

**MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH**

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**Master's Dissertation**

In Entrepreneurship and Project Management

**The role of risk assessment in exceeding client's expectations.**

Case: NAFTAL DISTRICT TIARET.

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## ABSTRACT

In a constantly evolving world, companies are forced to meet the client's expectations in terms of quality of product/service but such requirement seems not enough.

ISO standards come in handy in these situations regarding quality service in the petroleum distribution industry. Indeed, with hazardous products, safety comes first.

This study focuses on the risk assessment approach used in the ISO 9001:2015 quality standard; whether this risk-based method is any good for exceeding client's expectations and overall quality.

In qualitative demarche, three technics (observation, case study and interviews) have been used to gather data on three interested parties: media / neighbors / internal clients, which are often neglected in the implementation of an ISO standard.

The results reveal that the implementation of risk assessment can help organizations exceed client's expectations. Hence, a proactive approach incites organizations to be constantly evolving and aware of its surroundings.

**Key words:** Risk assessment / Quality ISO 9001:2015 / Interested Parties / Clients / Implementation.

## RESUME

Dans un monde en constante évolution, en attente de plus en plus des organisations en termes de qualité de produit / service, les entreprises sont obligées de répondre aux attentes du client mais parfois cela ne suffit pas.

Les normes ISO sont utiles dans ces types de situations, et en particulier dans le cas d'un service de qualité dans l'industrie de la distribution pétrolière, la sécurité passe avant tout lorsqu'il s'agit de produits dangereux. Dans cette étude, nous nous sommes concentrés sur l'approche d'évaluation des risques utilisée dans la norme de qualité ISO 9001 : 2015 pour voir si cette méthode basée sur les risques est utile pour dépasser les attentes du client et la qualité globale.

Dans cette étude nous avons opté pour une approche qualitative en commençant par l'observation, l'étude de cas et les entretiens sur trois parties intéressées (médias / voisins / clients internes) souvent négligées dans la mise en œuvre d'une norme ISO, les données collectées après analyse nous donnent les résultats à comparer entre une organisation qui a une approche d'évaluation des risques et celle qui n'en a pas. Les résultats à la fin ont déterminé que la mise en œuvre de l'évaluation des risques peut aider les organisations à dépasser les attentes des clients si elle est effectuée de la bonne manière avec une approche proactive qui incite les organisations à évoluer constamment et à être conscientes de leur environnement.

**Mots clés :** Évaluation des risques / Qualité ISO 9001 : 2015 / Parties intéressées / Clients / Mise en œuvre.

### ملخص

في عالم مستمر التطور ، دائما نتوقع المزيد والمزيد من المنظمات من حيث جودة المنتج/الخدمة ،حيث تضطر الشركات إلى الحاجة لتلبية توقعات الزبائن ولكن في بعض الأحيان لا يكفي.

تظهر اهمية معايير ايزو في هذه الأنواع من الحالات, خاصة في حالة جودة الخدمة في مجال توزيع البترول السلامة تأتي أولا عند التعامل مع مثل هذه المنتجات الخطرة. وفي هذه الدراسة ركزنا على نهج تقييم المخاطر المستخدم في معيار الجودة ايزو 9001\2015 لمعرفة ما إذا كانت هذه الطريقة القائمة على المخاطر مفيدة لتجاوز توقعات الزبائن والنوعية العامة للمنتج.

في هذه الدراسة اخترنا نهج نوعي من خلال البدء مع الملاحظة ، دراسة حالة والمقابلات على الأطراف الثلاثة المعنية (وسائل الإعلام/الجيران / العملاء الداخليين ) والتي غالبا ما يتم إهمالها في تنفيذ معيار ايزو, البيانات التي تم جمعها بعد التحليل تعطينا نتائج تمكنا بالمقارنة بين منظمة لديها نهج تقييم المخاطر و التي لا تملكه. وخلصت النتائج في النهاية إلى أن تنفيذ تقييم المخاطر يمكن أن يساعد المنظمات على تجاوز توقعات الزبائن إذا ما تم ذلك بالطريقة الصحيحة باتباع نهج استباقي يحرض المنظمات على التطور المستمر والوعي بمحيطها.

**الكلمات المفتاحية:** تقييم المخاطر/الاطراف المستفيدة/الزبائن(العملاء)/التنفيذ / الجودة ايزو 9001:2015

## ACKNOWLEDGMENTS

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## ACRONYMS AND ABBREVIATIONS

WORD	DEFINITION
ISO	International standardization organizations
QMS	Quality management system
GD	Gestion direct
GL	Gestion libre
CRB	CARBURANT (Fuel)
SPA	Joint stock company
TQM	Total quality management
BSI	British standards institution
GBS	Groupe Belhocine service
CEO	Chief executive officer
IMS	Integrated management system

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# **INTRODUCTION**

From Victor E. Sower's point of view Quality is not that of a new concept, the survival of the early humanoid depended on the quality of the tools he fabricated, from stone and bone to iron and bronze, Quality was completely integrated in the manufacturing process that was passed from one generation to another, with the evolution of the civilization, the specialization of labor began to develop, and that development was in the techniques within various sorts of organizations (guilds, unions, masters-apprenticeships) so the quality was the responsibility of the craftsman creating the product or doing the service at this point in time ( Victor E. Sower. Essentials of quality (2011) This evolution has escalated to a point where quality is mandatory for the success of an organization, and not any quality but the quality of service and product that quality standards such as ISO standards could provide to an organization.

In fact, these ISO standards help organizations to be more efficient, economical, and sustainable. By giving the organization a competitive advantage and a safer environment exceed client's expectations.

The latest version of the ISO 9001:2015 requires the use of a risk-based approach to ensure the best results possible. Henceforth, is this new approach any good for exceeding client's expectations?

In this study, we focus on the benefits of the risk assessment in quality management system that could be procured to an organization in order to exceed its client's expectations and benefit from all the advantages that this latter engenders.

In addition, we focus on three interested parties (media – neighbors – internal clients) to see how they could manifest (threat/opportunity) and affect the organization with a positive impact or a negative one. Accordingly, to the compatibility with research interests, we have chosen the NAFTAL CBR DISTRICT TIARET as an internship organization. Our presence coincides with the early phase QMS implementation, which helped us to collect as much data as we could till the global pandemic Covid-19 strike the globe.

The choice of our thematic was mostly motivated by our enquired background data that we picked from our ENSM quality formation, and by the staggering similarity between a QMS implementation and project management process.

As for the methodology, we opted for a qualitative method that was very helpful for the data collection that we divided into three main phases ordered in a logical order:

- observations: participative overt observation.
- A case study: using the ISHIKAWA tool in a brainstorming session with the quality and risk managers.
- Interviews with the internal clients (GB/GD).

The results demonstrate that risk assessment plays an important role in the success of the implementation of a QMS, that automatically helps to improve customers service and products that results in exceeding client's expectations and ensures a competitive advantage to gain more profit and makes the organization more safe, stable and sustainable.

**CHAPTER I**  
**PROBLEM STATEMENT**  
**AND**  
**METHODOLOGICAL FRAME**

Threats and opportunities assessment on interested parties for quality management systems implementation.

## **1.1. Problem statement**

### **1.1.1. Objectives:**

The main objective of our research is to use the ISO 9001:2015 risk assessment approach to point out the pertinent interested parties that are usually overlooked or not taken into consideration like (media - internal clients - entourage...). As a second step, we do a risk assessment on them to see their manifestation as a threats or opportunities, and how they exceed clients needs and expectation.

Furthermore, our study points out a better understanding of the ISO 9001:2015 risk assessment approach, (ISO 31000), and for a better management for organizations that have to deal with the instability of markets, new costumer's requirements, and all the outside forces that might affect and be affected by the organization. To manage their risks and upgrade the quality of their products and services, there are many risk management methods that are known and used by most entities, but the most used and reliable is the ISO 31000 approach, this standard will help entities assess the risks and opportunities, on the pertinent interested parties, for factual decision making, and help the managers on a strategic level. The present study provides organizations with the adequate risk management tools for a quality management system in order to get the certification, be more efficient, secured, sustainable, and gain more profit.

### **1.1.2. Research Question**

Nowadays, the increase of high-quality products and services demands from customers has led to the ISO 9001 certification of organizations to help them to fulfill and exceed customers

expectations, through effective planning and management. Hence, many organizations have adopted these standards, in the hopes of increasing customers' satisfaction and the acquisition of a competitive advantage. The requirement imposed by the quality management systems, such as ISO 9001:2008, need also to transit to the newer versions like the ISO 9001:2015, which obviously are sophisticated than the previous ones. Besides these new versions are more client oriented; they have adopted the risk assessment approach. Such adoption helps to insure a continuous development for organizations regardless the size or industry.

According to the clause 4.2 of the ISO 9001: 2015 (4.2 Understanding the needs and expectations of interested parties), the risk assessment approach is a new way to tackle the opportunities and threats of a particular market we are dealing with, and via understanding these needs and expectations of interested parties it is preferable to undertake an analysis of internal and external interested parties to determine the relevant ones and their requirements that relate to the business activities, and those which impact the management system.

It is possible to meet the expectations and needs of the clients, however to exceed them is another concept, according to Deming's words (1993: 30) «just to have the customer satisfied is not enough...you have to do better than that». To operationalize the customer' focused approach, one must define who the costumer is? Once defined, ways must be used to meet the needs and expectations of the customer, but clearly this isn't enough to exceed needs and expectations.

Consequently, we may formulate our research question as following:

- How risk assessment on the interested parties can be key factor to help entities manage their risks, improve the quality of the products resulting in the acquisition of a competitive advantage to exceed customers' expectations.
- How can risk assessment on interested parties in the quality management system help organizations exceed customers expectations?

## **1.2 Methodology**

Throughout our study we will see the benefits of risk assessment on the overlooked pertinent interested parties on organizations, that are quite beneficial in my opinion, to maintain sustainability, gain more profit, and to be one step ahead of the odds.

Our research inscribes in qualitative methodology, in our viewpoint it can be more fruitful in tackling our goals. Hence, gathering data will rely on a principal method, which is an interview. The gathered data can help us to describe, interpret, contextualize, and gain in-depth insight into our specific concept.

In order to gain a better insight into the possibilities for improvement of the service range, semi-structured interviews were conducted with a Group returning customers from the main target group of Naftal CRB which are the retailers. A returning customer was defined as someone who usually bought products on almost regularly basis (between three days to a week). The surveys were used to select participants who belonged to the target group (local service stations of Tiaret). Interviews were conducted in the office of the gas station, and lasted approximately 15 to 40 minutes each. Answers were recorded by note-taking, and audio recording interviews were also recorded with the consent of the persons interviewed.

### **1.2.1 risk assessment in ISO 9001:2015**

There are different risk assessment approaches adopted by organizations, that have implemented the ISO 9001:2015 or are about to, in the world. Thus, ones of the most used are the ISO 31000 standards. Although the process of creating and applying risk management may not be specific because of its application vary from one situation to another, ISO provides rich references such as:

- ANSI/ASSE Z690.1-2011 Vocabulary for Risk Management (U.S. Adoption of ISO Guide 73:2009).

- ANSI/ASSE Z690.2-2011 Risk Management Principles and Guidelines (U.S. Adoption of IEC/ISO 31000:2009).
- ANSI/ASSE Z690.3-2011 Risk Assessment Techniques (U.S. Adoption of IEC/ISO 31010:2009).

In this study, we will address risk and opportunities on the interested parties, to determine if they represent a threat or an opportunity for the organization, according to the 9000 store the requirements of the ISO 9001:2015 around risks and opportunities, do not require a formal risk management system. However, we determine what the risks are and how they will be addressed. By using two metrics, Severity (how serious is it), and Probability (What is the probability of the risk occurring), and some risk assessment/prevention tools like maintaining a risk register, an environmental failure mode effects analysis – FMEA (mats Zackrisson, Gunnar Bengtsson, Camilla Norberg, 2004) , yacov Y. Haimes (1987) Fault tree analysis (FTA), cause and effect, SWOT analysis Nadine Pahl, Anne Richter (2007) , PEST analysis, and the PHA preliminary hazard analysis Clifton A. Ericsson, II (2005), providing us with qualitative and semi qualitative risk analysis.

### **1.3. Research field**

#### **1.3.1 Naftal CBR District Tiaret**

The research field is in Naftal CBR District Tiaret. NAFTAL is a joint-stock company, a subsidiary of SONATRACH, having for missions marketing and distribution of petroleum products.

##### **I-1. History and mission**

NAFTAL national company for the marketing and distribution of petroleum products. Its essential mission consists in distributing and marketing petroleum products on the national market, distribution consists in sourcing, storing, selling and transporting the product to the customer with a view to its use. It acts as an intermediary between domestic and foreign suppliers (refiners, manufacturers and other producers).

### **a - History:**

From SONATRACH, "National Society for Research, Transport, Production, Transformation, marketing of hydrocarbons ", the national enterprise of refining and distribution of petroleum products "ERDP" was created by decree No. 80/101 of April 06, 1981. Entered into activity on January 1, 1982, it is responsible for the refining and distribution of petroleum products.

- On March 04, 1985, the following fuels, lubricants, tires and bitumen have been grouped under the name UND (NAFTAL Distribution Unit).

- In August 1987, the refining activity was separated from the distribution activity and devolved to a new NAFTEC entity. The name of the company changes following this separation of activities, giving birth to a new national company called:

"National company for the marketing and distribution of petroleum products" Under the acronym "NAFTAL".

- NAFTAL is now solely responsible for the marketing and distribution of petroleum products and derivatives.

- April 18, 1998: transformation of NAFTAL into a joint-stock company with share capital of 6,650,000,000 DA.

