Ecole des Hautes Etudes Commerciales

HEC Alger

Mémoire de fin de cycle

Pour l'obtention du diplôme de licence en sciences commerciales

Option : **Affaires Internationales**

Thème :

The Global Supply Chain Management of Renault Tessala El Merdja

Etude de cas : Renault Academy

Présenté par :

Mohamed SAGHOUR

Encadreur :

Mr. CHABANI Smain

Professeur à HEC

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ملخص

في عالم لا تعتمد فيه المنافسة على جودة السلع والخدمات فقط ولكن على موثوقية إدارة سلسلة التوريد، تميل الشركات إلى التركيز على هيكل سلسلة التوريد وقوتها.

ولهذا، تجد كل شركة ضرورة لتحسين سلسلة التوريد الخاصة بها دائمًا لتكون على نفس مستويات منافسيها وتحقيق هدفهم وهو إرضاء العميل.

تركز دراستنا على هيكل سلسلة التوريد ومدى أهميتها لرفاهية الشركة، ومعرفة كيفية عمل سلسلة التوريد بالفعل.

الكلمات المفتاحية: سلسلة التوريد - المشتريات - الزبون - الشحن - المستودعات

Résumé

Dans un monde où la concurrence ne dépend pas uniquement de la qualité des biens et des services, mais de la fiabilité de la gestion de la chaîne d'approvisionnement, les entreprises ont tendance à se concentrer sur la structure et la force de leur chaîne d'approvisionnement.

Et pour cela, chaque entreprise trouve la nécessité de toujours améliorer sa supply chain pour être au même niveau que ses concurrents et atteindre son objectif qui est la satisfaction du client.

Notre étude se concentre sur la structure de la chaîne d'approvisionnement et son importance pour le bien-être de l'entreprise, et sur la connaissance du fonctionnement réel de la chaîne d'approvisionnement.

Mots clés : chaîne d'approvisionnement - approvisionnement - client - expédition - Magasin

Abstract

In a world where competition doesn’t depend on the quality of goods and services only but on the reliability of the supply chain management, companies tend to focus on their supply chain structure and strength.

And for that, each company finds the necessity to always improve their supply chain to be on the same levels as its competitors and achieve their goal which is the satisfaction of the client.

Our study focuses on the structure of the supply chain and how important it is for the well-being of the company and its importance, and knowing how the supply chain really works

Key words: supply chain – procurement – costumer – shipping – warehouse.

Dedications

With enormous pleasure, an open heart and immense joy, may I dedicate this work to the ones dearest to my heart, to the ones who guided me to take my first steps and who taught me my first word. , the ones who were always by my side, who illuminated my dark nights and sunny my days with their inexhaustible affection, to my mother and father may God the Almighty protect and keep them,

To my brother Idris, my sisters Khadija and Amina and Fadia

To my cousins Mohamed, Mehdi and Oussama, Amira and lamis to my uncles and aunts

To my friends from the preparatory years: Billel, Amine, Hakim, Abdelraouf, Sofiane and Walid, Islam, Abdelhak.

To my dearest friends Midou, Yanis and my dear colleague and friend Assia.

To all my colleagues from Hec Inzgliz club.

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I would like to express my sincere thanks to all the teachers who taught me through my five years of university from preparatory period through my master period and who with their skills supported me in the pursuit of my studies. I would also want to thank miss BENHASSINE Thouraya for accompanying me through the period of my internship in Renault, alongside all the team of Renault spare parts of Tessala el Merdja for this relevant advice and their help and assistance during the realization of the experiences included in this work. I want to thank Dr Idris Saghour my brother for sharing his experience with me and helping me through my work , I want to thank my friend Yanis for always and I mean always sticking up for me and helping me even over his own work , also I want to thank my friend hakim for motivating me and honestly I couldn't've done this work without his motivation for me. Finally, I thank anyone who has participated directly or indirectly in the realization of this work.

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List of abbreviations

SCM: Supply chain management

Rosseta Net: Rosetta Net is a non-profit organization of more than 500 high tech companies. These members create and implement open standards for the processing of business to business transactions, particularly at the supply chain level.

CRPA: Le Code des relations entre le public et l'administration: The Code of relations between the public and the administration (CRPA) is a code bringing together the provisions governing relations between the general public (administered, business) and the French administration. It results from ordinance no 2015-1341 of 23 October 2015 and decree no 2015-1342 of the same day.

RCL: Réseau colis logistique, it is a transport company

HBL: HBL means House Bill of Lading issued by a freight forwarder on receipt of goods from shipper agreeing to deliver goods at destination.

MBL: MBL means Master Bill of Lading issued by vessel owner or his agent to a freight forwarder on receipt of goods from shipper agreeing to deliver goods at destination.

AWB: An **air waybill** (**AWB**) or **air consignment note** is a receipt issued by an international airline for goods and an evidence of the contract of carriage, it is a document of title to the goods. Hence, the air way bill is non-negotiable.

PLI bag: the latter is a simple binder which contains documents such as (the original invoice, the bill of lading, the certificate of origin ...) and allowing the customs clearance of the goods without waiting for the documents ...

DHL: DHL is a shipping company.

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General Introduction

Introduction

Over the past decade, people have paid increasing attention to supply chain management as a way for companies to gain a competitive advantage in the market (Collin, 2003). Numerous examples from the 1990s show how companies have made substantial investments to streamline their supply chains to increase customer satisfaction and increase internal productivity. As Christopher (1998) put it, in fact these days it is not individual firms that compete against each other; on the contrary, competition takes place between competing supply chains. The supply chain brings the greatest value to customers at the lowest cost and is a winning network for every business.

As businesses now seek to integrate cross-supply chain functions, geographically dispersed facilities, and decision making over time, evidence-based supply chain management is essential. The essence of evidence-based supply chain management is integrated planning and control, which has three important aspects. The first aspect is functional integration, involving decisions about purchasing, manufacturing and distribution activities within the company and between the company and its suppliers and customers. The second aspect is to integrate these functions geographically through physical installations located on one or more continents. The third aspect is the integration over time of supply chain strategy, tactics and operational decisions. In short, strategic planning and control is related to the acquisition of resources, while tactical planning and control is related to the allocation and refinement of resources, and operational planning and control is related to the execution of activities. (Shapiro, 2001).

Therefore, managing the supply chain in a business environment can have a significant financial impact on all parts of the chain. Therefore, researching and implementing the principles of supply chain management to improve the supply chain is vital for today's global business.

The main strategies for achieving business goals (such as reducing costs and improving service levels) are:

- Reduce cycle time from supplier to production unit, from production unit to distribution center and from distribution center to market.
- Increase the flexibility of suppliers and production.
- Improve reliability between supply chain partners to increase trust.
- Integrated planning process to coordinate the work of the entire supply chain.

- Fast delivery and replenishment: the internal time between receipt of customer orders, manufacturing and delivery to regional stock points is 48 hours.

The issues I want to resolve in this article are as follows how does supply chain management work, and what are circles of the chain, and how important is stocking and is it as simple as it sounds?

Bibliographic Synthesis

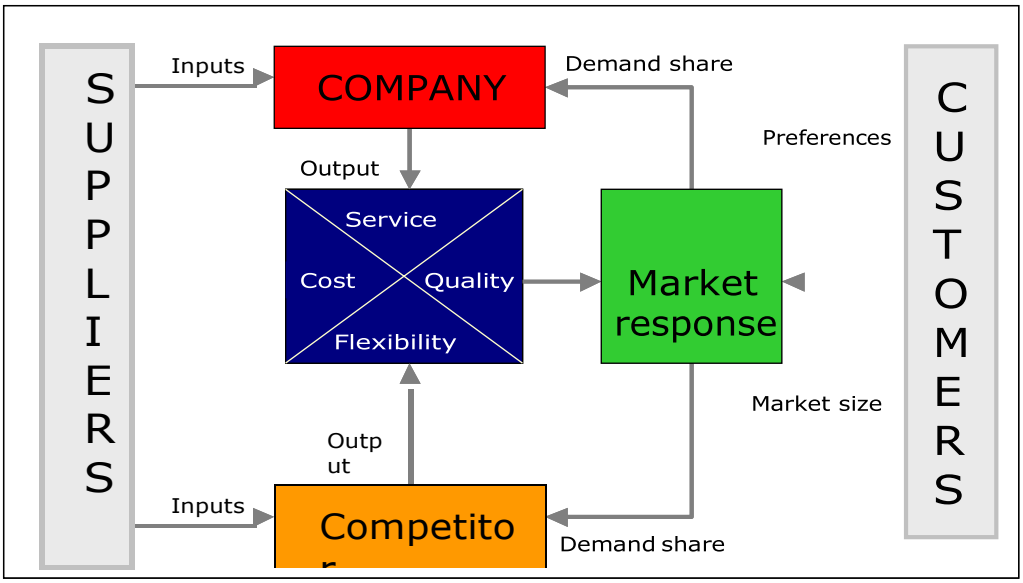
1. Introduction to the supply chain management

Today, many organizations are forced to increase their global market share to survive and maintain their growth goals. At the same time, these same organizations must defend their domestic market share in international competition. The challenge is how to expand the global logistics and distribution network in order to deliver products to customers who demand products in dynamic and rapidly changing channels. Strategic positioning of inventory is essential, so that products can be supplied when customers need them (Handfield et al., 2002,) Other thinkers also believe that the supply chain really needs to be efficient. In this case, effective methods should be adopted to minimize the use of resources in order to achieve specific effects; in terms of the design of distribution channels, it is effective. Efficacy is measured by delivery performance, product quality, backorders and inventory levels, while efficiency is measured by service quality and service demand.

Therefore, long-term competitiveness depends on the company's ability to meet customer preferences in terms of service, cost, quality and flexibility by designing its supply chain, which will be more efficient than its Competitors. For companies in the supply chain network, optimizing this balance is an ongoing challenge, as shown in Figure 1-1.

To optimize this balance, many strategic decisions must be made, and many activities must be coordinated. This requires careful management and design of the supply chain. Supply chain design represents a unique way for companies to innovate, differentiate themselves and create value. the challenge of supply chain design and management lies in the ability to design and bring together assets, organization, skills and capabilities. It includes teams, partners, products and processes.

Figure 1-1: Competitive Framework in the Supply Chain



Source: Ernst, 2002

In order to fully understand the term "supply chain management", we will first explain the term "supply chain" and then explain the role of management and management as the basis for a comprehensive definition of supply chain management.

According to Mentzer et al (2001) As a definition of supply chain management, the definition of "supply chain" is more unified. In his article, he sought to provide a broad definition of supply chain based on extensive research envisioned by several co-authors. They proposed the definition: **"A supply chain is defined as a set of three or more entities (organizations or individuals) directly involved in the upstream and downstream flows of products, services, finances, and/or information from a source to a customer".**

The supply chain can include internal company departments as well as external suppliers who provide information to key companies. The suppliers of this activity have their own set of suppliers (providing inputs) (also called second tier suppliers). The supply chain is essentially a series of connections between suppliers and customers until the product reaches the end customer (Handfield, 2002).

The company's supply chain consists of a network of upstream suppliers and its downstream distribution channels (see Figure 1-2). Organizations can be part of many supply chains, for example Renault Spare Parts is a part of RENAULT Algeria which is itself a part of Renault situated in France.

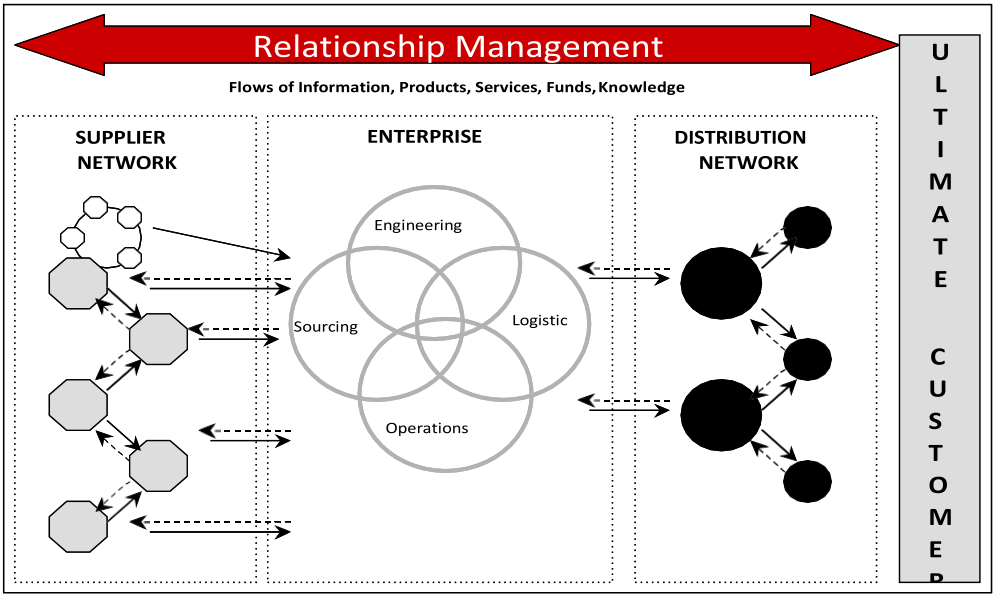
Depending on the complexity of the supply network, Mentzer (2001) defines three types of supply chains:

1. Direct supply chain, including companies, suppliers and customers.

2. Extensive supply chain, including suppliers from direct suppliers and customers from direct customers.

3. The final supply chain, including all organizations involved in the upstream and downstream processes.

Figure 1-2: Supply Chain or Supply Chain Network



Source: Handfiled, 2002, p. 9

2.Definition of management

The point is, there are different supply chains in everyday life, whether they are managed or not. If no organization actively implements any of the supply chain management concepts explained later in this article, supply chain as a business phenomenon will still exist, but it is unlikely to take reasonable measures and coordination. Therefore, supply chain management requires active management of supply chain organizations.

What is an organization? Lipovec (1987) defines organization as the composition of relationships between people, through which these people become members of established social units. The organization guarantees the existence and specific characteristics of social units and the reasonable achievement of objectives.

According to Rozman (2000), there are three processes in an organization

Ensure the reasonable achievement of objectives: organizational process, coordination Process and decision-making process. Organizational process is defined as a goal-oriented process to ensure the rationality of the behaviors of people and the reasonable achievement of social unit goals. Reason needs coordination. Coordinate by taking care of the problem and making the appropriate decisions. In this case, coordination is the very essence of achieving rational

behavior in the organization. This includes the coordination of activities, goals, interests and relationships. At the company level, we discuss the coordination of business functions, business units and projects.

What is management? The Longman Dictionary of Contemporary English defines management as:

- Control activities and organizational work carried out by the company or organization.
- People who run a business or organization.
- The way people control and organize various situations that occur in their life or work.

Most authors define management as the coordination of various activities in the organization (who does what) or the management process or functions of the organization (Rozman, 2000). Donnelly et al (1995) defines management as a process carried out by one or more people to coordinate the activities of others to achieve results that cannot be achieved by one person. Hellriegel and Slocum (1996) define coordination as the integration of activities carried out by individuals, teams and individual departments.

There are two nested processes in an organization that need to be coordinated: business processes and organizational processes (Rozman, 2000). The business process includes planning, execution and control of business processes; the organizational process includes: the organization of planning, execution and organizational control. They are also presented in Table 1-1.

Table 1-1: Relations between Management, Business, and Organizational Processes

		BUSINESS PROCESSES	**ORGANIZATIONAL PROCESSES**
MANAGEMENT PROCESSES	Plan	Business planning	PLANNING ORGANIZATION
	Execute	Execution of business	ACTUATING (STAFFING/LEADING)
	CONTROL	CONTROL BUSINESS	CONTROLLING ORGANIZATION

Source: Author, based on Rozman (2000, p.7)

As we can see in Table 1-1, the result of the division of labor among the staff of the organization is that the manager is responsible for the organizational process and part of the operational process (planning and control), and execution is delegated to non-managers. From this perspective, Pučko (2005) defines management as a formal organizational process that deals

with the definition of company goals, policies and the process by which others perform tasks. Through planning, organization, direction and control.

Most authors do not make the same distinction between organization and business process. Therefore, management is generally defined as planning, organizing, directing and controlling. These authors use plans only as business plans. By organization, they mean to establish or plan an organization. Operating activities are not part of management, but the implementing organization is part of management, also known as staffing and leadership. By control, most authors understand business control and organizational or audit control (Rozman, 2000).

Ernst (2002) is also an example. He defined management as the correspondence between the organizational process and the operational process. As an organizational process, it is defined as work process, behavior process and change process. In the workflow, it defines the operational process (production of products and services consumed by external customers) and the management process (generation of information and plans that the internal team will use). The workflow defines the key activities necessary to complete the job and achieve the set goals, and the behavior flow describes the behavior / interaction method and shaping the way in which work is conducted and decisions are made. The change process is defined as a series of events that change over time, and these events change the organization according to the needs of the business.

Ernst defines the management process as the definition of the processes of direction, negotiation and sales, as well as monitoring and control. Table 1-2 describes the purpose, main tasks, and basic capabilities of the management process. The main purpose of establishing direction is to establish direction and goals (as mentioned earlier, part of the business planning process). The key ability of managers is to be able to synthesize based on analysis and make the right decisions, determine priorities and communicate plans.

Table 1-2: Management Processes, Purpose, Tasks, and Skills

	DIRECTION SETTING PROCESS (PLANNING)	**NEGOTIATING AND SELLING (ORGANIZING & LEADING)**	**MONITOR AND CONTROL**
PURPOSE	Establishing organizational direction and goals	Obtain needed support and resources	TRACKING ONGOING ACTIVITIES AND PERFORMANCE
PRIMARY TASK	Developing an agenda	Building network	COLLECTING INFORMATION
CRITICAL SKILLS	SYNTHESIS, PRIORITY SETTING, COMMUNICATION	TIMING AND SEQUENCING, FRAMING AND PRESENTATION	QUESTIONING AND LISTENING, INTERPRETING DATA

Source: Ernst (2002, p. 107)

The main purpose of negotiating and selling is to get the necessary resources and support in the organization (can also be referred to as organizational planning and operation). The basic skills required are the timing and sequence of activities, as well as the ability to come up with plans and motivate people to implement them. In order to be able to monitor and control the organization, in terms of on-going activities, the key skills that managers need are the ability to ask and listen to people and the ability to interpret information received from the organization. These dialogues can make the right decision.

Therefore, planning is one of the main functions of management and, as Pučko (2005) said, the main function is to define the objectives of the company and the methods to achieve. Ansoff (1990) defines plan as the concept of the desired future and the effective means to achieve it. According to Rozman (1993,), planning is a process of creative thinking about the future, which ends with planning. It means the desired result and the means to achieve it. Further, Rozman (1993) described the plan as a process of coordinating goals, strategies and indicators, as well as decision making and authorization. The main purpose of planning is to solve and prevent problems by evaluating different possible solutions. On the other hand, the organizational process will establish a certain structure of permanent relationship between the employees of the company. These relationships enable the execution of business plans and goals. In this sense, the most important is leadership, that is, communication and motivation of employees for planned activities. The objective of the control is to verify the behavior and the

achievements of the employees (compared to the forecasts) and the actions to be taken in case of deviations.

