered a service failure will also have an expectation for service recovery from the service provider. If the recovery service evaluation is positive (SRE <SRP), service recovery will be confirmed. In other words, if a customer does not feel satisfied with the recovery of services, it will express a negative recovery service disconfirmation (SRE>SRP). The service recovery confirmation/disconfirmation also confirms the customer's general attitude towards a product, service or brand. The attitude the client takes towards a process guides the behaviors such as repetitive purchases, potential brand trust and brand loyalty (Lai & Chou, 2015).

If a company succeeds with its branding activities, the relationship between a consumer and a brand is likely to be strengthened. A close relationship between the consumer and the brand increases the likelihood of attracting the customer. The relationship between a brand and a customer arises when the brand is perceived by the customer as a person rather than a product or service. In order for a consumer to engage in a relationship with a brand, the consumer must benefit from the brand. Brands can make people express their personality in different ways, depending on whether there is a link between the brand and the person. Just as emotions can be associated with a person, they can also be associated with a brand. Different emotions may arise depending on the brand and to what extent the person is associated with it. Similar to how people's actions will affect their perceptions of personality, a brand's behavior will affect people in the same way. Consequently, the relationship of consumers to the brand depends to a large extent on the attitude expressed towards the brand image (Ledin et al, 2016).

#### 2.3 Brand Failure and Securing Customer Forgiveness

Service failure is defined as the failure to meet a customer's expectations. The severity of failure refers to the perception of the customer intensity of a service. The process of returning affected customers to a state of satisfaction is defined as the process followed by the organization to recover the desired quality of a service or product. Service recovery includes the actions and activities that thethe service provider (the firm), uses to correct, modify and restore the losses that customers experience as a result of service deficiencies. But the more serious the failure of the service, the greater the perception of loss on behalf of the customers (Lai & Chou, 2015).

Service failure is a situation that occurs when a customer's expectations are not met when delivering the service. Naturally, companies are interested in understanding how service failures occur, as such incidents cause a number of impacts. Customer reactions to service failures are often strong. Therefore, it is essential that the firm's recovery efforts must be equally strong and effective. Service failure is a major cause of negative publicity, as disgruntled customers in many cases decide to publicize service failure in order to complain about the negative experience. When companies receive negative publicity after failing to serve consumers, their relationships with customers are affected and the level of trust and loyalty will be reduced and therefore brand-consumer bonds will be damaged. Negative publicity threatens the brand image of a company and can have a negative impact on the perceptions of future consumers by affecting the brand image and the relationships between the brand and the consumers (Ledin et al, 2016).

Forgiveness is a multidimensional phenomenon, as it is not always clear why and under which conditions people forgive. Forgiveness is also perceived in different ways between cultures and times. Various authors argue that forgiveness is an interpersonal process, which occurs between the one who forgives and one that seeks forgiveness or may be an interpersonal experience, which means that it takes place within the individual. The fact that consumer behavior differs across generations is a challenge when studying consumer forgiveness and recognizing these important differences in understanding consumer behavior across different generations. It has been suggested, for example, that some generations are more loyal consumers, while others are more materialistic. However, these characteristics may be influenced by social events that shape the values and behaviors associated with a generation, but vary by country. Scholars have reported different factors in terms of forgiving consumers, but the relationship between the consumer and the generation has not been clarified (Hyllstram et al, 2017).

Bibliographic research presents strategies that deal with service failures and management in order to achieve consumer forgiveness. A general strategy to be applied to achieve consumer forgiveness, for whatever action is the condescension strategy. The strategy involves apology, expressing regret and sorrow as well as accepting guilt. Another effective approach is to conduct marketing communication campaigns that can help restoring consumer confidence and eliminating consumer fear. In addition, since trust and dedication are essential for a strong and long-lasting brand-consumer relationship, they are also the key to achieve brand forgiveness (Ledin et al, 2016).

The three key elements of apologetic responses that apply to businesses that need to recover confidence are: affective repair efforts, functional repair efforts, and informational repair efforts (**Figure 2**). Affective repair efforts include apology, remorse and compassion expression. Functional repair efforts are for example financial compensation and organizational steps to avoid repeating errors. Informational repair efforts are the communication of updated information. These three efforts enrich consumers' loyalty to the company's competence, efficiency and integrity and are central elements of forgiveness as well as trust when a business tries to rectify a service failure. Affective efforts are the top efforts when companies want to build an image of integrity and competence. On the other hand, informational repair should be used during forgiveness and confidence recovery, if the company aims to regain consumer perceptions of competence and integrity. In addition, functional efforts are effective in competence building situations. Many a researcher states that functional efforts have a weaker effect on trust and forgiveness than informational efforts (Ledin et al, 2016).

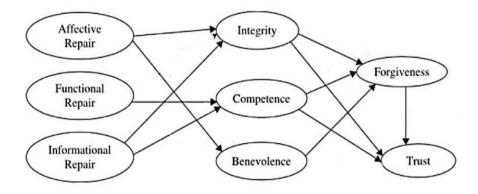
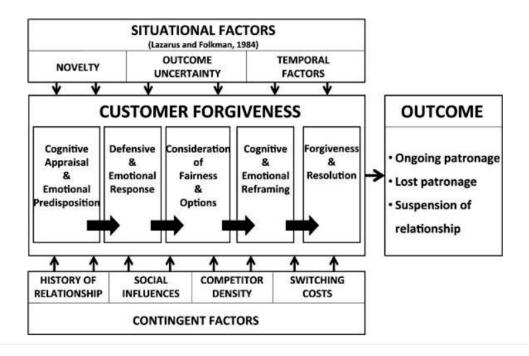


Figure 2. Conceptual model of trust repair (Ledin et al, 2016).

Tsarenko and Rooslani Tojib (2011) propose a theoretical model based on occasional factors thataffect consumer behavior after a service failure. This model suggests additional forgiveness factors. In addition to the strategies provided in the conceptual model mentioned, this model incorporates potential situations and components that represent various factors that have an important role in consumers' forgiveness. The three casual factors proposed by Tsarenko and Rooslani Tojib (2011) are Novelty, Uncertainty of the results and the Temporal Factors (**Figure 3**). These factors are important in shaping consumer confidence, evaluation and response after a service failure event (Tsarenko & Rooslani Tojib 2011).



**Figure 3**. The role of consumer forgiveness in the service transactional model (Tsarenko & Rooslani Tojib 2011).

Brand forgiveness is a complex concept with similar complex challenges and difficulties. According to the literature, brand forgiveness is a concept particularly associated with the basis of the brand-consumer relationship. **Figure 4** shows how the parts of the relationship are connected. Building a brand-consumer relationship involves the creation of the brand image, which, as we mentioned, is often portrayed as a person in consumer psychology. If the brand image and consumer perceptions are positive, trust and loyalty can be secured between the consumer and the service provider. This, as a result, will create a strong brand-consumer relationship. **Figure 4** shows the strategies of forgiveness, as well as important factors that influence consumer response to failure (Ledin et al, 2016).

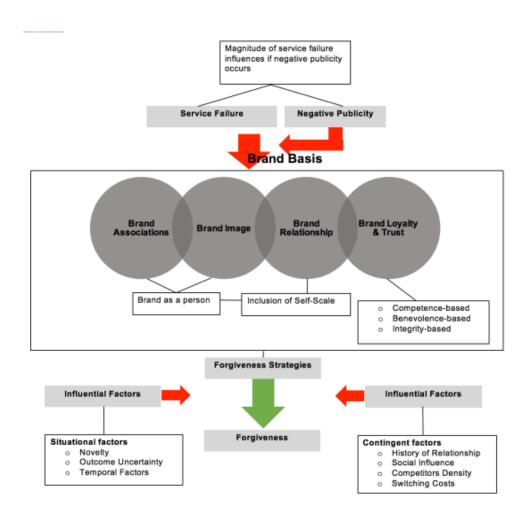


Figure 4. How the concepts in the frame of reference relate to each other (Ledin et al, 2016).

#### 2.4 The Global Surgical Suture Market

According to a Grand View Research report, the size of the global surgical sutures market is expected to reach \$ 5.9 billion by 2025. It is also expected to expand at a CAGR of

6.5% over the same period. The increasing incidence of complex surgeries and awareness of patient safety during surgery, are expected to drive the market in the coming years (Grand View Research, 2019).

The aging of baby boomers and the introduction of various types of sutures by market leaders are other major factors affecting market performance. For example, in November 2015, the US Food and Drug Administration (FDA) approved the RESORBA suture series developed by Advanced Medical Solutions Group plc. In addition, the advantages of polythene sutures over staples and adhesives in demanding surgeries are likely to promote future market growth. Staples cause more pain and are less accurate in complicated wound closure, so polyethylene sutures are preferred over staples. This factor is expected to be an essential element for the development of the surgical sutures market during the forecast period. Increasing numbers of surgeries due to aging populations, increased government support in many countries and more favorable reimbursement scenarios are likely to drive the market further in the coming years (Grand View Research, 2019).

The two main types of sutures are absorbable and non-absorbable sutures. The absorbed suture provides temporary support to the wound until it is healed, withstands normal stress and does not need to be removed after surgery as it is absorbed by the body after a certain period. This factor is expected to increase demand for this type in the near future (Grand View Research, 2019).

The overall market for surgical sutures in many countries is also growing significantly, due to the increasing number of surgeries and burning accidents, the aging population and the increasing prevalence of chronic diseases, as well as the technological developments. However, factors such as increased preference for less invasive surgeries that may affect suture demand, the availability of alternative wound management products and the lack of proper sterilization systems may hinder market development (Meticulous Research, 2019).

The worldwide surgical sutures market is mainly segmented by product, application, enduser and geography. On the basis of the product, the worldwide market for surgical sutures is primarily segmented into sutures and automated suturing devices. The suture threads hold the largest share of the overall surgical sutures market, however, the automated staple segment is expected to show the highest CAGR in the near future, due to the increased preference for minimally invasive surgical procedures, the reduced risk of injuries for the surgeon and the benefits of using automated staples instead of manual methods (Meticulous Research, 2019).

According to the application, the overall market for surgical sutures mainly refers to cardiovascular procedures, general surgeries, gynecological surgeries, orthopedic surgeries, ophthalmic surgeries, plastic surgeries and other. The cardiovascular sector is estimated to represent the largest share of the total surgical sutures market in 2019. This segment is also expected to record the highest growth due to factors such as increased prevalence of cardiovascular diseases, increased availability of improved products and increased incidences of Coronary Artery Bypass Graft (CABG) across the world (Meticulous Research, 2019).

Based on the end user, the worldwide market for surgical sutures is mainly segmented into hospitals, ambulatory surgery centers, and clinics and private practices. Hospitals have been the main end users, mainly due to the growing number of complex surgeries performed in hospitals, favorable reimbursement policies for hospital treatments and the growing number of private hospitals, especially in emerging countries (Meticulous Research, 2019).

The worldwide market for surgical sutures is influenced by three major organizations: B. Braun Melsungen AG (Germany), Ethicon, Inc. (Johnson & Johnson) (USA) and Medtronic plc (Ireland). Other major companies appearing on the market are Teleflex Incorporated (US), Smith & Nephew (United Kingdom), CONMED Corporation (US), Internacional Farmacéutica S.A. De C.V. (United States), Boston Scientific Corporation (USA), DemeTech Corporation (USA), Peters Surgical (France), Sutures India (India), EndoEvolution, LLC (USA), Surgical Specialties Corporation), along with several smaller local companies (Meticulous Research, 2019).

#### 2.5 General and Special Suture Specifications

It is known that surgical sutures are a necessary and critical part of surgery and trauma management. The main purpose of the sutures is to hold apposing tissues together, in order to speed up the healing process with minimal or no scarring, following the injury or the surgery. A variety of materials, such as gold, silver, iron and steel fibers, dried animal gut, animal hair (eg horse hair), silk, tree bark and plant fibers (eg linen, cotton) have been used as suture materials in the past, some of which are still used today.

Moreover, various synthetic biomaterials have been used in the past, such as polydioxanone, poly (lactic-co-glycolic acid) as raw materials for the manufacture of sutures. However, despite the availability of a wide range of materials, there is no specific suture material that makes a type of suture suitable for all types of surgery and medical procedures (Gokarneshan, 2018).

According to the Greek National Organization for Medicines (EOF), the general suture specifications are:

1. Mandatory reference to the factory production code on every product.

2. The following indications must also be stated in theGreek language (PES/2480 Art. 4 (4)):

- The Suture thickness must be according to the European Pharmacopoeia (Gauge Number).
- **4** The Suture length must (in metric system).
- $\downarrow$  If the needle is detachable.
- 4 The intended use.
- If it is colored.
- **4** The possible structure (single strand, polyclonal, knitted or twisted).
- $\downarrow$  The possible sheathing.

3. The stitches must be delivered within six months from the manufacturing dates.

4. The sutures offered must be certified (CE certified) in accordance with the applicable law and must be compliant with European Pharmacopoeia.

5. The sterilization method of the sutures must be indicated.

6. The particulars which relate to the type, the length and the thickness of the suture, as well as to the type and length of needle, must be clearly described on the labeling.

7. The materials shall be packed in such a way as totheir sterilization is maintained.

8. Prior to the final purchase, the client must be able to carry out sample testing in an independent quality control laboratory. The Hospital Reception Committee may also carry out sample checks. Expenses are charged to the supplier.

9. The length of the needle may be shorter or longer up to 3 mm of the requested.

10. The length of free sutures (ligations) can be up to 10% smaller and up to 20% larger than the requested length. If the length of the offered free suture is larger than requested, the extra length won't be be considered as an evaluation criterion. In case of tenders with different number of threads per packaging, the price per piece will be taken into consideration.