NAFTAL changes status and becomes a SPA share company wholly-owned by the holding company "*SONATRACH Valorisation des Hydrocarbures*" (SVH).

### **b - Mission:**

NAFTAL is responsible for the distribution and marketing of petroleum products on the national market.

It operates in the areas:

- the burning of LPG

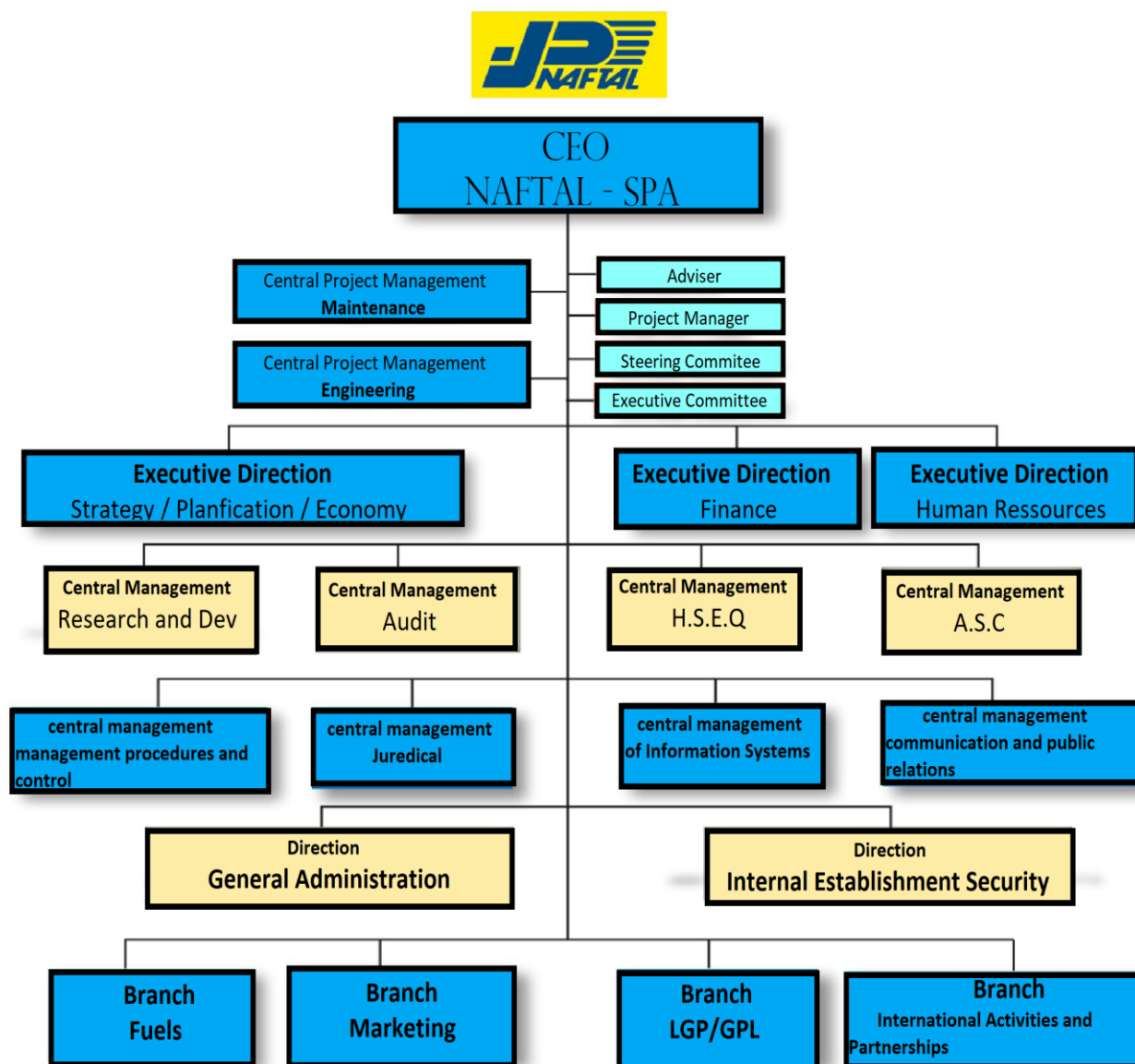
- bitumen formulation

- distribution, storage and marketing of fuels, LPG, lubricants, bitumen, tires, LPG / fuel, special products.

- transport of petroleum products.

**3 - NAFTAL Organigram:**

The following figure is from the organization’s archives, and translated by me from French to English.



**Figure N°1: Diagram of the macrostructure of the company NAFTAL SPA.**

#### **4.The activities of NAFTAL**

a- The resources of the NAFTAL company:

With a staff of 34,000 agents. Affective as of 12/31/2009, NAFTAL is the first and only distributor of petroleum products in Algeria.

It contributes 51% of final energy by supplying more than 10 million tons of petroleum products per year in the form of:

- Fuel.
- Liquefied petroleum gas.
- Bitumen.
- Lubricants.

For this NAFTAL has:

- 67 distribution centers and fuel storage depots. Lubricants and pneumatic.
- 55 aircraft supply depots, centers and sales outlets at sea.
- 45 GOL packing centers with a cask capacity of 1.2 million tons / year.
- 59 LPG relay storage depots.
- 05 LPG bulk centers.
- 16 bitumen formulation units of 360,000 tons / year.
- 3,500 distribution vehicles and 1,800 handling and maintenance vehicles.
- 380 km of multi-fuel and LPG pipelines.

And its distribution network spans:

- 1,732 service stations, 328 of which are directly managed by NAFTAL.

- 124 points of sale for unleaded petrol.
- 268 LPG / FUEL sales outlets.
- 14,550 LPG sales outlets.

The coverage of the needs of the national market in petroleum products involves massive transport of fuels and LPG from the sources of production to the consumption zones which are the districts.

To ensure this balance between supply and demand, NAFTAL makes use of several modes of transport:

- Cabotage pipe: for supplying companies from refineries.

Rail / railway: for supplying depots from the interior of the country from warehouses.

- Road: for the delivery of customers and the supply of depots not served by the rail.

To fulfill its mission of distributing oil tankers, NAFTAL has a fleet exceeding 3,000 distribution vehicles constitutes of:

- Road tractor.
- Flat semi-trailers.
- Tank semi-trailers.
- Tank truck.
- Flatbed truck.
- Pallet truck.

This allows it to ensure 70 to 75% of customer deliveries, the rest being provided by third party carriers or by customers themselves.

In addition, NAFTAL has (7) barges for ship welding and charters in permanence with public transport companies:

- 160 fuel tanks (SNTR).
- 960 tank wagons (SNTF).
- 04 coasters (SNTM / HYPROC)

## **II-2- Tiaret Fuel District**

1- The district of Tiaret entered into force in 1994 within the framework of the supply of certain wilayas of fuel product for the main mission of NAFTAL, the distribution and the marketing of petroleum products on the national market.

fuel storage facilities and the following deposits are under the responsibility of Naftal Tiaret:

- Tiaret Center
- Bourached Center (W- Saida)
- Frenda warehouse (W- Tiaret)
- Tissemsilt depot
- Chleff depot
- Aflou depot (W- Laghouat)
- El Bayedh depot

## 2-1: Fuel District TIARET organigram.

The following figure was taken from the organization archives and translated to English.

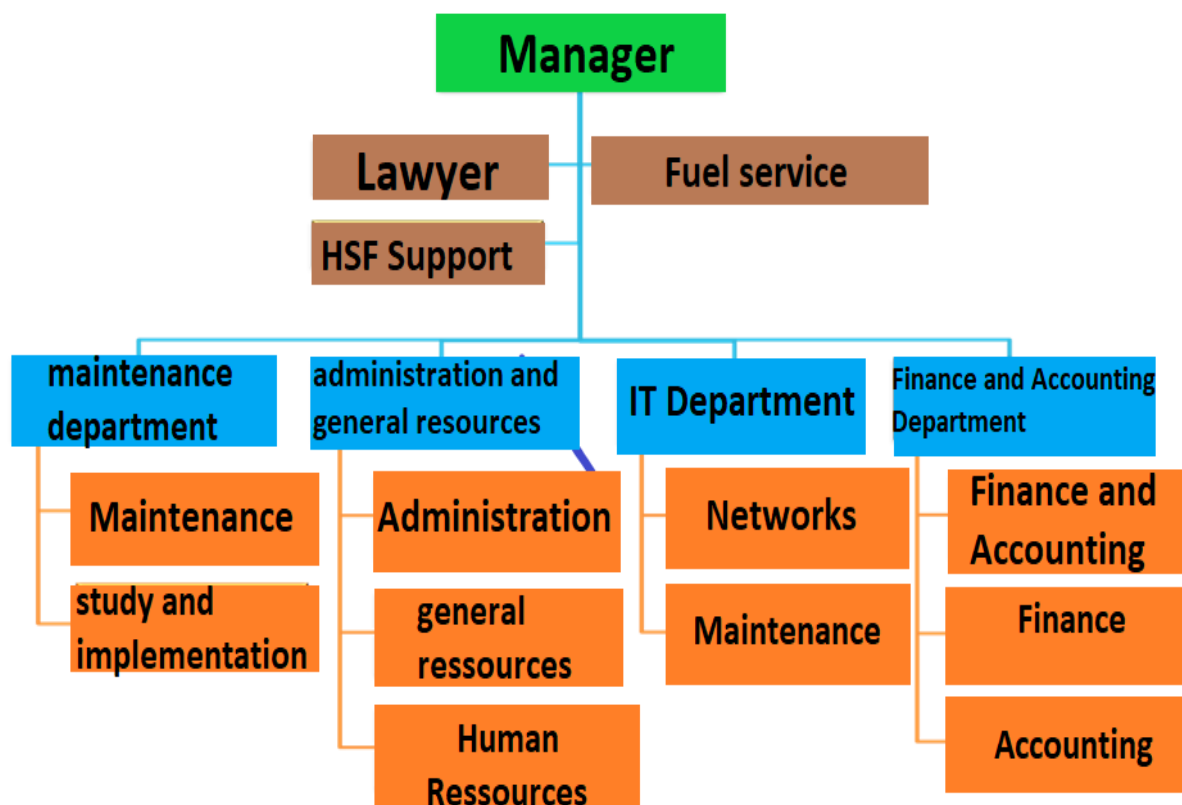


Figure N°2: FUEL DISTRICT TIARET ORGANIGRAM (NAFTAL INTRANET files).

## 2-2: Organization of the NAFTAL company

As any NAFTAL company has its own organization, we illustrate the main services:

### 2-2-1. Management Information Service (ING): its mission is to:

- Collect, verify and analyze district management information.
- Develop dashboards and reports of district activity.
- Ensure the installation, operation, and backup of management software and related data.
- Provide assistance to structures in terms of operating applications Operational IT.

**2-2-2: AMG Department (administration and general means):**

The missions of the AMG department are:

- Ensure the management of the general resources of the district
- Ensure the management of human resources
- Manage the administration
- Ensure the management of social and cultural works

**2-2-3: Finance and accounting department:**

The finance and accounting department is responsible for:

- Coordinate and monitor all treasurer accounting activities, budget and assets
- Consolidate, analyze the accounting statements and ensure the sincerity of the District accounts
- Ensure that the accounting entries correspond to the physical and financial flows.

This department includes the following services:

**2-2-3-a: Treasury department: it is made up of two sections, the Revenue section and the expenditure section. Its mission is to:**

- Monitor and control cash flows, receipts and expenses.
- Process investigation payment files, suppliers and other expenses.
- Establish reconciliation of accounts (income and expenses)
- Control and carry out the accounting of accounts and large cash books.
- Establish activity reports.

**2-2-3-b: General accounting service: it is made up of two sections, the SVCD section and the accounting section. Its mission is to:**

- Proceed with the accounting entries in accordance with the recommendations of the national accounting plan.
- Develop accounting documents (Balance sheets, scales and books).
- Control accounts closings and prepare inventories and balance sheets.
- Develop accounting analyzes and summaries.
- Proceed with the closing and reopening of accounts.

**2-2-3-c: Budget and cost service:**

- Develop the provisional investment and operating budgets of the District.
- Consolidate all the expenses necessary for determining the cost
- Control and process the financial situation of the District
- Adjust budgets and credits
- Ensure regular monitoring of cost accounting

**2-2-3: Transport and Technical Department: Its mission is:**

- Develop preventive and curative maintenance plans for equipment, depots, and channeling and monitoring its execution.
- Develops annual and multi-annual transport plans, taking charge of distribution and supply needs of the products sold.
- Monitoring the completion of works.
- Develop investment plans and budgets (renovation, extension, handover level, replacement) of fixed installations, pipeline, network of stations services and others.
- Establish a periodic activity report.

This department includes the following services:

**2-2-3-a: Operation and maintenance service:**

- Check the application of the requirements of the operating and safety regulations Fixed equipment and installation.
- Establish maintenance performance.
- Ensure the maintenance of the installations at the fuel depots.

**2-2-3-b. Studies and realization service**

- Establish the technical part of the specifications.
- To control and direct the various works.
- To follow the scheduled works relating to projects.