We can conclude that leadership is planning (business plans and organizational plans; for example, setting goals, policies and processes), leadership (for example, delegating activities, communicating plans and motivating employees) and monitoring (checking the behavior and achievements of the organization.). Business processes can ensure efficiency and organizational processes can ensure reasonable achievement of goals. The essence of achieving rational behavior is to coordinate activities, goals, interests and relationships to resolve conflicts in the organization in making the appropriate decisions. As business requirements are constantly evolving, only a good match between business processes and organizational processes can guarantee long-term efficiency.

The supply chain is declared as at least three organizations directly involved in the flow of products or services to the end consumer. This means that the purchasing organization is important and traditionally divides management into several functional managers. In order to ensure effective coordination of decisions throughout the supply chain, integrated supply chain management is essential.

The essence of integrated supply chain management is supply chain planning and control, which has three important aspects. The first aspect is functional integration, which involves decision making about purchasing, manufacturing and distribution activities within the company and between the company and its suppliers and customers. The second aspect is to integrate these functions geographically through physical installations located on one or more continents. The third aspect is the integration over time of supply chain strategy, tactics and operational decision-making (Shapiro, 2001). Functional and geographic integration is closely related to organizational processes, including the definition of the processes necessary for the operation of a business. The integration of strategic, tactical and operational supply chain decisions over time is linked to business planning and control.

In a very simplified way, management can also be described as a technique of organizing other people to complete work according to business plans. In terms of supply chain management, this involves all companies in the supply chain.

3.Definition of supply chain management

Although industry and academia have studied the concept of SCM over the past decade, there is still no consistent definition. As a result, there is often a lack of consistency in meaning and

clarity between the different definitions of supply chain management available in the literature. Some of them are listed below.

Bolumole (2000,) concluded that supply chain management provides an overall philosophy of managing an organization's procurement and distribution process from a marketing perspective. Persson (1997) concluded in his research that supply chain management is a homogeneous management concept. The overall goal of supply chain management is to help improve business results or profitability. Related goals include cost reduction primarily by reducing inventory levels and improving customer service through coordination and integration along material flow, win-win relationships and customer focus, thus increasing income. Finally. This means that to achieve the goals of supply chain management, Companies must coordinate and integrate their activities with other companies according to the flow of materials in a win-win relationship and focus their joint efforts on the end customer.

The supply chain includes all stages of direct or indirect satisfaction of customer needs. The supply chain includes not only manufacturers, but also Suppliers, as well as transport companies, warehouses, retailers and customers. Within every organization (like a manufacturer), the supply chain contains all the functions involved in meeting customer needs. These functions include new product development, marketing, operations, distribution, finance and customer service. Supply chain management involves managing the processes between and within each stage of the supply chain in order to maximize total profits (Chopra, 2001).

Although the definition of supply chain management varies from author to author, it can be divided into three categories (Mentzer, 2001): a management philosophy, implementation of a management philosophy, and as a set of management processes.

3.1. Supply chain management as a management philosophy

As a management concept, supply chain management takes a systematic approach to dealing with the supply chain. This means that the concept of partnership has been extended to the work of several companies to manage the flow of goods from suppliers to end customers. Each company in the supply chain directly or indirectly affects the performance of other members of the supply chain and the overall performance of the supply chain (Cooper et al., 1997).

As a philosophy, supply chain management has the following characteristics:

- A systematic approach to visualize the entire supply chain and manage the total flow from suppliers to end customers.

- The strategic positioning of the cooperative effort to synchronize and integrate internal and inter-company operational and strategic capacities into a unified whole.
- Be customer-oriented to create a unique and personalized source of customer value, thus improving customer satisfaction.

3.2. Supply chain management as a set of activities to implement a management philosophy

When a company adopts a certain philosophy, it must establish a set of management practices to ensure that the behavior conforms to that philosophy.

The main activities required to successfully implement the concept of supply chain management are (Mentzer and al 2001):

- Global behavior.
- Share information with each other.
- Share the risks and rewards with each other.
- Cooperation.
- The same goals and concerns for customer service.
- Integration of processes.
- Partners who establish and maintain long-term relationships

Therefore, the concept of supply chain management requires extending certain behaviors to external partners (suppliers, customers). In this case, the concept of supply chain management turns into a set of activities to implement the philosophy. One of the important aspects of onboarding behavior is also the sharing of information between members of the supply chain. This is particularly useful for planning and monitoring processes. Public sharing of information, such as inventory levels, forecasts, promotional strategies, marketing strategies, can reduce uncertainty and improve performance. Sharing risks and rewards helps to stay focused on long-term benefits and cooperation among members of the supply chain. All levels of cooperation between all supply chain processes are necessary to reduce inventory and pursue profitability across the entire supply chain. Setting the same goals and focusing on customer service is a form of strategic integration, possible if the members of the supply chain have compatible cultures and management practices. The implementation of supply chain management requires the integration of distribution processes from supply to manufacturing and the entire supply chain (Cooper et al., 1997). This can be achieved through cross-functional teams that require the participation of vendors and third-party service providers. Supply chain

management requires partners to build and maintain long-term relationships. Cooper believes that the duration of the relationship exceeds the duration of the contract and that the number of partners should be limited to promote cooperation.

3.3. Supply chain management as a set of management processes

Supply chain management is increasingly seen as the integration of key business processes across the entire supply chain. The implementation guarantee consists of three main elements: the structure of the supply chain network, the supply chain processes and the management components. When it comes to the structure of the supply chain network, it is important to integrate decisions related to purchasing, manufacturing, inventory, warehousing and distribution, and define goals and strategies and how to achieve them. On the other hand, it is important to design a set of standard procedures to ensure the reasonable behavior of individuals or companies in the supply chain. Finally, it is necessary to define a control mechanism so that the performance of the supply chain can be audited according to plans, activities and coordinated processes in order to establish connections between the members of the supply chain. and make the right decision.

Some organizations try to define cross-industry standard processes, such as the Global Supply Chain Forum (GSCF), SCOR (Supply Chain Operation Reference Model), CPFR (Collaborative Planning, Forecasting and Replenishment) and Rosetta Net, which can help members of a supply chain integrate efficiently. In addition, the CPFR and SCOR frameworks will be explained later.

The Global Supply Chain Forum defines supply chain management as “the integration of key business processes from the end user to the original supplier providing value-added products, services and information. Creation of value for customers and stakeholders” (Lambert, 2005).

The framework includes the following eight key supply chain management processes (Cooper, 1997):

1. Customer relationship management.
2. Customer service management.
3. Demand management.
4. Execute the command.
5. Management of the production process.
6. Supplier relationship management.
7. Product development and marketing.

8. Management of returns.

Eight key business processes are carried out across the entire supply chain, in companies and in the functional silos of each company. Although functional expertise still exists, the implementation of supply chain management requires moving from a functional organization to one focused on business processes, first within the company and then to through supply chain companies. Although the management teams of all companies in each supply chain should consider these eight processes, the relative importance of each process and the specific activities involved may vary.

The Supply Chain Council has developed another framework called the "Supply Chain Operations Reference Model" (SCOR). This process model aims to establish effective communication between supply chain partners. The scope of the SCOR model is questioned "from the supplier of the company to the client of the company.

It is based on five different management processes

Table 1-3: Distinct Management Processes

SCOR PROCESS	DEFINITIONS
PLAN	**PROCESSES THAT BALANCE AGGREGATE DEMAND AND SUPPLY TO DEVELOP A COURSE OF ACTION WHICH BEST MEETS SOURCING, PRODUCTION, AND DELIVERY REQUIREMENTS.**
SOURCE	**PROCESSES THAT PROCURE GOODS AND SERVICES TO MEET PLANNED OR ACTUAL DEMAND.**
MAKE	**PROCESSES THAT TRANSFORM A PRODUCT TO A FINISHED STATE TO MEET PLANNED OR ACTUAL DEMAND.**
DELIVER	**PROCESSES THAT PROVIDE FINISHED GOODS AND SERVICES TO MEET PLANNED OR ACTUAL DEMAND, TYPICALLY INCLUDING ORDER MANAGEMENT, TRANSPORTATION MANAGEMENT, AND DISTRIBUTION MANAGEMENT.**
RETURN	**PROCESSES ASSOCIATED WITH RETURNING OR RECEIVING RETURNED PRODUCTS FOR ANY REASON. THESE PROCESSES EXTEND INTO POST-DELIVERY CUSTOMER SUPPORT.**

Source: Supply Chain Council, SCOR Version 7, 2005, p. 7

Each of these processes is implemented at four levels of detail. The first level defines the number of supply chains and the parameters to be used. The second level defines the planning and execution process in the material flow. The third level defines the input, output and flow of each transition element (Lambert, 2005). Each process is analyzed and implemented around three parts: business process reengineering, benchmark testing and best practice analysis.

Both frameworks recommend implementing standard cross-functional business processes, but as Lambert said, only these two frameworks contain sufficiently detailed business processes before management can use those business processes to achieve cross-functional integration. The main differences between the two methods are shown in Table 1-4.

Table 1-4: Comparison of Supply Chain Management Frameworks (GSCF, SCOR)

Criteria		GSCF	SCOR
Scope	Strategic driver	Corporate and functional strategies	Operations strategy
	Breath of activities	All activities related to the successful implementation of the 8 business processes	All transactional activities related to demand-supply planning, sourcing, production, distribution and reverse logistic
Intra-company connectedness		Organization-wide cross-functional integration	Cross-functional interaction and information sharing
Inter-company connectedness		Relationship management	Transactional efficiency
Drivers of value generation		Economic value added	**Cost reduction and asset** utilization

Source : Lambert, 2005, p. 37

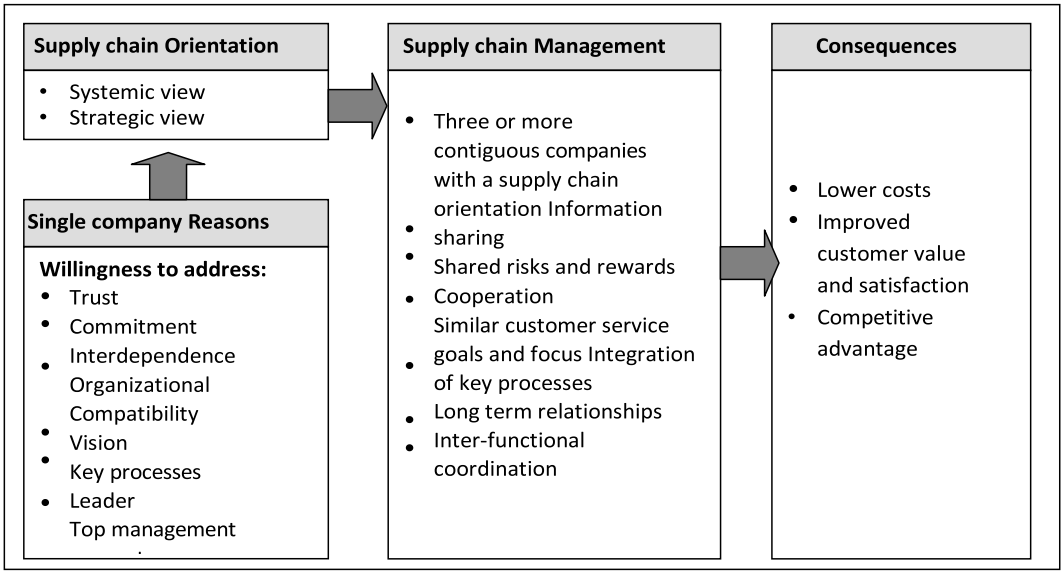
As Lambert (2005) summarized, the difference between SCOR and GSCF is that SCOR uses tactics to treat symptoms. On the other hand, the GSCF framework provides a strategic approach to the supply chain management process, which integrates the knowledge, expertise and goals of all functional departments. Therefore, these two frameworks represent different ways of doing business.

3.4. Supply chain management versus supply chain orientation

According to Mentzer, the idea of supply chain coordination from a global perspective (previously defined as a management philosophy) is more accurately referred to as supply chain orientation. Among supply chain companies, the actual implementation of this guide is more aptly referred to as supply chain management.

In short, the positioning of the supply chain is defined as (Mentzer, 2002): " Recognition by an organization of the systemic, strategic implications of the tactical activities involved in managing the various flows in a supply chain" The implementation of supply chain leadership requires that multiple supply chain companies use the supply chain process to perform a set of management activities defined in Figure 1-3.

Figure 1-3: Supply Chain Management Reasons and Consequences



Source: Mentzer, 2002, p. 16

By studying the literature on supply chain management, we can conclude that it is difficult to provide a general definition of supply chain management, since standards of process and terminology do not exist. However, in most author definitions, supply-side companies are also common.

Supply chain management can gain a competitive advantage by reducing costs while increasing customer satisfaction. They achieve this goal by optimizing the entire value chain and seeking opportunities for value creation through closer cooperation with supply chain partners. It also requires advanced collaboration models (sharing information on market needs, integrating key processes and thus building long-term relationships and cross-functional coordination).On the other hand, for successful cooperation to be essential, there must be a high degree of trust between all parties involved in integrated supply chain management. They must commit to a similar global vision, have compatible organizations, key processes and, most importantly, support from top management.

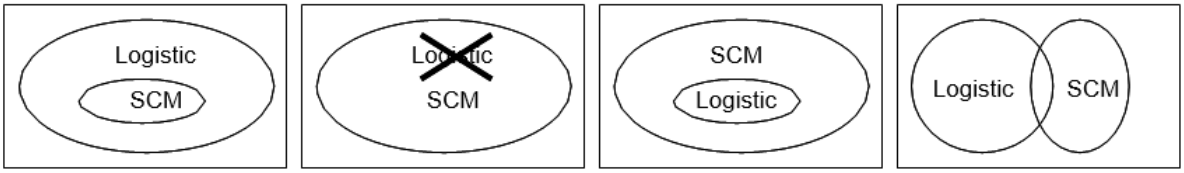
3.5. Supply Chain Management versus Logistic

When defining supply chain management, it is usually associated with logistics to better understand the method, since the concept of supply chain management began in the logistics literature (Min, 2002).

Halldorsson and Larson (2000,) show that there are four different ways of looking at the relationship between supply chain management and logistics (see Figure 1-4). They believe

that one of the reasons for these multiple views is that the common definition does not make supply chain management transparent.

Figure 1-4: Perspectives of SCM versus Logistic

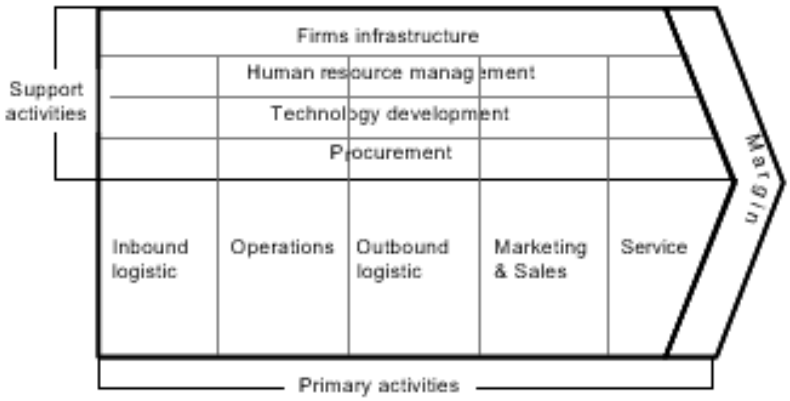


Source : Halldorsson, et al., 2000, p.220

According to traditionalists, the logistics department hires “supply chain analysts” to focus on cross-cutting and inter-organizational issues. Some authors did not distinguish between supply chain management and logistics. They just changed the name. Trade unionists see supply chain management not only as logistics, but also as purchasing operations and marketing. while intersectionists describe it as a function of an insider or consultant. Supply chain management takes into account the strategic and integrated elements of several functional areas (logistics, procurement, operations and marketing); however, this does not involve tactical elements, such as picking orders in a warehouse.

The comparison of logistics and supply chain management can also be based on Porter's value chain theory (1985). Each company is a series of activities to design, produce and sell, deliver and support its products. They can be represented in the general value chain illustrated in Figure 1-5.

Figure 1-5 : Generic Value Chain

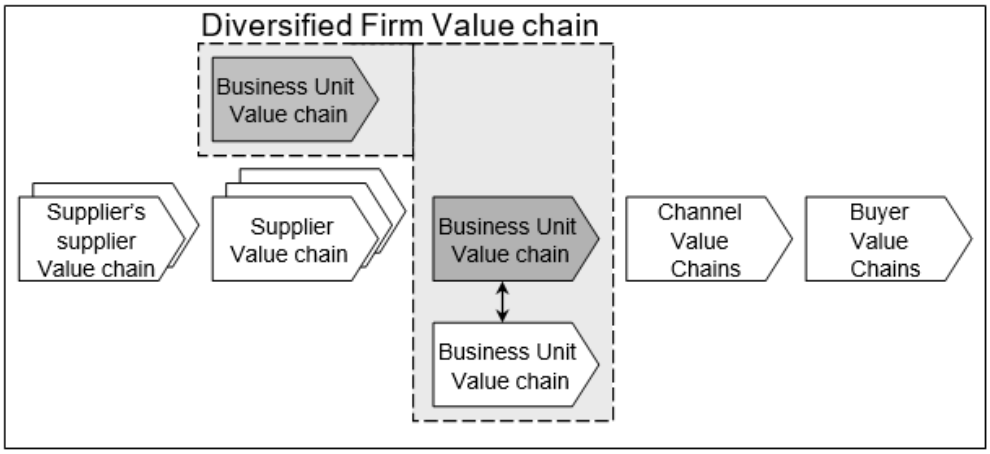


Source: Porter 1985, p. 36

Companies in the same industry may have similar chains, but their main competitors are usually different. The difference between competitor's value chains is a key source of competitive

advantage. The firm's value chain is embedded in many activities called the value system (Porter, 1985). Suppliers not only deliver products, but they can also influence business performance in several ways (Figure 1-6). On the other hand, the products usually reach the buyer through the value chain of the different distribution channels. In addition, the distribution channel will also perform other activities, these activities will affect the buyer and the company's business. The ultimate basis for differentiation is the role of the company and its products in the buyer's value chain which determines the buyer's needs. Obtaining and maintaining a competitive advantage depends not only on understanding the business value chain, but also on how the business is integrated into the overall value system.