11. The length of the suture can be up to 10% shorter of the indicated. If the length of the offered suture with needle is larger than the requested, the extra length won't be considered as an evaluation criterion.

12. The suppliers must indicate the manufacturer as well as the place of origin, according to the Article 18 of the Presidential Decree 394/96 (with a disclaimer).

13. Sample submission by category is compulsory.

14. The submition of package leaflets of all suture categories, with instructions in

Greek is mandatory.

15. For any type of synthetic absorbable suture, clinical studies must be filed, reporting the behavior of the suture into the tissue.

16. The official factory lists, which include codes and descriptions of all suture types, must be submitted (Syzefxis, 2014).

Demands for innovative suture materials are increasing due to the increasing number of surgical procedures around the world and the requirement for minimally invasive surgical procedures, irrespective of the availability of older technology sutures. The choice of a type of suture in wound management depends largely on factors such as the number of tissue layers involved in wound healing, the tension along the wound depth, the presence of swelling, the estimated time of suture removal, and the behavior of the sutures to cause minimal or no inflammatory reactions. Sutures should also have significant flexibility and pliability for better handling characteristics during the process. In addition, ease of knot placement, high knot safety, no irritation reaction, or contaminants delivery, are also particularly sought after features. Suture materials available for routine use today meet most, but not all, of these requirements. Therefore, current efforts are focused on the development of suture materials that have all the desired features along with additional characteristics, such as the ability to deliver drugs and cells to facilitate and/or enhance wound healing (Gokarneshan, 2018).

Sutures are classified into three categories according to the materials of their structure and their origin. These are sorted by the Food and Drug Administration (FDA) on the Safe Medicical Devices Act (SMDA) and Food and Drug Administration Modernization Actof USA (FDAMA). The FDA classifies medical devices used for humans,in terms of their effectiveness and their safety. The sutures are classified as Class I (General controls), Class II (Special controls), Class III (pre-market approval). These controls are specified in the FDA's SMDA guidance documents and FDAMA. **Figure 5** shows the basic classification of surgical sutures (Srinivasulu & Dhiraj Kumar, 2014).

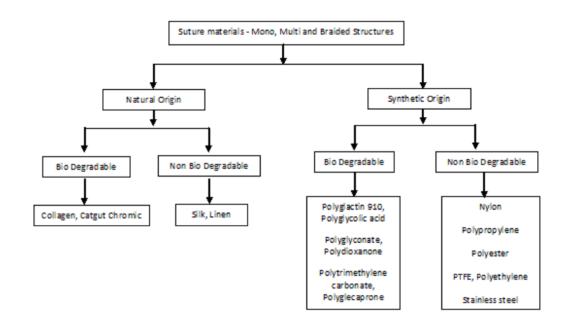


Figure 5. Classification of Suture Materials (Srinivasulu & Dhiraj Kumar, 2014).

#### **Basic suture characteristics**

All suture types must follow specific manufacturing specifications as follows:

- \rm Sterility
- Uniform diameter and size
- Pliability for easy handling and knot security
- 4 Uniform tensile strength according to suture type and size
- Free from pollutants or irritants that may cause tissue reaction

#### **Other suture characteristics**

The following characteristics are related to the suture material:

- Absorption Gradual loss of mass and/or volume of suture material. It is not associated with the initial tensile strength
- **W** Braking strength Tensile strength limit at which suture fracture occurs.
- Capillarity The extent to which the absorbed fluid is transported along the suture.
- Elasticity Measure the material's ability to recover its original shape and length after deformation.
- ↓ Absorption of liquids Ability to absorb fluid after immersion.
- Knot-Pull Tensile Strength Fracture strength of the knotted suture material (10-40% weaker after deformation by knot allocation).
- Node Strength The amount of force needed to cause a knot slip (related to static friction coefficient and plasticity of a spesific material).
- Memory The inherent ability of the suture to return or maintain its original shape, after deformation (related to elasticity, plasticity and diameter).
- Non-absorbable Surgical suture material that remains relatively inactive by the biological activities of body tissues and therefore its presence is permanent unless removed.
- Plasticity Measures the ability to expand without breaking and to maintain a new shape after the deformation force has ceased.
- Pliability Easy to handle suture material, ability to adjust knot rigidity and ensure knot safety (related to suture material, fibre type and diameter).
- **4** Straight Pull Tensile Strength Linear fracture power of the suture material.
- Suture Pullout Value Applying force to a suture loop located on the tissue failure area, which measures the strength of a particular tissue. Variable depending on the anatomical location and histological composition (fat, 0.2 kg, muscle, 1.27 kg, skin, 1.82 kg, fascia, 3.77 kg) (Srinivasulu & Dhiraj Kumar, 2014).

Surgical sutures play a vital role in medicine when managing wounds and in many other medical treatments. Recent developments have expanded their applicability and have demanded their highest efficiency. Significant progress has also been made in the technological evolution of materials. Polymers have significant potential and high plasticity, which makes them excellent materials for special sutures with demanding physical and mechanical characteristics. In addition, biodegradable polymers, can be easily cleaved and released ort be absorbed without removal or surgical procedure. These materials are also known for their contribution as carriers of drugs, stem cells, proteins, peptides, antibodies, DNA, nanoparticles, and so on, thereby enhancing the therapeutic potential of the sutures. The basic function and effectiveness of sutures depend on their physico-mechanical behaviour, and it is vital to maintain these characteristics, whilst being modified or coated with bioactive compounds. In addition, for better handling characteristics and the desired modifications, they should also be non-carcinogenic, non-toxic, free of allergens, and should notcause any adverse reaction to the patient's tissues. To cope with the rising requirements, it is necessary for the construction company to carry out a detailed pre-clinical study and assessment of the safety of all new types of sutures (Gokarneshan, 2018).

#### 2.6 Brand Management in Surgical Suture Industry

The quality of health care has been defined as "the extent to which health services for individuals and populations increase the likelihood of desired health outcomes". To this end, the Lancet Committee on World Surgery and the guidelines of the World Health Organization (WHO), recognize that efficient clinical protocols are important in surgical care. One aspect of this strategy is to improve resource management by reducing costs without compromising clinical standards. Such a system needs to provide surgical supplies that meet clinical requirements and international product standards. Surgical sutures have been an integral part of the surgical practice for more than 5000 years, and therefore are essential consumables. Despite considerable studies evaluating different types of suture materials, no standardized control procedure has been established, as the studies cannot control disease, patient and care dependent variables. Therefore, the use of the suture materials is usually empirical, based on personal preference, and is dependent on the requests of individual surgeons. These varieties and quantities of suture materials can be economically inefficient and difficult to manage (Puttergrill et al, 2018).

The demand for innovative surgical suture materials is increasing, as we have seen, due to the increasing number of surgeries around the world, irrespective of the availability of suture substitutes such as surgical staples and tapes in the market. Several efforts have been made to develop technologically advanced sutures with additional characteristics, such as smart sutures, antimicrobial sutures and bioactive sutures. This will give further

stimulus to the development of surgical sutures market in the coming years (Meticulous Research, 2019).

#### Here are the top companies active in this market:

It was founded in 1839 and is based in Melsungen, Germany. Braun Melsungen AG, along with its subsidiaries, manufactures and distributes various medical products and services in the areas of anesthesia, intensive care, cardiology, extracorporeal blood

## RAU SHARING EXPERTISE 5,000 products, 95% of which

therapy and surgery around the world. The B. Braun product line consists of a total of are

manufactured by the company itself. The company operates through four reportablebusiness segments: Hospital Care, Aesculap, Out Patient Market and B. Braun Avitum. The company has a strong presence in North America, Europe, Asia-Pacific, Latin America and the Middle East and Africa (Meticulous Research, 2019).

It was founded in 1979 and is based in Massachusetts, USA. Boston Scientific Corporation is involved in the and development, manufacturing



marketing of medical instruments for use in various invasive medical procedures worldwide. The company operates through three operating segments, namely Cardiovascular, Rhythm Management and MedSurg. With a strong distribution network and more than 35 subsidiaries, the company has a strong geographical presence in North America, Europe, Asia-Pacific, Latin America and the Middle East and Africa (Meticulous Research, 2019).



The company was founded in 1949 in Dublin, Ireland. Medtronic plc designs, manufactures and sells medical instruments. The company offers its products under four business segments: Cardiac and Vascular Group, Minimally

Invasive Therapies Group, Restorative Therapies Group, and Diabetes Group. The company's Minimally Invasive Therapies Group provides surgical products such as surgical sutures, vascular sealers, wound closures, electrosurgery products, mechanical

hernia instruments, mesh implants, gynecology products, hardware and mesh fixation instruments and gastrointestinal, inhalation and renal care solutions. The company has a strong presence in North America, Europe, Asia-Pacific, Latin America and the Middle East & Africa with its 30 sidelines, such as Medtronic PS Medical, Inc., Medtronic MiniMed, Inc., India and Medtronic Private Ltd (Meticulous Research, 2019).

#### **ETHICON** PART OF THE **Common Common FAMILY OF COMPANIES** Shaping the future of surgery

ShapingIt was founded in 1887 and is based inthe futureNew Jersey, USA. Johnson &of surgeryJohnson is involved in the research,

development, manufacture and sale of a wide range of healthcare products. The company operates through three business sectors – Consumer, Pharmaceutical and Medical Devices. The company's medical device division includes a wide range of products used in orthopedic, surgery, cardiovascular, diabetic and eye health care. Johnson & Johnson supplies surgical suture material through its subsidiary Ethicon, Inc. The company has a strong geographic presence in the US, Europe, Asia-Pacific, the Western Hemisphere and Africa (Meticulous Research, 2019).

#### 3. Methodology

#### 3.1 Research aims-questions

The purpose of this study is to investigate how a particular company that manufactures surgical sutures, called Medipac SA, manages its trademark and in particular the failures of the suture brand. Specifically, the purpose is to study how important Brand Management is in general, how important it is for the company to have brand failures, and what the company gains through managing those failures. Also, what is the most common brand failure that has occurred, what kind of damage has a stitch brand failure caused to the company, how has the company managed that, and where the blame for the failures of the last 5 years is blamed. What is more, if there is an action protocol to follow in the event of a suture brand failure, and lastly though how the company is trying to increase its customer loyalty despite cases of suture failure.

Based on the research objectives of the study, the following research questions are formulated:

- 4 To what extent is Brand Management considered a vital tool for a company?
- How important is the existence of brand failures and what are the associated gains from the processing processes?

- What is the most common suture brand failure the company has faced, what kind of losses have the company caused by the stitch brand failure and how has the company managed them?
- Who does the company hold responsible for the stitch brand failures for the last 5 years?
- 4 Are there any predefined actions to follow in the event of a stitch brand failure?
- Is the company trying to reduce the suture brand failures to enhance customer forgiveness and if so, how?

#### 3.2 Research design

A qualitative research will be conducted since the sample to be used is small, using bilateral studies. The purpose of qualitative research is to describe and analyze social phenomena and situations. The key advantages of a qualitative analysis are that perspective of the participants and avoiding "a priori" crises. The analysis of the interview was accomplished through thematic analysis in order to identify the patterns of the concepts mentioned (Willing, 2014).

#### **3.3 Population - Sample**

The target population of this research is three executives of the company, the CEO, the Sales Department representative and the Quality Department representative. The company is a family owned company founded in 1987.

#### 3.4 Procedure - Method of data collection

The research was conducted by collecting data using the questionnaire from the abovementioned individuals. Data were collected using semi-structured interviews. The advantage of semi-structured interviews compared to structured interviews is that they can go deeper into the answers of interviewers, that the questions are not instructive, and that the participants are also given the opportunity to express their views freely (Tracy, 2014). The questionnaire used in each participant included 5 questions, some of them have a common meaning, some have a similar meaning, and some have an independent meaning. Interviews were recorded and the whole procedure lasted 30 minutes.

#### **3.5 Analysis tools**

The data were analyzed by thematic analysis. The thematic analysis consists of 6 stages. The  $1^{st}$  stage refers to the familiarity with the data, the  $2^{nd}$  to their coding, the  $3^{rd}$  to the search for the themes, the  $4^{th}$  to the revision of the themes, the  $5^{th}$  to the definition and

naming of the themes, and the 6<sup>th</sup> to the production or compilation of the data of the research report (Braun & Clarke, 2006). Finally, the inductive approach was used to analyze the interview, where coding was done from bottom to top.

**Table 1** lists the axes of questions and their corresponding questions. Overall 6 axes were

 created corresponding to 15 questions of the semi-structured interviews.

The 1<sup>st</sup> axis of questions is called "The importance of Brand Management." It includes the questions "Let me begin with the most important question for me: Do you consider Brand Management as a vital tool for a corporation to deal with? Please be as descriptive as possible." and "The very first question I wanted to ask you is to which degree you consider Brand Management as a vital tool for a corporation to deal with. Please give me your insight into this from the Sales Dept. perspective.".

The 2<sup>nd</sup> axis of questions is called "Importance of brand failures and gains from processing." and includes the questions "I would now like to move on the major topic of this interview. So please tell me, what is the importance behind the existence of brand failures for a manufacturing firm and what are the linked gains stemming from their treatment processes?", "Closing with my questions, in your point of view, what is the importance behind the existence of brand failures for a manufacturing firm and failures for a manufacturing firm and what are the linked gains stemming from their treatment processes?", "Closing with my questions, in your point of view, what is the importance behind the existence of brand failures for a manufacturing firm and what are the linked gains stemming from their treatment processes?" and "Please let me know, what is the importance behind the existence of such failures for you?".