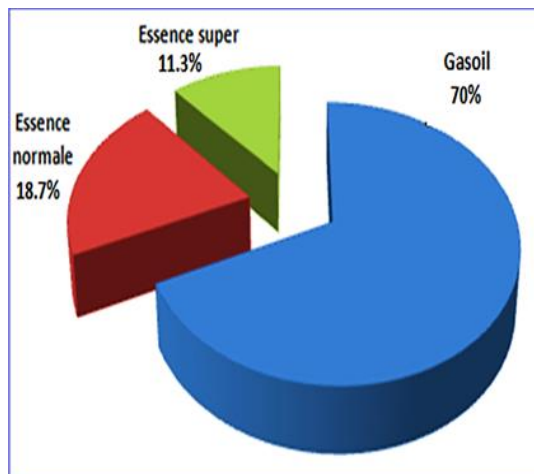
**2-2.4. Technical sheet: Fuel Center 1147 Tiaret**

- District: CBR Tiaret                      Town: Tiaret Center code: 1147
- Year of operation: 1994
- Refinery supply source from Arzew, Center CBR Oran
- Medium supply by Truck
- Area of influence: Tiaret –Tissemsilt -Aflou
- Legal situation: NAFTAL property
- Total area: 189,800M<sup>2</sup> Built-up area: 27,667 M<sup>2</sup>

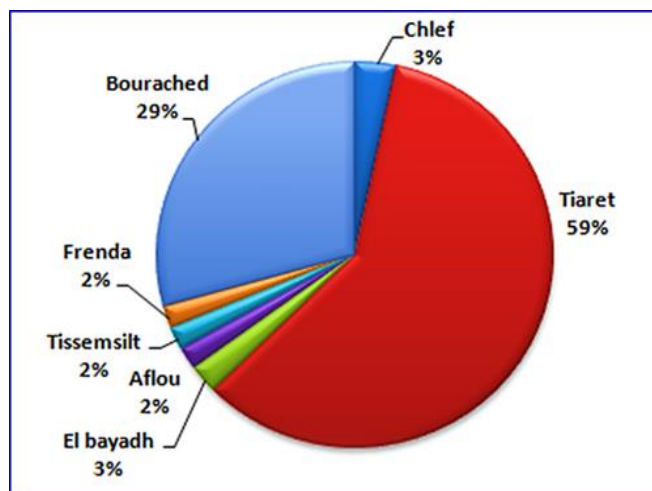
The total storage capacity is 58,360m<sup>3</sup> all products combined, distributed as follows:

- Diesel 40,860 m<sup>3</sup> or 70%
- Premium gasoline 6600 m<sup>3</sup> or 11.3%
- Normal petrol 10900 m<sup>3</sup> or 18.7%

### 2-3 Graphic representation of the stocking capacities



FigureN°3: Total Stocking Capacity.



FigureN°4: Distribution of Capacities by region.

The Fuel Branch is one of the three branches of NAFTAL. It is responsible for procurement, storage and delivery of Aviation Fuel (Jet-A1 and Methmix), Marine (Diesel oil and fuel oils) and Earth fuel (Super Essences, normal and unleaded, Diesel, A72, white spirit) as well as aviation and marine lubricants and greases. All of the above are highly flammable products that requires high standards of quality and safety, for the sake of the user and the workers, that are in contact with the products, or in the area of danger (in case of fire, or explosion), Naftal was already certified ISO 9001:2008, and in the mean time it is in the faze of a new ISO 9001:2015 implementation, what makes it the perfect field for our research, which is risk assessment in the QMS, also it is one of the main approaches of the new standard ( client oriented and risk based approach ) for best performance and sustainability.

**CHAPTER II:**  
**LITERATURE REVIEW**

## **Section 1 Quality management system risk assessment:**

### **2. Quality management system Risk assessment on interested parties**

This chapter is dedicated to discuss the two main concepts in our study by taking a look at the literature and their perspectives on the influence of these two merged standards, the quality management system ISO 9001 and the risk based thinking (risk management ISO 31000) on the success of organization implementing them or on the verge of implementing, and mostly how they can help exceed client's expectations first we start with the quality management system.

#### **2.1 Quality management system ISO 9001 standard**

In historically perspective, and according to Victor E. Sower (Essentials of quality; 2011), quality is not that of a new concept, the survival of the early humanoid depended on the quality of the tools he fabricated, from stone and bone to iron and bronze, Quality was completely integrated in the manufacturing process that was passed from one generation to another, with the evolution of the civilization, the specialization of labor began to develop, and that development was in the techniques within various sorts of organizations (guilds, unions, masters-apprenticeships) so the quality was the responsibility of the craftsman creating the product or doing the service at this point in time .

In the same vein, through a progress of the industrial revolution to the early twentieth century, the industry shifted from the craft concept to the concept of the specialization of labor, scientific management, and mass production. Thus, the invention of the interchangeable parts in the 18<sup>th</sup> century made adherence to specifications very important. It wasn't apt to the craftspeople to create unique parts for their customers, but to create identical parts to their co-workers in the organization, and for a certain number of workers to create parts that had to fit together to form a final product, management needed systems that define material quality, work methods, and specifications, and to control these production processes, a formalization of quality as a discipline had to be done.(Victor E. Sower; 2011)

#### **2.2. Exceeding customers' needs and expectations**

There was three major quality revolutions in history, the first one occurred in the united states by the work of Walter Shewhart during world war II years, in the united states of America, the second one was in japan in the 1950s with the work of Edward w. Deming , Joseph Juran, and

Armand Feigenbaum, which resulted in the emergence of Japan's emergence as an economic power. The third revolution was in the early 1970s when they finally recognized the work of these men and put it into practice in the USA. (Victor E. Sower; 2011)

ASQ defines quality as «A subjective term for which each person has his or her own definition. In technical usage, quality can have two meanings: (1) the characteristics of a product or service that bear on its ability stated or implied needs and (2) a product or service free of deficiencies» - (Quality glossary, 2002, p.56).

According to Walter Shewhart (1931), the quality had two aspects: firstly, the objective one, like the quality of a product "on objective reality independent of the existence of man", and, secondly, the subjective aspect refers to it as "what we think, feel, or sense as a result of the objective reality" according to Shewhart, although we measure the objective aspect, it is the subjective one that is of commercial interest.

For Deming (1933), in the new economics for industry, government, education, agreed on quality being subjective, and must have commercial value. «What is quality? A product or service possesses quality if it helps somebody and enjoys a good and sustainable market. Trade depends on quality».

Relying on Shewhart's work Juran (1970) defines it as «fitness for use», and Feigenbaum (1951) as «best for certain customers conditions». These definitions form the base of modern quality definition. Victor E. Sower (2011).

Others and Parasuraram define quality as meeting customers' expectations but in Deming's words (1933, p. 30) «Just to have the customer satisfied is not enough...you have to do better than that». In order to operationalize the customer-focused definition, one must know who the customer is. And we have two types of customers internal and external ones, once we know who they are we can satisfy them, and by meeting customers expectation we can stay in the game, but once we exceed their expectations, that's when the competitive advantage is found and gain more profit from it.(Victor E. Sower; 2011)

### **2.3. Quality management system frameworks and Critical Success Factors/Barriers to Successful Quality Management System Implementation:**

Many studies (Kim et. AL (2011), Milan Hutyrá (2010), Valentina Biasini (2012), Garza-Reyes et al., (2015), etc.related to Quality Management System implementation have been

reported in the literature by quality experts, in the field quality practitioners, consultants and international organizations. Which have brought to us experiences of organizations after Quality Management System has been implemented. Some studies have also reported Quality Management System implementation experiences in form of conceptual frameworks and case studies.

One of the first conceptual frameworks for TQM implementation was developed by Hakes (1991), he focused on continuous improvement aspect by using a questionnaire an organization needs to ask itself. These questions were: what are the short term and long-term objectives? How performance is measured? How to communicate opportunities for improvement? However, no knowledge about quality tools and resource management was provided, with no sign of risk-based thinking approach (Yusof and Aspinwall, 2000).

A quality management model was proposed by Berry (1991). However, it failed to consider a need for early quality related training in his inner most model required for providing necessary improvement (Yusof and Aspinwall, 2000). That Early training was necessary for the education of the employees within the organization and mostly the top management, about Quality Management System, it dedicated its efforts to initiate a change in culture, which is in my personal observation one of the first barriers to the implementation of a quality management system in many industries in Algerian territory).

In one of the recent researches works, Kim et al. (2011) did compare few Quality Management System frameworks on the idea of consideration of critical factors, motivational factors and clarification of links within Quality Management System impacts. Authors also suggested that Quality Management System implementation studies can be evaluated based on the type of impact they have on the organizations. Having that said, authors also did propose organizations can be classified to have 'zero impact' or impact with 'Quality Management System assets' or impact by having 'improved Quality Management System outputs' (Kim et al., 2011). However, no comparison was provided by the usage of this criterion. Also, we believe that an ineffective Quality Management System could have some impact on the organization. Henceforth, we refer to these types of impact as 'negative impact' rather than 'zero impact' in this study. As stated before, Quality Management System implementation might have 'negative impact' on organizations performance at any level (operational/mid management/top management), if Quality Management System is ineffective, its due to reasons like, incorrect implementation methods and an organization based only on external motivations. However, 'Quality Management System assets' could be

taken from an effective implementation of any quality system (Kim et al., 2011). Such 'Quality Management System assets' were achieved in forms of improved quality systems (Yahya and Goh, 2001; Magd, 2008; Poksinska et al., 2006; Williams, 2004), Standardized process (Williams, 2004; Yahya and Goh, 2001; Zeng et al., 2007; Jones et al., 1997), sustainable environment (Yahya and Goh, 2001; Zhang, 2000; Zeng et al., 2007) and many other types of assets. Most likely, Quality Management System outputs were also achieved by efficient management of Quality Management System assets, that simplify the improvement of operational performance that manifests in the form of cost reductions that are related to waste and nonconformance's, timely deliveries of products and services, enhanced customer satisfaction levels of both the internal and external customers, the increase of productivity through-out product making processes (from raw material receiving to product or service delivery), a reliable and controlled processes, shorter cycle times, and so on... (Mezher et al., 2005; Jang and Lin, 2008; Han et al., 2007).

Lee and Lam (1997) also did present a Quality Management System implementation framework for an Asian railway company in six different phases based on ISO 9001 standards. The implementation started with the training of all the staff levels of the organization to make sure that a total commitment to quality was followed by development of Quality Management System documentation process. This phase was followed by an implementation, internal audits, preliminary assessment and Quality Management System review, and a dry run and formal assessment. However, the case study failed to explain the basis of development of QMS and related documentation, which can be achieved by using self-assessment techniques like 'Gap Analysis'. Despite the Total Quality Management and quality control circles (QCC) program already installed at the organization, motivation for the implementation of Quality Management System was not well explained and detailed. Also, apart from the first training, the framework does not include any specific training program for the new procedures and any of the work instructions that were affected due to changes. The procedures were also made without taking in consideration of understanding the needs and expectations of internal customers.

### **2.3.1 Critical Success Factors and Barriers to Successful QMS Implementation:**

An organization with a motivation to implement a Quality Management System must adopt all the necessary requirements specified in the standard (Psomas et al., 2010). However, many research studies have found implementation of Quality Management System to be somehow complex and difficult (Chow-Chua et al., 2003). Organizations also could have different

motivations for implementing a Quality Management System like the need of the certifications. On the other hand, researchers have also revealed a multitude of barriers and critical success factors that organizations that are seeking a Quality Management System implementation should consider. Oakland (1993) defined critical success factors as elements that need to be examined and categorized to ensure successful implementation of a system. In this study, we have used previous Quality Management System experiences from the literature discussed in the precedent section and list the different types of organizational barriers and critical success factors needed to be taken into consideration while implementing a Quality Management System, in the exhaustive table below, from an American master of science thesis of quality management by Manish Avinash Sawant (2016) North Dakota State University, and modified by me to suite this research.

Critical Factors to Be Considered During Quality Management System Planning	
Inability to provide resources needed for QMS (Magd, 2008; Zeng et al., 2008; Kim et al., 2011; Angelo Giannopoulos et al., 2007)	Employee resistance to change (Bhuiyan and Alam, 2005)
Lack of commitment to financial support from the top management before QMS Implementation (Yahya and Goh, 2001; Magd, 2008; Kim et al., 2011)	Poor problem-solving training to tackle quality related problems (Magd, 2008)
Lack of qualified personnel required for successful implementation and maintenance of QMS of (Magd, 2008)	Lack of measurement and monitoring of internal and external customer satisfaction (Park et al., 2007; Kim et al., 2011)
Lack of experience and knowledge of QMS (Angelo Giannopoulos et al., 2007)	Lack of training to perform performance analysis using quality tools (Yahya and Goh, 2001; Park et al., 2007; Magd, 2008, Kim et al., 2011)

Lack of training necessary for implementing QMS (Yahya and Goh, 2001; Park et al., 2007; Magd, 2008; Chow-Chua et al., 2003; Psomas et al., 2010; Kim et al., 2011)	Analyze the impacts of organizational change that are necessary to implement QMS successfully (Park et al., 2007)
Meeting internal and external customer needs and expectations (Psomas et al., 2010; Park et al., 2007; Kim et al., 2011)	Ensure employee involvement and commitment to QMS development and Implementation (Psomas et al., 2010)

Table N°1: Important factors for quality management system planning.

Source: Manish Avinash Sawant - Approved by: Dr. Om Prakash Yadav (November 17, 2016.) modified by ourselves to suite this research.

#### **2.4. Benefits and motivation of quality management system implementation:**

Organizations have also benefited from QMS implementation with advantages like increase in quality productivity, reduction in operational costs, increased flexibility, shortened cycle times and increase in employee satisfaction (internal customers) (Mezher et al., 2005; Han et al., 2007; Kim et al., 2011).