Figure 1-6 : The Value System



Source: Porter, 1985, p. 35

We can use the value chain model shown in Figure 1-6 to define logistics related to supply chain management. Logistics refers to optimizing the flow of material and information of sales departments and optimizing logistics processes, such as planning, distribution and warehousing within a single sales department. Supply chain management explores the opportunities for creating value along the supply chain. These opportunities begin by exploring customer needs and supplier capabilities, and then continue to assess common opportunities for improvement. These efforts can lead to joint product development projects, process integration, joint information sharing, integrated planning or marketing activities to improve the overall performance of the parties involved. An example of such activity is the development of joint planning and inventory control processes, not only for business units, but for the entire channel, as product knowledge and supply chain flexibility are well known in the above business units. In the canal. Such activities are good for both parties. In key industries, the advantage is that demand is more stable, which requires less flexibility and lower costs. On the other hand, the channel value chain does not need to focus on planning and inventory control, as this is already

done by the business unit, and therefore the management costs associated with inventory control for these activities are also low.

4. Drivers of supply chain development and main initiatives

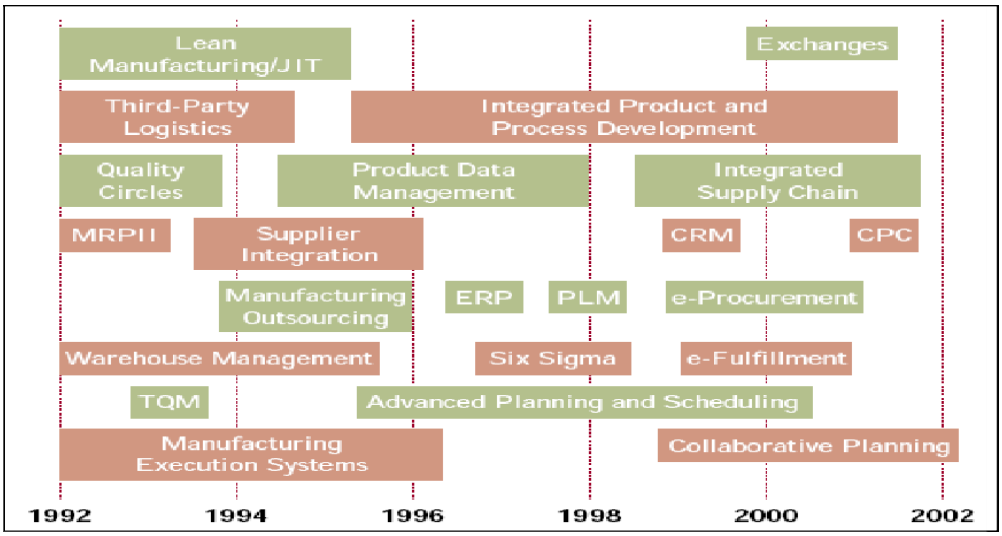
In today's global economy, businesses are facing increasing pressure to reduce costs while maintaining production levels and quality to deliver results. In order to achieve these goals, the business must successfully overcome many challenges. As Meakem (2003) pointed out that the free market economy and new technologies are creating a new market of supply and demand in the world. For example, many organizations are looking to source resources from China. However, many of these organizations lack the information and knowledge to increase offshore supply and production. The rules of global competition in the free market state that only the strongest can survive. As a result, industries around the world are consolidating rapidly. Mergers and acquisitions are the main means of achieving consolidation. However, unless synergy between the merged entities can be achieved, the merger rarely works. Global competition and technological advancements are shortening the time to market and delivery of products. In turn, this forces organizations to select the best suppliers and integrate them into their core business activities. Organizations in all regions and industries are examining make-versus-buy options. Many thinkers find that the value of outsourcing the production of goods and services is increasing.

Handfield (2002) summarizes these factors as follows:

- Customer needs continue to grow in terms of cost of products and services, quality, delivery, technology and cycle times caused by global competition.
- The emergence and better acceptance of relations between high-level cooperative organizations.
- Information revolution.

As a result of this development, companies are making more and more efforts to develop new methods to improve market competitiveness through more efficient supply chain management. The results of these efforts are many supply chains plans that have emerged over the past decade, as shown in Figure 1-7.

Figure 1-7: A Decade of Supply Chain Initiatives



Source: Accenture, 2002, p. 3

But the development continues. According to Anderson (2003), the last supply chain plan is:

- Supply chain design**:** customer-centric design, collaborative design and use of R&D resources.
- Electronic market: vertical industrial electronic market, private stock exchange, horizontal aggregator.
- Collaborative manufacturing: transaction integration, collaboration integration, network integration.
- Integrated execution: logistics delay, resource exchange, leveraged transport, click and checkout model.

The common feature of all plans is that they require a high degree of collaboration at different levels of the process of delivering products to customers and involving advanced use of information technology.

More and more companies are implementing supply chain management practices. Additionally, while many companies have expressed enthusiasm for cross-functional cooperation within the company and with supply chain partners, in fact, few companies can successfully implement the practices and technologies needed to do this job well. The use of different practices is closely related to the level of development of supply chain processes and the level of integration of these processes.

5. Different initiatives and levels of supply chain maturity

In order to assess how companies are using emerging supply chain practices and their success in choosing best practices, Performance Management Group (PMT) and consulting firm Pittiglio Rabin Todd & McGrath (PRTM) have jointly developed a supply chain maturity model (Figure 1-8). The model is based on a combination of benchmarking experience and on-the-ground knowledge of current and emerging practices in different departments over the past five years.

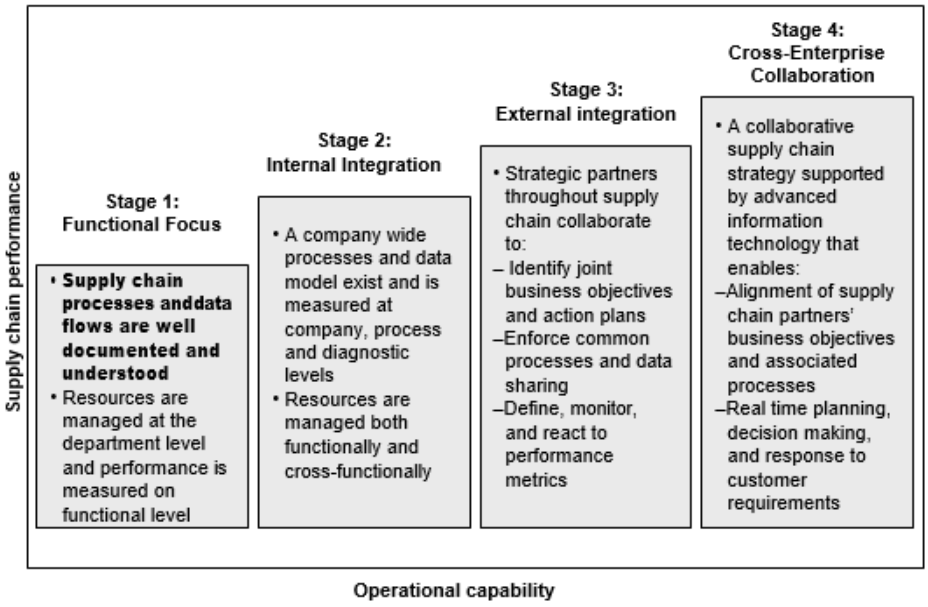
Step 1 - The functional departments of the organization focus on improving their process steps and the use of resources. Managers usually focus on the cost and functional performance of their department. Unclear definitions and incomprehensibility of processes in multiple functions or departments lead to limited efficiency of complex supply chain processes.

The model defines four stages of operational capability. Businesses almost always operate with a well-established sequence of practices at each stage. Attempts to try without a solid foundation in practice are seldom successful (Cohen, 2004):

Step 2 - Now an enterprise-wide service or process is defined so that each functional department can understand its role in the complex supply chain process. Clearly define cross-functional performance indicators and be responsible for the contribution of each function to overall operational performance. Usually, the resource requirements of the entire organization are balanced. At this point, a clearly defined supply-demand balancing process is evident, which combines forecasting and planning with supply and manufacturing.

Step 3 - Now develop the practice from Step 2 to interface with customers and suppliers. The company has identified strategic customers and suppliers, along with the key information needed to support its business processes. Use Joint Service Agreements (JSAs) and Dashboard Agreements to take corrective action when performance falls below expectations.

Figure 1-8: levels of supply chain maturity



Source: Cohen, 2004, p. 231

Step 4 - Customers and suppliers do strategic work to define mutually beneficial strategies and set performance goals in real time. Information technology can now automate the integration of business processes in these companies to support a clear supply chain strategy.

The model also assesses the extent to which information technology supports richer practices and business-to-business integration in supply chain management.

6. Levels of supply chain maturity and business result

In order to assess the impact of supply chain development or maturity level on business performance, the Performance Measurement Group **(PMG)** conducted a survey in 2003, which investigated the company's supply chain and its performance.

The main conclusions of this study are:

- The survey shows that 36% of business practices are at the Mature stage 2.3. They expect to reach an average of 2.9 by the end of 2003.
- The maturity of different industries varies considerably. Due to the continued focus on managing and reducing costs, consumer products companies are currently leaders in mature supply chain practices (average of 2.5). In contrast, life science companies are still paying more attention to operations (1.9 on average).
- The analysis also shows that mature companies outperform their peers in three of the four aspects of supply chain performance: delivery, flexibility and responsiveness, and cost.

The fourth area of performance asset rotation is not directly related to the maturity of the supply chain defined in this study. In addition, mature organizations have a 10-25% advantage on all three elements of overall supply chain management costs: order management, material sourcing, and inventory management. As a result, the total supply chain costs of mature companies accounted for only 9% of revenue on average, while immature companies accounted for 10.7%. Mature companies can increase the speed of six-day product delivery, meet customer needs almost 100%, and reduce total supply chain management costs by 20%.

- Research shows that there is a strong correlation between supply chain maturity and financial performance. Mature companies use their supply chain expertise to gain global business benefits. In fact, based on earnings before interest and taxes (EBIT**)**, mature companies' profits are 40% higher. While other factors (such as product innovation and channel management) can bring this profit advantage, supply chain management is a key driver. In addition to reducing cost of sales (COGS) as a percentage of revenue, top performing companies also reduced COGS overall, and their competitors have seen those costs increase.
- Best practices: The improvement of the "overall" management of the supply chain lags the four components of the process. Manufacturing and delivery processes are typically the "practical fruit" of supply chain improvement work - more obvious and easier to understand than blueprints. However, companies that are at the best level (20% of the best) in terms of key indicators always adopt higher level plans.
- Likewise, this research, like many other documents, also confirms that supply chain management can greatly promote improved service levels and optimization of service levels. The cost, which is closely linked to the company's financial situation, is therefore considered to be a key driver of the company's long-term competitiveness. Given the correlation between mature supply chain practices and financial performance, the companies were also asked how much they expect to increase their level of development over the next two years. Participants plan to increase their maturity by only about 0.6 stages over the next two years. These expectations reflect their understanding of the challenges encountered in developing new supply chain functions and practices.

7. Key components of successful supply chain management

As mentioned earlier, the level of supply chain maturity drives both the supply chain and affects financial performance. However, companies must choose the supply chain practices that best suit their supply chain strategy and their overall business. Blindly adopting common supply

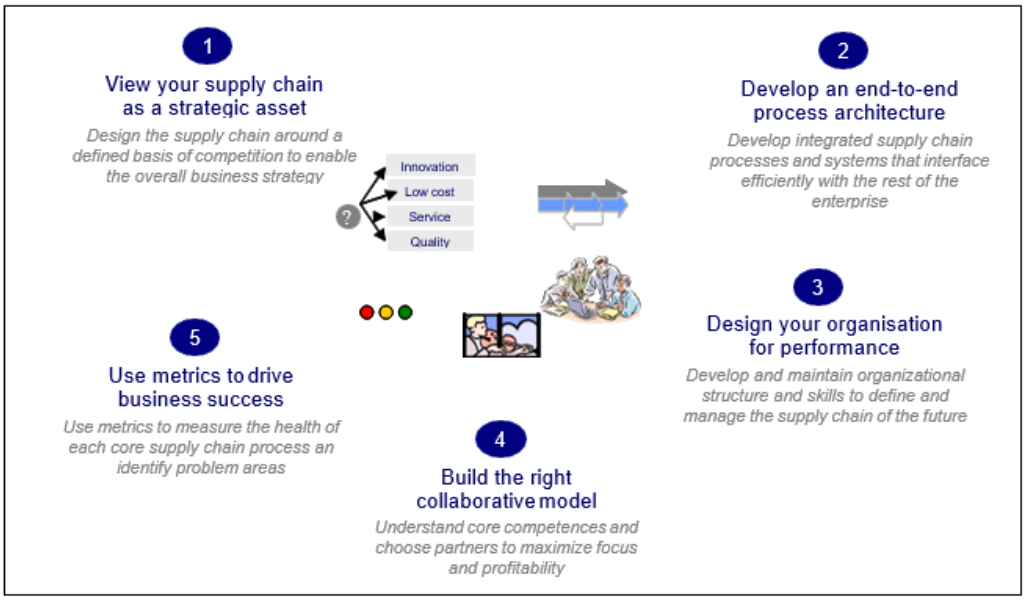
chain best practices may allow companies to catch up with their industry peers but will not lay the groundwork for competitive advantage. The question is how to develop the necessary supply chain capabilities and select the key best practices that will advance the strategic goals of the company. To achieve this goal, PRTM has developed an effective supply chain management framework based on five basic disciplines (Cohen et al 2004).

The framework considers a broader perspective of supply chain management and extends it beyond the process (as defined in the SCOR model). This is also a logical response to the research conducted by Lambert: in the research conducted by Lambert, the strategic aspects of the SCOR model itself are not so easy to explain as they rely more on tactics and cost reduction.

These core disciplines are (see Figure 1-9):

- Treat the supply chain as a strategic asset (designed around a competitive basis defined to achieve the overall business strategy).
- Develop end-to-end processes and systems to effectively interact with the rest of the organization.
- Organization of the design and necessary skills required.
- Establish an appropriate collaboration model based on core competencies and the selection of appropriate partners to maximize attention and profitability.
- Use metrics to measure the health of processes and identify problems.

Figure 1-9: Five core disciplines for strategic supply chain management



Source: Adapted by Cohen, et al., 2004, p.12

This framework can be closely related to the definition of management earlier. Here we define management as planning (business and organization), direction and control. The vision of the supply chain as a strategic asset is linked to the business plan. Organizational planning is related to end-to-end process development, organizational design and establishing the correct collaboration model, while metrics are related to control. On the other hand, leadership is one of the key elements in the successful implementation of these plans and therefore constitutes the key competence of managers.

7.1. Supply chain as a strategic asset

When a company views the supply chain as a strategic asset, the supply chain strategy is part of the overall business strategy, designed around a clearly defined competitive basis (innovation, low cost, service, quality). It is integrated with marketing strategy and customer needs, product strategy and power position. On the other hand, the supply chain strategy must adapt to changing market conditions and competitive advantages.

In this way, the supply chain strategy designs a unique supply chain configuration that can advance strategic goals. The supply chain strategy has five components (Cohen, 2004):

1. Manufacturing strategy.
2. Outsourcing strategy.
3. Channel strategy.
4. Customer service strategy.
5. Asset network.

7.1.1 Supply chain strategy building blocks

Manufacturing strategy means deciding how to produce a product or service. Will the products be stored, ordered or combined? Is it a matter of outsourcing certain manufacturing industries or of transferring production to low-cost countries? Will the final setup be done outside of the manufacturing plant, closer to the customer?

Evolving manufacturing strategies can be a key source of competitive advantage. Sometimes it can be beneficial to choose different manufacturing strategies for different products or different markets. The main driver of the manufacturing strategy is the product life cycle, changes in demand, and the number of product variants. Figure 1-10 shows the types of manufacturing strategies applicable to different products.

Figure 1-10: Types of Manufacturing Strategy

Strategy	When to choose this strategy	Benefits
Make to stock	For standardized high-volume products	Low manufacturing cost, meeting customer demands quickly
Configure to order	For products requiring in many variations	Customization, reduced inventory, improved service levels
Make to order	For customized products with infrequent demand	Low inventory levels, wide range of product options, simplified planning
Engineer to order	For complex products that meet unique customer needs	Enables response to specific customer requirements

Source : Cohen, et al., 2004, p. 12

Channel strategy defines how products or services are delivered to buyers or end users. He must answer the following question: will the product be sold through distributors? In the event of a shortage of equipment, which markets and market segments will be served and which channel will be used? Do you keep an inventory dedicated to strategic partners? Decisions about company assets and cost performance should be part of channel strategy, including pricing, promotion, funding, and other terms and conditions.

Anderson (1999) has proposed a series of strategies for working more effectively with channels, customers and / or end consumers more closely:

- Consumer Customizer: Use large-scale personalized settings to establish and maintain a close relationship with end consumers through direct selling.
- Commercial oriented: like optimizing logistics, this strategy prioritizes offering consumers "low prices and good value for money", but it pays less attention to the brand than to business customers.
- Logistics Optimizer: emphasizes the balance between efficiency and effectiveness of the supply chain.

Outsourcing decisions are an important source of flexibility. Through outsourcing, the company can focus on its core competitiveness and improve its competitive position. Outsourcing activities of less strategic importance or activities that can be carried out by outsourcing partners can be better, faster or cheaper and are the areas we need to consider. If the product, process or technology makes the business unique, it should not be outsourced. However, before making a final decision, the risks and strategic implications should be assessed.

The customer service strategy should be based on two things: total number of customers and profitability and understanding the real needs of customers. Should the company provide different levels of service depending on the importance of the customer? Customizing customer service strategies to provide the best cost / service performance in each customer group can generate high returns.

The final decision concerns supply chain networks, factories, warehouses, production equipment, order desks and service centers. The location, size, and tasks of these assets can have a significant impact on performance. Depending on the size of the business, customer service requirements, tax incentives, supplier base, cost of labor, the business can choose global, regional or national manufacturing mode. The company can choose different models depending on the types of needs of its products. High volume products can be produced in low cost countries for a global demand. Another option is to use a different "in market" delay strategy. This means that standard products are manufactured in low cost production centers, but final setup and packaging is done in distribution points close to customers. Another aspect is the product life cycle. At the start of the life cycle, the global model can be used to develop the manufacturing process, after which the regional model should be used to improve customer service.

7.1.2 Key Criteria for a Good Strategy

The supply chain strategy supports and advances the business strategy. An effective business strategy begins with a basic strategic vision that defines the business framework. Business strategy defines what a business is, what it does and what it does not (Cohen, 2004). In this way, it also defines the basis for competition in the following aspects: innovation, cost, service and quality. High tech companies only focus on one of these four.

From a supply chain perspective, a good business strategy is very important, as each competitive base requires different network structures, processes, information systems and skills, as shown in Table 1-5. . . If cost is the source of competitive advantage, the emphasis is on efficient operation and the basis for competition is the lowest prices across product categories and supply chains can help gain competitive advantage through low cost and efficient infrastructure.