The 3<sup>rd</sup> axis of questions is called "Types of brand failure losses, their management and the most common brand failure.". It includes the questions "Now, when it comes to Medipac SA, has a suture brand failure ever caused irreparable damage to the company? If so, what did it concern and how did you handle it, please?", "So, as you may know personally, a crucial aspect of what is called Brand Management in the scientific community, is the Brand Failure Management. Hence, please let me know what a suture failure means for you and how you handle it, in the case of your company." and "What is the most common brand failure you have encountered so far?".

The 4<sup>th</sup> axis of questions is called "Responsibility for failures in the last five years". This includes the questions "Who do you believe was responsible for the suture brand failures you have been confronted with in the last 5 years (e.g. your raw material suppliers, production procedure deviations, etc.)?", "During the interview I held with your firm CEO, it was mentioned that the suture failures might be a result of either procedural or performance problems. What is your view on this, as per your experience?" and "Lastly,

I would like to give me your opinion on who you believe was responsible for the suture brand failures you have been confronted with in the last 5 years (e.g. your raw material suppliers, production procedure deviations, etc.).".

The 5<sup>th</sup> axis of questions is called "Default actions in case of failure.". This includes the questions "As the Sales Dept. representative of Medipac SA, what are your duties/reactions against suture brand failure events? In practice, what is the action protocol you must follow in the event of a suture brand failure?" and "Let us begin with the issue of Brand Management and specifically, the part of suture brand failures. As representing the Quality Dept. of Medipac SA, what are your predefined actions upon a receiving a complaint about a suture brand failure?".

The 6<sup>th</sup> axis of questions is called "Failure reduction efforts" and includes the questions "I would like to close this interview with the following interesting question: Would you change your production procedures towards eliminating a relatively systematic defect in the final product, avoiding suture brand failures related to Quality problems which could affect your brand name recognition? Please give me some examples." and "Now, could you please give me an idea on how your department attempts to enhance customer forgiveness and limit the negative impact on their trust to your products? I mean, is there an explicit contribution to this effort on the part of your department beside the movements undertaken by the Sales Dept.?".

Questions	
Let me begin with the most important question for me: Do you consider Brand	
Management as a vital tool for a corporation to deal with? Please be as descriptive	
importance of as possible.	
Brand The very first question I wanted to ask you is to which degree you consider Brand	
Management Management as a vital tool for a corporation to deal with. Please give me your	
insight into this from the Sales Dept. perspective.	
<b>I</b> would now like to move on the major topic of this interview. So please tell me,	
of brand what is the importance behind the existence of brand failures for a manufacturin	
firm and what are the linked gains stemming from their treatment processes?	

**Table 1.** Axes and questions.

gains from	Closing with my questions, in your point of view, what is the importance behind the		
processing	existence of brand failures for a manufacturing firm and what are the linked gains		
	stemming from their treatment processes?		
	Please let me know, what is the importance behind the existence of such failures for		
	you?		
Types of	Now, when it comes to Medipac SA, has a suture brand failure ever caused		
brand failure	irreparable damage to the company? If so, what did it concern and how did you		
losses, their	handle it, please?		
management	So, as you may know personally, a crucial aspect of what is called Brand		
and the most	Management in the scientific community, is the Brand Failure Management. Hence,		
common	please let me know what a suture failure means for you and how you handle it, in		
brand failure	the case of your company.		
	What is the most common brand failure you have encountered so far?		
	Who do you believe was responsible for the suture brand failures you have been		
	confronted with in the last 5 years (e.g. your raw material suppliers, production		
Responsibility	procedure deviations, etc.)?		
for failures in	During the interview I held with your firm CEO, it was mentioned that the suture		
the last five	failures might be a result of either procedural or performance problems. What is		
years	your view on this, as per your experience?		
ycars	Lastly, I would like to give me your opinion on who you believe was responsible for		
	the suture brand failures you have been confronted with in the last 5 years (e.g. your		
	raw material suppliers, production procedure deviations, etc.).		
Default actions in	As the Sales Dept. representative of Medipac SA, what are your duties/reactions		
	against suture brand failure events? In practice, what is the action protocol you must		
	follow in the event of a suture brand failure?		
case of failure	Let us begin with the issue of Brand Management and specifically, the part of suture		
case of failure	brand failures. As representing the Quality Dept. of Medipac SA, what are your		
	predefined actions upon a receiving a complaint about a suture brand failure?		
	I would like to close this interview with the following interesting question: Would		
Failure	you change your production procedures towards eliminating a relatively systematic		
reduction	defect in the final product, avoiding suture brand failures related to Quality		
efforts	problems which could affect your brand name recognition? Please give me some		
	examples.		

Now, could you please give me an idea on how your department attempts to enhance customer forgiveness and limit the negative impact on their trust to your products? I mean, is there an explicit contribution to this effort on the part of your department beside the movements undertaken by the Sales Dept.?

#### **3.6 Moral issues**

Ethical issues are particularly important in participants' psychology and need to be considered by the researcher (Kocher, & Keith-Spiegel, 1998) as defined by the American Psychological Society (APA, 2001) and the British (BPS, 2014). Specifically, the rules were:

- Before answering the questions, the participants were informed about the process, the research objectives, that their participation is voluntary.
- The participants' right to withdraw from the survey at any time, even after the end of the survey was clarified.
- Participants were informed that no personal information would be used. It was also understood that their answers would be used not only for research purposes but also for future research.

#### 3.7 Reliability and validity of data

Reliability of the data was ensured as the interviewees themselves checked the data after the analysis (Fives & Biehl, 2012). This process was necessary as the investigation of the interviewees' beliefs was based on the subjective interpretation of the researcher. Consequently, the transcribed interviews were discussed at a second level with each participant as to their agreement on the meaning given by the researcher.

#### 4. Results

#### 1st axis: "The importance of Brand Management "

The questions of the importance of Brand Management were asked to the CEO and the Sales Department representative of the company. **Table 2** lists the degree of importance that Brand Management has for each respondent, as well as the methods each of them performs for Good Management.

The first participant responded that he considered every aspect of Brand Management is important. Specifically, as a founder of Medipac SA, he began to question whether production and sales in a traditional way, were enough, so he first devised the company's first logo and with the help of basic computer skills, he created the packaging labels, stickers, leaflets and so on. Initially, he managed all the sectors himself, because it was a very small company. Later, and with the same enthusiasm, he has outsourced all the brand promotion to an external marketing partner. He has also added a new logo next to the logo in an attempt to keep up with current and ever-changing trends. In addition, he places great emphasis on the quality of the products and so he made sure to supply the best raw materials in the world. He deals with every aspect of brand management to grow its business and he never fails to hear end-user requests and comments even when they are negative. He considers that solving every problem and adapting the production of the company to the needs of the customers a very important priority.

The second participant responded that he also considers brand management of the company crucial, especially when it comes to its segment. He analyzes the factors that shape the image of the company's products to the public, in tangible and intangible terms. Tangible refers to the appearance and presentation of products, such as packaging materials, packaging graphics, logos, brochure and social media images, videos, pricelists, and occasional clinical cases. In general, it is stated that the aesthetic context and the perception of quality play a vital role in satisfying the very demanding company audience. Then, in connection to intangible assets, they relate to trademarks. The effort to create a strong global brand is emphasized. This is achieved through hands-on seminars organized by the company, participation in major exhibitions and conferences, personal contact with doctors and agents, clinical case preparation and company presence in print and digital media. The participant also emphasizes the very good value for money of the company's products. Last but not least, it is vital to respond promptly to any requests from partners or end users and to build personalized relationships with them. This raises the bar and increases brand recognition, quality ratings and confidence levels.

Degree of Importance of Brand	<b>Methods of Brand Management</b>
Management	
Every aspect of Brand Management is	Challenging operating in the traditional way.
important.	Invention of logo, creation of packaging labels,
	stickers, leaflets and so on.

**Table 2.** Degree of brand management importance and methods of brand management.

Crucial especially with regard to my	Outsourcing the brand to an external marketing
section.	partner.
	-
	Adding a New Logo Next to the Logo.
	Emphasis on quality and raw materials.
	Accept end users' comments, requests and
	comments.
	Adapting to customer needs.
	Managing tangible elements related to the
	appearance and presentation of products, e.g.
	packaging materials, packaging graphics, logo,
	brochure and social media images, videos,
	pricelists and clinical case preparation.
	Emphasis on the aesthetic context and perception
	of quality.
	Intangible asset management, namely trademarks.
	Creating a strong global brand, through seminars,
	participation in exhibitions and conferences,
	personal contact with doctors and representatives,
	clinical case preparation and presence of the
	company in print and digital media.
	Good value for money.
	Immediate response to any Customer.
	Relationship request.

Increase recognition, trust rating.

Below are excerpts of the interviews listed in the answers to Table 2.

### **Degree of Brand Management Importance**

### Every aspect of Brand Management is important.

"I have dealt with every aspect of Brand Management to grow my business and I have appreciated its contribution to success step-by-step." (CEO).

**Crucial especially with regard to my section.** 

"The perception our brands in the market is a topic that concerns our department a lot" (Sales Dept.).

## Methods of Brand Management

**Challenging operating in the traditional way.** 

"...I found myself wondering whether just producing and selling in the traditional way is enough." (CEO).

**Invention** of logo, creation of packaging labels, stickers, leaflets and so on.

"...I devised our first logo from the first day and created our packaging labels, stickers, leaflets and so forth, on my own computer in primitive software environment." (CEO).

4 Outsourcing the brand to an external marketing partner.

"...this is the reason why I have recently gotten our logo, promotional flyers, packages, giveaways such as bags, pencils, notebooks, etc., our trade fair stands appearance and the entire presentation of our firm redesigned by an external marketing partner, towards revitalizing our brand elements and refresh brand equity." (CEO).

Adding a New Logo Next to the Logo.

"We added also a fresh symbol next to our logo and many other tricky things to keep up with the modern trends..." (CEO).

### **<u>Emphasis on quality and raw materials.</u>**

"Finally, it is in my own mentality to deliver quality to the consumers. It has been my personal decision to procure some of the best raw materials worldwide from the beginning and set up a production line whose deliverables are some of the best in the world market, according to the feedback gained so far." (CEO).

### **Accept end users' comments, requests and comments.**

"We tend to stay side-by-side to the end-user and listening to their feedback, requests and remarks - either positive or negative - ..." (CEO).

### Adapting to customer needs.

"...and tailor our production to their needs." (CEO).

Managing tangible elements related to the appearance and presentation of products, e.g. packaging materials, packaging graphics, logo, brochure and social media images, videos, pricelists and clinical case preparation.

"As for the tangible part, we cater much for our product appearance and presentation in all aspects. Packaging materials, graphics on packaging, logo, images on our promotional leaflets and social media, videos, pricelists and clinical cases we prepare occasionally are some examples." (Sales Dept.).

Emphasis on the aesthetic context and perception of quality.

"The aesthetic framework plays a vital role in forging the ideal perception among our clients. The perception of quality, in particular, to our audience is a demanding and long-term project that does not accept any divergence from the target." (Sales Dept.).

Intangible asset management, namely trademarks.

"Then, comes the intangible part. The relationship the clients maintain with our brands influences their perception over the value we deliver to a great extent." (Sales Dept.).

Creating a strong global brand, through seminars, participation in exhibitions and conferences, personal contact with doctors and representatives, clinical case preparation and presence of the company in print and digital media.

"We make efforts to build up a strong brand awareness worldwide through hands-on seminars we or our local distributors organize. Participation in major exhibitions as well as congresses, personal contact with doctors and dealers, preparation of clinical cases with our articles by authorities in the field and our presence in the print and digital media are also some ways to achieve this." (Sales Dept.).

# **Good value for money.**

"Our prices are very competitive when compared to the market leaders' pricing policy whereas we deliver the same quality levels as they do." (Sales Dept.).

# **Immediate response to any Customer.**

"...policy is to provide a fast response to every request coming both from our partners or end-users..." (Sales Dept.).

# **Relationship request.**

"...and establish personalized relationship with them." (Sales Dept.).

**Increase recognition, trust rating.** 

"...high and define goals as to how we can increase our brand recognition, appreciation on our quality and loyalty levels." (Sales Dept.).

# 2<sup>nd</sup> axis: "Importance of brand failures and gains from processing"

The question of the significance of brand failures as well as the associated gains of the company from processing those failures was asked to all three participants, namely the CEO, the Sales Department representative and the Quality Department representative of the company. **Table 3** lists the degree of importance for each respondent to the existence of brand failures and the causes of such failures, whilst **Table 4** lists the treatment of failures, and the associated gains from processing those failures.

The first participant responded that he considers the frequency of such failures to be a central indicator of the company's good productivity. Good quality means zero complaints about the products and therefore the sales department's confidence. Of course, he says the Quality Department is the one to receive and investigate some complaints first. Also, the participant states that the causes of a failure should be studied, which separates it into procedural or performance problems. The first category of causes relates to the wrong way the doctor uses the products because of a lack of awareness of some special handling. This may give the wrong impression that this product is defective. In any case, the sales department is responsible for demonstrating the recommended way of using the products. The second category of causes is associated with defects in the product, such as quality

defects in use. It is reported that solutions to these problems are achieved by improving or correcting some occasional or systematic deviations in the company's production environment. In addition, the interviewee also referred to the brand failures associated with placement strategies in a new market. The aim of the company is to raise awareness of the brand in the audience of each country. The usual means used for this purpose are local advertising, attending trade fairs, events or conferences, door-to-door marketing through the company's affiliates, and collaborating with local reputable dentists, KOL, whose recommendations play a huge role. However, the interviewer also raises the issue of fierce competition with local manufacturers and with global brands such as Ethicon or B Braun. It takes a lot of money investment to get the company to this situation, which is not feasible. Yet the fact that the company offers very high-quality products at a reasonable price is its competitive advantage. Finally, the respondent says that the creation of experience and the acquisition of competition information are the associated gains from processing failures.