##### **2.4.1. Quality Management System Implementation Motivation**

Numerous researchers that studied the factors that motivated organizations to implement Quality Management System, and the ISO certification was found to be one of the key motivation factors (Singels et al., 2001; Gotzamani & Tsiotras, 2001; Boiral & Roy, 2007). In their study, Lee et al. (2009) got to the fact that organizations take different efforts in the implementation of Quality Management System requirements as they could have different priorities and motivations. Anderson, Daly & Johnson (1999) did study United States manufacturers and found out that their motivation to implement a Quality Management System was to achieve standardization of organizational processes to improve the quality of products and internal processes that would enhance customer satisfaction levels and reduction in costs associated with quality. Due to such diverse motivation factors, Leung et al. (1999) classified them into two types of driven motivation factors, internal driven motivation factors and external driven motivation factors, which were also called as noncustomer driven and customer driven motivations respectively. Internally motivated organizations, that did

implement a Quality Management System for achieving internal benefits, did make higher levels of organizational performance than externally motivated organizations, which seek certification due to external motives or pressure (Singels et al., (2001).

## 2.5. Risk management

At this level, we introduce the risk management methods that are used in the quality management system, and discuss them in the following literature.

### 2.5.1 The origin of risk assessment:

Based on the work of Henri-Pierre MADERS and JEAN-Luc MASSELIN (2009) the origin of « risk assessment » appeared long ago, from maritime transport, mining... etc. to subsequently develop to other sectors like health, construction, and continuous development in projects.

*«À l'origine, la gestion du risque » est apparue dans le secteur industriel : transport maritime, exploitation minière, industrie automobile, nucléaire, pétrolière, chimique, etc. Par la suite, elle s'est développée dans d'autres secteurs tels que la santé, la construction, la production agricole... Sans oublier les projets de développement durable.»*

Henri-Pierre MADERS and JEAN-Luc MASSELIN piloter les risques d'un projet

© Groupe Eyrolles, 2009 page 8.

What is a risk assessment?

First, we define the risk, it is the mathematical expectation of a probability of events that could happen in the near future or a long one, by Dr. Daniel Bernoulli (1738)

*« Le risque est l'espérance mathématique d'une fonction de probabilité d'événements »* Dr. Daniel Bernoulli (1738)

Based on the work of Henri-Pierre Maders et Jean-Luc Masselin, risk assessment is the process of evaluation, anticipation of hazards, and the implementation of a surveillance, and data collection system that triggers alerts, that help us take factual decisions. Henri-Pierre MADERS and JEAN-Luc MASSELIN (2009)

### **2.5.2. The importance of risk management in quality management system:**

According to BSI (British Standards Institution, created in (1901) ) the risk-based approach is an automatic behavior we often sub-consciously do to get optimum results, this concept always was implicit in the previous ISO 9001 standards, the revision made in 2015 makes it more explicit and built in the whole management system. This approach, emphasizes on the fact that risk is considered from the beginning and throughout the whole process, also making proactive actions a part of strategic planning, and finally changing the way we think about risk that it is only negative; risk can be positive on how he helps identify opportunities.

There exist a great number of popular guidelines for implementing risk management in all kind of projects domains (INCOSE 2011; DoD 2006; International Organization for Standardization 2009; Project Management Institute 2008; NASA 2008).

These guidelines generally consist of a list of so-called “best practices” in risk management, assumed to be collected and made from experience and lessons learned from the past. However, the guidelines fail to include evidence to support the effectiveness of their prescriptions. What results is an ad-hoc application of risk management processes, if there is any application at all. Also, there is both a lack of legitimacy and a lack of unity towards one common best practice understanding (BSIgroupe.com (© BSI Group BSI/UK/642/SC/0715/en/BLD)

The complex and diverse nature of project management has led us to various communities of practices and bodies of knowledge, and it has been quite challenging to reach a common and workable understanding of project management best practices (Bresnen 2016). Until this point, Kutsch and Hall (2009) argue that despite a great deal of work towards prescriptive risk management guidelines, very little amount of work exists to reveal why risk management is actually done (or not done) by top management, and why. Kutsch and Hall report that one third of the 102 IT project managers in their study conducted no project risk management process on their project at all, it seems that they could not justify the cost of such processes. Also, in a number of other studies of project management maturity, risk management methods

are included as a category of competence, and is consistently found to be relatively immature (Ibbs & Kwak 2000; Papke-Shields et al. 2010; Grant & Pennypacker 2006). It appears that even though project managers could be aware that risk management practices exist, they fail to implement these practices. Only few evidences exist to prove the legitimacy of these methods, and persuade project managers to invest in risk management (Olechowski, A., Oehmen, J., Seering, W., & Ben-Daya, M. (2016)).

It is known that legitimacy is critical in the decision of an organization to adopt a standard (Brunsson et al. 2012), however, is difficult to assess from the standard itself. We can look to the literature to provide legitimacy through empirical studies that investigate both important factors in risk management and if and how risk management might lead to project success. We highlight below the limited set of studies that have attempted such evaluations (Olechowski, A., Oehmen, J., Seering, W., & Ben-Daya, M. (2016)).

## **2.6. Project risk management success evaluations**

These following evaluations from the literature that were established will display to us whether the risk management methods contribute to the organizations success or do the complete opposite by leading organizations to failure.

A meta-analysis (quantitative study) of empirical evidence from previous studies of risk management in IT projects seeks to address the question of whether risk management actually contributes to project success or not (de Bakker et al. 2010). The authors identify that senior management support and the user participation in risk management might be highly influential on project success. Hence, the authors warn that the knowledge of risks alone (or what they call the “evaluation approach” as opposed to the “management approach”) is not enough to contribute to project success by its own.

In another study of 291 development programs, Oehmen et al. (2014) examined 30 proposed risk management best practices and exposed that more than 70% show no significant association with desirable product development or risk management outcomes, with only indirect impact on product and project success in impact measures. These findings might suggest that we take a more critical look at the conventionally recommended risk management practices.

A project management focused study, investigating specific methods extracted from the PMBOK (project management body of knowledge, a project management guide), surveyed

142 practitioners (Papke-Shields et al. 2010). The risk-related methods include “quantitative risk analysis” and “risk register updates,” for example. Of particular interest to this work is the finding that risk-related methods were surprisingly found to be the least used of 10 knowledge areas. The authors found a significant difference in the level of use of risk management methods between the successful and unsuccessful projects in the study, suggesting that even though infrequently used, the more risk management, the better project outcomes.

An empirical study based on over 100 product development projects in various industries was reported by Raz et al. (2002), this study found that only a small number of projects used any kind of risk management practices. Those projects that did use risk management were found to have better met time and budget goals than the ones who didn't.

In another study, with evidence from a questionnaire of 84 project managers from the software and high-tech industries, Raz and Michael (2001) start from a list of 38 risk management tools from the literature and identify 28 tools that are used by organizations with better project management performance. Examples of such tools include the ranking of risks, risk probability assessment, and checklists, that contributes in a major way to the success of the host organization.

Mu et al. (2009) propose and validate a risk management framework for new product development which divide risk management into three factors: organizational, technological, and marketing risk management. Validation was performed empirically through a survey of Chinese firms. The results show that risk management strategies focused on those three factors contribute both individually and interactively to the performance of new product development which automatically leads to satisfied customers and more.

Even though this work, provided evidence that risk management can lead to better project outcomes, it is possible to see the opposite, when the risk management guidelines are poorly adapted by managers and organizations (Kutch et al. 2009; Ibbs and Kwak 2000).

Another example, where risk management and safety measures are by-passed or over looked in order to meet the needs of production, and everybody seems to participate in a silence conspiracy, which relies on a strange contractual behavioral manner that makes the employees deny the fact that they are working in a hazardous environment, that might lead to catastrophes and major losses (Sutherland, Valerie J, Makin, Peter John, Cox, Md, Charles 2000) like the case of The loss of the north sea drilling rig piper alpha, the night of 6 July

1988. It appears in that devastating event that it was a culmination of a catalogue of accidents in the quest for oil over the preceding decades. Caused a major explosion, it claimed the lives of 167 people and the total loss of the rig piper Alpha.

Given the disagreement we witnessed in the literature provided prior, in the previous section, we can see that not all of the researchers agree on the same concept, nor tools, or practices, or even the abstraction, and it would take a manager to choose from the existing different best practices methods and tools to mount their own method of risk management, rather than just using a unified method, guideline, or standard (Olechowski, A., Oehmen, J., Seering, W., & Ben-Daya, M. (2016)).

However, it would be much easier and more beneficial for organization to use standardized methods, to constantly evolve and be in a continuous development. There is evidence that suggests that standardized methods for project management may increase project success (Milosevic & Patanakul 2005), and it can be argued that standardized processes allow for more accessible and transferable gained experiences and learning in the organization (Perminova et al. 2008).

Although these unifying bodies of knowledge proved their role in the success of organization, those who have a contingency point of view on project risk management are skeptic towards such claims, and think different project and different uncertainty characteristics need different risk management approaches, which brings us to a one-size-fits-all standard risk management practice is not recommended (Teller et al. 2014; Jun et al. 2011; Miterev et al. 2016; Williams 2005; Thamhain 2013).

The recommended sets of principles, which happened to be already implemented by the host organization for our study is the ISO 31000 risk management standard, considering them a part of a major standard, made to provide high-level guidance, evaluate, implementation of concrete risk management practices.

## **2.7. The ISO 31000 risk management standard**

ISO 31000 is an international standard published in 2009 that provides principles and guidelines for effective risk management. It outlines a generic approach to risk management, which can be applied to different types of risks (financial, safety, project risks) and used by any type of organization. The standard provides a uniform vocabulary and concepts for discussing risk management. It provides guidelines and principles that can help to undertake a

critical review of your organization's risk management process. Published: 2017-07-31 Eric Marsden, risk engineering.org

However, the standard does not provide detailed instructions or requirements on how to manage specific risks, nor any advice related to a specific application domain; it remains at a generic level (Published: 2017-07-31 - Eric Marsden, risk engineering.org).

the implementation allows the company to encourage proactive management, to comply with legal obligations and regulatory as well as international standards, (Jacques Segot, Julie Raymond, Lise Favier (2011).

Risk management consists of five main processes:

- Establishment of context;
- Risk identification;
- Risk analysis;
- Risk evaluation;
- Risk treatment.

Jacques segot, julie Raymond, lise Favier (2011).

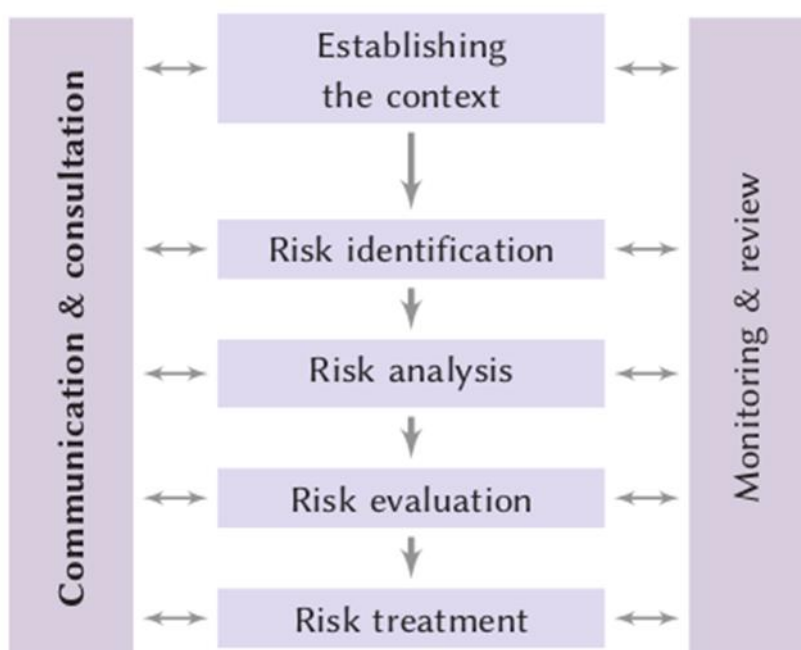


Figure N°5: Principles and guidelines for effective risk management (Published: 2017-07-31 Eric Marsden risk engineering.org)

The risk management process outlined in the ISO 31000 standard includes the following activities: Eric Marsden risk engineering.org (2017)

- Risk identification:** identifying a risk that could prevent us from achieving our objectives.
- Risk analysis:** understanding the sources and causes of the identified risks; studying probabilities and consequences given the existing controls, to identify the level of residual risk and the impact it could have on the organization.
- Risk evaluation:** the comparing of risk analysis results with risk criteria in order to determine whether the discovered risk is tolerable or not.
- Risk treatment:** the increasing or decreasing of the magnitude and likelihood of consequences, both positive and negative, to achieve a net increase in benefit.
- Establishing the context:** which is a new activity, that consists of defining the scope for the risk management process, defining the organization's objectives, and establishing the risk evaluation criteria. The context involves both external elements (regulatory environment, market conditions, stakeholder expectations) and internal elements (the organization's governance, culture, standards and rules, capabilities, existing contracts, worker expectations, information systems, etc.).
- Monitoring and review:** checking for deviations from the risk management plan, checking whether the risk management framework, policy and plan are still appropriate, given organizations' external and internal context, reporting on risk, progress with the risk management plan and how well the risk management policy is being executed, and reviewing the effectiveness of the risk management framework.
- Communication and consultation.** With the interested parties that help understand stakeholders' interests and concerns, to ensure that the risk management process is emphasizing on the right elements, and also helps with the factual decision making.

The standard includes a number of principles that risk management should verify:

- Creation and protection value.
- Based on the best information.
- An integral part of organizational processes.

- Tailored.
- A crucial part of decision-making.
- Taking human and cultural factors into account.
- The addressing of uncertainty explicitly.
- Transparency and inclusivity.
- Systematic, structured and timely.
- Dynamic, iterative and responsive to the changes of the situations.
- Facilitates continual improvement of the organization (PDCA).