Table 1-5: Supply Chain Contribution to Business Strategy

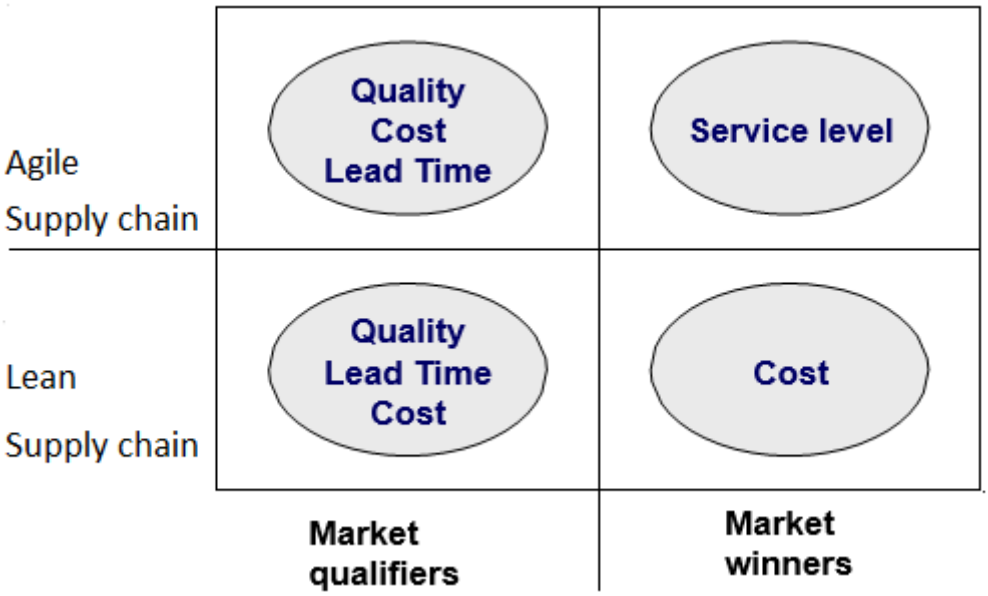
Primary strategy	Source of advantage	Basis of competition	Key supply chain contributor
Innovation	Brand and unique technology	Desirable and innovative products	Time to market and time to volume
Cost	Cost efficient operations	Lowest prices in the product category	Efficient low cost infrastructure
Service	Superb service	Tailored to meet customer specific needs	Designed "from the customer in"
Quality	Safest, most reliable products	Products you can count on	Supply chain excellence and quality control

Source : Cohen, et al., 2004, p. 22

As Cohen said, a good supply chain strategy must meet four criteria. It must be consistent with business strategy, customer needs and positions of power, and it must be adaptable.

Businesses need to know what customers really want. Therefore, the strategy must be consistent with the needs of the clients. Lean principles should be applied when cost is the market winner, and agile principles should be applied when availability is the market winner (Figure 1-11).

Figure 1-11: Market Winners – Market Qualifiers Matrix for Agile versus Lean Supply chain



Source: Adapted by Mason Jones, 2000, p. 65

Depending on the market demand, there are three dimensions: product characteristics, demand characteristics and lead time characteristics.

On this basis, we can divide the supply chain into (Corsten, Longituedes 04, 2004):

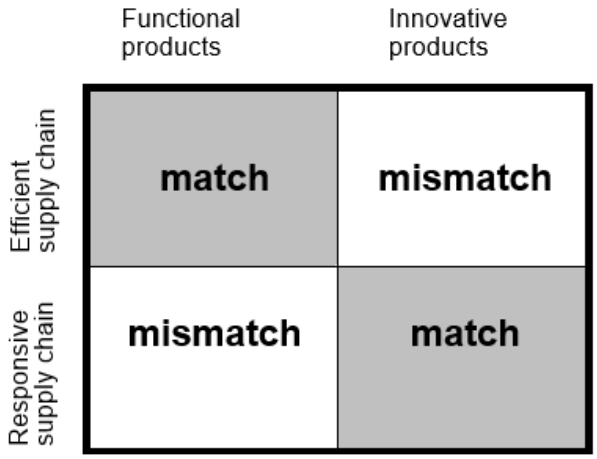
- Lean supply chain: has high fixed assets, focusing on high capacity utilization and efficiency (like automobiles).

- Agile supply chain has few fixed assets, short innovation cycles, assembly is generally modular, and due to rapid changes in product, demand flexibility is essential.
- Fast supply chains: can be found in the consumer goods industry because the innovation cycle and shelf life are short, and speed is essential.

Fisher (1997) classified supply chains as functional or innovative according to the type of product demand. The criteria for this distinction and the supply chain requirements are presented in the appendix (Figure 1-12). Depending on the type of request, companies must design processes that focus on efficiency or responsiveness. Functional products require an efficient process, while innovative products are reactive.

According to Fisher (1997), firms often appear in the upper right corner of Figure 3-4. The main reason is that companies find it difficult to accept that uncertainty as inherent in innovative products. They can use three coordination strategies to reduce uncertainty. One is to increase the share of common components, thereby improving the predictability of demand. They can also avoid uncertainty by reducing lead time or avoiding residual uncertainty through inventory buffers or overcapacity.

Figure 1-12: Matching Supply Chain with Products



Source: Fisher, 1997, p. 109

For a good supply chain strategy, it is important that the sales department understands the power and influence associated with customers and suppliers. Therefore, it must be consistent with the position of power. Firms with high power and influence can use their volume to obtain cheaper products and gain more control over the supply chain, its structure, customers and suppliers. The brand plays an important role in cooperation with customers. The influence of the position of power is most important for the management of relationships in the supply

chain. The company can either monitor supply chain partners or collaborate with carefully selected partners based on their strategic impact. Anderson (1999) has proposed six strategies that directly support business strategies focused on product leadership and brand building:

- Focus on Market Saturation: Focus on generating high profits through strong brands and ubiquitous marketing and distribution.
- Agile operation: allocate assets and operations to react quickly to new consumer trends.
- Focus on freshness: commitment to obtain a premium by offering consumers fresher products than competitors.

With the development of business strategies and the emergence of new technologies, supply chain strategies must be adaptable. Internal and external factors determine the life cycle of the company's strategy:

- New technologies which modify the dynamics of the industry (like the emergence of social media).
- Changes in the scope of activities (new products or services, new markets, geographic expansion, distribution capacities, new channels, new suppliers).
- Due to the arrival of new competitors, the basis of competition has changed.
- Need to absorb new acquisitions.

7.2 Key supply chain processes

Whatever strategy the company chooses for the supply chain, the implementation of that strategy must include architectural details in processes, applications and information. The process architecture has four main components (Cohen et al 2004):

1. A description of the supply chain process and its relationships.

2. Display the interaction between the supply chain process and the rest of the core business processes.

3. A description of the IT applications needed to support the supply chain process, including the data and performance indicators needed for execution and control.

4. Describe how to integrate the application, including data specifications and communication frequency.

According to Cohen, an effective supply chain process in a business should:

- Adapt to the supply chain strategy and support the competitive base.
- Ensure end-to-end management with the same vision and a set of common objectives.

- Simple and easy to understand to reduce complexity, thereby increasing costs and reducing manageability.
- Sufficient integrity in integrated applications, accurate data and documented processes.

Firms need to choose leading-edge practices and processes that fully match the strategy to improve the basis for competition and avoid the trap of choosing costly leading-edge practices that only provide marginal support

although cost is the primary source of competitive advantage, it can support the leading practices of these strategies with integrated plant planning and scheduling, raw materials and standardization. manufacturing processes. In addition, the product design must be suitable for efficient manufacturing, purchasing and order management. When businesses compete for quality services, key processes involve collaboration plans with customers, customer segmentation to best meet different customer segmentation and product differentiation needs. Adapt as quickly as possible to changing customer needs in the process, also known as carry over.

The structure of the supply chain process must change with the development of the business strategy. In addition, the company must assess where the integration of internal or external processes can create value for the company. This means that the focus should be on end-to-end supply chain management. When processes achieve the end-to-end focus goal, they are:

- Integrated inside and outside the organization (customers and major suppliers).
- Supply chain resources are optimized throughout the supply chain.
- Standard indicators and targets are shared throughout the supply chain.
- Visibility and performance management are shared.

A complex supply chain is difficult to understand, improve and manage. As a result, the supply chain must be simple to overcome these problems. The complexity factors are:

- Supply chain configuration.
- The proliferation of products and services.
- The processes and the information system are inconsistent.
- Regarding automation.

In order to simplify the process, companies should (Cohen et al., 2004):

- Measure and manage the complexity of products, services and associated costs.
- Define rules and respect standards relating to components and materials.

- Regularly check the physical configuration of the supply chain (warehouse, order office, factory, supplier location, distribution center) and simplify it if possible.

When it comes to integrated applications, accurate data and documented processes are very important to successfully achieve the integrity of the process architecture. In practice, this means defining the level of integration required between applications, documenting processes at each level of the supply chain, providing clear descriptions and the data needed to perform them, as well as measuring and managing data quality.

Companies in all sectors most often accept the SCOR model as a process architecture tool. Thanks to its structure and method, the SCOR model helps to make the architecture of supply chain processes easy to manage.

7.3 Design of supply chain organization

Integration is the essence of supply chain management. This means that if the company is to ensure effective supply chain management, it must integrate the core supply chain processes defined by the SCOR model into the senior management of the organization. The challenge is to determine the organizational structure, roles and responsibilities, and to find the right people with the right skills.

Just like other organizations, the organization of the supply chain is constantly evolving. Based on new business needs or determined improvement plans; roles and responsibilities can change; goals and priorities can change. It also means that when some new skills become obsolete, new skills must be developed.

An effective supply chain organization should have the following characteristics (Cohen et al 2004):

- Support the overall strategy of the company.
- Provide the core competencies and competencies provided internally or through strategic partnerships, which are necessary to execute all supply chain processes.
- Take action to measure performance.
- Follow a series of practical design principles.

The organization (structure and process) should be checked regularly to ensure that strategic business development is supported and that those assigned to the different roles have the technical and managerial skills necessary to effectively carry out their established responsibilities.

Over time, organization has developed considerably. Beginning in the 1980s and 1990s, the functional organization of the supply chain separated order management and procurement from operations, and the company began the transition to integrated management of core business functions. As the main supply chain, procurement is also part of the operations. Supply chain management began in the 1990s. In an integrated supply chain organization, the supply chain manager is fully responsible for all supply chain processes, from order management through order fulfillment, manufacturing and purchasing (Cohen, 2004).

There isn’t only one way to design an effective supply chain organization. However, four guiding principles can be used:

- The form should follow the function - the organization should reflect the process.
- For each process, assign a manager (function or individual).
- Understand, develop and maintain basic skills.
- Organize around the skills needed rather than the skills available.

When internal capabilities are defined as competitive advantages or are essential to achieving the strategic objectives of the company, internal capacities can be considered essential. When defining content as a core skill, its quality should be at a high level. If the activity is essential, it can be defined as a basic skill (Cohen et al. 2004):

- Competitive advantage.
- Business growth.
- Customer service.
- Superior offerings.

Well-trained and knowledgeable people are the key to developing basic skills. Advanced systems cannot replace humans. They can provide Higher levels of decision support, but they require experienced users. In other words, the technology doesn't deliver results, but people do. An effective organization requires the right skills and abilities. After defining the organization around the process, it is important to determine the skills required for each role. Key work according to Cohen is illustrated in Figure 1-13.

Figure 1-13: New Roles for End-to-End Supply Chain Management

New role	Key required skills
Outsourcing partner Relationship manager **MAKE**	• Ability to negotiate strategic alliances and partnerships • Ability to drive best-in-class performance from supply chain partners • Ability to inspire individuals within various organizations to work collaboratively
Global commodity manager **SOURCE**	• Ability to manage across continents • Ability to manage ongoing relationships with key suppliers and to execute the global supply chain strategy for products purchased from these suppliers • Ability to structure the supply base to achieve the lowest total cost of ownership • Ability to manage suppliers through objective measurements and regular generation of formal suppliers' scorecards
Customer relationship manager **DELIVER**	• Deep understanding of the customer's business and channels • Sufficient understanding of supply chain operations to ensure implementation of core processes that supports customer requirements
Supply chain process improvement manager **PLAN**	• Thorough understanding of supply chain best practices • Ability to inspire individuals within multiple functions to work collaboratively • Ability to recognize opportunities for process improvement and appropriate automation
Supply chain performance analyst **PLAN**	**• Thorough understanding of supply chain metrics and appropriate method for target setting** **• Ability to institutions metrics-driven reviews and continuous improvement programs**

Source : Cohen, et al., 2004, p. 129

In most roles, the ability for cross-functional and organizational collaboration is essential. It also involves a high degree of relationship management, and therefore requires good leadership skills related to communication and motivation of people involved in making improvements.

7.4 Development of a collaborative model

7.4.1 Definition of collaboration

As companies migrate to larger supply chains, collaboration becomes their most strategic activity. Collaboration can Have many meanings, but for the purposes of this article I will use Cohen's (2004) definition: “The means by which companies within the supply chain work together toward mutual objectives through the sharing of ideas, information, knowledge, risks, and rewards”.

Driving factors for cooperation include the desire to access (Cohen, 2004):

- Technology owned by another company.
- For businesses, capital-intensive technologies cannot invest alone.
- A skill that is too expensive to acquire, develop or maintain.

- A new market is effectively closed due to high entry costs or preconditions (trade barriers, laws).

Real cooperation is very difficult: if you can't get financial or strategic advantages, it doesn't make sense. Potential partners are customers, material suppliers and service providers who support supply chain operations. Cohen (2004) distinguishes different levels of collaboration depending on the maturity model:

- Business collaboration (effectively executing business between partners).
- Collaboration (requires sharing of higher-level information, such as demand planning, order confirmation, stock levels and delivery status. The main technology used is EDI electronic data interchange).
- Collaboration (Collaboration requires closer cooperation as partners build on each other's capabilities. It is used for strategically important supply chain partners. For example, supplier manages VMI inventory and the supplier is responsible for maintaining the agreed inventory (level, based on usage or forecast).
- Synchronous collaboration (here collaboration goes beyond supply chain operations and goes beyond joint development projects. They can be called strategic alliances).

The following questions are important factors for successful cooperation (Cohen, 2004):

- The company must first master internal collaboration.
- The appropriate degree of collaboration should be defined for each partner segment. Partners should be carefully selected based on their strategic importance, cultural suitability, organizational and technical suitability. The process should be relevant to each of these key partners, and the type and level of integration applicable to each process link should be carefully assessed.
- Benefits, gains and losses, risk sharing. The overall aim of cooperation is to benefit all parties involved. Supply chain partners need to assess their relative advantages and capabilities in an open and rigorous manner. The implicit condition in this process is "to open the account book" to an external manager

The company's internal and cross-functional teams can analyze the cost structure and performance indicators of specific company limits. If supply chain partners want to cooperate strategically rather than tactically, trust is key.

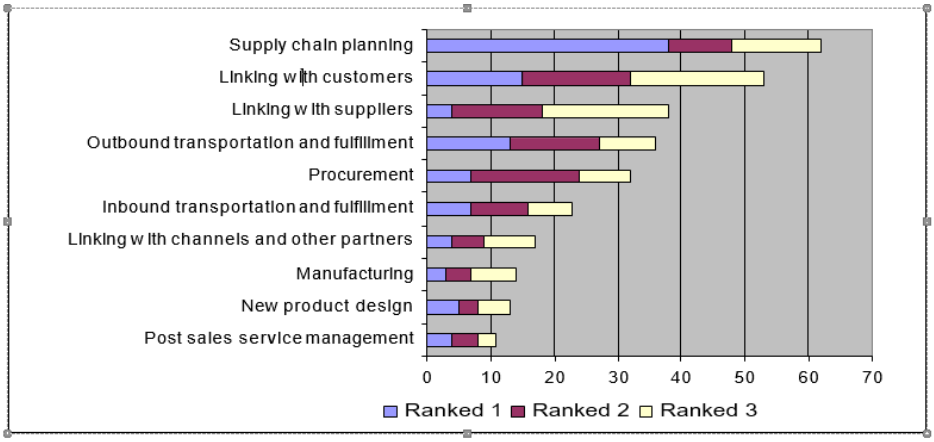
- Clear objectives and parameters for acceptable performance must be defined and clearly understood.

- Use of technology. Today's collaboration tools focus on managing supply chain event management and the relationship between customers and suppliers.

7.4.2 Key areas with increasing need for collaboration

The Global Study of Supply Chain Leadership and its Impact on Business Performance has identified key areas where companies should collaborate. Those main areas are shown in Figure 1-14

Figure 1-14: Supply Chain Collaboration Areas with Highest Potential



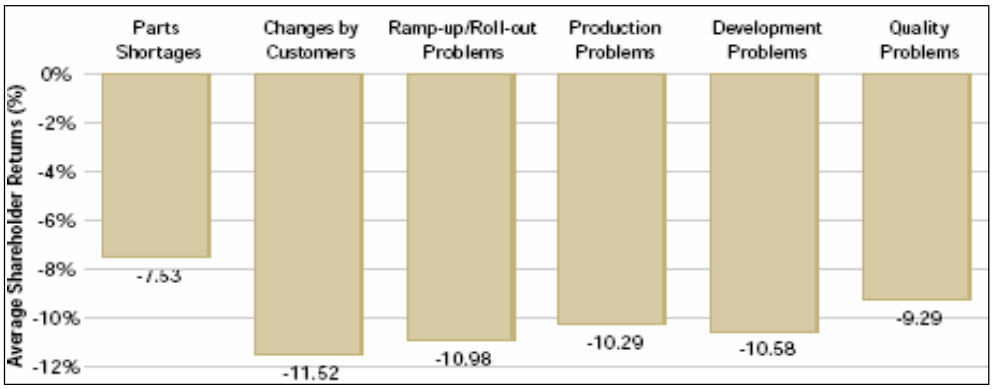
Source: Accenture, 2003

The survey revealed that cooperation in the areas of "supply chain planning" and "customer-supplier relationships" is considered the best opportunity for operational improvement. Investing in these three functions can help businesses respond more effectively to changing market conditions, proactively control costs, and strengthen relationships through better information sharing and collaboration.

The survey looked for the main issues in the current supply chain (Figure 1-15). These lines include customer-made changes and evolutions, deployment issues, production issues, development issues, quality issues, and parts shortages. Among them, the main objectives for the next few years should be (Anderson 2002):

- The front end of the supply chain is more than the back end.
- Cooperation, which will become the most strategic capacity.
- Hand over assets and functions to experts who can benefit from them.
- Improve service and support as they will be as important as the product itself.
- Ability to integrate new and innovative functions into the company's economic model, thus promoting high-level value creation.

Figure 1-15: Biggest Problems in Supply Chain that Impact Shareholder Value



Source: Anderson, 2002, p. 26

According to Cohen (2004), the next generation of cooperation will focus on long-term customer satisfaction. True integration between different systems will become a reality, allowing companies to monitor their production and logistics assets from a central system. The system will be able to investigate the future, predict unforeseen events and trigger the right response when needed. Cooperation with multiple customers and suppliers will become the norm. Cooperation with material suppliers will continue to be transaction focused. The cooperation will increasingly focus on the front-end of the supply chain and focus on collaborative forecasting and replenishment models.