The second participant responded similarly that brand failure is an important factor for the company's development. He mentioned that feedback is obtained from end users, either through direct contact or through the company's worldwide distributors. A constant positive feedback is the ideal situation, but not creative for the growth of the company. In fact, it is stated that the value of the suture failures is initially hidden behind the conclusions drawn from the examination of the Quality Section. Thus, errors are corrected, production processes are improved, processes are streamlined, latency and problematic features are explored, packaging problems are resolved, the probability of future defects is minimized, and the company's supply systems are undoubtedly adapted to the needs of consumers. It is emphasized that any post-purchase interaction with a customer should be dealt with tactically and strategically. This is because quick response to a complaint and taking drastic action adds value to the company's relationship with the customer, even on an emotional level, and eventually the company gains a deeper view of the public's view of its products. Finally, the participant concludes that each complaint represents an opportunity to make the company better and stronger.

The third participant responded that the existence of brand failures is very important. In particular, as in any manufacturing company, errors, procedural malfunctions, false beliefs in product quality, and overall end-user feedback, lead to efficiency, improvements, modernization, and overall rationalization of production. Divergences and

complaints play the role of a roadmap for resolving various internal issues. The complaints about quality mainly concern his department and they, in cooperation with the Production Manager, try to resolve any unpleasant situation. The Sales Department transmits the complaint to the Quality Department from where the information is given to the Production Manager. It was mentioned that there is responsibility for every complaint that is sent to the company and the value of this is that they sometimes learn from their mistakes. If the results of the tests show the conformity of the product characteristics with those specified by the European Pharmacopoeia, then the operation shall be continued in the correct manner. On the contrary, when the results are negative, then all means of identifying the causes are developed and a thorough analysis is made on how to prevent the repetition of such a problem. In the end, the participant stresses that it is important to ensure that any issues are resolved and that the customer is happy with the company's response.

Degree of importance of brand failures	Causes of failures
It is a key indicator of the company's good	Procedural problems related to the
productivity.	wrong way the doctor uses the products
	due to lack of awareness of some
An important factor for the company's	special handling.
development.	Performance problems associated with
	defects in the product, such as quality
The existence of brand failures is very	defects in use.
important for our department.	
	The strategies to place in a new market.
Divergences and complaints play the role of a	
roadmap for resolving various internal issues.	Fierce competition with local
	manufacturers but also with global
	brands such as Ethicon or B Braun.
	Mistakes, procedural malfunctions,
	false beliefs in product quality.

**Table 3.** Degree of importance of brand failures and causes.

Below are excerpts of the interviews listed in the answers to Table 3.

### Degree of importance of brand failures

4 It is a key indicator of the company's good productivity.

"To me, the suture failure incidence constitutes one of the central indicators of our good manufacturing performance..." (CEO)

4 An important factor for the company's development.

"Alright, getting always positive feedback is the ideal situation but simultaneously boring and non-creative for our own development." (Sales Dept.)

**The existence of brand failures is very important for our department.** 

"Complaints about quality is what concern mostly our department..." (Quality Dept.)

Divergences and complaints play the role of a roadmap for resolving various internal issues.

"...complaints usually play the role of our roadmap towards resolving several internal issues."(Quality Dept.)

# **Causes of Failures**

Procedural problems related to the wrong way the doctor uses the products due to lack of awareness of some special handling.

"Procedural problems concern the wrong way the doctor uses our products. If someone is not aware of some special handling one of our product's needs..." (CEO)

Performance problems associated with defects in the product, such as quality defects in use.

"Performance problems are linked with defects in the product, like quality defects during the usage..." (CEO)

The strategies to place in a new market.

"This is all about the brand image and the brand recognition we try to establish in each country audience..." and "Failures come out of wrong handling of the situation and careless positioning strategies." (CEO)

Fierce competition with local manufacturers but also with global brands such as Ethicon or B Braun.

"Yet, the competition is tough, with local manufacturers in some countries being wellpositioned in that specific market whereas big players who have a worldwide acceptance are always present and constitute a threat to our business..., like Ethicon or B Braun, ... " (CEO)

# **Mistakes, procedural malfunctions, false beliefs in product quality.**

"...mistakes, procedural malfunctions, false beliefs on products quality and in general the entire feedback from our end-users..." (Quality Dept.)

Treatment of failures	Associated gains from processing failures
Procedural problems: The sales department has the	Confidence in the sales department.
responsibility to demonstrate the recommended	
way of using the products.	The creation of experience and the acquisition
	of competition information.
Performance Problems: Solutions are achieved by	
improving or correcting some occasional or	Errors are corrected, production processes are
systematic deviations in the company's production	streamlined, processes streamlined, latency and
environment.	problem functions are explored, packaging
	problems are resolved, future defects are
Placement Strategies: Boost brand awareness with	minimized and the company's supply systems
local advertising, attending trade fairs, events or	are adapted to the needs of consumers.
conferences, door-to-door marketing and	
collaborating with locally renowned dentists, KOL.	The company gets a deeper picture of the
	public's view of its products.
Fierce competition: Investing big capital to cope	
with this situation, which is not feasible, and offer	Every complaint is an opportunity to make the
something appealing.	company better and stronger.
Quality products at reasonable prices.	Effectiveness, improvements, modernization
	and overall streamlining of production.
By examination of the Quality Department.	
	Sometimes they learn from their mistakes.
Rapid response and drastic action.	
	If the results of the tests show the conformity
The Sales Department transmits the complaint to	of the product characteristics with those
the Quality Department from where the information	specified by the European Pharmacopoeia, then
is given to the Production Manager.	

## **Table 4.** Treatment of failures and associated gains from processing failures.

Responsibility for any complaint.	the operation shall be continued in the correct manner.
When the results are negative, all means of identifying the causes are developed and a thorough analysis is done on how to prevent a repetition of such a problem.	
Ensure that any issues are resolved and that the customer is happy with the company's response.	

Below are excerpts of the interviews listed in the answers to Table 4.

# **Treatment of failures**

Procedural problems: The sales department has the responsibility to demonstrate the recommended way of using the products.

"Hence, it is generally our sales reps' responsibility to demonstrate the recommended way our products can be used." (CEO)

Performance Problems: Solutions are achieved by improving or correcting some occasional or systematic deviations in the company's production environment.

"These get solved through improving or correcting some occasional or systematic deviations in our manufacture context." (CEO)

Placement Strategies: Boost brand awareness with local advertising, attending trade fairs, events or conferences, door-to-door marketing and collaborating with locally renowned dentists, KOL.

"We and our local distributors are responsible for this. Local advertisements, participation in trade fairs, events or congresses and door-to-door marketing – the latter being a part of our partners' job – and cooperation with local reputable dentists, KOLs in other words, are some of the common means to enhance brand awareness. KOLs, as authorities in their field of practice, ..." (CEO)

Fierce competition: Investing big capital to cope with this situation, which is not feasible, and offer something appealing.

"We do not possess that strong name in the international marketplace and we cannot invest so much money to compete directly with big brand names, ..., they are multinational

ones with enormous budgets..., it is multifactorial issue that needs deep investigation." and "Every time you have to offer something new or more appealing than the big brand names do." (CEO)

**Quality products at reasonable prices.** 

"We offer very qualitative products at reasonable prices and this the competitive advantage we and our business partners avail of in promotions."(CEO)

**By examination of the Quality Department.** 

"The value of suture failure incidents is firstly hidden behind the conclusions we infer from our Quality Dept.'s examination that follows. We correct ourselves, we better our manufacturing procedures, streamline processes, explore latent and problematic functions, solve packaging issues, minimize the likelihood of a future defect occurrence and undoubtedly, we adjust our offering schemes to the needs of the consumers. " (Sales Dept.)

**Rapid response and drastic action.** 

"Fast response to complaint and undertaking drastic measures " (Sales Dept.)

The Sales Department transmits the complaint to the Quality Department from where the information is given to the Production Manager.

"The Sales Dept. passes the complaint to us and we impart also the information to our Production Manager. "and "...we, in collaboration with our Production Manager, attempt to resolve any unpleasant situation." (Quality Dept.)

**Responsibility for any complaint.** 

"We are responsible for any complaint sent to our company..." (Quality Dept.)

When the results are negative, all means of identifying the causes are developed and a thorough analysis is done on how to prevent a repetition of such a problem.

"On the contrary, when the results are negative, we deploy all our means to identify the causations behind and we make a meticulous analysis on how to prevent any similar problem from reoccurring." (Quality Dept.)

Ensure that any issues are resolved and that the customer is happy with the company's response.

"In the end, we have to make sure that any issue is resolved and the customer is happy with our reaction." (Quality Dept.)

### Associated gains from processing failures

**Confidence in the sales department.** 

"This generally strengthens our Sales Dept. self-confidence in their sales pitches, too." (CEO)

**the creation of experience and the acquisition of competition information.** 

"So, building up experience and getting information about the rivalry are the gains, helping us to prepare better and grow more mature." and "From each such experience we have learnt many things about how we can beat those players." (CEO)

Errors are corrected, production processes are streamlined, processes streamlined, latency and problem functions are explored, packaging problems are resolved, future defects are minimized and the company's supply systems are adapted to the needs of consumers.

"We correct ourselves, we better our manufacturing procedures, streamline processes, explore latent and problematic functions, solve packaging issues, minimize the likelihood of a future defect occurrence and undoubtedly, we adjust our offering schemes to the needs of the consumers..." (Sales Dept.)

The company gets a deeper picture of the public's view of its products.
 "Additionally, a brand failure may bring the chance of our getting a deeper insight into the audience's view on our products." (Sales Dept.)

Every complaint is an opportunity to make the company better and stronger.
 "So, we view each complaint as an opportunity to grow better and stronger, too." (Sales Dept.)

Effectiveness, improvements, modernization and overall streamlining of production.

"...drive efficiency, improvements, modernization and generally, streamlining of our production " (Quality Dept.)

**Sometimes they learn from their mistakes.** 

"...the value of this is that we sometimes learn from our mistakes." (Quality Dept.)

If the results of the tests show the conformity of the product characteristics with those specified by the European Pharmacopoeia, then the operation shall be continued in the correct manner. "If the test results display a conformity of the products attributes with those set by the European Pharmacopeia, then we ensure ourselves that we keep on operating the right way." (Quality Dept.)

# <u>3<sup>nd</sup> axis: "Types of brand failure losses, their management and the most common</u> brand failure "

The question of what types of damage caused by brand failure and how they were managed were asked to the CEO and the Sales Department representative, while the question of what the most common brand failure has been was asked to the representative of the company's Quality Department. **Table 5** lists the types of damage caused by brand failure, the most common brand failure and **Table 6** lists the modes of handling.

So, for the first question, the CEO replied that they only handled a limited number of signal failure events, most of which involved procedural rather than performance problems. In particular, the worst case involved the first and newest partner to date in Thailand, active in the field of general medical medicine. He mentioned that this applies to the Profimed suture brand. Describing the incident, the participant said that during open-heart surgery by a client doctor of the former Thai distributor, suture knots applied to some blood vessels, which served as a vascular ligament, were relaxed. Thus, the surgery could not be completed and then the cooperation with this partner was terminated. After further research, the conclusion was that the structure of Profimed yarn was not as suitable for cardiovascular surgery as it was ideal for dental surgery. In the end, because this distributor was not significant, so the revenue lost was not so significant.

For the same question the Sales Department representative replies that, first of all, a suture failure is recorded at the exact time a complaint is received by a company's distributor or consumer. Whether it is the result of improper use of the suture or a genuine suture quality defect, a response that is not offensive, misleading or even harmful to the company's reputation must be given immediately. Any type of inbound negative comment is a failure on this part and must be addressed so as not to disrupt the customer relationship. He feels confident about quality, but mistakes make sense as production is driven by human hands, which, in turn, adds value and excellent quality features to the needle-thread joints. It is reported that the failure cases received by the company are mainly related to incorrect labeling/sticker information on the packaging material, which is somewhat acceptable to the customer. However, the participant says that complaints about insufficient needle hinge integrity or threads that break easily or fewer stitches in a sold box are much harder

to handle. In fact, these types of failure cases are thwarted by the whole picture they are trying to promote. In all cases, it is up to the customer to ask for the stitch code and batch numbers and to pass complaints on to the Quality Department staff. Then, the reports in the form of a formal report are transmitted to the client, and if the results present an acceptable range in the technical properties of the suture reference code, they try to identify any errors in the usage and always in communication with the end user. When the problem is not resolved by these means, they will even watch the practice of the doctor and try to find out what may be wrong with the technique of real use. In all cases, it is corporate policy to replace defective (or non-defective) sutures with a new suture box as an act of redress. On the other hand, once it is proved that failure is linked to the batch of production, they manage to convince the customer that quality has not changed, noting that, as is well known in this industry, all companies may have some defective stitches when they produce huge quantities. The participant then comments that it is up to the doctor at his or her discretion to continue using the stitches of the company. He concludes that the quality provided by the company is always its roadmap and maintaining a good relationship with the end consumer is its primary goal. In addition, the interviewee also mentioned the placement of the company in a new market. The main contributor to this effort is the local partner of the company. Intense marketing activities are required to get the best results possible. It also states that something attractive must be offered that will compete in price and above all in quality. On the other hand, brand failures associated with placement strategies have occurred and the causes can be a wrong timing or a bad pricing policy or even rumors about the quality of the product itself. Failures can also come from a misleading perception of how the company's products can be marketed by the merchant. It is mentioned that it is necessary to conduct training sessions and discussions on the guidelines at the level of strategy adopted, some tricks used in sales and the philosophy surrounding the company. In addition, marketing channels such as media advertising, collaborating with local KOLs, participating in exhibitions, conferences or other events, preparing digital advertising material, preparing (mainly by the company) and demonstrating clinical cases or even door-to-door marketing are the most important things a company partner needs to manage. Consumer standards must be identified and the target market should be the roadmap for the company representative to penetrate. Subsequently, the performance of the suture takes action, and the word-ofmouth spread among the medical community in combination with all of the above can create a good base for company placement. The goal is to anticipate failures in early

marketing activities and to prevent them. It must be born in mind, however, that each market has its own peculiarities, which must be considered. In conclusion, he says that a well-known seller is created after gaining experience from all markets.