## **Section 2 interested parties:**

### **2.1 Interested party:**

According to ISO (international organization of standardization), it is any individual or organization that can affect or be affected by the outcomes, installation of a project or organization. The official definition from ISO: “*an interested party can be a stakeholder, person or organization that can affect, be affected by, or perceive itself to be affected by a decision or activity*” clause 4.2 ISO 9001:2015.

Also, it is stated that an organization must define its pertinent interested parties and meet their expectation, in order not to suffer from the risk they could hold for the future of the organization sustainability. (ISO 9000:2015 2.2.4)

### **2.2 Who are these interested parties?**

The following exhaustive list from different literatures (Whittington & Associates, ISO 9000) gives us the list below:

- Customers.
- end users.
- business partners.
- franchisors.
- intellectual property owners.
- parent company.
- subsidiaries.

- owners.
- shareholders.
- bankers.
- insurers.
- utility companies.
- emergency services.
- unions.
- news media.
- external providers.
- employees.
- contractors.
- regulators.
- trade associations.
- professional societies.
- community groups.
- neighboring firms.
- competitors.

### **2.3 The identification of the pertinent interested parties:**

The identification of these interested parties, could be done by the use of the six markets model that helps organization identify markets that are crucial to their marketing strategies (Whittington & Associates).

Example:

- Customer, e.g., buyers, consumers
- Supplier, e.g., vendors, contractors
- Internal, e.g., employees, business units
- Intermediary, e.g., distributors, retailers
- Alliance, e.g., joint ventures
- Influencer, e.g., reviewers, media

In another research, Howard C. Kunreuther, Eryl V. Ley (1982) interested parties analysis provides information to the party that could affect or be affected by the organization, and furthermore improve decision making, which makes it a strategic necessity.

Also, the national research council describes the implication of the interested parties in the risk assessment to be a crucial part of the analysis and deliberation, and might even become a part of the risk management team, NRC (1996). Federal Register, Volume 63, Numéros 93 à 95.

Now that the background of the main concepts discussed prior is done, we will proceed with a qualitative approach used by R. Sakthiganesh, Dr. S. Suchithra -IRJET (international research journal of engineering and technology) Volume: 04 Issue: 01 | Jan -2017, used on a construction project. With modification we will use it on our study, with an objective of identifying both negative positive impacts of risk, making them a strategic factor for success; and allowing the establishment of response plans and future strategies to transform the risk into competitive advantage in the market.

Also, we will be using the Ishikawa diagram through-out the whole process of the organization to determine the risk and opportunities on the three interested parties that we chose to focus on, by doing brainstorming sessions with the quality and risk management departments managers in the organization, that did lead to satisfying results about the help that the risk assessment provides to the QMS implementation and the exceeding of client's expectations.

And finish off with some interviews with the internal clients of the organization (the gas stations owners GB/GL/GBS - and some of the operational workers in the organization (Tissemssilet stock station ), to understand the role of the risk assessment in the acquisition of the competitive advantage, that results in the success of the organization and exceeding of clients expectations.

**CHAPTER III:**  
**METHODOLOGY**

### 3. Methodology and frame analysis

This chapter presents the methodological frame. It displays the epistemological stance and the method used to gather data.

Epistemologically speaking, our enquiry adheres within deductive logic, opting for qualitative demarche. Thus, deductive logic is the process of reasoning from one or more statements (premises) to reach logically certain conclusion. We have opted for such an approach so that we can get a concrete conclusion about whether the risk assessment in ISO 9001:2015 quality management can help exceed client's expectations.

In purpose to collect reliable information, we opted to use several data collection methods on the three interested parties that we chose for this study (media - internal clients, fuel stations – entourage) these sources of information are divided into two categories (principal sources – secondary sources).

- Primary sources: observation – interviews – case study.
- Secondary sources: company's documents and literature.

The qualitative research is more fitted to meet the reality of the situation, and by collecting information by interacting with the different participants gives us an overview to really connect the dots and get a general idea about the phenomena or the theory that we study.

#### *Primary data sources:*

In order to gather the right data from the right participants, we proceeded by logical order. First thing that you do when put in a new environment, whether it is voluntary or not, you observe James P. Spradley (1980). After the observation is done, we managed to organize a meeting with the managers of the RSE department and, the quality management implementation, and establishing a cause and effect study (Ishikawa diagram – or -called fishbone strategy) on the three interested parties we agreed on this thesis, at last we had several semi-directed interviews within the internal clients of Naftal CRB District Tiaret to see whether the risk assessments influence on the clients and also the gaps between the theories and the reality.

### 3.1 - Observation

The circumstances we encountered in our research field compelled us to opt for the participative observation where we prefer to use both techniques overt and covert participative observation. Basically, participative observation is when *“the researcher joins in and becomes part of the group they are studying to get a deeper insight into their lives”* (Festinger 1952). However, regarding the global pandemic crisis that did strike the world by surprise imposing on us to be armed with safety measures and taking extra caution, which helped us collect even more data for our research. Henceforth, using the overt method, since the environment was in the host organization that already knew about my presence and the purpose of my staying, so it was not up to me, as a researcher, allow to myself to be a participant and an observer at the same time gives you a broad idea about our subject, and helps us get answers to most of the questions and even get access to abstract data, that we normally wouldn't reach in codified forms. Alongside, the covert observation which we considered only during the process of the interviews, that has been integrated into our plan, only after the pandemic period, by observing the conditions, the entourage, the new measures against the Covid-19 situation, and the architecture without the participants knowing about it.

**The overt Observation:** According to Festinger (1952), overt is where the observer asks for permission to participate and observe, and is doing so under his true identity and with a transparent objective.

**The covert Observation:** Covert is where the observer is (undercover) incarnating another identity, or not revealing his true intentions from the group of study, by collecting information secretly (Festinger 1952). Furthermore, as Spradley (1980) asserted *“Introspection will greatly enrich the data an ethnographer gathers through participant observation.”* This means that the researcher uses himself as a data collection tool, throughout the whole process

and relying on everything that documents the social situation under study (recordings – pictures – videos – observation...)

### The Observation Objectives

The main objective in using this data collection technique is to provide our study with as many relevant information to the risk assessment relation with interested parties threats and opportunities, and successfully integrate the team of the new project which was already in action before my arrival (the implementation of the new ISO 9001:2015 quality standard), and gather the abstract information to back up my knowledge and the study about risk assessment.

### **3.2 - The case study**

The case study we opted for was a cause and effect method on the three interested parties (neighbors/entourage – media – internal clients), which is called the Ishikawa diagram (fishbone diagram) to see what could make these three interested parties manifest into a threat or opportunity for the organization. Henceforth this exercise was done in a brainstorming session with the three managers who had the responsibility of the project implementation, depending on their expertise, company's documentation and literature provided by me from the ISO standards.

### **3.3 - The semi directed interviews**

To see the situation from both sides we tried to diversify the sources of information, as we did with the tools we also went to different clients (NAFTAL GL-NAFTAL GD) and even to the direct opponent (GBS). To see if the risk assessment had a place within the gas stations and its role in the petroleum business to conclude whether it had an impact on client expectations.

NAFTAL GL gas stations: Those stations are mostly private station who bought the rights to sell the organizations products, the NAFTAL products like (gas / petrol / diesel / lubricants...), under a contract signed by the two sides.

NAFTAL GL Gas Station: GL stands for "*Gestion Libre*" in French, which means that the management of the gas station is under the owner of the stations command (the owner runs the station by his own rules and management system) (Source internal documentation).

NAFTAL GD Gas Station: GD stands for “*Gestion Directe*” in French, referring to a direct management from the NAFTAL organization, in other terms it has the same management system as the NAFTAL Organization.

GBS (GROUPE BELHOCINE SERVICE): GBS head office was created in the year 2000, by the CEO (Chief Executive Officer) Mr. Aissa Belhocine.

Location (Route d'Alger BP A5 (Benamara Djilali) 14000 Tiaret)

FAX: +213 46 20 89 98.

This organization offers the same services as NAFTAL (petroleum products Distributor and service provider). Source GBS employee.

Semi-directed interviews with NAFTAL GD and GL gas stations

The interviews were conducted in the two types of NAFTAL Gas Stations, the GL (the under private management Stations), and the GD (under NAFTAL management Stations) to collect data from the internal clients themselves, and any other type of information we could get from this process.

Semi-directed interview with GBS (GROUPE BELHOCINE SERVICES)

The interview was to get extra information and even get a view from a third perspective about whether the use of risk assessment could impact the quality of service and win more clients by exceeding their expectations.

Here is table we made to have a simplified overview on the interviews and observations within the Gas stations:

N°	Type of organization	The Interviewee	Place of the interview	Date of the interview	duration	Covid-19 procedures	Covert Observation
N°1	NAFTAL GL (kerjou)	Fuel pump operator.	In front of the fuel pump.	28/05/2020	10 minutes	None	There is no communication or what so ever with their superiors, no safety equipment nor measures.
N°2	NAFTAL GL(Rigina1)	Fuel pump operator and supervisor (experience + 30 years)	In the gas station's store.	31/05/2020	35 minutes	None	The safety zone wasn't respected (very old gas station) pre independence.
N°3	NAFTAL	The stations	The stations	31/05/2020	40	None	The safety zone

	GL (Rigina 2)	vulcanizer experience 30+ years	store		minutes		in the architecture plan none existent. The pumps exposed to danger with no protection.
N°4	GBS (Rival)	Administration top manager.	His office	01/06/2020	30 minutes	Some workers wear masks	Minimum safety measures, reactive approach only, and the juridical risk measures only.
N°5	NAFTAL GD (Tiaret)	IMS Manager	The administration	01/06/2020	50 minutes	Anti Covid-19 measures applied by all workers.	Same risk management as the organization, proactive approach, and safety zone respect.
N°6	NAFTAL GL	Gas station owner and manager	His office	02/06/2020	30 minutes	None	New foundation, with safety measures but the owner had no idea what risk management stands for.
N°7	NAFTAL GL	Store supervisor and 2 <sup>nd</sup> manager	In the store	02/06/2020	35 minutes	None	Operators working in dangerous conditions (one of them had slides on his feet) and no safety zone between the station and the hotel next door.
N°8	NAFTAL GL	Fuel pump operator, store supervisor.	Next to the pumps (he was alone)	03/06/2020	30 minutes	Face mask	Pumps exposed to traffic. he bought his own safety equipment.
N°9	NAFTAL GL	Owner of the gas station and manager	In the office	03/06/2020	40 minutes	None	Old foundation, no safety zone, no equipment, reactive risk approach only.
N°10	NAFTAL GD (Sougeur)	The same IMS Manager from the previous GD Gas	In the office	04/06/2020	30 minutes	Anti Covid-19 measures applied by	Same risk management as the organization, proactive

		Station				all workers.	approach, and safety zone respect.
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Table N°2: the interviews and observations within the Gas stations (elaborated by us)

*Sampling:* The number of interviews is 10 maximum. We wanted to get as much evidence and data as possible to get the best results. We could have done more but the remaining Gas station where the GD ones which they all happen to be under the supervision of the same IMS (Integrated Management System) Manager we interviewed in Tiaret and Sougeur.

*Interviewee selection criteria:* We selected the Gas stations workers/managers because they were somehow the internal clients and the external ones, and they are directly affected by managerial practices (risk assessment in the quality management system), which can affect the quality of service the safety of the end client and even the entourage (public safety, neighbors).

The different organizations interviewed and observed are the following:

- The NAFTAL GD Gas station.
- The NAFTAL GL Gas station.
- GBS (GROUPE BELHOCINE SERVICES).

### 3.4 Interview guidelines

According to our demarche, we built the interview guide for all the types of gas stations (internal clients/external) to collect accurate information that can be translated to results later on. The interview guide is divided into 3 concepts. Firstly, the risk management best practices and its importance in the petroleum business; secondly, the barriers of risk assessment on the service quality; and finally, the effect of risk assessment on the quality process and end user.

This interview guide was designed to put the interviewee in the correct frame, and ease the tension, that was often misunderstood (interviewees thinking that I was there to audit) by a quick introduction at the beginning of the questionnaire, of course the interview was conducted in the Algerian dialect and translated afterwards. (cf. the interview guideline can be found in appendix A.)

### 3.5. Results analysis

In order to obtain the best results after doing the prior interviews, we chose a particular analysis method, which makes the end results more objective, with clear ideas that we conclude from the interviewee responses.

We propose below three distinct steps to our demarche analysis:

- **Data Transcription:** It is important to transcript the collected data from the interviews to the letter, to preserve a raw data inventory that could be helpful for the next step. (Andreani, et al, 2015).
- **Data coding:** There are two types of coding (open coding / closed coding):

Open coding:

- Generalizing the data.
- Looking for similarities, ranking, comparing.
- Coding the main ideas.

Closed coding:

- Coding according to research hypotheses.
- Explanatory variables and variables to explain.
- Coding of search indicators.

The open method was the optimal choice for our study, according to the analysis methods of Jean-Claude Andreani. (2015).

- **Data processing:** Also, the data processing methods for qualitative data analysis are divided into two methods:
  - Semantic processing: (manual processing) the empiric analysis of ideas, words, meanings.
  - Statistic processing: (computing treatment) the statistical analysis of words and phrases.

For our study a semantic approach is best suited, to ensure the right processing of the data perceived, that is placed in a context that mentally allows for such thorough processing. (Andreani, et al, 2015).

**CHAPTER IV:**  
**RESULTS AND DISCUSSION**

This chapter is dedicated to results discussion. Yet gathering data was based on different tools: observation, case study, and interview. By respecting the logical order of the prior methodology.