7.5. Design of measurement systems and measurements

Everything that is measured has the potential for improvement. Therefore, in order to improve the performance of the supply chain, a measurement system should be put in place. The measurement system and measurement should (Cohen, 2004):

- Translate financial objectives and targets into effective measures of operational performance.
- Evaluate and transform the impact of operational performance on future profits or sales.
- Promote the behavior of the entire supply chain organization.

If we are trying to use indicators to manage performance, we must design them carefully keeping in mind that indicators must have the following characteristics (Cohen, 2004):

- They must be aligned with business strategy.
- They must be balanced and comprehensive; they need to take into account the financial dimension, internal dimension, customer dimension, and innovation and learning dimension.
- Targets must be set on both internal and external benchmarks.
- Targets must be achievable.

- Metrics must be highly visible and monitored at all levels of the company.
- They must be used as a continuous improvement tool.
- They must be implemented via a formal implementation plan.

The goals of the supply chain are often contradictory. High quality service costs money. Therefore, the measuring system must be a balance between (Kaplan, 1996):

- Internal attention and customer-oriented indicators.
- Financial and non-financial measures.
- Functional and horizontal measurement.
- Measures to measure innovation and continuous improvement.

Top performing companies use balanced metrics to support their strategy. Examples of Level 1 measures are shown in Table 1-6

Table 1-6: Supply Chain Metrics

Performance attribute	Performance Attribute Definition	Level 1 Metrics
Supply Chain Delivery Reliability	The performance of the supply chain in delivering: the correct product, to the correct place, at the correct time	Delivery Performance
Supply Chain Responsiveness	The velocity at which a supply chain provides products to the customer	Order Fulfilment Lead Time
Supply Chain Flexibility	The agility of a supply chain in responding to marketplace changes to gain or maintain competitive advantage	Production Flexibility
Supply Chain Costs	The cost associated with operating the supply chain	Total Supply Chain Management cost
		Total Return Processing Cost
Supply Chain Asset Management Efficiency	The effectives of an organization in managing assets to support demand satisfaction. This includes the management of all assets: fixed and working capital	Cash to cash cycle time
		Inventory Days of Supply
		Net Assets Turns

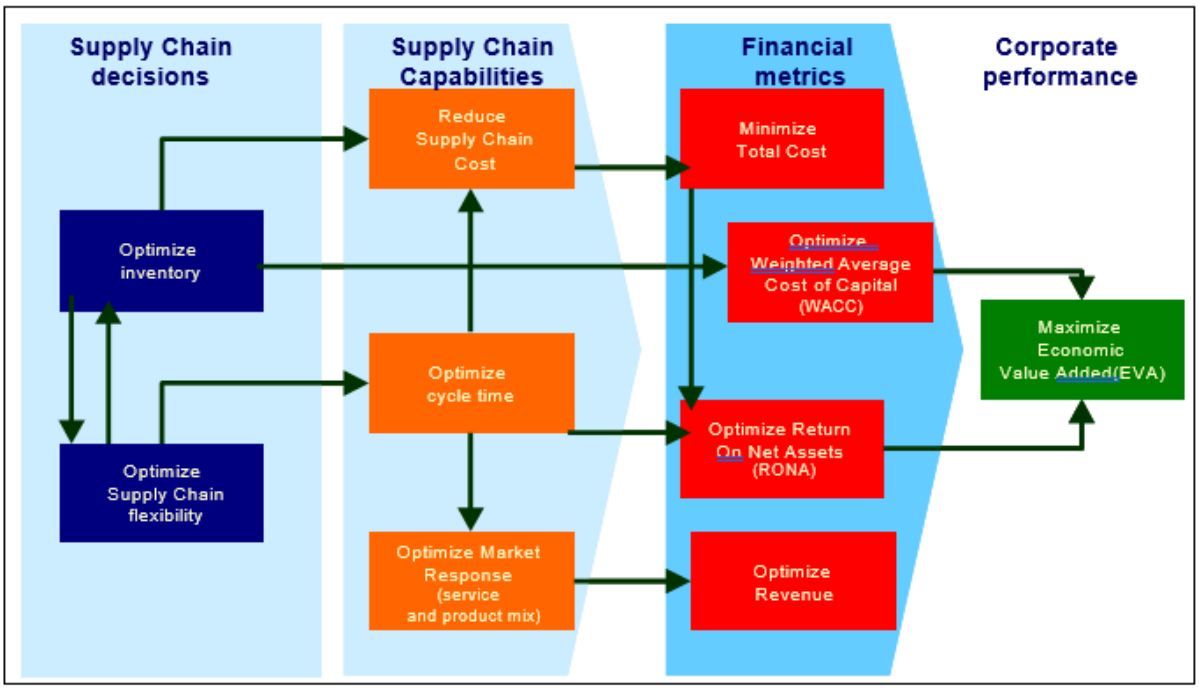
Source : Cohen, 2004, p.280

Evaluating and transforming improved operational performance into future profits or business results is very important in gaining commitment to implement the principles of supply chain management. One method is explained below.

Supposedly the goal of management is to increase shareholders' wealth. To assess the potential value that can be achieved through supply chain optimization, consider the challenges of mergers or acquisitions. The challenge of rationalizing warehouses, distribution centers and even production facilities is a decision in the area of supply chain flexibility. Supply chain decisions related to optimizing inventory and maximizing supply chain flexibility can improve

operational capabilities. These will have a significant impact on the performance of the company and the visible results of the financial indicators (Lewin, 2003). The relationship between them is also shown in Figure 1-16

Figure 1-16: From Supply Chain Decision through Capabilities to Financial Results



Source: adapted by Lewin, 2003, p. 6

Let's start by defining the performance of the company. “Increased economic value” describes an indicator that measures the overall performance of the business, which is determined by a combination of financial parameters, as shown in red in Figure 1-17. In its simplest version, the formula for EVA® can be simplified as shown in Figure 1-18.

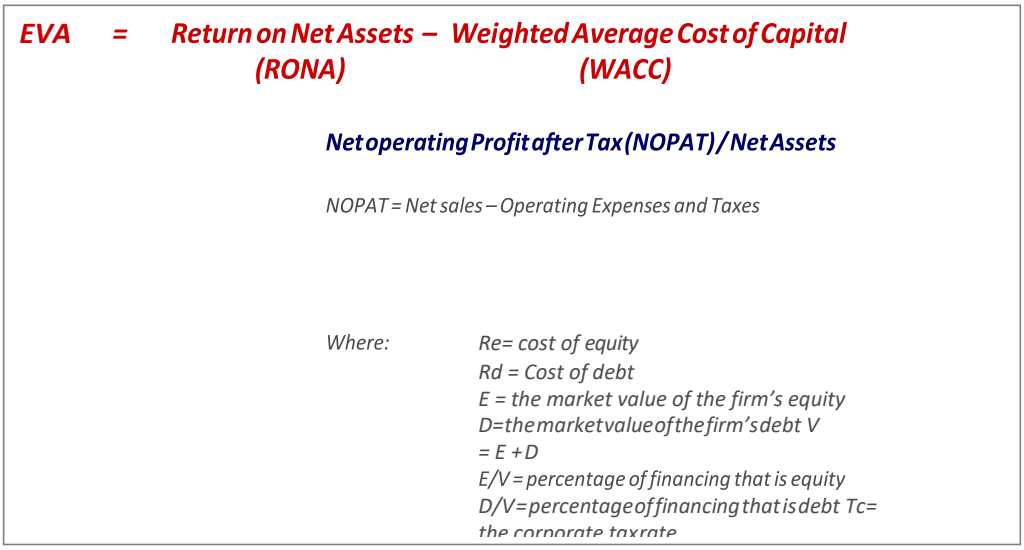
Since RONA's numerator is profit, RONA is strongly affected by revenues and costs. Therefore, managing revenues and costs is critical to overall performance.

The simplified total cost includes the cost of goods sold (COGS = cost of inputs, the added value during the conversion and delivery of the products / services) as well as the selling and management costs.

The weighted cost of capital is reduced as the sum of the cost of each component of capital and the total capital occupied by each component. WACC has two effects. The first is its impact on the income statement and cash flow. For example, interest must be paid on loans that provide funds to buy stocks. The second effect concerns the balance sheet. Since invested capital comes from banks, bonds and stocks in the market, Excessive funds in inventory can mean the

business has to raise additional funds and pay higher prices for it, rather than new investments or better operations.

Figure 1-17: Definition of EVA, RONA



Source: Lewin, 2003, p.7

Although the key financial metrics for creating enterprise value relate to cost, capital expenditure, consumption and profitability, the skills or competencies required to drive these metrics include cost control in the trade chain, Purchasing, supply chain cycle time management and optimization of market response capabilities.

The first capability of the company is to reduce the costs of the supply chain. These companies mainly focus on the following activities: procurement, processing and delivery. These activities can not only be related to hardware, but also to services, data or information. Current information technologies allow a very close link between the activities of acquisition and fulfillment of orders. But there are always costs that are usually not so obvious. Examples of such costs might be suppliers will charge for the additional set ups they have due to changes in schedule, costs of poor quality, cost of poor schedule, inventory carrying costs. All expenses paid for unsold inventory, storage, movement, insurance, and payment of taxes are part of the supply chain cost.

Financial charges are part of the weighted average cost of capital, and inventory levels have a direct impact on that.

The second capability is to optimize the duration of the operating cycle. Cycle time is defined as the time between when an order is received and when an invoice or charge can be issued to the customer. Cycle time can be broken down into its components, including purchasing, manufacturing, packaging, distribution, and service. A thorough understanding of the tradeoffs between economies of scale and rapid schedule changes can optimize cycle times. This trade-

off is usually the most notable in the manufacturing sector, but it also affects purchasing, warehousing and transportation. Visibility of customer needs and visibility of supplier needs help reduce cycle time. The sooner the information about changes is known, the more complete the information and the more likely it is for members of the supply chain and value network to plan for these changes with minimal impact on costs.

The third capability is responding to the marketplace. All companies are doing this. Every company must anticipate market requirements before they happen. Capital must be allocated, and suppliers identified. Planning of demand is a fact of business. Second, companies must develop a product and service bundle that will find paying customers in sufficient number at the price that yields an adequate margin. Third, responding to marketplace means being able to have the right product, in the right place, at the right time, at the right quality, for the right price. Finally, in circumstances where demand exceeds the ability of the company to meet every order on time, the product mix should be such that it meets corporate objectives, such as maximizing margin, satisfying most important customers, shipping the most products on time, satisfying most customer orders on time.

7.6. Most common benefits, barriers and bridges to successful supply chain management

As mentioned in before supply chain management plans make a significant contribution to a company's bottom line, which is why the implementation of these practices is important for today. On the other hand, the implementation of these practices is also a very complex process which requires a high degree of management commitment.

As stated by Duncan (2001), the process of developing a logistics strategy along the supply chain is a complex task, especially in large international organizations. Recommendations for implementing this strategy may include changes to the organizational structure of the company, changes to the physical infrastructure used to store and move the company's products, and in the IT systems used to manage the quotation- to-invoice business processes. The implementation process is even more difficult because it involves changing the way people work, the way they report, and the systems they use to take on new roles in the organization. Duncan recommends that companies follow six basic implementation rules. However, adherence to these rules should minimize the impact of any difficulty encountered in the process. After all, if the strategy is not implemented successfully, it will be a waste to develop a strategy. These six rules for a successful implementation of the logistics strategy can also be applied to the implementation of the principles of supply chain management. They are (Duncan

2001):

- The commitment of all members of the management team must be obtained before the start of the project.
- The measurement of logistics performance at the start of the project implementation phase should be introduced.
- The level of implementation resources required before the start of the project must be determined and obtained.
- Communication is the main driver of success.
- The computer system should not be an excuse not to develop in other areas.
- The hierarchy rather than the project team should be responsible for the implementation.

The Center for Advanced Purchasing Research explores the most common advantages, barriers, and bridges when implementing advanced supply chain practices. The research is based on interviews with 52 carefully selected companies that the academia says are successful in GCS. The results of the survey show (Figure 1-19) that the most common benefits are related to improved responsiveness (external and internal) of the company, cost reduction, better quality and a closer relationship with the company's Main partners.

Table 1-7: Top Ten Benefits, Barriers, and Bridges to Supply Chain Management

Benefits	Barriers	Bridges
▪ Increased customer responsiveness ▪ More consistent on-time delivery ▪ Shorter order fulfilment lead times ▪ Reduced inventory costs ▪ Better asset utilization ▪ Lower costs of purchased items ▪ Higher product quality ▪ Ability to handle unexpected events ▪ Faster product innovation ▪ Preferred & tailored relationships	▪ Inadequate information sharing ▪ Poor/conflicting measurement ▪ Inconsistent operating goals ▪ Organizational culture & structure ▪ Resistance to change – lack of trust ▪ Poor alliance management practices ▪ Lack of SC vision (understanding) ▪ Lack of managerial commitment ▪ Constrained resources ▪ No employee passion/ empowerment	▪ Senior & functional managerial support ▪ Open & honest information sharing ▪ Accurate & comprehensive measures ▪ Trust bases, synergistic alliances ▪ Supply chain alignment & rationalization ▪ Cross-experienced managers ▪ Process documentation & ownership ▪ Supply chain education and training ▪ Use of supply chain advisory councils ▪ Effective use of pilot projects

Source: Fawcet, 2003, p. 12

The main obstacles shown in Table 1-7 can be summarized as management and organizational issues within the organization and with external partners. The most common gateways that can overcome obstacles are support from senior management and functional managers, open and honest information sharing, good measurement systems, process documentation, education and training, and the use of supply chain advisory committees.

As explained in this chapter, there are many issues that must be resolved in the business before the principles of supply chain can be implemented successfully. They range from choosing the right strategy that meets the needs of the business to defining the key processes required to execute the strategy. Without the right people with the skills to support the development and execution of supply chain processes, nothing can be done. An effective measurement system is also a prerequisite as it provides good support for monitoring operational performance. Finally, without frank cooperation between all parts of the supply chain, it is difficult to achieve benefits in terms of cost, flexibility and improved service levels.

Therefore, the implementation of supply chain management is a very complex task. This requires very professional management of the supply chain organization and the relationship between supply chain partners. In order to be able to manage the complex changes associated with the implementation of advanced supply chain management principles in the supply chain.

Introduction to Renault And Spare parts business

1.Presentation Of RENAULT

The Renault group is a French automobile manufacturer. Since 1898, Groupe Renault has been an international group that sold more than 2.7 million vehicles in 2014 in 125 countries. Today it brings together more than 117,000 employees and 36 manufacturing sites.

To meet the major technological challenges of the future and pursue its profitable growth strategy, the Group is relying on its development on the international field, the complementarity of its three brands (Renault, Dacia and Renault Samsung Motors), the electric vehicle, its alliance with Nissan as well as its partnerships with AVTOVAZ and Daimler. With 12 Formula 1 World Champion titles and an investment in Formula E, Groupe Renault is making motorsport a vehicle for innovation and the image of the brand.

1.1. The Renault group:

1.1.1. History of the Renault group:

From 1898 to the present day, the history of the Renault Group spans 117 years of innovative concepts and engines, industrial production, and even sporting achievements. The many emblematic models that have marked its history have accompanied and sometimes anticipated changes in society. We invite you to relive this extraordinary industrial and human adventure by citing the main key dates:

1898: the adventure begins on December 24, when Louis Renault climbs rue Lepic in Paris, driving his coach. It is equipped with a revolutionary gearbox: the "direct drive". He pocketed 12 first firm orders that evening.

1899: Marcel and Fernand Renault, Louis's brothers, create the Société Renault Frères. Louis is dedicated to design. The cart won its first automobile competitions, earning it 71 orders in the year.

1900: production diversifies, with a first prior driving - type B - and the first “utility”, a type C with a van body. Orders are multiplying, thanks to the competition: the Billancourt workshops are expanding, and Renault now has 110 employees.

1902: cars gain in power and speed. The K type, equipped with the first 24 horsepower 4-cylinder engine, won the Paris-Vienne at an average speed of over 60 km / h.

1903: Marcel Renault is killed in the Paris-Madrid race.

1904: Renault develops its sales network. In addition to its 120 agents in France, it creates subsidiaries abroad: in England, Belgium, Italy, Germany, Spain and the United States.

1905: Renault enters mass production with the order of 250 Parisian taxis. The AG type will become the famous “Marne taxi”.

1906: Renault asserts its presence abroad: it is present at the Berlin Motor Show and sells 75 new cars in the United States. The first Renault bus leaves the factory.

1907: the Renault taxi is a great success, in Paris as in London. Renault began to apply Taylorism and rationalization of work: production reached 3,800 cars.

1908: the company becomes the Société des Automobiles Louis Renault.

1909: Fernand Renault succumbs to illness.

Renault enjoyed its first success as an aircraft engine manufacturer, with Maurice Farman.

1910: another Farman biplane with a Renault engine wins the Brodsky Cup over the Pyrenees. The Renault plant employs more than 3,200 people.

1911: Louis Renault meets Henry Ford in the United States: he says he is "amazed" by the organization of his establishments. Renault moved into aviation with the Farman brothers and the Voisins planes. The French army chooses Renault trucks, and the Billancourt plant devotes new workshops to heavy goods vehicles.

1913: Workers go on strike against the introduction of Taylorism.

1914: when war breaks out, the Ministry of War asks Renault to mobilize and entrusts it with 31 contracts (ambulances, aircraft engines, shells, etc.). Renault taxis are used to transport 4,000 troops to the front. They will go down in history as the “Taxis de la Marne”.

1916: a factory is built at Point du Jour in Boulogne-Billancourt, which will allow the construction of an entirely Renault aircraft.

1917: Renault produces the FT 17 light tank for the French Ministry of Armaments. It also supplies aircraft engines to Allied governments.

1918: the "Great War" ends: for Renault it will have been a considerable factor of expansion.

1919: Renault devotes itself entirely to civilian production again. The conquest of the skies continues, with the rise of commercial flights.

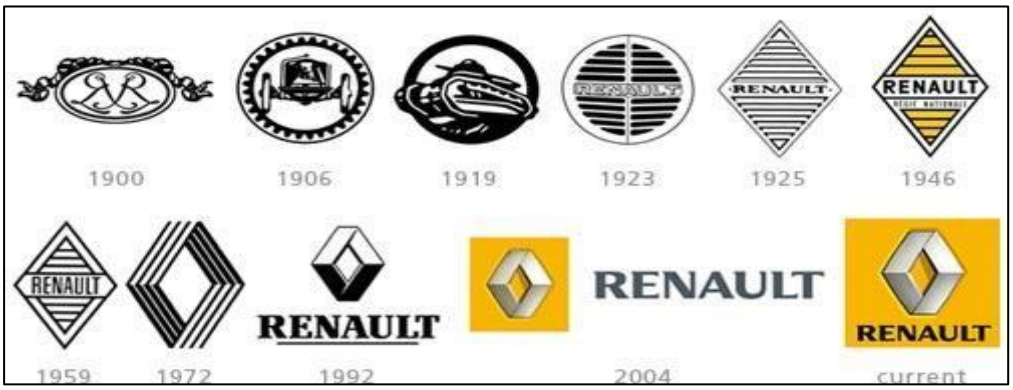
1921: Renault, interested in rail, released a prototype compressed air locomotive.