To the second question, that of the most common brand failure, the Quality Department representative responded that the most frequently reported defect is incorrect labeling information that results from a human error, and quality complaints are few in each operating year of the last decade. Wrong box stickers, incorrect batch numbers and other product information incorrectly placed in the box as well as the wrong number of stitches in a box are the most commonly encountered errors. He also stated that the second complaint in the classification relates to some incidents of needles and threads threaded into a sold box, because the connection between these two elements is not an easy job and the corresponding production stage requires skillful handling and experienced staff. But this is a key feature of a manufacturer to differentiate itself, deliver superior quality through durable needle attachment and use it as a competitive advantage. He describes how this work is done manually, a technique that minimizes the likelihood of this defect and that this method is more effective than automated procedures. However, the human error factor still exists and is justified in some cases. In general, he considers that the number of such incidents has been reduced through stricter protocols, rules, control procedures and training.

Types of damage	Most common brand failure
Only a limited number of signal failure	Most commonly reported defect: incorrect
events, related more to procedural rather than	labeling information, incorrect stickers,
performance problems.	incorrect batch numbers and other
	information incorrectly placed in the box and
Worst case: One client doctor used sutures	incorrect number of stitches.
whose structure was intended for another use,	
thus not being able to complete the operation.	There are few complaints about quality in any
	operating year of the last decade.
Any type of inbound negative comment is a	
failure on this part.	

**Table 5.** Types of damage, the most common brand failure.

Complaints about quality in all sales pitches	The second complaint in the classification
are thwarted by the whole picture they are	relates to cases of posting between needles
trying to promote.	and threads.

Below are excerpts of the interviews listed in the answers to Table 5.

### **Types of damage**

Only a limited number of signal failure events, related more to procedural rather than performance problems.

"Fortunately, we have encountered only a limited number of brand failure incidents, most of them being concerned with procedural and not performance problems." (CEO)

Worst case: One client doctor used sutures whose structure was intended for another use, thus not being able to complete the operation.

"As far as I remember, the worst case was about our first, and latest so far, partner in Thailand, who was active in the general medical sector of consumables. This is was about our Profimed suture brand. Particularly, during an open-heart surgery by a client doctor of our former Thai distributor, the suture knots applied to some blood vessels, serving as a vessel ligature, loosened up repeatedly. Thus, the surgical operation could not be completed and after that, the cooperation with this partner was terminated." (CEO)

**Any type of inbound negative comment is a failure on this part.** 

"Any kind of incoming negative feedback is a failure for our department..." (Sales Dept.)

Complaints about quality in all sales pitches are thwarted by the whole picture they are trying to promote.

"Yet, complaints about insufficient needle-thread joint integrity or threads that get torn easily or fewer suture pieces in a sold box are much more difficult to handle. Especially, when talking about quality in all sales pitches, those kinds of failure incidents are dissociative with the entire image we struggle to promote." (Sales Dept.)

## Most common brand failure

Cost commonly reported defect: incorrect labeling information, incorrect stickers, incorrect batch numbers and other information incorrectly placed in the box and incorrect number of stitches.

"The most frequently reported defect is the wrong labeling information which is a result of human factor error. Wrong stickers on the boxes, wrong lot numbers and other product information wrongly placed on the box as well as wrong number of suture pieces in a box are the error we usually face and we try day-by-day to eliminate." (Quality Dept.)

There are few complaints about quality in any operating year of the last decade.
"Fortunately, the complaints about our quality are few during any operational year the last decade." (Quality Dept.)

The second complaint in the classification relates to cases of posting between needles and threads.

"The second complaint in rank has to do with some detachment incidents between the needles and the threads of some in a sold box." (Quality Dept.)

### Table 6. Modes of handling

### Modes of handling

After an investigation it was found that the suture was misused.

A suture failure is recorded at the exact time the complaint is received by a company sutures distributor or consumer.

Immediately a response that is not offensive, misleading or harmful to the company's reputation is given.

Complaints about quality defects are requested by the client with the stitch code and batch numbers passed on to the Quality Department staff. If the official answers present an acceptable range in the technical properties of the suture reference code, any errors in the method of use are investigated and a visit to the physician's practice is required.

Replacing defective (or non-defective) sutures with a new suture box as an act of compensation.

For batch-related complaints, they convince the customer that quality has not changed, pointing out that in large quantities they may have some defective stitches.

Intense marketing activities. Organizing training meetings, strategy level, media advertising, collaborating with local KOLs, participating in exhibitions, conferences, preparing digital promotional material, preparing and demonstrating door-to-door clinical cases.

The connection between the needles and the threads is performed manually to minimize the likelihood of defect compared to automated procedures.

In general, with stricter protocols, rules, control and training procedures. Below are excerpts of the interviews listed in the answers to **Table 6**.

# Modes of handling

4 After an investigation it was found that the suture was misused.

"The conclusion elicited after further research was that our Profimed suture thread structure was not so suitable for cardiovascular surgery while it was ideal for dental surgery." (CEO)

A suture failure is recorded at the exact time the complaint is received by a company sutures distributor or consumer.

"For our department, a suture failure is recorded at the exact time we receive a complaint from a distributor or consumer of our sutures. Concerning our distributors, they have their own clientele and the complaints get transferred to us in the end." (Sales Dept.)

Immediately a response that is not offensive, misleading or harmful to the company's reputation is given.

"...we have to be ready to provide someone with an answer that is not offending, misleading or even harmful for our reputation." (Sales Dept.)

Complaints about quality defects are requested by the client with the stitch code and batch numbers passed on to the Quality Department staff. If the official answers present an acceptable range in the technical properties of the suture reference code, any errors in the method of use are investigated and a visit to the physician's practice is required.

"What we do in all in all circumstances is to ask from the client for the suture code and lot numbers and pass the complaints and relevant information on to our Quality Department staff. Upon receiving our colleagues answer in the form of an official report, we forward it to the customer, outlining the basic inferences. When the results exhibit an acceptable range in the technical properties of the reference suture code, we attempt to identify any possible mistake in the way of use and always in communication with the end-user. When the issue is not solved by this means, we even pay a visit to the doctor's practice and try to find out what might have gone wrong in the actual use technique." (Sales Dept.)

Replacing defective (or non-defective) sutures with a new suture box as an act of compensation.

"In all cases, it lies in our corporate policy to replace the defective (or non-defective) sutures with a new suture box, as a deed of reimbursement." (Sales Dept.)

For batch-related complaints, they convince the customer that quality has not changed, pointing out that in large quantities they may have some defective stitches.

"On the other hand, once it is proved that the failure is linked to our production lot, we manage to convince the customer that our quality has not changed, pointing out that all companies may have a couple of defective sutures when producing enormously big quantities and this is something well-known in this industrial field." (Sales Dept.)

Intense marketing activities. Organizing training meetings, strategy level, media advertising, collaborating with local KOLs, participating in exhibitions, conferences, preparing digital promotional material, preparing and demonstrating door-to-door clinical cases.

"The more intense the marketing activities they follow, the best results we expect to have in the most of cases." and "Marketing channels, such as media advertising, cooperation with local KOLs, participations in fairs, congresses or other events, preparations of digital promotional material, preparation (mainly by us) and demonstration of clinical cases or even door-to-door marketing are some the most crucial things our partner should manage with our contribution." (Sales Dept.)

The connection between the needles and the threads is performed manually to minimize the likelihood of defect compared to automated procedures.

"Many times, this is the key feature for a manufacturer towards differentiating themselves, provide superior quality through resilient and firm needle-thread attachment and use it as competitive advantage against rivalry. We execute this task by hand, a technique that minimizes the likelihood of this defect and believe it or not, this way is more effective than the automated processes." (Quality Dept.) In general, with stricter protocols, rules, control and training procedures.
"In overall, we have managed to limit the number of such incidents through stricter operator protocols, rules, control processes and training." (Quality Dept.)

## 4<sup>th</sup> axis: "Responsibility for failures in the last five years"

The question about responsibility for failures over the last five years was asked to all three participants, namely the CEO, the Sales Department representative and the company's Quality Management representative. **Table 7** lists the attribution of liability for suture brand failures and failure prevention measures.

The first participant responded that he believes that few such events have occurred. Endproduct failures, such as incorrect labeling or sticker information on packaging material, incorrect number of stitches in the delivered boxes, and just a few complaints about the tensile strength characteristics of the stitches, such as easily threaded or threaded threads disconnecting some threads from their needles, are the most common complaints reported. Concerning errors in labeling information, the respondent replied that the responsible party was undoubtedly the person responsible for producing the staff responsible for placing them in the boxes and for their visual inspection. Recommendations should be given on how they should perform their duties and more stringent measures should be implemented to avoid such things. However, in relation to complaints about the suture itself, there was no type of non-compliance with the limits set by the European Pharmacopoeia, as measured by the respective sections each time. Only once did the company receive a complaint that some of the sutures in the box were defective and indeed, this was true after the tests were carried out. However, this was a unique event so far and the staff responsible for the attachment process did something wrong. Finally, it is important to take into account the procedural problems that arise when the end user exerts excessive force on a set of specific technical specifications. In such cases, doctors always attribute failure to the company, which is not true but difficult to accept on their part. The company is satisfied with the quality of raw material suppliers and will continue to prefer them.

The second participant initially responded that the procedural problems are caused by the many misconceptions that a doctor may have regarding the proper use of sutures. Some stitches, e.g. the trademark of Profimed requires special handling and this specifically requires a different way of forming the final knot after the stitching process. One reason for this is that during university studies, a doctor is taught only a few things about

stitching, and most notably the use of the simplest suture class, that is, Silk. It is therefore the company's responsibility to provide recommendations and instructions on how the stapling techniques are applied on a case-by-case basis. This participant also mentioned how to prevent any procedural problems. Specifically, he said that seminars are being organized by the company or even its distributors internationally to give instructions on how the company's products are used during surgery. Also, three videos, posted on YouTube, have recently been presented to the public. It is worth noting that even during the company's participation in all trade fairs, doctors visit the kiosk and are informed about the bids and how to treat the suture. In all cases, all potential customers or existing customers receive the methods of using the products by any means available. It is important to prove what the doctors were doing wrong and to obtain any information about it. Sometimes doctors attribute a failure to use quality problems incorrectly and this is something that must be avoided and necessarily prevented. Therefore, the preparation of a protocol of use by one of the leaders of the Opinion Center, a surgical authority, is ongoing and this initiative could help the company address many objections from some categorical doctors.

The third participant responded that the production of the company is largely responsible for the majority of the cases considering the accumulated historical data of previous years. It was reported that the company's raw material suppliers are very reliable and no complaints have arisen. This is because even though test reports are delivered along with the shipment, additional tests are always carried out to ensure that the raw material specifications exhibit acceptable behavior and characteristics. Incorrect labels on the boxes or insufficient needle attachment pressure are examples of errors in production personnel. However, the total number of these incidents is limited and he stresses that he greatly appreciates the staff assigned to carry out this operation.

Attribution of liability for suture brand failures	Failure prevention measures
On errors in labeling information: The production staff	On errors in labeling information:
responsible for placing the information in boxes and for	Recommendations on how to perform
their visual inspection.	their duties and apply stricter measures.

**Table 7.** Attribution of liability for suture brand failures and failure prevention measures.

On the suture complaints itself: Only once was a defect detected. This is the responsibility of the staff responsible for the attachment process.

For procedural problems: Occurs when the end-user exercises excessive force in a suture of specific technical specifications by the end-user.

For procedural problems: They are caused by a doctor's misconceptions about the proper use of sutures, e.g. Profimed, because in university studies, few things are taught about stapling and mainly about the use of the simplest suture class, that is, Silk.

The production of the company is largely responsible for the majority of incidents according to previous years.

Incorrect labels on the boxes or insufficient pressure mounting on the needle joints are examples of errors in production personnel. For the suture complaints themselves: There was no type of non-compliance with the limits set by the European Pharmacopoeia, according to measurements in the respective sections each time.

For procedural problems: The company is not responsible for this. Hence, the company prefers the quality of raw material suppliers and will continue to supply them.

For procedural problems: Provide recommendations and guidance on stapling techniques. Also, applying preventive measures, that is, organizing internationally to give instructions on how the company's products are used during a surgery. Also, three YouTube videos have recently been prepared that present the process to the public. Free access and information for doctors at all trade shows. A protocol of use is being developed by one of the leaders of the Opinion Center, a surgical authority.