## **4.1. Observation**

### **4.1.1. Within the internal clients**

Based on our participative observations, within the internal clients, the risk assessments (safety measures / best practices) has two sides of consideration. On the one hand, it is considered as an extra work, which led to braking to work flow or even unnecessary measures, on the other hand it is an opportunity to improve working environment and making it safer.

These safety measures implied:

- Restricted areas;
- Evacuation plans;
- Direct line with the local authorities;
- Emergency drills (for the staff and managers);
- Clear directions;
- Emergency exits.

The current situation related to the pandemic covid-19 gives us the opportunity to experience in real time how a threatened situation of the safety of the workers (internal clients) can be managed. Indeed, since the beginning a serious and severe measures has been applied, which are numerated in following:

- Wearing masks (mandatory);
- Physical distancing (mandatory);
- Hand sanitizers and face masks where at the disposition of the whole internal clients.;
- Implementation of a new face recognition technology, for workers check ins;
- Permission to stay quarantined for staff with chronic illnesses, and children under the age of 14 years old;
- The use of technology when possible (meetings on line (Skype) / work from home).

## Comment

In terms of added value of the risk assessment in the quality process that helps exceeding client's expectation, the prior results affirm that in feeling safer work environment, the workers tend to be motivated. Consequently, the quality of service and product follow and lead to client satisfaction. Henceforth, the internal clients tend to manifest in this situation as an opportunity rather than a threat.

### 4.1.2. On the entourage

We focus, in this research, on the safety zone of the gas stations and some storage sites to see whether or not the neighbors were safe, and, to know what they could manifest to?

The following tables will simplify the results observed on the sites:

The organization	Safety zone	Neighbors safety	Risk assessment/ Safety measures
NAFTAL GL 01	None existent	Not safe	Minimum imposed by the law
NAFTAL GL 02	None existent	Not safe	Minimum imposed by the law
NAFTAL GL 03	None existent	Not safe	Minimum imposed by the law
NAFTAL GL 04	None existent	Not safe	Minimum imposed by the law
NAFTAL GL 05	None existent	Not safe	Minimum imposed by the law
NAFTAL GL 06	None existent	Not safe	Minimum imposed by the law
NAFTAL GL 07	Existent	Safe	Minimum imposed by the law
NAFTAL GD 01	Existent	Safe	Risk management ISO 31000
NAFTAL GD 02	Existent	Safe	Risk management ISO 31000
Fuel storage depot (Tiaret)	Existent	Safe	Risk management ISO 31000
Fuel storage depot (Tissemssilet)	None existent	Not safe	Risk management ISO 31000
Fuel storage depot Frenda	Existent	safe	Risk management ISO 31000

Table: N° 3: Different organizations observations on neighbors

Source: overt observations (elaborated by ourselves.)

## Comments

The previous observation table shows that most of the organizations with a risk management system or so-called risk management best practices have a safe environment and a safe neighborhood. But there are some exceptions like the case of:

- NAFTAL GL 07: with no risk assessment measures it still has a safe entourage, mostly because of it not having any neighbors and being far from the city.
- Fuel storage depot (Tissemssilet): even though it has a risk management system and the administration is aware of dangers they can't solve the problem of the safety zone because the faced problem is a first-degree importance project related to the new rail road which is too close to the fuel storage.

However, those exceptions are some rare occurrences and doesn't affect the fact that most of the organizations with risk management are safer and more durable. Besides it means that the implementation of a risk assessment can make the difference between a neighbor being threat or an opportunity.

### 4.1.3. Observation results and discussion on the media

For some reason, the media in Algeria is not that powerful, and for most of the times they are irrelevant. However, the Naftal district CRB Tiaret does not have a dedicated department for media communication. In addition, Naftal holds the monopoly in the Algerian market of petroleum products distribution and cannot be affected by the written media that could be done for or against the organization.

## 4.2. Case study

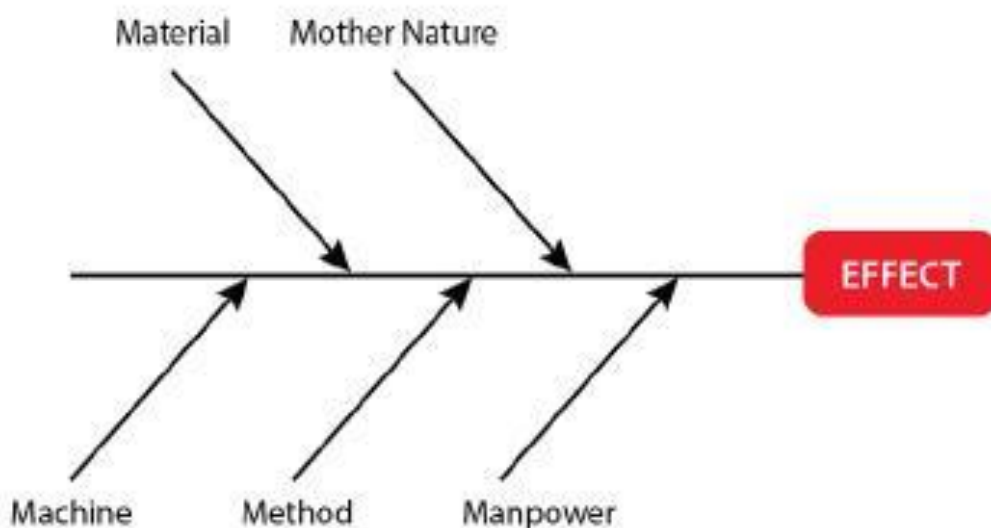
According to the previous observations and the importance of risk management in the quality and sustainability of Organizations, we have proposed to the team accountable for the ISO quality project 9001: 2015 to use the Ishikawa diagram (Risk management tool) with a brainstorming on the following interesting parties (media / internal customers / entourage) and how they can manifest (threat / opportunity) via the Ishikawa diagram.

### 4.2.1. ISHIKAWA DIAGRAM

Definition of the Ishikawa diagram<sup>1</sup>

The Ishikawa diagram is a graphic tool that is used by businesses that provides an overview of the causes of a particular problem. In theory, it is mainly used by organizations as a quality or project management tool. Surprisingly, it lends itself well in risk management. Its components are the famous 5 Ms of Ishikawa (Material / Method / Mother nature (environment) / Machine / Manpower (Human Resources)). Hence it was limited to 5 Ms, the diagram has been expanded to 7 or 8 Ms depending on the situation (Measurement / management / maintenance).

#### Ishikawa diagram



Ishikawa Diagram © 50MINUTES.com

Figure N°6: ISHIKAWA DIAGRAM (Ariane Seiger and Brigitte Feys - 50 minutes)

Also, this diagram can be custom made depending on the organization and the situation; the diagram we opted for, had the following components (Management / Maintenance / Material / Method / Man power).

<sup>1</sup> The Ishikawa diagram was invented by Kaoru Ishikawa (1915-1989), a Japanese professor and chemical engineer at the University of Tokyo.

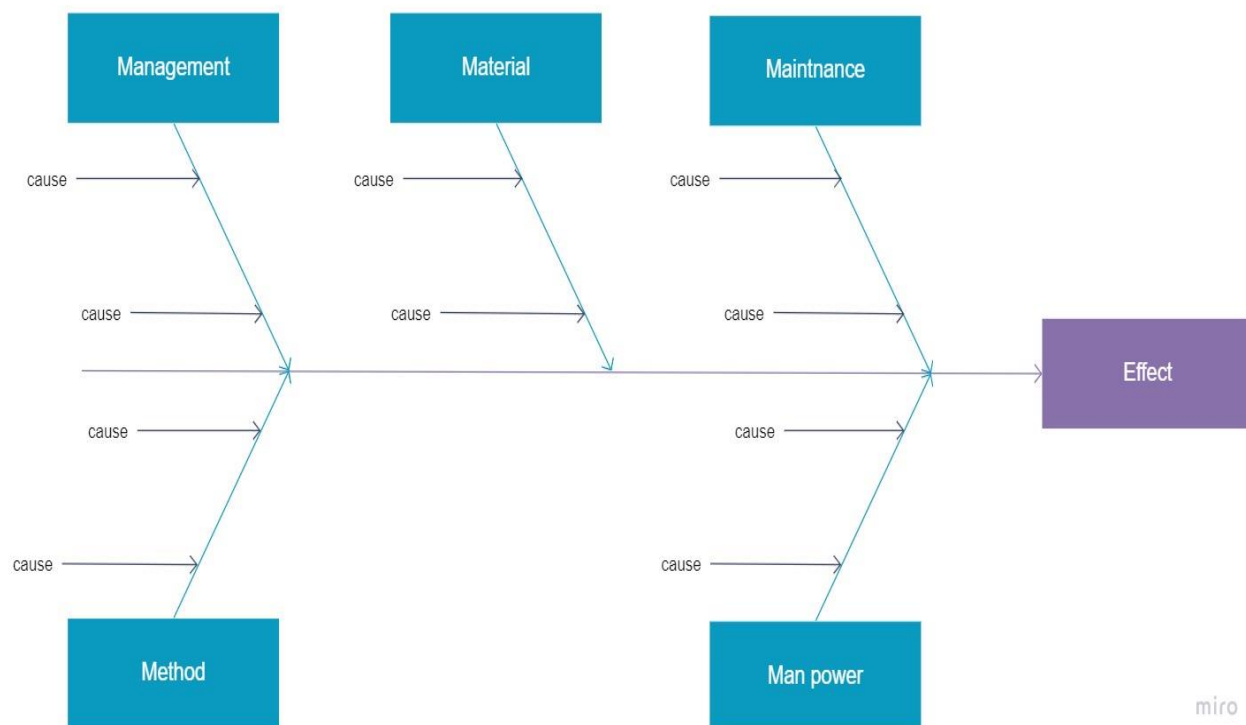


Figure N°7: the elaborated diagram for our study (cause and effect)

The following diagrams are the results that we got from the brainstorming, they are displaying what the media, neighbors, and internal clients may need theoretically, depending on the expertise of the managers of Naftal District CRB Tiaret, the organization documents and the risk assessment guidelines and even some of my background data.

### 4.2.2 THE MEDIA

#### The media being a threat:

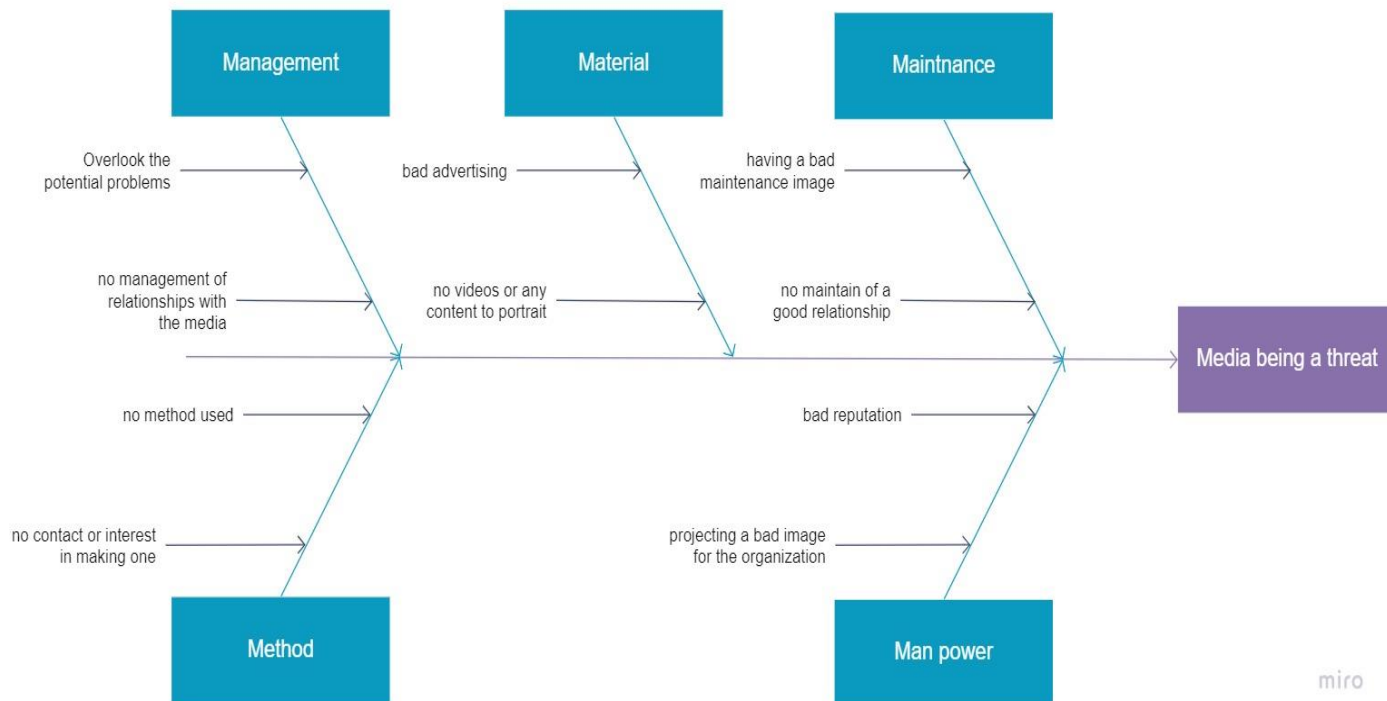


Figure N°8: ISHIKAWA diagram (media opportunity/threat).