1922: penetration of Renault vehicles in Algeria.

1.1.2. The visual identity of the Renault group:

Through the figure below, we can see the different logos of the Renault group, from its inception and its development to the present day:

Figure 2. 1: Evolution of Renault's logo



Source : http://www.w12.fr/12/renault-logo.html

1.1.3. Renault group markets:

Since its creation and its launch in the sale of vehicles, Renault now occupies many markets all over the world. In the following table, we will see the fifteen main markets occupied by Renault as well as the number of vehicles sold in 2014 and of course the market share in each country:

Table 2-1: the fifteen primary markets of Renault around the world

Country	Sales Volume	Market share
France	577 601	26.6 %
Brazil	237 187	7.1 %
Russia	194 531	7.9 %
Germany	173 479	5.3 %
Turkey	133 212	17.4 %
Italy	130 996	8.9 %
Spain	127 666	13.2 %
The United Kingdom	109 014	3.9 %
Algeria	91 800	26.9 %
Argentina	84 946	12.9 %
South Korea	80 003	4.9%
Belgium	77 303	13 %
Colombia	50 362	16.6 %
Morocco	45 174	37 %
India	44 849	1.5 %

Source: intern document of the company

1.2. Renault Algeria:

Renault Algeria, a subsidiary of the Renault group, a company specializing in the distribution and sale of Renault and Dacia vehicles and also has after-sales service workshops for their vehicles. Leader in Algeria for 10 consecutive years and directed by Guillaume JOSSELIN,

Renault Algeria is a company under a legal form of: joint-stock company, with a share capital of 1.037.001.545.00 DA, 100% owned by the Renault group. It now has 2 branches and 62 agents and 113 points of sale.

1.2.1. Renault Algeria history:

Before Renault Algeria arrived at this internship, it began to climb the ranks since 1922, the date when Renault vehicles began to enter Algeria.

Here are the key dates that the Renault Algeria company has known since its entry into Algerian territory:

1922: creation of the Algerian company of Automobiles Renault (SADAR): the most important vehicle distribution company in Algeria.

1959: creation of the CARAL assembly plant (Construction of Automobiles Renault in Algeria).

1967: creation of CARAL Renault Algeria, result of the merger between CARAL and SADAR, whose activities were taken over the same year by SONACOME), due to the nationalization initiated by the Algerian government.

1986: opening of the Renault representative office.

1997: creation of Renault Algeria Spa, the capital of which is held by Renault and Unionpart.

2002: Renault's stake in Renault Algeria increased to 100%.

2008: Renault Algeria is leader of the Algerian market for the 3rd consecutive year;marked by several inaugurations of new businesses and that of Renault Algeria Academy.

2009: Renault Algeria closed the year 2009 with 23.4% market share and 56,085 sales, a record in the history of the subsidiary.

2011: Inauguration of the new headquarters of Renault Algeria

2013: Creation of the joint venture between Renault, SNVI and the FNI “Renault Algeria Production” abbreviated RAP spa. Opening of a second branch le grand Alger.

1.2.2. Renault Algeria brands:

On Algerian territory, Renault has two brands, which it commercializes and provides after-sales service, these brands are:

• the Renault brand:

Renault, the Group's global brand, is established in 128 countries with a range of nearly 30 models, available in different versions (passenger cars / utility vehicles) and different

generations. Founded in 1898, Renault has marked the history of the automobile from its origins, under the seal of innovation accessible to all and a passion for challenges.

The Renault brand has given new impetus to its design, under the leadership of Laurens van den Acker, in order to enhance the attractiveness of its products. Simplicity, sensuality, warmth is at the heart of this strategy. Renault design aims to arouse emotion. It displays the brand's passion for cars and reflects its Latin culture. Renault's style is homogeneous and immediately recognizable, thanks to the diamond accentuation on the front face and the flowing lines.

• The Dacia brand:

Since the 1960s, Renault has been working with Dacia factories in Romania before buying them out in 1999. Today, the positioning of the brand is simple: to shake up preconceived ideas in the automotive sector, by offering vehicles at the reach of all. Thus, Dacia never ceases to surprise while remaining faithful to the values which make it successful: offering generous, simple and reliable vehicles; in short, smart.

Dacia is sold in 44 countries in Europe and in the countries of the Mediterranean basin. It has already attracted more than 3 million customers since 2004, by offering a range of robust vehicles at the best price. In 2014, Dacia sold 500,000 vehicles worldwide.

1.2.3. Renault Algeria's commitments:

- Reward loyalty by offering privileged advantages on My Renault:

If you buy and maintain your vehicle in the Renault network, they will agree to give you privileged advantages through the My Renault program.

- Listening to your customers:

You can contact one of the dealers in the network, or customer relations at any time.

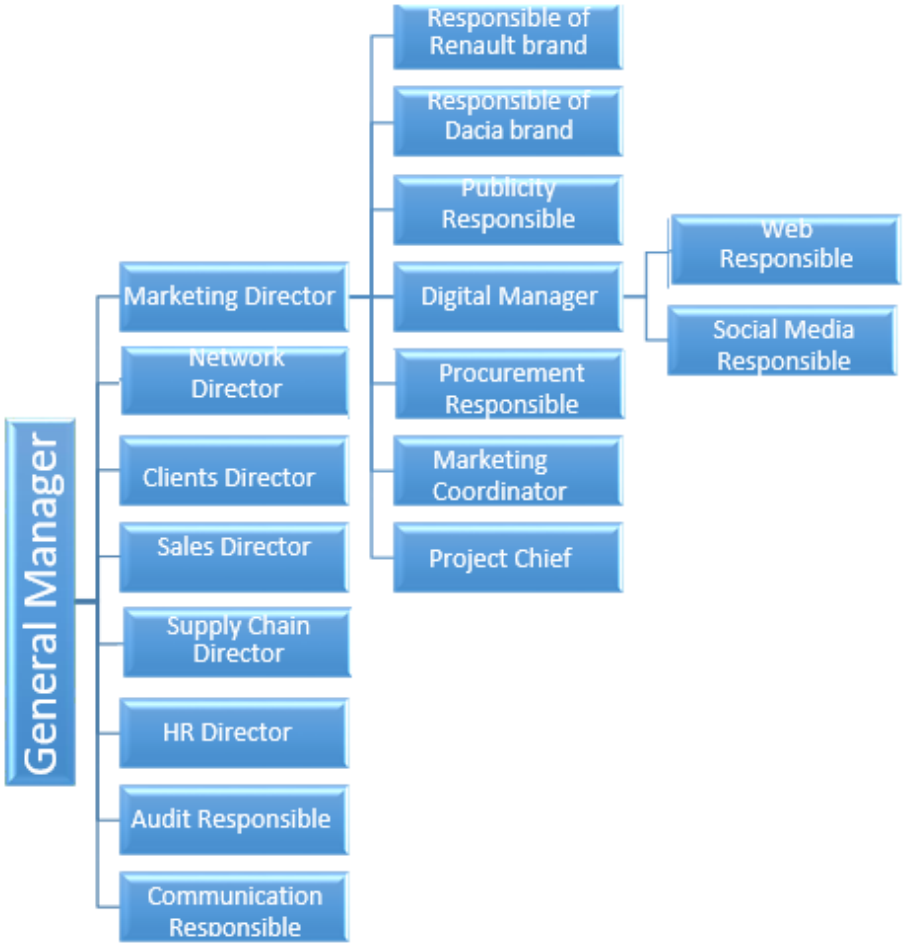
- Return your vehicle at the agreed price:

The Renault network is committed to returning your vehicle to you at the agreed time and price.

- The guarantee for any paid intervention:

The Renault network is committed to guaranteeing for one year any intervention in its workshops, parts and labor.

Figure 2-2: Organizational chart of Renault Algeria



Source: interne source of the company

1.2.4. Marketing department:

1.2.4.1. Its main missions:

• Define a brand plan, brand development strategy for the years to come.

• Manage the development of new products.

• Carry out promotional operations.

• Increase brand awareness.

• Designate a digital marketing manager and monitor his actions.

1.2.5. Digital manager:

1.2.5.1. Its goals:

• Be present on social networks.

• Attract as many Internet users as possible.

• Facilitate transactions between customers and the company.

• Make social networks a reliable means of communication.

• Increase brand awareness and image.

• Be closer to the consumer.

• Presentation of products and new offers.

1.2.5.2. Its missions:

• Define the general objectives for the year as well as the objectives of each campaign.

• Distribute the actions and the marketing budget for each department of the company.

• Define human resources and monitor their skills development.

• Ensure the control of data and their marketing and commercial use.

• Organize the day before and manage it.

• Guide advise the proper use of social media.

• Take into consideration all posts and comments on social networks.

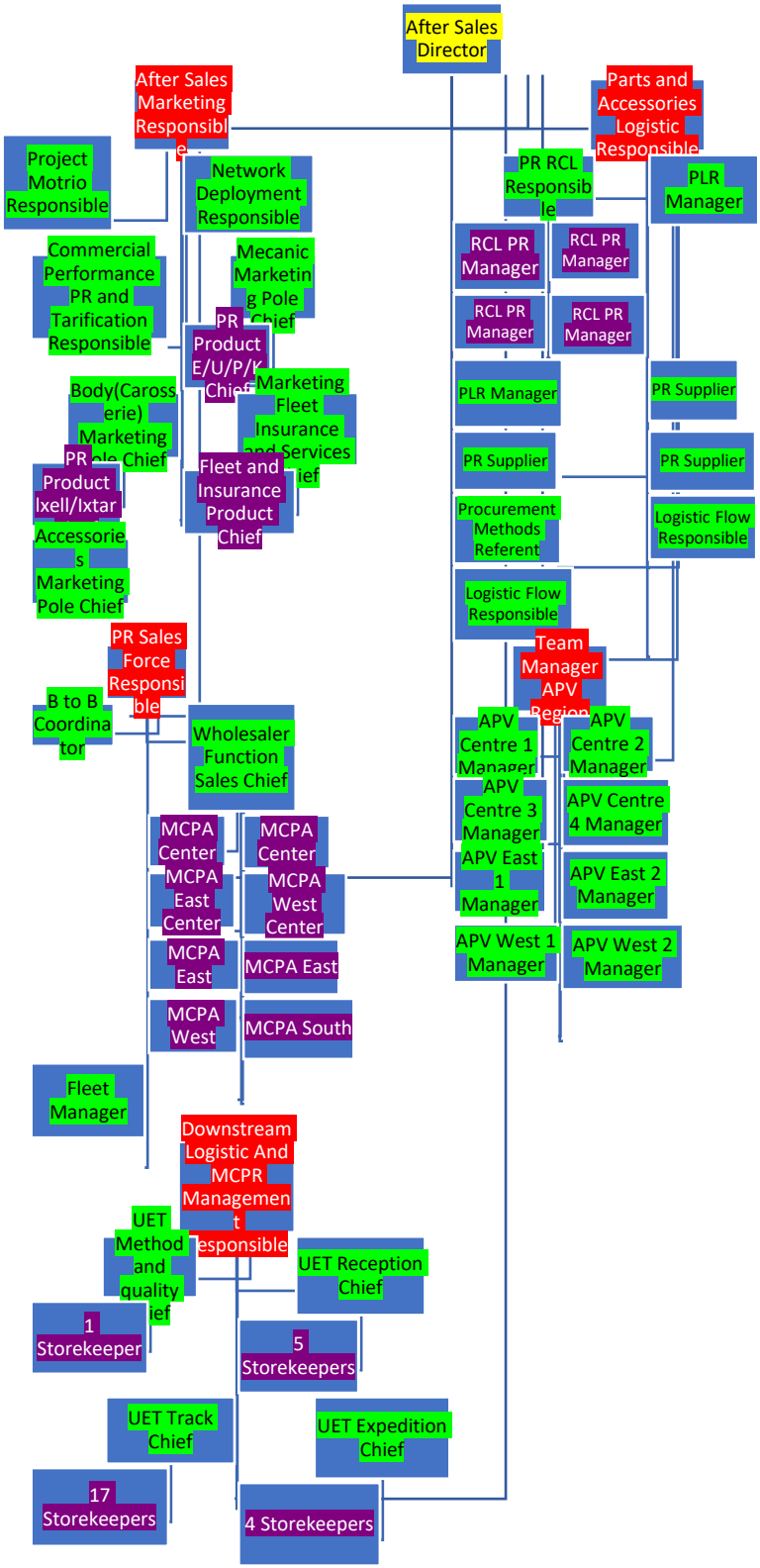
• Creation of content and management of pages for the various brands of the company.

2.Presentation of RENAULT ACADEMY:

Renault Academy situated in Tessala El Merdja is the Official branch of Renault Algeria that is responsible for the importation and distribution of Renault and Dacia Spare Parts.

2.1. The organizational chart

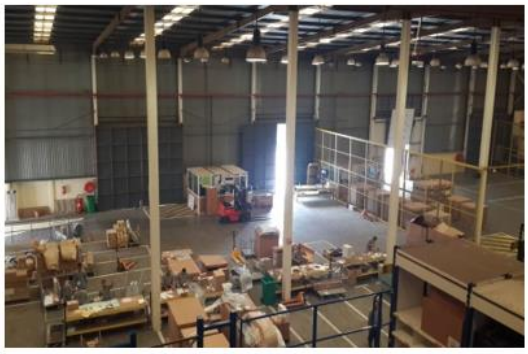
Figure 2-3-: The organizational chart of Renault Academy



2.2. Warehouse Features :

Warehouse Space

8200 M²



Number Of Storekeepers

28

EQUIPEMENTS

3 Forklifts
2 Stackers
2 Electric Pallet Trucks
10 Manual Pallet Trucks
30 Wheeled Trolleys
1 Film Wrapper
1 Crimper

Number Of Supported References

13597

Number Of Available References

12355

Number Of TC And Recieved Groupage At The End Of June

161

Number Of Reception Lines At The End Of June

12721

Number Of Shippings At The End Of June

9655

Number Of Served Lines At The End Of June

50057

Stock Value At The End Of June:

1 227 628 847

Living Stock

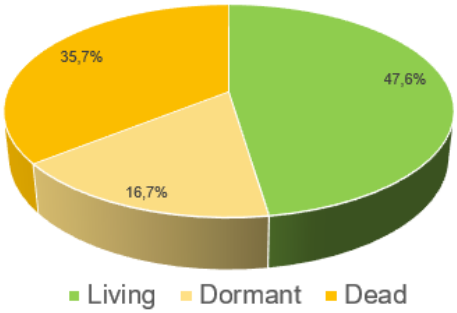
584 511 006

Dormant Stock

205 059 185

Dead Stock

438 058 656



3.After-sales management

This section is an introduction to aftermarket management and explains why and how to make the business competitive in the aftermarket. Cohen and al. (2006) explained the importance of after-sales management for the company and paid attention to its advantages and challenges. The most important aspects of this situation are described below, along with the conclusions of other authors.

3.1. The importance of after-sales management:

Since the early 1990s, most companies in mainstream industrial countries such as North America, Western Europe and Japan have shifted their strategies from simply bringing products to market to providing complete solutions and creating value for customers. Vandermerwe (2000) describes how companies can increase their performance and business results while adding value to customers. The author explains that smart businesses can increase returns by focusing on the entire customer and setting goals based on market space rather than sales of individual items. The main reason for the shift to more service-oriented businesses is increased competition, which leads to lower demand and lower profit margins. Wise and Baumgartner (1999) explained that the economic value of manufacturing has been pushed downstream instead of being a production sector. Successful manufacturing companies have reconsidered their business strategies and realized they have to shift the focus from operational excellence to customer loyalty. The resulting service-centric worldview not only emphasizes the company's traditional core business, but also highlights the importance and potential of after-sales service. Today, businesses can choose from a variety of aftermarket activities related to the following: spare parts, repairs, upgrades, refurbishment, inspections, maintenance, technical support, consulting, training and financing. Mathieu (2001) discussed the enormous heterogeneity of after-sales service in the manufacturing industry and developed types based on two dimensions: organizational strength (tactics, strategy or culture) and service specificity (service customer, service product or service as a service) to classify different after-sales methods. Providing after-sales service can become a source of differentiated competition and contribute to the profitability of the business. It has been noted that after-sales activities are high-profit businesses, while after-sales services usually represent high turnover or even higher business profits. In some manufacturing industries, the spare parts market is larger than the markets for commodities and original equipment of manufacturing companies (Bundschuh and Dezvane 2003; Vandermerwe 2000). In many countries, total sales of spare parts and after-

sales service are playing an increasingly important role in their national economy. In addition, the quality of after-sales service was found to have a significant impact on the company's stock price and customer loyalty.

3.2. Advantages of after-sales management

Usually, there are three different stages in the product lifecycle and manufacturing companies can compete: the design phase, the production phase and the aftermarket phase. Some companies pay special attention to the design phase, mainly because 80% of the cost of the product is determined during the design process. For example. Swedish furniture retailer IKEA focuses on the design phase to ensure the integrity of its image and to gain design expertise for efficient manufacturing (Hambrick and Fredrickson 2005). Most companies compete at the production stage, because most companies use the same global manufacturing standards, so it is difficult to tell them apart from each other. However, only a few companies realize that the aftermarket phase is the longest period in a product's life, and therefore the most sustainable source of income. Providing after-sales support will generate low-risk revenue for a long time, and the longer the life of the asset, the more opportunities the business will have. This is especially true for companies that manufacture industrial and consumer products. Levitt (1983) pointed out as early as the 1980s that the relationship between the selling company and the buying customer did not end after the first sale of the product, but this relationship intensified after the customer began to use the product. And plan to buy the company's next product. Only companies that focus on relationship management and provide after-sales service to their customers will receive repeat orders and have strong customer loyalty. If the company is to be successful, it cannot ignore the secondary market stage, but must be aware of the strategic importance and advantages of the secondary market. Therefore, after-sales business management should play an important role in manufacturing enterprises. One of the main strategic advantages of after-sales service is that it can be used as a source of differentiation from competing companies and can be used as a way to overcome consistency in the production phase. In addition, offering an efficient after-sales service can be a mean of obtaining customer satisfaction and loyalty (Saccani et al., 2007). Cohen and al. (2006) described the aftermarket potential as follows: "Being on par with your rivals in performance, price, and quality gets you into the game; after-sales services can win you the game." Additionally, the after sales phase requires the smallest investments and less marketing efforts compared to the two other phases because focusing on sales of spare parts and service products to already known and existing customers is cheaper and easier than finding completely new customers. In addition, after-sales

activities provide important information on technology, processes and customer plans. Firms can use information about customer needs when developing new products and services, which can increase the success rate of bringing them to market (Alexander et al., 2002; Goffin and New 2001). Therefore, after-sales support generates knowledge that competitors cannot easily obtain and represents a competitive advantage.