Although test reports are delivered along with the shipment, additional tests are always carried out to ensure that the raw material specifications exhibit acceptable behavior and characteristics so as to exclude liability to suppliers.

Below are excerpts of the interviews listed in the answers to **Table 7**.

### **Attribution of liability for suture brand failures**

On errors in labeling information: The production staff responsible for placing the information in boxes and for their visual inspection.

"As for the mistakes on the labeling information, the responsible party was undoubtedly the production personnel being liable for their placement on the boxes and their macroscopic checking control." (CEO)

On the suture complaints itself: Only once was a defect detected. This is the responsibility of the staff responsible for the attachment process.

"Only once we received a complaint that some of the sutures of the sold box were defective and indeed, this was true after our tests. However, this has been a unique incident so far and the responsible staff for the attachment process did something erroneously." (CEO)

For procedural problems: Occurs when the end-user exercises excessive force in a suture of specific technical specifications by the end-user.

"...it is important to bear in mind the procedural problems that occur when the end-user exerts excessive force on a suture of specific technical specifications." (CEO)

For procedural problems: They are caused by a doctor's misconceptions about the proper use of sutures, e.g. Profimed, because in university studies, few things are taught about stapling and mainly about the use of the simplest suture class, that is, <u>Silk.</u>

"The procedural problems are caused by the several misconceptions a doctor could have related to the correct usage of our sutures. Some sutures, e.g. our Profimed brand, need special handling and this one specifically requires a different way of forming the final knot after the stitching process. During the University studies, a doctor is taught only a few things in suturing and principally about the use of the simplest suture category, namely the Silk." (Sales Dept.)

The production of the company is largely responsible for the majority of incidents according to previous years.

"I can claim openly that our production is mostly accountable for the majority of incidents taking into account the accumulated track records of the past years." (Quality Dept.)

Incorrect labels on the boxes or insufficient pressure mounting on the needle joints are examples of errors in production personnel.

"Wrong labels on the boxes or insufficient attachment pressure on the needle-thread joints are examples stemming from mistakes in our production personnel." (Quality Dept.)

### Failure prevention measures

On errors in labeling information: Recommendations on how to perform their duties and apply stricter measures.

"Recommendations on how they should perform their tasks is provided and even stricter measures come into effect to prevent things like this." (CEO)

For the suture complaints themselves: There was no type of non-compliance with the limits set by the European Pharmacopoeia, according to measurements in the respective sections each time.

"Yet, when it comes to the complaints about our suture itself, there has been no kind of non-compliance with the limits that European Pharmacopeia sets, according to our measurements on the respective lots each time." (CEO)

For procedural problems: The company is not responsible for this. So, the company prefers the quality of raw material suppliers and will continue to supply them.

"In such cases, the doctors always attribute the failure to us, something which is not true but difficult to admit on their part. We are satisfied by the quality our raw material suppliers deliver and we will keep on procuring from them." (CEO)

For procedural problems: Provide recommendations and guidance on stapling techniques. Also, applying preventive measures, that is, organizing internationally to give instructions on how the company's products are used during a surgery. Also, three YouTube videos have recently been prepared that present the process to the public. Free access and information for doctors at all trade shows. A protocol of use is being developed by one of the leaders of the Opinion Center, a surgical authority.

"So, it is our own duty to give recommendations and instructions on how suturing techniques are implemented correctly per each case. We already organize our own hands-on seminars or even our distributors internationally do so to share expertise and offer guidelines on how our products are used during a surgical operation. Also, we have recently prepared three fresh videos and uploaded it on our new YouTube in order to showcase the processes to the audience. It is worth noting that even during our participation in all commercial exhibitions, doctors visit our booth and learn about both our offerings and the way a suture is treated." (Sales Dept.)

Although test reports are delivered along with the shipment, additional tests are always carried out to ensure that the raw material specifications exhibit acceptable behavior and characteristics so as to exclude liability to suppliers.

"Although we get their test reports along with the shipment, we always carry out our own tests to ensure that the raw material specs exhibit the acceptable behavior and features." (Quality Dept.)

## 5th axis: "Default actions in case of failure"

The question of whether certain actions have been fixed in the event of a failure has been raised with the Sales Department representative and the Quality Department representative of the company. **Table 8** lists the default actions of the participants in case of failure.

The first participant replied that, as he mentioned in a previous question, the first step is to inform the customer of the receipt of his complaint and to request more details about the staple codes and batch numbers associated with the failure incident.

In addition, staff should obtain information on how this failure occurred and possible errors in use. The customer is then informed that he will receive a formal reply after the inquiry, in due course. In the meantime, the complaint is forwarded to the Quality Service staff to begin its investigation. Once the report is ready, it is read carefully and then an e-mail is sent to the client linking the report and outlining the most important points in the email text. It is also announced that the customer will be compensated in the form of shipment of new products for replacement. Finally, the staff always have in mind that they must communicate in a cautious, honest and polite way. It is emphasized that if the failure event proves to be the result of a bad suture, then a patronizing style is not used, even the doctor or business associate continues to insist that he did all the work well. Customer relationship is a key priority because every person and human profile is different. However, he said that in the next period a form of complaint template will be

prepared with predefined questions to guide the customer in the desired direction, with less energy being spent on disputing all events during face-to-face failure.

The second participant responded that complaint management is an important area of their responsibility. When a complaint is sent by the Sales Department, the first thing to do is to identify the "defective" product batch and code numbers. After that, the staff reviews the collection of individual pieces kept for each batch of production and for each code included. After finding these pieces, they are tested on features such as tensile strength limits, needle joint detachment and sterility levels to determine if there is evidence that the particular batch under consideration contains defective bits. Next, a data sheet is linked to the values of the test results, which is then inserted into a template report containing many pieces of recorded information, such as the original description of the complaint, the actions taken, the test results, and the conclusion drawn from the staff study. Finally, we send this report to the Sales Department in order to contact the applicant.

### **Table 8.** Default actions in case of failure.

### **Default actions**

Initially, the client is informed of the receipt of his complaint and details of the staple codes and batch numbers associated with the failure incident are requested. Then, information is drawn on how this failure occurred and on possible errors in use. The customer is informed that they will be informed immediately. The Quality Service staff starts the investigation. The report is sent to the customer by email. It is announced that it will be compensated by shipping new products for replacement. Finally, staff always maintain a thoughtful, honest and polite way of communicating.

If the failure event proves to be a result of a bad suture, then a patronizing style is not used, and even the doctor or business associate continues to insist that he did all the work well.

A form of complaint template with predefined questions is to be prepared to guide the customer in the desired direction, faster.

Once a complaint has been sent by the Sales Department, the batch and the code number of the "defective" product are initially identified. Then, the collection of individual pieces is examined. After finding these pieces, tests are performed on the tensile strength limits, needle joint detachment limits and infertility levels to determine if there are defects. The test results are then output to a data sheet, which is then inserted into a template report containing many pieces of recorded information, from the original description of the complaint to the conclusion reached. Finally, the report is sent to the Sales Department and we contact the applicant.

Below are excerpts of the interviews listed in the answers to **Table 8**.

## **Default actions**

Initially, the client is informed of the receipt of his complaint and details of the staple codes and batch numbers associated with the failure incident are requested. Then, information is drawn on how this failure occurred and on possible errors in use. The customer is informed that they will be informed immediately. The Quality Service staff starts the investigation. The report is sent to the customer by email. It is announced that it will be compensated by shipping new products for replacement. Finally, staff always maintain a thoughtful, honest and polite way of communicating.

"...the first action is to notify the client of the receipt of their complaint and ask for more specific details concerning the suture codes and lot numbers which are connected to the failure incident. Additionally, we try to elicit information about how this failure took place as well as possible mistakes in the way of use. Then, we inform them that they are to get an official answer after the investigation, in due course. In the meantime, we pass the complaint on to our Quality Dept. staff to start their research. Once we receive the report on that, we read it carefully and then we send an email to our client attaching the report and outlining the most important points in the email text. We also announce that they will enjoy a reimbursement in the form of our sending new products for substitution. Last but not least, we always keep in mind that we have to communicate all this in a careful, honest and polite manner, a process which requires a skillful tackling and ability to adapt to each contingency and I am talking about the dialogue we establish with the customer." (Sales Dept.)

If the failure event proves to be a result of a bad suture, then a patronizing style is not used, and even the doctor or business associate continues to insist that he did all the work well.

"Note that if the failure incident proves to be a result of a bad way of suture use, we avoid using a patronizing style, even the doctor or a commercial partner keeps on insisting that he or she did all the work well." (Sales Dept.)

A form of complaint template with predefined questions is to be prepared to guide the customer in the desired direction, faster.

"...during the next period, we are about to prepare a template form of complaints with predefined questions to drive the client to the desired direction, with less energy spent on questioning about all the facts during the failure one-by-one." (Sales Dept.)

Once a complaint has been sent by the Sales Department, the batch and the code number of the "defective" product are initially identified. Post. the collection of individual pieces is examined. After finding these pieces, tests are performed on the tensile strength limits, needle joint detachment limits and infertility levels to determine if there are defects. The test results are then output to a data sheet, which is then inserted into a template report containing many pieces of recorded information, from the original description of the complaint to the conclusion reached. Finally, the report is sent to the Sales Department and we contact the applicant.

"When we receive a complaint from our Sales Dept., the first thing we have to do is to identify the lot and the code numbers of the "defective" product. Upon getting this piece of information, we look through the collection of single pieces we reserve for every production lot and for every code included. After finding these pieces, we perform tests on them, pertaining to features like the thread breaking tensile strength limits, detachment of needle-thread joint limits and sterility levels to figure out whether there is any kind of evidence denoting that the specific lot under investigation contains defective pieces. Afterwards, we issue a data sheet linked to the test result values. Then, this data sheet is inserted in a template report we attempt to issue, in which there are several pieces of recorded information, such as the initial description of the complaint, the actions followed on our part, the test results and the conclusion extracted out of our study. Lastly, we send this report to our Sales Dept. in order to reach out to the complaint applicant." (Quality Dept.)

# 6th axis: "Failure reduction efforts "

The question of whether or not some efforts are being made to reduce brand failures was asked to the CEO and the representative of the Company's Quality Department. **Table 9** lists efforts to reduce brand failures reported by participants.

The first respondent responded that it would definitely change the company's production processes to eliminate a relatively systematic defect in the final product, avoiding suture brand failures associated with quality problems that could affect brand recognition. He explained that the corporate philosophy is to deliver quality to end users and to seek the confidence of our distributors around the world. On the other hand, there has been no systematic defect recorded so far in the last decade. The average number of incoming complaints is about 2-3 per year, the majority of which relate to labeling information errors. Thus, specific instructions were given to the key staff responsible for the labeling of the number of checks to be carried out. The same measurements have been performed in response to the events of thread opening and needle-thread separation and finally, more samples from each batch were tested.

The second participant responded that the quality department's contribution to customer forgiveness is in fact the typical part of the job. The staff performs all the tests and in the report they issue each time, the conclusions drawn after the investigation are described in a formal text. The stamp of the company and the signature of the representative according to the report provide credibility to the customer, as they receive an official document with all the details and work of a business for them. The perception formed by the customer is that an entire corporate entity is always willing to consider its complaints immediately and resolve any potential issues or misconceptions. This enhances the value they receive from our department through personalization. This is the protocol that has been instructed to follow, and all other work on the communication framework to be adopted is the responsibility of the Sales Department. In the most extreme cases, we personally, as an authority in the field, contact the customer to present our arguments about our report, but this is a dedicated service that is usually provided to the most important customers when needed.

### Table 9. Efforts to reduce brand failures.

### **Efforts to reduce brand failures**

Changing production processes to eliminate a systematic defect in the finished product, in terms of quality problems, so as not to affect brand recognition.

As regards the minimum labeling information errors, specific instructions were given to the key staff responsible for the labeling of the number of checks to be carried out.

The same measurements have been performed in response to the events of thread opening and needle-thread separation and finally, more samples from each batch were tested.

The Quality Department staff performs all the tests and describes in an official text the conclusions drawn after the investigation, with the stamp of the company and the signature of the representative.

Emphasis on personalization and prompt examination of complaints. In extreme cases, we personally contact the customer to present our arguments regarding our report.

The other work on the communication framework relates to the Sales Department. Below are excerpts of the interviews listed in the answers to **Table 9**.

## Efforts to reduce brand failures

Changing production processes to eliminate a systematic defect in the finished product, in terms of quality problems, so as not to affect brand recognition.

"My answer is absolutely yes! (Would change production processes). As mentioned, our corporate philosophy is to deliver quality to the end-users and aspire trust to our distributors around the world. On the other, there has been no systematic defect recorded so far in the last decade. " (CEO)

As regards the minimum labeling information errors, specific instructions were given to the key staff responsible for the labeling of the number of checks to be carried out. "The average number of the incoming complaints is around 2-3 per annum, the majority of which pertain to labeling information mistakes. Thus, special instructions have been given to the key personnel being liable for the labeling placement as to how many controls they should carry out. " (CEO)

The same measurements have been performed in response to the events of thread opening and needle-thread separation and finally, more samples from each batch were tested.

"The same measurements have been undertaken as a reaction to events of thread tearing and the detachment between the needles and the threads: more samples of each lot tested." (CEO)

The Quality Department staff performs all the tests and describes in an official text the conclusions drawn after the investigation, with the stamp of the company and the signature of the representative.

"We perform all the tests and in the report we issue every time, we outline in an official text the post-investigation conclusions extracted. The stamp of our company and my signature under our report provide credibility to the customer, since they receive an official document with all the details and the work done by a firm for their sake." (Quality Dept.)