#### The media being an opportunity:

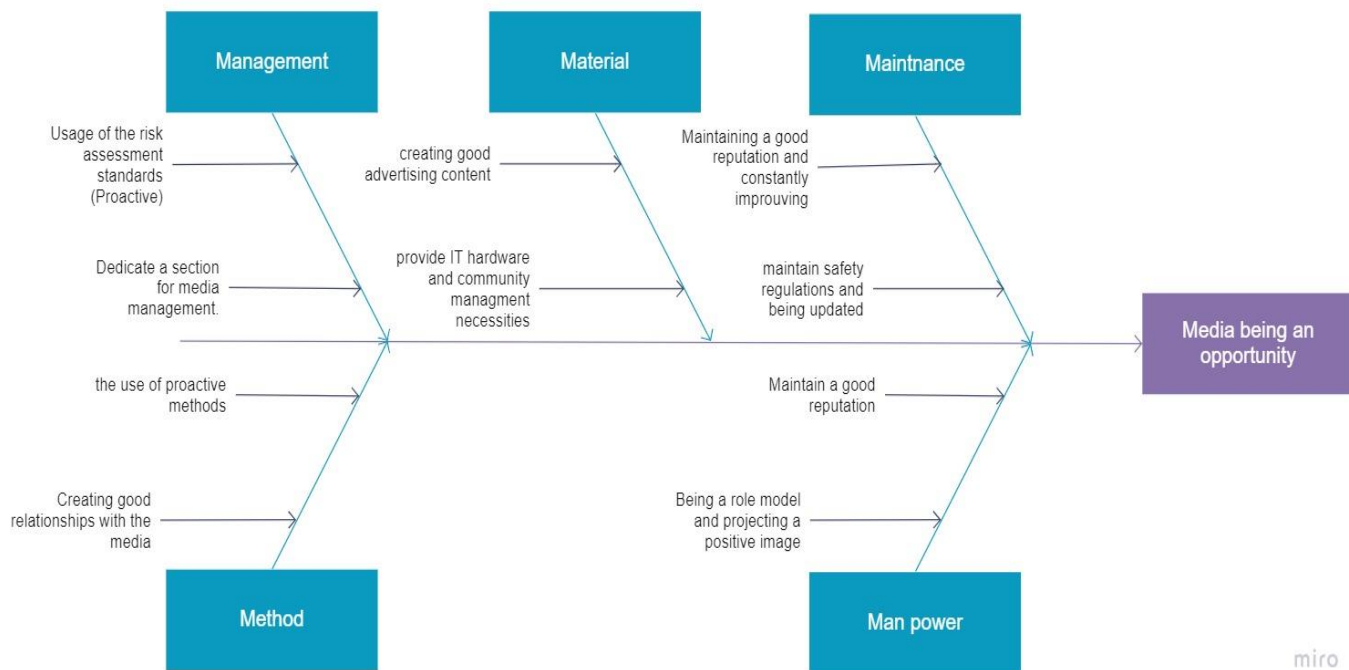


Figure N°9: ISHIKAWA diagram (media opportunity/threat).

**Comments:**

The media could be a lever of success or a brake that hinder the organization’s improvement. But, since Naftal is monopolizing the petroleum distribution market, the media is not considered as a threat to the organization.

Even though the department does not have a dedicated segment to deal with the media, the employees and the managers are aware of the danger that the media could hold for the future of the organization. In addition, by understanding the needs of these interested parties, we could avoid catastrophes (losing the trust that the organization worked hard for / defamation / some articles could lead to the portraying of a bad image of the NAFTAL brand and this could hurt the sales rate and even lead to the shutdown of some departments ) and even use it to our own benefit.

**4.2.3 THE NEIGHBORS**

**The Neighbors being a threat:**

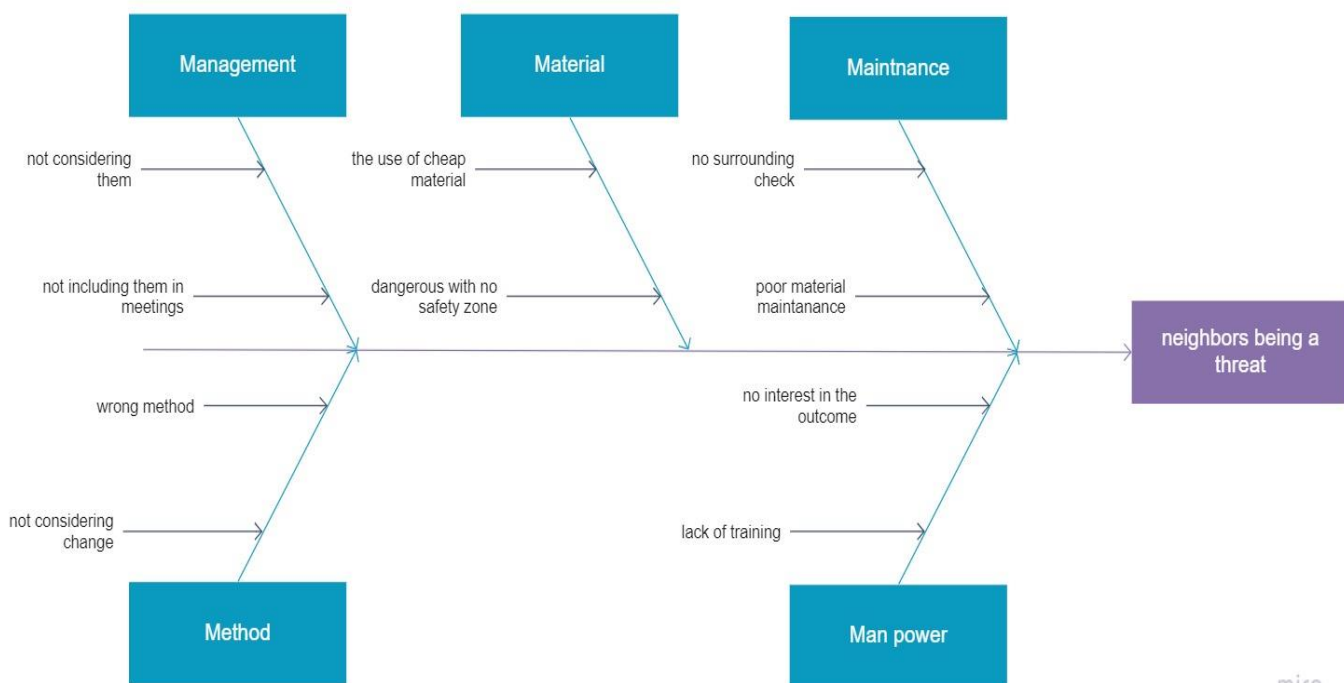


Figure N°10: ISHIKAWA diagram (Neighbors threat / opportunity).

## The Neighborhood being an opportunity:

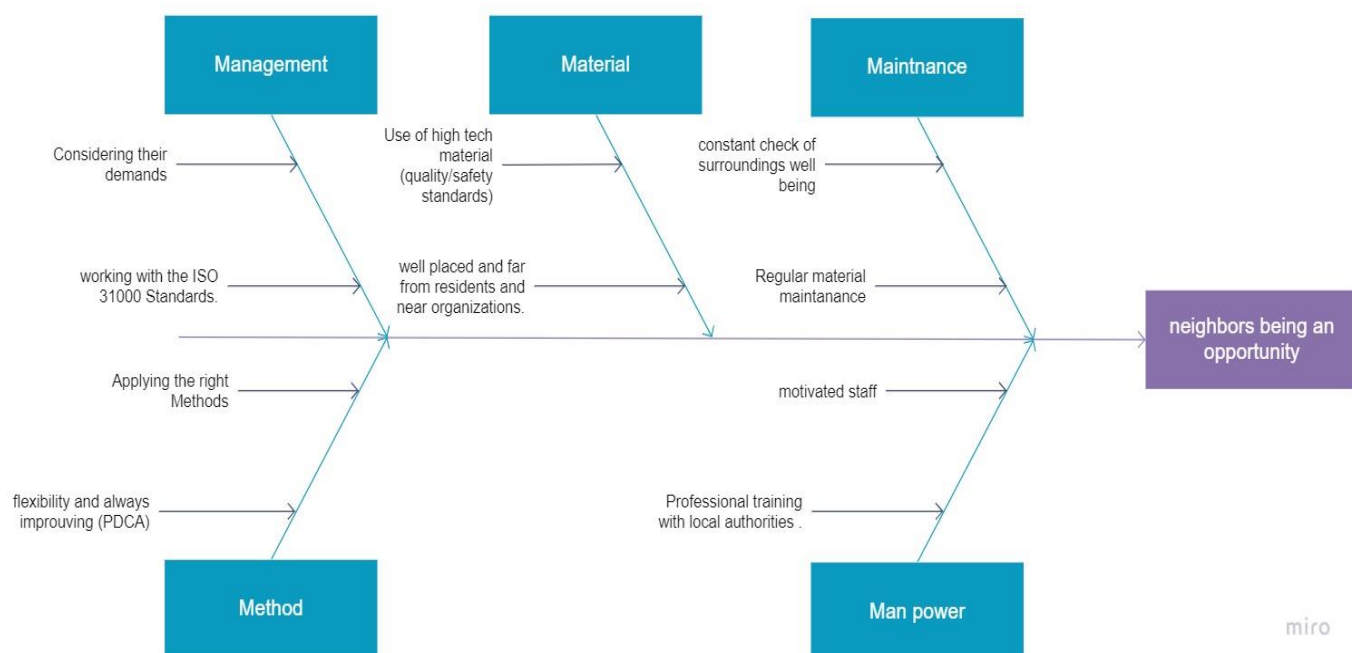


Figure N°11: ISHIKAWA diagram Neighbors (threat / opportunity).

### Comments:

The neighborhood is one of the closest interested parties to the organization, and they could affect and be affected by it, and being in a close perimeter it could be endangered or endanger the organization, for example, in our case we have big capacity fuel reservoirs that require safety zone delimitations for the security of both parties:

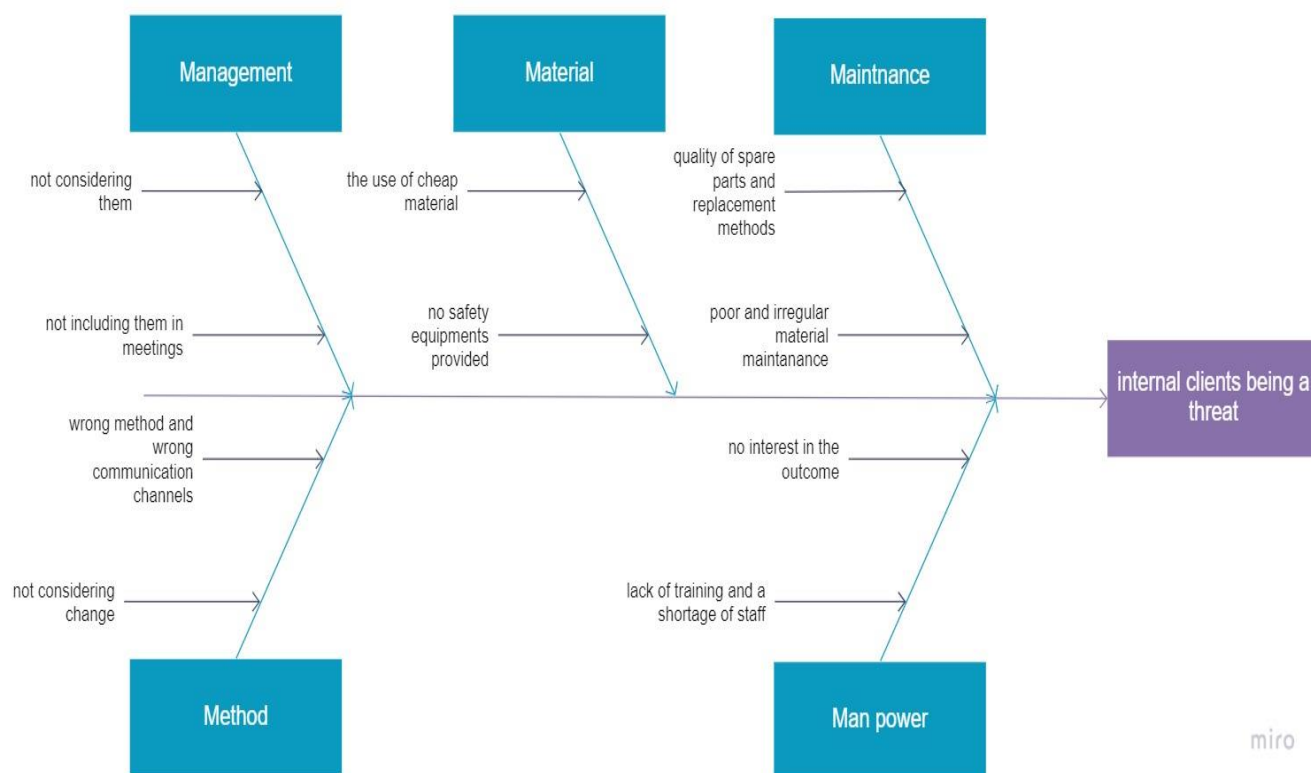
- The rail's road in the safety zone of the fuel stock station that could cause major damages to the tanks with the vibrations.

- And the potential explosion of one of the tanks could damage the rail's road and cause a major accident.

Thus\, by understanding the needs and expectation of the neighbors we could create a much safer environment and enhance the service quality, relationship with the interested parties and much more.

#### 4.2.4 INTERNAL CLIENTS

##### Internal clients Being a threat:



FigureN°12: ISHIKAWA diagram internal clients (threat/opportunity).