3.3. The challenges of after-sales management

Many companies view after-sales service as an indispensable evil (Lele 1997), resulting in unnecessary costs or expenses, rather than a means of increasing turnover and profits. Therefore, most of the companies do not fully utilize the potential of the after-sales service market: if they pay more attention to efficient after-sales service, they can make a lot of money. Instead, their after-sales management efficiency is low and the inventory turnover rate is low, many parts and many inactive employees and facilities are eliminated every year. However, after-sales service is indeed a difficult business, and there are many different reasons that make after-sales service difficult to compete with. The most important challenges of after sales management are presented in the following.

Manufacturing companies that focus primarily on production and sales functions find it difficult to manage the complex structure of their service network and meet the service needs of their customers. This can have serious consequences for these businesses as customer expectations continue to rise, and disappointed customers will go to competitors if they can provide better, especially faster after-sales service. Companies must understand that there is a close relationship between the quality of after-sales service and the intention to buy back. This is especially true for companies that manufacture industrial and consumer products. However, as Brax (2005) has pointed out, it is very difficult to move from a manufacturing-oriented to a service-oriented enterprise. Businesses need to understand that during the transition process, they will face many different challenges in marketing, production, delivery, product design, communication, and relationships. Likewise, Mathieu (2001) emphasized that manufacturing companies must not only consider the promising advantages of the secondary market, but also the costs incurred to implement service strategies. These costs can be divided into competitive costs and political costs. As manufacturing companies enter new areas of activity (service delivery areas), they must compete with service providers, distributors and customers, and must develop their own competitive advantages. Typically, manufacturing companies have three options for building their own competitive advantages, all of which are related to different competitive costs: using position advantage drivers that competitors cannot achieve, weakening the driving force of competitors, or developing new sources of competitive

advantage. Political costs arise because the implementation phase represents a political process in which manufacturing companies face resistance from different organizational units and conflict between different groups of employees. Some employees may fear losing their power and authority under the new strategy, while others may see it as a way to increase their influence and responsibilities. Therefore, Mathieu (2001) explained that companies view the service strategy as an innovation. This innovation creates new ideas, processes, products and services, but at the same time leads to differences, obstacles and challenges. Political costs within the organization. The more intense and specific the new service strategy, the greater the uncertainty of innovation and the higher the political cost. In addition, Mathieu (2001) pointed out that for companies to successfully implement service strategies, they must adopt service management principles. This is only possible when manufacturing companies transform into service organizations based on a service culture that is completely different from traditional industrial culture.

Another challenge is that after-sales networks are generally more complex than manufacturing networks as they have to deal with not only the products being manufactured but also all the different generations of products sold in the past and their respective suppliers and customers. . . In addition, when a company hopes to meet customer needs quickly, it must distribute spare parts, equipment and technically trained service personnel to many locations, making it difficult to manage the network successfully. Therefore, multinational enterprises globally have a centralized strategic business department which is responsible for all the different after-sales activities and is responsible for the management and configuration of service delivery, as well as distribution of spare parts and the client service (Saccani et al., 2007).

In addition, more and more competitively priced third-party vendors are constantly looking for niche aftermarket markets. After the initial product warranty period expires, many manufacturers cannot compete with these independent service providers and lose a lot of aftermarket revenue. Due to economies of scale and learning advantages, professional service providers and distributors generally have cost advantages over manufacturing companies. They can benefit from economies of scale as they serve not only brands but also entire product categories. In addition, they also have a learning advantage as they only focus on one (specific) service as the main activity, and not on manufacturing and service. Due to their long experience as service providers, they can generally better anticipate customer expectations (such as flexibility, speed, proximity or professionalism) than manufacturers (Mathieu 2001).

In addition, aftermarket activities are very unpredictable and inconsistent as the aftermarket is generally characterized by unexpected and sporadic demand patterns. However, many

companies have deployed the same software tools and processes as manufacturing plans and after-sales service plans. Since manufacturing planning is generally based on deterministic schedules and forecasts, and the demand for service is generally uncertain, this strategy carries certain risks. Therefore, using the same deterministic forecasting method for manufacturing and after-sales service can lead to problems such as mismatch between supply and demand, poor customer service, and lost sales. Therefore, companies should use special forecasting methods when planning and managing after-sales services (Silver et al., 1999).
Another important and difficult service issue is the environmentally friendly return, repair and disposal of defective parts.

4-Spare parts supply chain management

The supply of spare parts is one of the most important after-sales activities and has been widely adopted by manufacturing companies. SPSCM is a complex issue that, due to the unique characteristics of aftermarket parts and their supply chain, differs from traditional SCM in several ways.

4.1. Special Characteristics of Spare Parts

Fortuin and Martin (1999) noted that repairing industrial systems and consumer products requires spare parts. The author divides the spare parts into repairable (non-interchangeable or rotating) and non-repairable. Non-interchangeable repairable parts are parts that must be repaired. In the event of failure, they cannot be replaced by other parts. Therefore, the customer should wait until the part is repaired before reusing the product to which the part belongs. In the event of a breakdown, rotating repairable parts can be replaced with equivalent parts, but they can also be returned to the company and can be put back into inventory after repair. Non-repairable parts cannot be repaired. In the event of a breakdown, they must be replaced by equivalent parts. Kennedy et al (2002) distinguished between two types of basic maintenance: planned maintenance or preventive maintenance, and the foreseeable demand for spare parts and unplanned maintenance. For the first type of maintenance, the on-time arrival of spare parts may be sufficient, but for unscheduled repairs a safety stock strategy should be adopted to compensate for changes in demand. With the exception of planned or preventive maintenance, the structure of the demand for spare parts is generally very uncertain and it is difficult to forecast the demand for spare parts (Huiskonen 2001). In most cases, the demand pattern for spare parts is intermittent, meaning that demand is not constant, but occurs infrequently, and

there may be several periods of no demand between appearance of different requests. In addition, the demand for spare parts is generally very irregular, which means that the occurrence of the demand varies greatly depending on the size of the demand (Martin and al., 2010). Therefore, companies must use specialized predictive techniques when managing efficient parts operations (Silver and al., 1999). The demand for spare parts is related to the possibility of part failure, in addition to historical demand data, information about the machine installation fleet and market forecast should also be considered when making the planning of the spare parts inventory (Drapner and Suanet 2005).

The lifetime of spare parts is generally longer than the life of the products it uses, ranging from several years to 25 years. Even if the production period of the corresponding product has ended or even stopped, spare parts still must be supplied (Drapner and Suanet 2005). However, some spare parts in stock may not be needed at all, or they may be in stock for many years before being sold for the first time. The probability of demand for most spare parts is low, but many spare parts must be delivered as early as possible when ordering (Sherbrooke, 1992).

Another special function of spare parts is the existence of substitutes, which will increase the complexity of the SPSC. The products and parts they contain are subject to a process of continuous improvement, leading to the development of new products and parts which replace old products and parts. Therefore, companies tend to stock many different versions of parts with the same functionality in their warehouses, which should be considered when forecasting, planning, ordering and delivering (Drapner and Suanet 2005).

Another important element of SPSCM is reverse logistics, which manages the old parts and machines returned from customers to supplier companies. Returned parts can be considered good or defective. Good parts can be used directly as spare parts or used to repair machines, while defective parts must be repaired before they can be used again. As a result, more and more companies are focusing on repairing faulty parts, which facilitates reverse logistics. When the complete machine is returned, the company can perform a disassembly process to identify reusable parts and transfer them to the spare parts inventory (Fleischmann and al., 2003).

Huiskonen (2001) suggests that firms distinguish their spare parts according to the following four characteristics: importance, specificity, demand pattern and value. In the following, each feature will be analyzed in more detail.

Criticality illustrates the importance for customers to restock specific spare parts immediately after a failure. Three levels of severity can be distinguished: breakdowns should be corrected immediately, spare parts should be restocked as soon as possible (high risk), short-term breakdowns should be tolerated, and parts should be replenished in a cycle, at short term

(medium critical) and longer Downtime and spare parts can be replenished for longer (low criticality).

The second characteristic is the specificity, which concerns the manufacturing aspect, which indicates that the spare part can be a standard part or a user-specific part. Standard parts are usually supplied by several companies but can usually be supplied by several suppliers. In most cases, suppliers have stocks of standard parts and can benefit from economies of scale due to large orders. In contrast, user-specific parts are produced by suppliers specifically for specific business purposes and are typically out of stock due to very low order volumes.

As mentioned earlier in this section, the patterns of demand for spare parts may differ in terms of quantity and predictability. Strong demand promotes economies of scale for suppliers and businesses. However, the demand for most of the spare parts is very low and irregular. They belong to the group of "slow movers" and their demand is so low that statistical stock control methods cannot be applied. The use of "fast movers" can only use these methods for efficient management because they are called more frequently (Fortuin and Martin 1999). In terms of predictability of demand, spare parts can be divided into random failure parts and predictable wear parts. In general, it can be said that the more predictable the demand for spare parts, the less safety stock is required.

Finally, the value of spare parts is an important characteristic and the value of spare parts should be considered when making inventory decisions. Companies generally try to reduce inventories of high-value parts. However, they need to be careful because a certain amount of these parts should always be kept to meet the needs of the customers. In addition, Kennedy and al. (2002) explained that companies should prefer repairs rather than replacements and should stock as many inexpensive parts as possible instead of buying large, expensive parts. When it comes to low value spare parts, companies should try to develop an efficient replenishment process so that the management costs are not too high compared to the value of the spare parts.

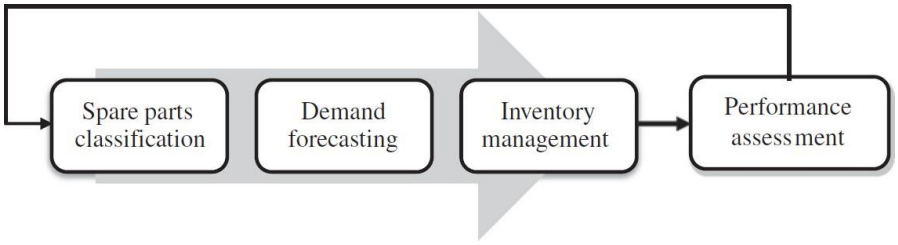
4.2. Recent Spare Parts Supply Chain Management Developments

SPSCM has decades of history, but as more and more companies move from current customer needs to a product-oriented business approach towards a service-oriented concept, SPSCM has become increasingly important. The service is better than ever.

Bacchetti and Saccani (2011) explored the gap between research and practice on spare parts classification and demand forecasting and proposed an integrated approach to spare parts management. The author explained that companies tend to focus on specific aspects of spare parts at the planning and operational levels, rather than looking at SPSCM from a strategic

perspective. As shown in Figure, the integrated method consists of the following four steps: parts classification, demand forecasting, inventory management and performance evaluation. The author emphasizes that decisions on these aspects should not be isolated but interdependent.

Figure 2-4: Integrated approach to spare parts management



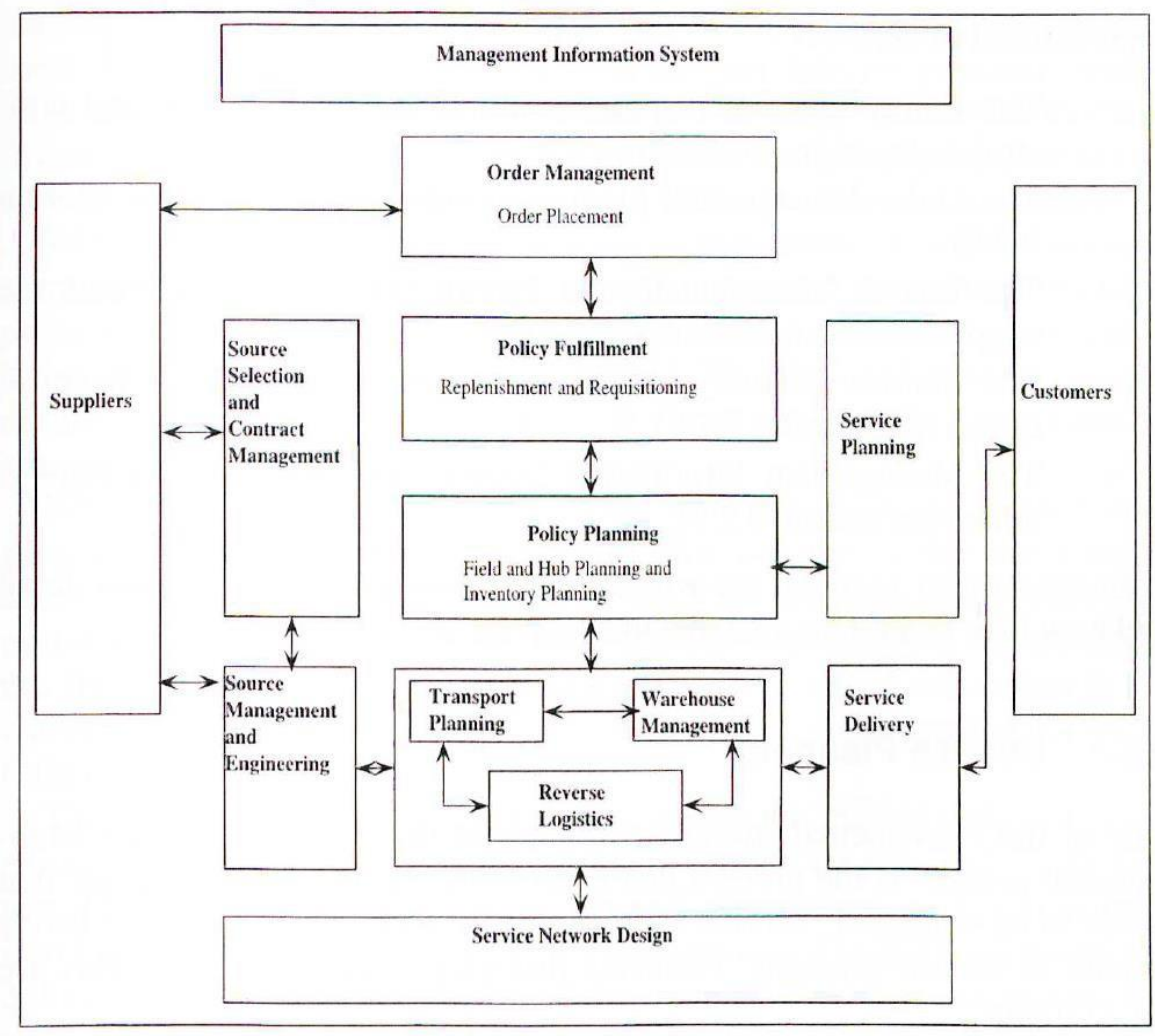
Source: Bacchetti and Saccani (2011)

In addition to the application of integrated methods, the author also proposes that theoretical models be supplemented with real relevance, and in the future, researchers and companies should pay more attention to 8 management instructions based on the contingency and the process of accumulation of knowledge within the company.

Kennedy et al. (2002) reviewed the literature on spare parts inventory management and divided different research areas into general and managerial issues, age replacement, tiered issues, obsolescence issues, spare parts repairable and special applications .The authors argue that aftermarket inventory is different from traditional manufacturing inventory in some ways, and companies should consider the unique aspects of spare parts when making inventory decisions. Manufacturing companies can reduce inventories and save a lot of money through specialized spares inventory policies and forecasting techniques.

Drapner and Suanet (2005) studied the latest development of IBM's internal SPSCM and divided its process of managing service logistics into the preparation and planning process and the operations process (see Figure 2-5). Preparation and planning include service planning, service network design, policy planning and source selection and contract management, while business processes are responsible for policy execution, management orders, source and project management, service delivery and management information systems. The most important aspects of these processes can be summarized as a manufacturing company, as shown below.

Figure 2-5: The service logistics management process



Source: Drapner and Suanet (2005)

According to Drapner and Suanet (2005), a company should decide what type of product and what type of customer to provide which service before starting a spare parts business. Usually they make service decisions based on criteria like customer agreement, product type, spare part size, inventory budget, and geographic area, making it worth it. Additionally, many companies have taken market differences into account and offer differentiated services (such as same day delivery and next day delivery). In this way, the company can reach different groups of customers with different market expectations. In recent years, new service needs have arisen, as in many companies having enough necessary spare parts is not enough anymore, but companies also need to be able to deliver them as quickly as possible. Therefore, the applied

service parameters should not only focus on availability, but also on the actual delivery time of spare parts. The final service level selected has a great influence on the inventory planning process. However, before companies can determine specific inventory levels, they must allocate total inventory within their network structure. In this process, they must consider all possible inflows and outflows and overall inventory goals. Planning and determining the actual stock level should be based on the inventory, service, and cost goals set by company management and the interdependence between these three goals. There are special algorithms that consider the corresponding target and demand data, and automatically generate the best inventory level. However, local planners can usually set and adjust inventory levels manually. Companies generally divide their spare parts into different categories and choose a specific level of service for each category. This makes the planning process easier and takes less time than deciding on the best level of service for each spare part individually. For example, spare parts can be classified according to the following criteria: product group, maintainability, demand / expected demand intensity, time to purchase, delivery time, scope of planning, necessity / vitality / importance / price, stock keeping Costs and (re) order costs (Fortuin and Martin, 1999).

In addition, it should be remembered that spare parts are products that can be at different stages of their life. The company must at least distinguish the three phases of the product life cycle and their respective characteristics. Fortuin and Martin (1999) distinguish between the initial stage, the normal stage and the final stage, as shown below. When the product is used in the sales phase of the corresponding product, spare parts are usually introduced. At the initial stage of the product, since most parts have never been used, there is no historical data on the demand for spare parts. However, some parts may have been used as components of other comparable products and their past consumption may become the starting point for further predictions. However, the initial demand forecast is primarily determined by market sales plans and failure rates and is difficult to estimate because it is difficult to predict failure behavior during the first stage of the life cycle. Therefore, companies should constantly update their forecasts with the latest demand data (Silver 1999). In the normal product phase, the company has become more and more experienced in the characteristics and failure rate of parts, and more and more demand data are available. Special statistical forecasting techniques can be used to estimate future consumption of spare parts. In addition, when selecting the level of spare parts stock in the normal phase, one should consider the replacement and return of parts. In the final phase of the product, the production period is over, but the service period continues, and spare parts are still needed. At the start of the final stage, the manufacturing company must decide which spare

parts will ultimately be purchased, which must be purchased from external suppliers. After the last purchase, it is usually no longer possible to order parts, otherwise the purchase of parts will be extremely expensive. Therefore, manufacturing companies should take the last time very seriously and incorporate the latest data provided on demand, spares reuse and returned parts into their planning process. There are special methods to simplify the final ordering process (Teunter and Klein Haneveld 2003).