Emphasis on personalization and prompt examination of complaints. In extreme cases, we personally contact the customer to present our arguments regarding our report.

"The perception formed by the client is that an entire corporate entity is always eager to immediately look into their complaints and solve any potential issues or misconceptions. This enhances the value they receive from us through personification." and "In the most extreme cases, we personally, as the authority in the field, come in contact with the client to present our argumentation on our report but this a special service we usually offer to the most important customers and when needed." (Quality Dept.)

The other work on the communication framework relates to the Sales Department.
 "...all the rest work regarding the communicational framework to be adopted is the Sales
 Dept.'s responsibility." (Quality Dept.)

# 5. Conclusion

The research involved three executives of a surgical suture manufacturing company, Medipac SA. These executives are the Managing Director, the Sales Department representative and the Quality Management representative. The company is a family owned company founded in 1987.

Research results have shown that brand management of surgical sutures requires good quality raw materials and original and up-to-date methods of advertising and product promotion. These methods cover various stages, from product packaging to social media promotion, participation in conferences and events, and of course competitive product sales. The main objective of the company is to maximize customer confidence and satisfaction with the use of the company's products in the world market. It is also necessary to emphasize any positive or negative feedback from customers and end users of the sutures, as well as to carefully resolve any problems that may arise from the use of the company's products.

Subsequently, regarding the importance of the company to the existence of suture brand failures, a key indicator of good company productivity is the frequency of occurrence of such failures. The main causes of such failure relate first to procedural problems and second to performance problems. The procedural problems are the incorrect use of the suture by the doctor due to a lack of knowledge of how to handle the product, which the Sales Department must properly provide. On the other hand, performance problems are related to actual product defects, which are the responsibility of the Quality Department of the company. This department must respond promptly to any complaint and take drastic measures to eliminate the possibility of future defects. Nonetheless, part of the brand's failures is related to product placement strategies in a new market. Managing such failures requires organized promotions of the company's products as well as collaboration with renowned dentists, KOL, who have a great influence on the public. The goal is to cope with the strong competition in the global and local market, investing in good quality and price relationships and creating fully satisfied customers.

Except for a single case of failure due to a procedural problem and which did not cause significant financial damage to the company, the failure cases usually received by the company are mainly incorrect labeling / sticker information on the packaging material or incorrect number of pieces or wrong numbers. This company treats them easily. However, complaints about suture quality problems require more difficult handling. After thorough

investigation by the competent department, each customer is compensated with a new, non-defective product.

Responsibility for errors in labeling information lies with the production staff. As for failures for the suture itself, there has been one unique event so far, where the mistake was made by the personnel responsible for the adhesion section. All types of sutures of the company fully comply with the limits set by the European Pharmacopoeia and the raw materials have excellent characteristics. However, there are incorrect manipulations of the suture by the end user due to lack of training and information of the individual. For this reason, the company strives to make public the methods of use of its products by all means available.

In case of failure, the company records the product codes and the way the failure occurred. Next, detailed research and various tests on the product from the Quality department are made, and after their completion they are sent by email to the customer. Finally, the customer is compensated by the replacement of the product. Also, the company is going to develop a complaint template with predefined questions for immediate customer service in case of failure.

Regarding methods of reducing failures, specific instructions have been given to the staff responsible for placing the labels on the number of checks to perform, since in that sector failures are usually identified. Also, all the necessary tests are carried out on the company's products, in order to maintain the highest quality and maximum reliability of the products, and therefore no defects have been systematically recorded.

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# Appendices

### **Interview Questionnaire**

#### CEO:

- Let me begin with the most important question for me: Do you consider Brand Management as a vital tool for a corporation to deal with? Please be as descriptive as possible.
- 2) I would now like to move on the major topic of this interview. So please tell me, what is the importance behind the existence of brand failures for a manufacturing firm and what are the linked gains stemming from their treatment processes?
- 3) How, when it comes to Medipac SA, has a suture brand failure ever caused irreparable damage to the company? If so, what did it concern and how did you handle it, please?
- 4) Who do you believe was responsible for the suture brand failures you have been confronted with in the last 5 years (e.g. your raw material suppliers, production procedure deviations, etc.)?
- 5) I would like to close this interview with the following interesting question: Would you change your production procedures towards eliminating a relatively systematic defect in the final product, avoiding suture brand failures related to Quality problems which could affect your brand name recognition? Please give me some examples.

### Sales Dept.:

- The very first question I wanted to ask you is to which degree you consider Brand Management as a vital tool for a corporation to deal with. Please give me your insight into this from the Sales Dept. perspective.
- So, as you may know personally, a crucial aspect of what is called Brand Management in the scientific community, is the Brand Failure

Management. Hence, please let me know what a suture failure means for you and how you handle it, in the case of your company.

- 3) During the interview I held with your firm CEO, it was mentioned that the suture failures might be a result of either procedural or performance problems. What is your view on this, as per your experience?
- 4) As the Sales Dept. representative of Medipac SA, what are your duties/reactions against suture brand failure events? In practice, what is the action protocol you must follow in the event of a suture brand failure?
- 5) Closing with my questions, in your point of view, what is the importance behind the existence of brand failures for a manufacturing firm and what are the linked gains stemming from their treatment processes?

## **Quality Dept.:**

- Let us begin with the issue of Brand Management and specifically, the part of suture brand failures. As representing the Quality Dept. of Medipac SA, what are your predefined actions upon a receiving a complaint about a suture brand failure?
- 2) What is the most common brand failure you have encountered so far?
- 3) Please let me know, what is the importance behind the existence of such failures for you?
- 4) Now, could you please give me an idea on how your department attempts to enhance customer forgiveness and limit the negative impact on their trust to your products? I mean, is there an explicit contribution to this effort on the part of your department beside the movements undertaken by the Sales Dept.?
- 5) Lastly, I would like to give me your opinion on who you believe was responsible for the suture brand failures you have been confronted with in the last 5 years (e.g. your raw material suppliers, production procedure deviations, etc.).

## **Interview Answers**

CEO

 "I am actually the founder of Medipac SA, a family business established in 1987. Throughout my long-run career in the field of consumables, I found myself wondering whether just producing and selling in the traditional way is enough. So, in the beginning when I was still young and enthusiast, I devised our first logo from the first day and created our packaging labels, stickers, leaflets and so forth, on my own computer in primitive software environment.

Back then, we were a very small company and I used to manage/accomplish such projects and do the job of marketeers myself. After so many years, I still feel enthusiast about our qualitative offerings and this is the reason why I have recently gotten our logo, promotional flyers, packages, giveaways such as bags, pencils, notebooks, etc., our trade fair stands appearance and the entire presentation of our firm redesigned by an external marketing partner, towards revitalizing our brand elements and refresh brand equity. We added also a fresh symbol next to our logo and many other tricky things to keep up with the modern trends - I adamantly believe that this is the right way to move forward in a business environment which is ever-changing.

Finally, it is in my own mentality to deliver quality to the consumers. It has been my personal decision to procure some of the best raw materials worldwide from the beginning and set up a production line whose deliverables are some of the best in the world market, according to the feedback gained so far. I have dealt with every aspect of Brand Management to grow my business and I have appreciated its contribution to success step-by-step. We tend to stay side-by-side to the end-user and listening to their feedback, requests and remarks - either positive or negative - to resolve problems and tailor our production to their needs. I maintain that all this framework paves every time the way for the very next decisions to be made."

2) "To me, the suture failure incidence constitutes one of the central indicators of our good manufacturing performance and the roadmap towards the essential value we attempt to communicate every time to our end-users: Quality. It is undoubtedly a sign that everything goes well or bad! For instance, if we have zero complaints about our products in an operational year, we can make sure that we offer what we promise. This generally strengthens our Sales Dept. self-confidence in their sales pitches, too. However, in any case, the real causations behind a specific failure should be investigated into, so as to figure out whether they pertain to procedural or performance problems. As per our protocol, when we receive a complaint, this gets forwarded to our Quality Dept. with an aim to identify the real background of the problem."

- What do you mean by saying "procedural or performance problems"?

"Procedural problems concern the wrong way the doctor uses our products. If someone is not aware of some special handling one of our products needs, then he or she may think that our product is defective. Hence, it is generally our sales reps' responsibility to demonstrate the recommended way our products can be used. Performance problems are linked with defects in the product, like quality defects during the usage and we have to look into this kind of problem through our in-house procedures. These get solved through improving or correcting some occasional or systematic deviations in our manufacture context."

What about the brand failures linked to positioning strategies in a new market?What are the gains in this case?

"This is all about the brand image and the brand recognition we try to establish in each country audience. We and our local distributors are responsible for this. Local advertisements, participation in trade fairs, events or congresses and doorto-door marketing – the latter being a part of our partners' job – and cooperation with local reputable dentists, KOLs in other words, are some of the common means to enhance brand awareness. KOLs, as authorities in their field of practice, play the role of ambassadors for our firm products through their recommendations. Yet, the competition is tough, with local manufacturers in some countries being well-positioned in that specific market whereas big players who have a worldwide acceptance are always present and constitute a threat to our business. We do not possess that strong name in the international marketplace and we cannot invest so much money to compete directly with big brand names, like Ethicon or B Braun but we have equally good quality. In Greece, we are definitely a very well-known brand name and for many years present in many public or private practices and establishments. Companies like those ones are not a few and usually, they are multinational ones with enormous budgets and a huge network of dealers. If someone has nothing to present against them, it is a matter of time to quit the game. Failing in the promotional processes brings that failure because marketing is all about communication. We offer very qualitative products at reasonable prices and this the competitive advantage we and our business partners avail of in promotions. Being a new entry in a market dominated by central players is very difficult. Failure in this case is not only a matter of production, performance of the product or even misconception on the way of use; it is multifactorial issue that needs deep investigation. Every market to penetrate needs to be analyzed carefully and the very first steps of our brands introduction into the audience, like the pricing policy or the habits of doctors, must be discussed with the local dealer first. Sharing ideas with the local distributor is necessary. Failures come out of wrong handling of the situation and careless positioning strategies. Every time you have to offer something new or more appealing than the big brand names do. From each such experience we have learnt many things about how we can beat those players. So, building up experience and getting information about the rivalry are the gains, helping us to prepare better and grow more mature."

3) "I have invested a lot in the aspect of quality and I have tried a lot to consolidate our position in the international marketplace as top quality providers. Fortunately, we have encountered only a limited number of brand failure incidents, most of them being concerned with procedural and not performance problems. As far as I remember, the worst case was about our first, and latest so far, partner in Thailand, who was active in the general medical sector of consumables. This is was about our Profimed suture brand. Particularly, during an open-heart surgery by a client doctor of our former Thai distributor, the suture knots applied to some blood vessels, serving as a vessel ligature, loosened up repeatedly. Thus, the surgical operation could not be completed and after that, the cooperation with this partner was terminated. The conclusion elicited after further research was that our Profimed suture thread structure was not so suitable for cardiovascular surgery

while it was ideal for dental surgery. Luckily, that distributor was not a major one, so the revenues lost were not that significant."

4) "As discussed, we have not encountered many such events. Final product failures, like wrong labelling or sticker information on the packaging material, wrong number of suture pieces in the delivered boxes as well as only a few complaints about the suture tensile strength features, like threads being torn apart easily or detachment of some threads from their fitted needles, are the most commonplace complaints we have been communicated.

As for the mistakes on the labelling information, the responsible party was undoubtedly the production personnel being liable for their placement on the boxes and their macroscopic checking control. Recommendations on how they should perform their tasks is provided and even stricter measures come into effect to prevent things like this. Yet, when it comes to the complaints about our suture itself, there has been no kind of non-compliance with the limits that European Pharmacopeia sets, according to our measurements on the respective lots each time. Only once we received a complaint that some of the sutures of the sold box were defective and indeed, this was true after our tests. However, this has been a unique incident so far and the responsible staff for the attachment process did something erroneously. Finally, it is important to bear in mind the procedural problems that occur when the end-user exerts excessive force on a suture of specific technical specifications. In such cases, the doctors always attribute the failure to us, something which is not true but difficult to admit on their part. We are satisfied by the quality our raw material suppliers deliver and we will keep on procuring from them."

5) "My answer is absolutely yes! As mentioned, our corporate philosophy is to deliver quality to the end-users and aspire trust to our distributors around the world. On the other, there has been no systematic defect recorded so far in the last decade. The average number of the incoming complaints is around 2-3 per annum, the majority of which pertain to labelling information mistakes. Thus, special instructions have been given to the key personnel being liable for the labelling placement as to how many controls they should carry out. The same measurements have been undertaken as a reaction to events of thread tearing and

the detachment between the needles and the threads: more samples of each lot tested"

## Quality Dept.

- 1) "Complaint management is a major area in our responsibilities. When we receive a complaint from our Sales Dept., the first thing we have to do is to identify the lot and the code numbers of the "defective" product. Upon getting this piece of information, we look through the collection of single pieces we reserve for every production lot and for every code included. After finding these pieces, we perform tests on them, pertaining to features like the thread breaking tensile strength limits, detachment of needle-thread joint limits and sterility levels to figure out whether there is any kind of evidence denoting that the specific lot under investigation contains defective pieces. Afterwards, we issue a data sheet linked to the test result values. Then, this data sheet is inserted in a template report we attempt to issue, in which there are several pieces of recorded information, such as the initial description of the complaint, the actions followed on our part, the test results and the conclusion extracted out of our study. Lastly, we send this report to our Sales Dept. in order to reach out to the complaint applicant."
- 2) "Fortunately, the complaints about our quality are few during any operational year the last decade. The most frequently reported defect is the wrong labelling information which is a result of human factor error. Wrong stickers on the boxes, wrong lot numbers and other product information wrongly placed on the box as well as wrong number of suture pieces in a box are the error we usually face and we try day-by-day to eliminate. The second complaint in rank has to do with some detachment incidents between the needles and the threads of some in a sold box. The attachment between these two elements is not an easy job and the respective production stage requires skillful handling and experienced personnel. Many times, this is the key feature for a manufacturer towards differentiating themselves, provide superior quality through resilient and firm needle-thread attachment and use it as competitive advantage against rivalry. We execute this task by hand, a

technique that minimizes the likelihood of this defect and believe it or not, this way is more effective than the automated processes. Nonetheless, the human error factor is still existent and justifiable in some cases. In overall, we have managed to limit the number of such incidents through stricter operator protocols, rules, control processes and training."