## Internal clients Being an opportunity:

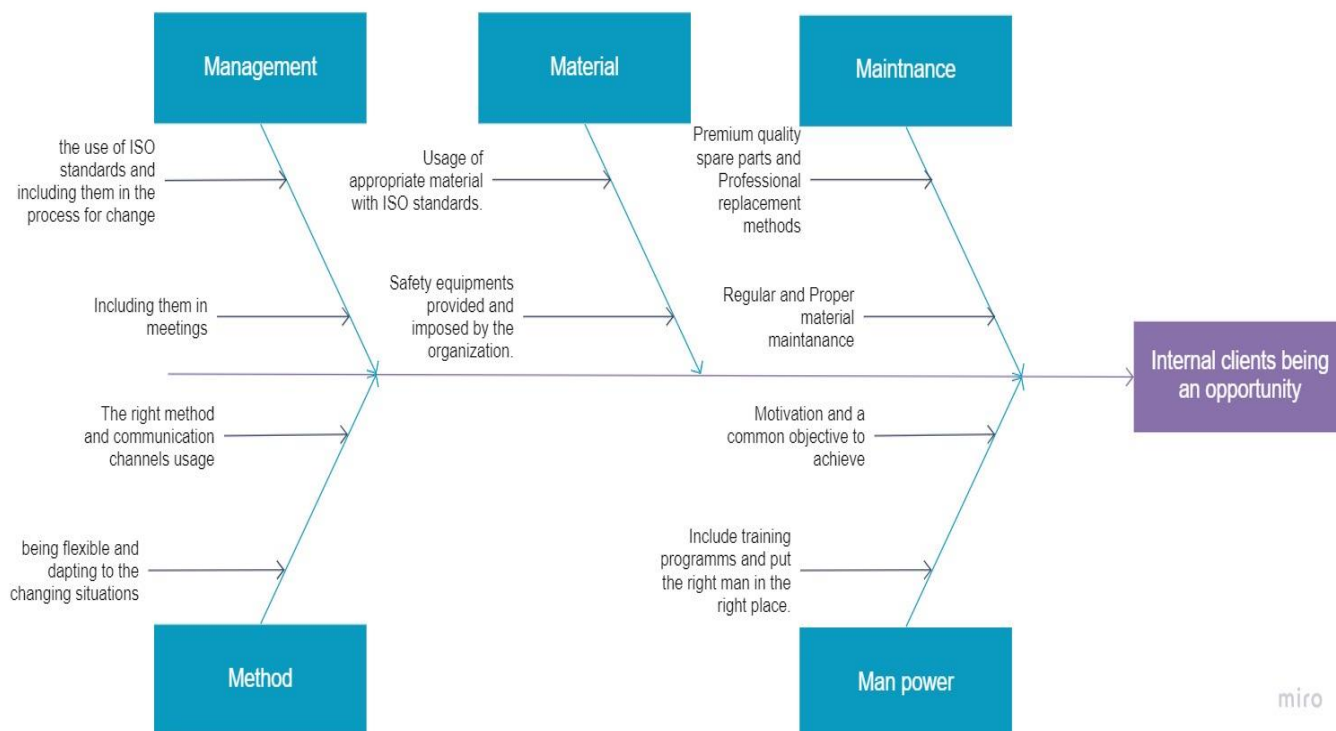


Figure N°13: ISHIKAWA Diagram internal clients (threat/opportunity).

### Comments:

The internal clients are the ones often forgotten, ironically, they are the driving force of the organization (the workers / staff), by taking them into consideration they can help to detect the anomalies and fix the problems they are often confronted to that the management level cannot detect from distance.

Also, their impact is direct and could have some heavy consequences on the company's productivity and its commercial image.

By understanding their needs and expectations we can improve the risk assessment process and enhance the service quality and exceed client's expectations.

### 4.3. THE INTERVIEWS

The interviews focused on the internal clients (GB / GD / Fuel stock stations). They provide us with the data related to the observations and case study (done in a brainstorming with the managers), to determine whether the risk assessment in quality management helps exceed client's expectations or not.

The interview guide we used is our inquiry is divided into three thematic (see appendix A)

- The risk management best practices and its importance in the petroleum business.
- The barriers of risk assessment on service quality.
- The effect of risk assessment on the quality process and end user.

#### 4.3.1. The Risk management best practices and their importance in the petroleum business:

According to our participants (interviewee N°8, N°2), the risk management is considered as doing the bare minimum of safety measures, which are imposed by the government, like having a fire extinguisher, a sand bucket and a shovel in case of a fire in the station. For others, it is totally a different approach, more positively it is a constant improvement of risk assessment for the safety of the workers, environment, and most importantly the end client (customers).

The interviews have revealed, the existence of a huge difference between the GB and GL in terms of safety procedures, quality of service, environment safety etc.

Besides, the GD (direct management station) and the fuel stock stations are managed with the same management system (NAFTAL's management system).

As witnessed by the interviewees in both GB stations and GL below, concerning the risk assessment.

**Interviewee n 8:** (GL) *"... we don't have a specific management system we just have the tools (shovel, sand bucket, fire extinguisher) to react in case of an emergency."*

**Interviewee n 5:** (GD) *"... Actually we are familiar with the ISO standards and the we are well formed to prevent accident from happening and constantly improve the risk management system."*

There is clear difference between GD and GL in how the management systems is applied (If any are applied)

According to the interviews, the added value of the risk assessment in the quality management system is that sets a safe environment for every interested part, and in the petroleum industry safety is mandatory, in order to provide the best service quality.

Also, it is worth mentioning during the interviews we explain with details to the participants in matter to have a better insight at the subject and be prepared for the next part.

### **Comments**

The risk assessment is a new method implemented in the new ISO 9001: 2015 that helps achieving optimal quality products and services. In addition, it may help to exceed client's expectations by implementing a proactive method that is in constant improvement and in touch with its interested parts in order to overcome improbabilities of the market and the future compromises.

The world is in a constant evolution with imperceptible environments and markets like, climate change to lack of raw materials (fossil energy) the fierce competition.

And for a closure, all of the interviews and other data gathering methods we used lead to a common result which is the important role that the risk assessment plays in the continuous development and sustainability of an organization.

#### **4.3.2. The barriers of Risk assessment on service quality**

The barriers of the Risk management could manifest in many levels and situations like, the case of the Absorption Capacity of the operators and managers. Sometimes it is the clients who are not cooperating, or taking it personally like stated below

**The interviewee (n5)** *"... Sometimes, when the fuel pumps operators deal with the clients in the station, they often get into arguments with the customers because they don't understand the purpose of the safety procedures"*

In other cases, it the cultural barrier that causes the most problems.

However, this thematic has for a purpose to demonstrate the problems that the organization could be facing when implementing the risk assessment approach, the questions in it are directly related to the implementation of this management method.

It is also important to take into the consideration the experience factor of our interviewees in both cases (GD and GL). We noticed the difference in the experience level which varying from 10 to 30 years of service; hence we see clearly the difference of an organization that uses a Risk Management system and the one who does not.

The responses concerning the barriers of the risk assessment are presented below:

- The low Absorption Capacity of the employees and sometimes even the managers.
- The cultural barrier that is often the first problem when implementing a foreign system.
- The resistance of the clients to cooperate due to the lack of awareness of the danger.
- The cost of such implementation to small businesses especially the private sector the GL.
- Ethical problems (cooperation between the audit team and the area of inspection).
- Under qualified staff and no management system at all.
- The lack of communication.
- Absence of trust between the GL managers and Naftal.
- Time wasting and impatient clients.

#### **Comments:**

It seems that the problems the organization can face come from both contexts: inside (absorption capacity / budget...) and outside (client's resistance to change / cultural shocks...). These barriers can cause a drop in the efficiency of the risk assessment system and the whole operation can be compromised and lead to a failed ISO standard implementation. In others forms of barriers, it usually means extra procedures and protocols that sometimes the clients aren't aware of the benefits of risk assessment, which translates into safety measures and procedures that guarantee a quality service in the best-case scenarios (safety / quality).

#### **4.3.3. The effect of risk assessment on the quality process and end user**

Risk assessment has a huge impact on the quality of service because it concerns the product being safely manipulated and sold to the customers; hence its big influence on the quality service due to its direct impact.

The questions used in this thematic directly aimed the clarity of the risk assessment and its importance in the quality management system (ISO 9001:2015). Indeed, the interviewees

were aware of its benefits for them and for the future of the organization. Considering the manipulations of the hazardous products and the constant danger they have to work in, such situations could lead to catastrophic consequences that will lead any organization regardless of its size to a total collapse and shutdown. One particular statement inspired this idea of the importance of the risk assessment:

**The interviewee n9** *“If I the superiors provided us with safety equipment, we would be doing our jobs accordingly, and the service would be much better, the customer wouldn’t have to fill up by himself”.*

On the other hand, the added value of the risk assessment, if it is properly implemented, it could definitely improve the service quality and even the workspace the employees operate in; and eventually, the entourage / environment, leading to a continuous development that will satisfy the many interested parties, especially the end client and even exceed his/her expectations.

**The interviewee n5:** *“us using a proper risk management system makes the job easy for us, and the clients are always met with optimal service”.*

## **Comments**

The interviews conducted in this research have proved that the risk assessment is key to success. Furthermore, the risk assessment is a useful tool that helps to predict some of the future problems the organization might encounter, which means working in a proactive way rather than just react to every situation. Besides, the implementing of such approach compels us constantly looking for better solution and improving the competitive advantage to exceed clients’ expectations.

On the other hand, if the risk assessment were not taken into consideration it could have some catastrophic outcomes with no time to react and in a world that is constantly evolving this might be the end of the organization.

## **Partial Conclusion**

The study conducted in the NAFTAL CRB District Tiaret has showed us the importance of the risk assessment in quality management, and how it is considered as a lever to exceeding client expectations by focusing on the three interested parties (media / neighbors / internal clients).

The order of discussion has respected the order of data gathering. It respected the logical method we used in matter to justify the results of our study: firstly the observation as an instinctive thing to do and to gain a broader insight into the subject; secondly the case study with the quality and risk managers throughout a brainstorming; and finally the interviews with the internal clients to demonstrate the difference between the two types of organizations (the ones with a risk assessment and the ones without one), and check if the results of the brainstorming is relevant to the needs of the interested parties concerned.

Our study has confirmed that the organization relies on its management system to be sustainable and exceed its client's expectation sometimes even depends on them, in our case it is vital to have a risk assessment approach for an optimal service quality in the field of petroleum distribution.

# **CONCLUSION**

Nowadays in a competitive market, where the rivalry is at its peak, having satisfied' clients is not enough anymore. As the main objective, the organization has to demonstrate their superiority and dominance in the modern market exceeding the client's expectation. Such objective is feasible with the implementation of the ISO standards ISO 9001:2015 (quality standard). This standard has a new Risk assessment approach that changes the whole perspective.

The role of the risk assessment in a quality management system is to prevent accidents from occurring during the pursuit of quality service and products. Hence, by reducing the accidents, the company gains more profit and is more efficient in terms of work techniques, staff safety, environment' protection. Aware of its interested parties including the media / neighbors / internal clients, and by understanding what the interested parties want exactly from the organization their demands and expectations can be met and even exceeded.

The implementation of a quality management system or any management system is a project in itself. Besides, a project without a Plan is often set to failure from the beginning, and that's where the ISO standards come in handy. The GL's stations who are running under their own management tend neither to have any standards nor management system. For this reason, they tend to fail and up portraying a negative image on Naftal. Even though the GLs and GDs do not run under the same management system however they share the same logo and that could be a problem for the organization's reputation.

Risk assessment being the main approach to work with in the new upgraded ISO 9001:2015 is however very helpful in the petroleum industry. Its high' risk work environment is very essential for a company's success and surrounding's safety. Henceforth, the risk assessment provides a great overview on the company interested parties. It is easier to identify their needs and meet their expectation and even go the extra mile and adopt a pro-active approach to exceed the interested parties' expectations. In addition, being one step ahead every time to prevent accidents that could be fatal to the company's reputation or even future.

Our study was focus on three interested parties that are often overlooked or taken for granted. But by digging deeper in those three interested parties needs and expectation we have come to a conclusion that a risk management when done right could save the day. In our case, it did prove its major importance to a company's success and sustainability by providing an overview on what could be a potential opportunity/threat to the organization.

Concerning limits, we encountered only one limitation, and it was this ongoing global pandemic that did put the whole study on hold for a while and we had to readapt to the situation and work from a distance via communication tools and softwares, which was a bit of a challenge concerning the acquiring of the organization's information and having in interactions.

To conclude, we suggest as a thematic to work on a standardized and simplified risk assessment method for small organizations that can't afford the cost of a risk management implementation

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# **APPENDIX A**

## **Interview guide**

**Interviewee: the managers of the fuel stations GB/BL and opponent GBS.**

### **Greetings and introduction to the interview:**

Good morning madame/sir,

I am a second year master student, currently in a NAFTAL internship for my final year project thesis and I need answers to some questions concerning the risk assessment in quality management systems related to your interactions with the supplier ( Naftal ) and the quality of the product, thank you for taking the time to answer my questions, and allowing me to do this interview in your work space.

The concepts and questions:

- 1- the risk management best practices and its importance in the petroleum business.
  - Tell me about what you do exactly for safety measures?
  - Are you familiar with risk assessment practices?
  - Do you use any?
- 2- the barriers of risk assessment on the service quality.
  - Did you have any issues when implementing the risk assessment standards?
  - Would it be preferable if you fused with the organization?
  - Would you prefer working with a certified organization or non-certified? and why?
- 3- the effect of risk assessment on the quality process and end user.
  - Do you think that the need of a risk assessment is necessary for the safety and quality of the service?
  - Did you notice any difference between the past and present of NAFTAL?
  - What do you get from the application of these best practices?

Thank you for your transparency and honesty while responding to my questions.