- 3) "As in every manufacturing firm, mistakes, procedural malfunctions, false beliefs on products quality and in general the entire feedback from our endusers drive efficiency, improvements, modernization and generally, streamlining of our production. We are not always in the position to pinpoint the entirety of our production processes deviations and the complaints usually play the role of our roadmap towards resolving several internal issues. Complaints about quality is what concern mostly our department and we, in collaboration with our Production Manager, attempt to resolve any unpleasant situation. The Sales Dept. passes the complaint to us and we impart also the information to our Production Manager. We are responsible for any complaint sent to our company and the value of this is that we sometimes learn from our mistakes. If the test results display a conformity of the products attributes with those set by the European Pharmacopeia, then we ensure ourselves that we keep on operating the right way. On the contrary, when the results are negative, we deploy all our means to identify the causations behind and we make a meticulous analysis on how to prevent any similar problem from reoccurring. In the end, we have to make sure that any issue is resolved and the customer is happy with our reaction."
- 4) "Our contribution to customer forgiveness lies actually in the typical part of the job. We perform all the tests and in the report we issue every time, we outline in an official text the post-investigation conclusions extracted. The stamp of our company and my signature under our report provide credibility to the customer, since they receive an official document with all the details and the work done by a firm for their sake. The perception formed by the client is that an entire corporate entity is always eager to immediately look into their complaints and solve any potential issues or misconceptions. This enhances

the value they receive from us through personification. This is the protocol we are instructed to follow whereas all the rest work regarding the communicational framework to be adopted is the Sales Dept.'s responsibility. In the most extreme cases, we personally, as the authority in the field, come in contact with the client to present our argumentation on our report but this a special service we usually offer to the most important customers and when needed."

5) "I can claim openly that our production is mostly accountable for the majority of incidents taking into account the accumulated track records of the past years. Our raw material suppliers are very reliable and we have no complaint to raise against them. Although we get their test reports along with the shipment, we always carry out our own tests to ensure that the raw material specs exhibit the acceptable behavior and features. Wrong labels on the boxes or insufficient attachment pressure on the needle-thread joints are examples stemming from mistakes in our production personnel. However, as I said the total number of such events is limited and appreciate much the staff which has been assigned to run this operation."

## Sales Dept.

 "The perception our brands in the market is a topic that concerns our department a lot. The factors which shape the image of our products in our audience can be broken down to two parts: Tangible and intangible elements. As for the tangible part, we cater much for our product appearance and presentation in all aspects. Packaging materials, graphics on packaging, logo, images on our promotional leaflets and social media, videos, pricelists and clinical cases we prepare occasionally are some examples. The aesthetic framework plays a vital role in forging the ideal perception among our clients. The perception of quality, in particular, to our audience is a demanding and long-term project that does not accept any divergence from the target. Our products per se are already very qualitative and our mission is to communicate this with our selling propositions. Then, comes the intangible part. The relationship the clients maintain with our brands influences their perception over the value we deliver to a great extent. Loyalty and satisfying product experience have been in our main interest. We make efforts to build up a strong brand awareness worldwide through handson seminars we or our local distributors organize. Participation in major exhibitions as well as congresses, personal contact with doctors and dealers, preparation of clinical cases with our articles by authorities in the field and our presence in the print and digital media are also some ways to achieve this. Our products have all the prerequisites to be well-positioned in the international marketplace and be compared with any other competitive offering. Our prices are very competitive when compared to the market leaders' pricing policy whereas we deliver the same quality levels as they do. Finally, service experience is also crucial thus, our policy is to provide a fast response to every request coming both from our partners or end-users and establish personalized relationship with them. Therefore, brand management is regarded as determinant to the success or failure the whole company faces. It is an everyday challenge for us, the salespeople, to set the bar high and define goals as to how we can increase our brand recognition, appreciation on our quality and loyalty levels."

2) "For our department, a suture failure is recorded at the exact time we receive a complaint from a distributor or consumer of our sutures. Concerning our distributors, they have their own clientele and the complaints get transferred to us in the end. Either this is an outcome of wrong use of the suture or a real suture quality defect, we have to be ready to provide someone with an answer that is not offending, misleading or even harmful for our reputation. Any kind of incoming negative feedback is a failure for our department and we need to tackle it with caution with an aim not to disturb the relationship with the client. We are confident about our quality but errors are reasonable to happen, since our production is driven by human hands, something by the way which adds value and superb quality characteristics in the needle-thread joints. Luckily, the failure incident claims we have received are mostly associated with wrong labelling/sticker information in the packaging material. This is something acceptable by the clientele, to a certain degree. Yet, complaints about insufficient needle-thread joint integrity or threads that get torn easily or fewer suture pieces in a sold box are much more difficult to handle. Especially, when talking about quality in all sales pitches, those kinds of failure incidents are dissociative with the entire image we struggle to promote.

What we do in all in all circumstances is to ask from the client for the suture code and lot numbers and pass the complaints and relevant information on to our Quality Department staff. Upon receiving our colleagues answer in the form of an official report, we forward it to the customer, outlining the basic inferences. When the results exhibit an acceptable range in the technical properties of the reference suture code, we attempt to identify any possible mistake in the way of use and always in communication with the end-user. When the issue is not solved by this means, we even pay a visit to the doctor's practice and try to find out what might have gone wrong in the actual use technique. In all cases, it lies in our corporate policy to replace the defective (or non-defective) sutures with a new suture box, as a deed of reimbursement. On the other hand, once it is proved that the failure is linked to our production lot, we manage to convince the customer that our quality has not changed, pointing out that all companies may have a couple of defective sutures when producing enormously big quantities and this is something well-known in this industrial field. Then, it is in the doctor's discretion whether he or she is going to continue using our sutures. Sometimes, doctors are very stubborn and assertive with their arguments making them completely negative to listen to you. Nonetheless, please note that it has to do with a communicational game every time and the above example is just indicative – this is a dynamic process we have to cope with and nothing is prefixed in such discussions, as logical. Stressing the quality we deliver as a company is always our roadmap in our argumentation and preserving the good relationship with the final consumer is our primary aim."

What about the brand failures linked to positioning strategies in a new market?
 What are the gains in this case?

"Positioning in a market is a kind of puzzled thing. I mean there are many factors that define the result every time. The main contributor to this endeavor is our local business partner. So, success of failure is undoubtedly associated with the quality of their work. They have to communicate our advantages and the value proposition we deliver to the end-user. The more intense the marketing activities they follow, the best results we expect to have in the most of cases. Competition out there is very hard with a wide specter of company structures. The two extreme cases are rivals being either very cheap but of the lowest quality or very expensive but of the highest quality. They are definitely influencers of how our brand image is positioned in the mind of consumers as well. We have always to beat them delivering something attractive but as reasonable we cannot steal a market share from everyone. We focus mainly on the most qualitative producers as quality is one our strong propositions. Brand failures are a result of an ineffective positioning. You can say that wrong timing or bad pricing policy or even rumors around the product quality itself can trigger a series of failures. To a certain degree, it is the responsibility of fresh local partner to promote our offerings in the new market and we need to evaluate their performance frequently as well as train them to be ready to face any objections. So, it is also our own duty to do our job with success. We run training sessions and have further discussions on the strategy-level directions we adopt, some tricks we use in our sales pitches and the philosophy around suture of our company. Failures can stem from misleading perception on how our products can be positioned on the dealer's part. We have one the best quality, we know which market segment to address and this should be in line with our new partner's mentality. For us, good positioning stands for an upward inclination in the sales figures someone generates. This is the sign that our work has a sense and can bring fruits. Marketing channels, such as media advertising, cooperation with local KOLs, participations in fairs, congresses or other events, preparations of digital promotional material, preparation (mainly by us) and demonstration of clinical cases or even door-to-door marketing are some the most crucial things our partner should manage with our contribution. Follow-ups and continuous references to our sutures in the sales visits is necessary. Someone has to invest at least for the basics to have an impact on the audience, to become known. The consumer patterns should be identified and the target market should the roadmap for our dealer to penetrate. Then, the suture performance takes action and word-of-mouth dissemination among the medical community in combination with all the above can forge a good footing for us to be positioned. Our goal is to foresee failures in the first marketing activities and prevent them from happening – so timing is important and gaps in the market should be pinpointed so we can penetrate more easily. We have learnt many new things from every market, dealer or feedback after our very first efforts to penetrate a new market. The only thing I can confess with certainty is that every market has its own particularities and we have to look into them. Yet, our core strategy remains the same, reflecting the identity of Medipac SA. A well-versed salesman is created after gaining experiences from all the markets. Thus, brand positioning failures for us play that role in this process."

- 3) "The answer is simple and I referred briefly to this kind of problem we encounter in my previous words. The procedural problems are caused by the several misconceptions a doctor could have related to the correct usage of our sutures. Some sutures, e.g. our Profimed brand, need special handling and this one specifically requires a different way of forming the final knot after the stitching process. During the University studies, a doctor is taught only a few things in suturing and principally about the use of the simplest suture category, namely the Silk. So, it is our own duty to give recommendations and instructions on how suturing techniques are implemented correctly per each case."
- Thank you. Now, could you please tell me how you prevent any procedural problem in advance?

"We already organize our own hands-on seminars or even our distributors internationally do so to share expertise and offer guidelines on how our products are used during a surgical operation. Also, we have recently prepared three fresh videos and uploaded it on our new YouTube in order to showcase the processes to the audience. It is worth noting that even during our participation in all commercial exhibitions, doctors visit our booth and learn about both our offerings and the way a suture is treated. In some cases of high importance, we tend to pay a visit to the doctor's practice site and share our knowledge regarding this. In any case, we manage to help everybody get a grip on our products usage methods by any available means – this is our duty as salespeople, that is to exchange information with all the possible clients or the existing ones. It is significant for us to know what the doctors did wrong and elicit every piece of information related to that. Their feedback is useful for us because we must ensure that everyone knows how to use our articles, first in principle and then in practice. Sometimes, doctors attribute a failure coming from erroneous way of use to quality problems and this is something we must avoid and necessarily prevent. Therefore, the preparation of a protocol of use by one of our Key Opinion Leaders, authorities in the surgery sector, has been in the pipeline and this initiative on our part could free our hands against many objections we usually get from some assertive doctors."

4) "As said, the first action is to notify the client of the receipt of their complaint and ask for more specific details concerning the suture codes and lot numbers which are connected to the failure incident. Additionally, we try to elicit information about how this failure took place as well as possible mistakes in the way of use. Then, we inform them that they are to get an official answer after the investigation, in due course. In the meantime, we pass the complaint on to our Quality Dept. staff to start their research. Once we receive the report on that, we read it carefully and then we send an email to our client attaching the report and outlining the most important points in the email text. We also announce that they will enjoy a reimbursement in the form of our sending new products for substitution. Last but not least, we always keep in mind that we have to communicate all this in a careful, honest and polite manner, a process which requires a skillful tackling and ability to adapt to each contingency and I am talking about the dialogue we establish with the customer. Note that if the failure incident proves to be a result of a bad way of suture use, we avoid using a patronizing style, even the doctor or a commercial partner keeps on insisting that he or she did all the work well. The relationship with the customer is our priority in our job. Every individual and human profile is different and we have to both adjust ourselves in their behavioral context and correct things to the possible extent. Notwithstanding, during the next period, we are about to prepare a template form of complaints with predefined questions to drive the client to the desired direction, with less energy spent on questioning about all the facts during the failure one-by-one."

5) "It lies in the nature of our position to learn day-by-day new things as well as exchange as much information as we can from the international marketplace. A facet of this framework is the elicitation of the feedback from the end-users. either through direct contact or by our distributors worldwide. Alright, getting always positive feedback is the ideal situation but simultaneously boring and non-creative for our own development. The value of suture failure incidents is firstly hidden behind the conclusions we infer from our Quality Dept.'s examination that follows. We correct ourselves, we better our manufacturing procedures, streamline processes, explore latent and problematic functions, solve packaging issues, minimize the likelihood of a future defect occurrence and undoubtedly, we adjust our offering schemes to the needs of the consumers. The conclusions we extract, as the Sales Dept., are critical as well. You know, any post-purchase interaction with a customer should be treated with tact and strategy. Every suture failure complaint is literally a part of this context and sometimes constitutes an opportunity for both sides to come closer, look together at the problem, share ideas, exchange information and build up stronger bonds. Fast response to complaint and undertaking drastic measures adds value to our relationship with the client, even on an emotional level. Additionally, a brand failure may bring the chance of our getting a deeper insight into the audience's view on our products. You know, a complaint may also bring further complaints to the surface to be discussed as well as feedback from counterparts that has never been communicated re unveiled. So, we view each complaint as an opportunity to grow better and stronger, too."