Faris II and al (2005) highlighted a similar problem and explained that the management of obsolete parts is one of the main challenges of the aftermarket. Obsolete parts are technically obsolete and are no longer used in production. It is difficult to predict future demand for these parts, and the company must carefully determine the sourcing and inventory strategy for obsolete parts. The author has identified four methods of dealing with obsolescence of parts that must be purchased from external suppliers. The first method suggests purchasing and stocking all anticipated future parts needs at the start of the part's life cycle. This strategy results in higher inventory holding costs, but at the same time can shorten delivery times and respond quickly to customer needs. The trade-off between high customer response and low inventory costs or between a responsive and efficient supply chain is one of the most important and controversial topics of SCM. The second method recommends phasing out the product shortly before the part production ends. Compared to the first method, this strategy can reduce inventory retention costs because the manufacturing company does not have to stock all future parts requirements throughout its life cycle. In addition, at the end of the production phase, forecasts of future parts demand are generally more accurate than at the start of the life cycle. The other two methods involve the period after the production stage and the situation where the obsolete parts needed can no longer be purchased directly from the original supplier. In this case, one possibility is to contact a company specializing in the storage and sale of obsolete parts. However, these companies usually charge high prices because they have to bear very high inventory holding costs. Another opportunity is reverse engineering, which involves breaking down the product into original parts and serving as a source of obsolete parts. However, this method usually results in high costs.

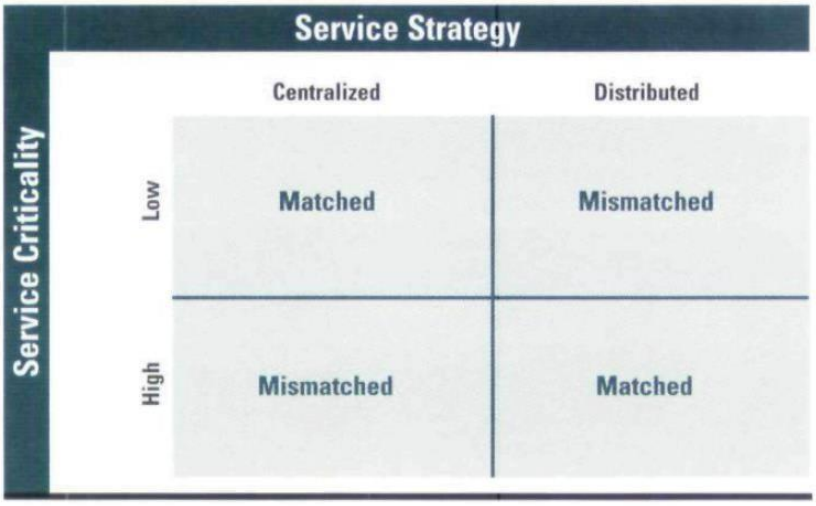
Another fundamental element of the SPSCM concerns the identification, selection and management of source contracts. Therefore, here are the most important aspects regarding the source of supply. Most parts can be ordered from the same external or internal suppliers responsible for the production of the parts. In addition, more and more external service providers specialize in repairing returned and defective parts. However, as Fortuin and Martin (1999) explain, problems arise when manufacturing firms choose the same source of spare parts

as production parts. Many suppliers prefer to deliver production parts to their spare parts business because the ordered quantity of production parts is usually more than the ordered quantity of spare parts. This can cause replacement parts to be delivered excessively and seriously affect the overall service performance of the manufacturing company. Finally, when buyers find a suitable source of supply, they should try to negotiate a reasonable price, lead time, and minimum order quantity with the supplier. More and more suppliers are offering companies more choices, but at the same time, they also increase the complexity of the procurement process (Drapner and Suanet 2005).

4.3. Centralized and Decentralized Spare Parts Supply Chains

Multinational companies usually decide to centralize their SPSC and consolidate a central spare parts warehouse that can meet the needs of several countries. The advantage of centralized SPSC is that, compared to decentralized SPSC, their maintenance costs are generally lower. This is because usually in a decentralized SPSC the same activities must be carried out in multiple locations and the same types of parts must be stored in multiple warehouses, as each site must maintain its own (safety) spare parts stock. Therefore, the fewer storage sites, the lower the operating costs and the less capital investment. However, at the same time, a small number of vaults can also result in longer response times and lower service levels. Therefore, we again made an important trade-off between responsive and efficient supply chains. Therefore, when making network design decisions, companies should consider proximity to customers. In general, the network strategy chosen by the company must always correspond to the service strategy chosen and the characteristics of the spare parts offered (Saccani and al 2007). If a business is to be successful in the secondary market, it must align the SPSC strategy with the needs of customers. Cohen et al (2000) Established a matrix that companies can be used as a tool to check whether their service network strategy meets customer. Service policies can be centralized or distributed (decentralized), and the importance of services can be low or high. As shown in Figure 2-6, the centralized service strategy corresponds to low service criticality, while the distributed service strategy corresponds to higher service criticality. In what follows, the two terms service criticality and service strategy will be explained in more detail.

Figure 2-6: Service strategy and service criticality.



Source: Cohen et al (2000)

Service criticality describes the urgency of customer needs and the perceived value of meeting customer needs. In the aftermarket, high criticality can indicate a situation where customers have a great need for specific spare parts, as this is essential to their daily operations. Breakdowns and missing parts can result in significant losses to customers, so the company supplying the parts must deliver the missing parts as quickly as possible. While it may take a long time for customers to deliver parts because they don't need them every day or because it's not important, low-critical activity may occur. Generally, SPSC has two types of service network strategies: centralized supply chain and distributed supply chain. Where customer needs are usually not very urgent, a centralized supply chain with a single central warehouse is economically more reasonable. When businesses typically face high service criticality, a distributed supply chain with multiple coordinated storage locations is the best strategy for improving customer satisfaction. When companies want to know which service, strategy is best for their business environment, they should realize that centralized and distributed SPSCs differ in four main areas. These four aspects are performance targets, network structure, planning process and execution process, which will be analyzed in detail below. The centralized supply chain pays special attention to reducing costs and improving efficiency. Therefore, the maximum inventory turnover rate is generally used as a performance target. The distributed network tries to ensure that all customers can quickly receive the parts they need, and service metrics such as uptime and rapid response are the most important. Logically speaking,

distributed supply chains are more complex than centralized supply chains and include multiple storage and maintenance points at multiple levels. The warehouse should be located close to the most important customer area, which can ensure high service performance but also leads to high costs. Centralized supply chains typically consist of a storage location and perhaps a small second-level repair or retail store, and their maintenance costs are relatively low compared to their distributed copies. The planning process involves the management of stocks and material flows within the network. There is a big difference in this process between centralized and distributed supply chains. In a centralized supply chain, planning is based on retail outlets and statistical forecasting methods are used. Retailers stocking decisions are made independently and focus only on local demand and delivery time. The planning strategy is like the classic push distribution of the finished product. In the distributed supply chain, a planning strategy that focuses more on circulation is adopted. The forecast is based on assumptions about the reliability of parts and the geographic distribution of customers. The main difference in centralized adjustment is that the storage decisions for all rooms and locations are linked and interdependent. The final aspect to consider when comparing centralized and distributed supply chains is the process of fulfilling physical orders. In a centralized environment, there is no need for a lot of coordination and the fulfillment process mainly focuses on the link between the supplier and the central warehouse. In some cases, it may be advantageous to outsource certain fulfillment activities to a third-party logistics provider. The process of running a distributed supply chain is more complex, so more coordination is needed between different storage locations. Outsourcing is rarely chosen as an option to improve the execution process of a distributed supply chain.

Detailed view of Renault spare parts supply chain management process

Why Renault spare parts (Academy)is focusing on supply chain management?

Renault Academy is composed of 5 departments:

- Sales Force and TMR
- Marketing
- Warehouse (MCPR)
- Procurement service
- Client relations

These 5 departments all collaborate in a sophisticated supply chain to achieve the following goals:

- Ensure after-sales service and customer satisfaction;
- Ensure the availability of the spare parts;
- Ensure the market needs at the right time.

The main activity of Renault spare parts (Renault academy) or the after-sale department Is the import and selling of the car spare parts for both Renault and Dacia vehicles. Renault's spare parts come from their factory in France while Dacia's spare parts come from their factory in Romania, which makes the supply chain a bit more complicated because of the two different supply sources.

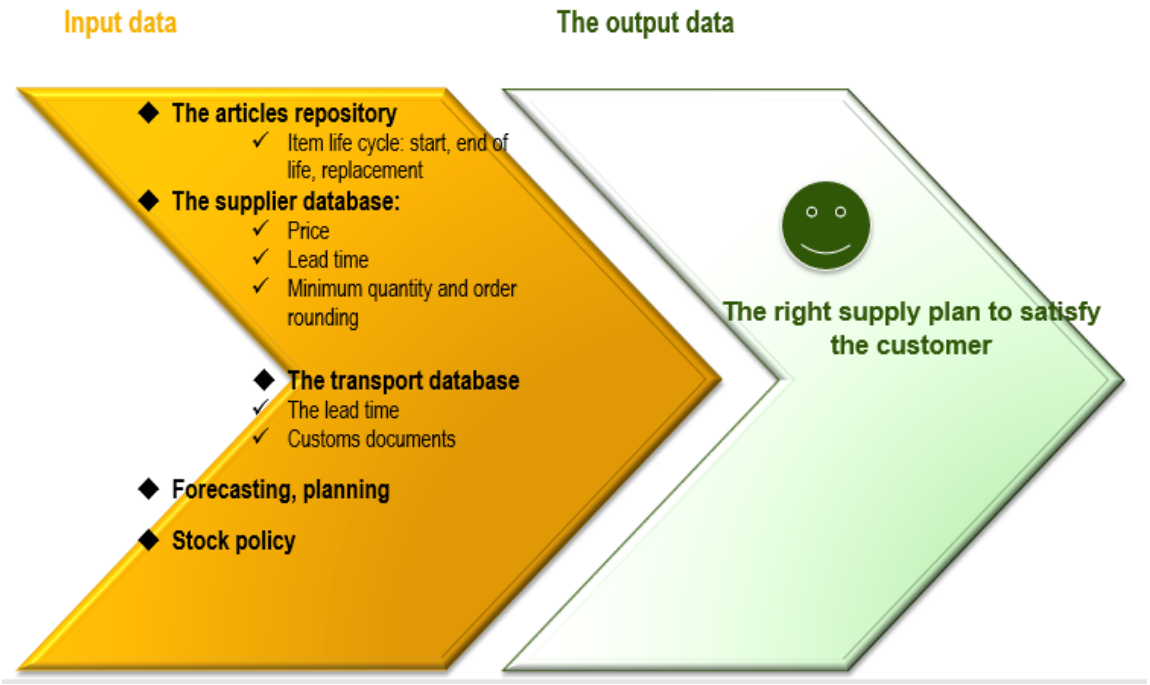
The imported products are countless , but are classified into 3 main categories: the car spare parts that include glass , car doors ,engines etc.… the second category is the dangerous products that may include car batteries , paint, gas and all the stuff that may cause harm if wrongly treated. The third category includes the luxurious products that do not have a direct relation with Renault's operational activity but are imported to be sold separately or to be given to employees such as toy cars , pens , t-shirts… the budget for these products is nothing but a drop in the ocean compared to the budget specialized for the other two categories.

In addition to that , there's some products that aren't imported but are bought from within the country and they only include 3 products which are car tires, car oil and glass cleaner and the reason for that is that they're common products between all car companies so the state finds it relevant that it does the importation operation and sell them to the different car companies in order to make it easier for them.

1. Renault Academy's Supply chain vision and strategies:

RENAULT Academy's supply chain is a complicated chain with multiple stakeholders, which work together for the major goal which is client satisfaction.

Figure 3-1: The procurement process



And for that, it must go through many steps to ensure client satisfaction.

1.1. The planification:

1.1.1. Long term S&OP (Sales & Operations Planning):

Goal:

Process aimed at balancing demand and capacity of supplying by integrating financial and operational aspects on long-term projections.

Actions that should be taken:

Improve customer service;

Reduction of stocks and obsolescence;

Decrease in supplier lead time.

1.1.2. Middle term (Master Production Planning):

Material Resource Planning (MRP) = Calculation of Net Needs (CNN)

The CNN integrates :

- Classification of articles

- The mode of supply
- Supplier constraints : deadlines
- Supply constraints: multi-vendor and order frequency.

1.1.2. Short term :

- Execution
- Supply order

1.2. Previsions:

1.2.1. Their implications:

- Drive the entire company by market demand and put customers at the center of the game.
- Ensure the availability of parts to satisfy the end customer
- Reduce the level of stocks
- Adjust safety stocks
- Reduce the rate of obsolescence through better management of the end-of-life cycle of products
- Transmit forecast volumes that are as reliable as possible to suppliers

1.2.2. The methodological approach:

- Perform an analysis of consumption histories according to different statistical models
- Exploit market intelligence :

-Customer information.

-Marketing promotions based on a forecast turnover.

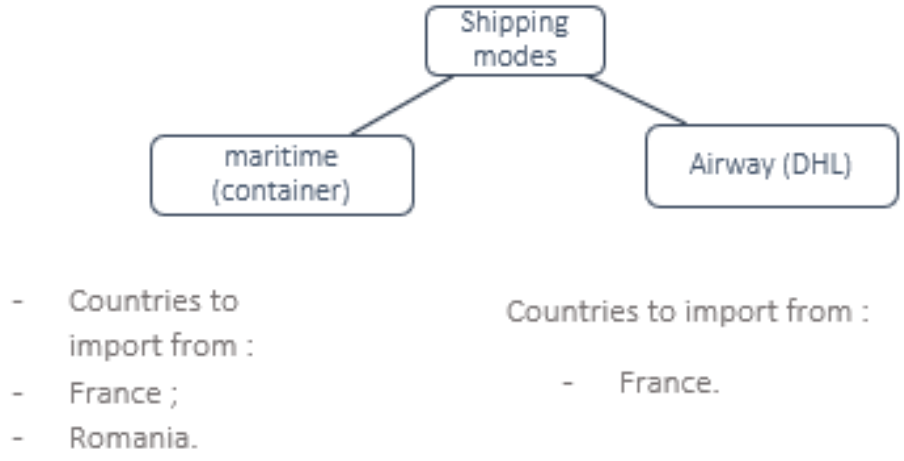
-Market trends: alerts, weather.

1.3. Procurement(supplying):

1.3.1. shipping modes:

We distinguish two modes:

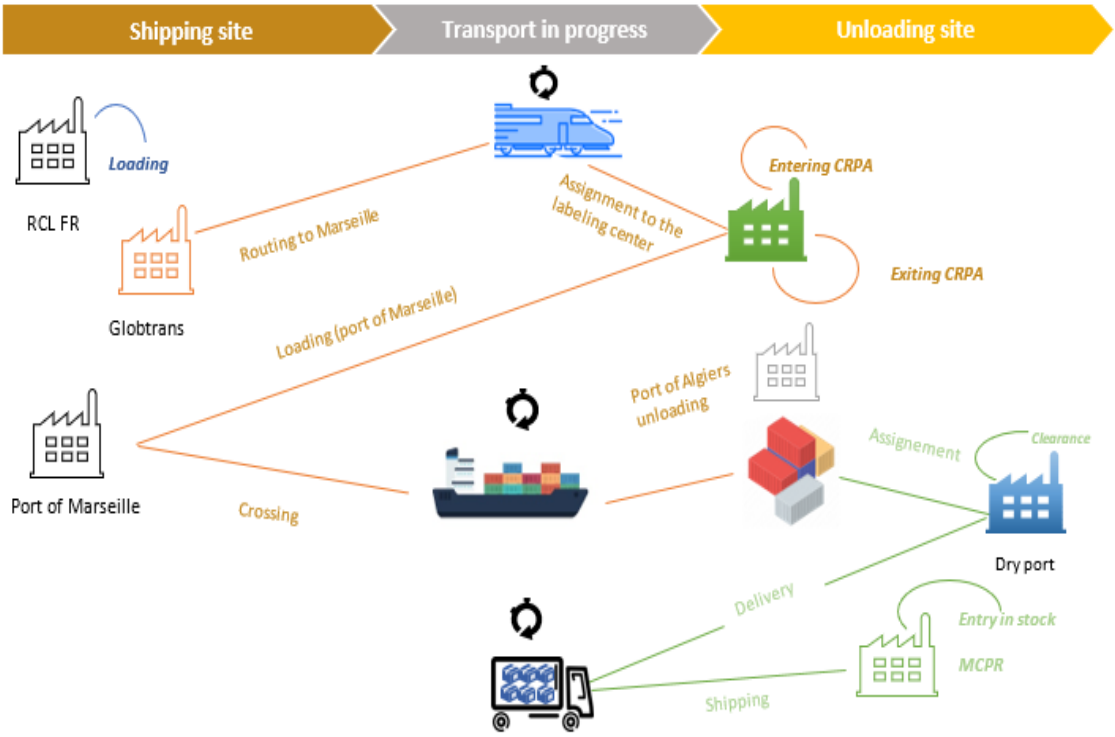
Figure 3-2: Shipping modes



1.3.2. Maritime shipment (container process) France:

1.3.2.1. Physical flow:

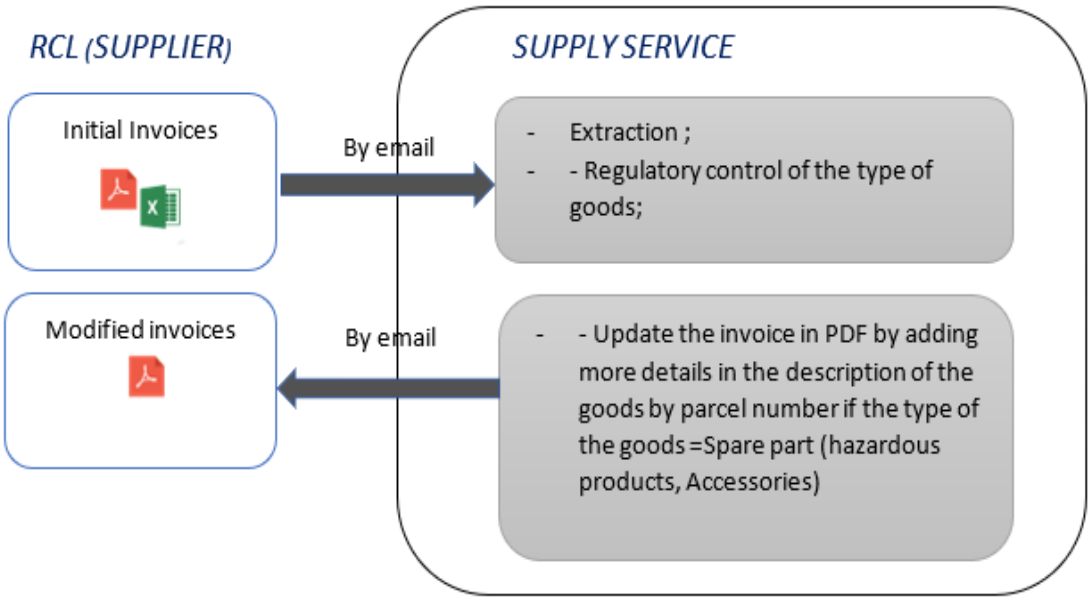
Figure 3-3-Physical flow



1.3.2.2. Documentation flows:

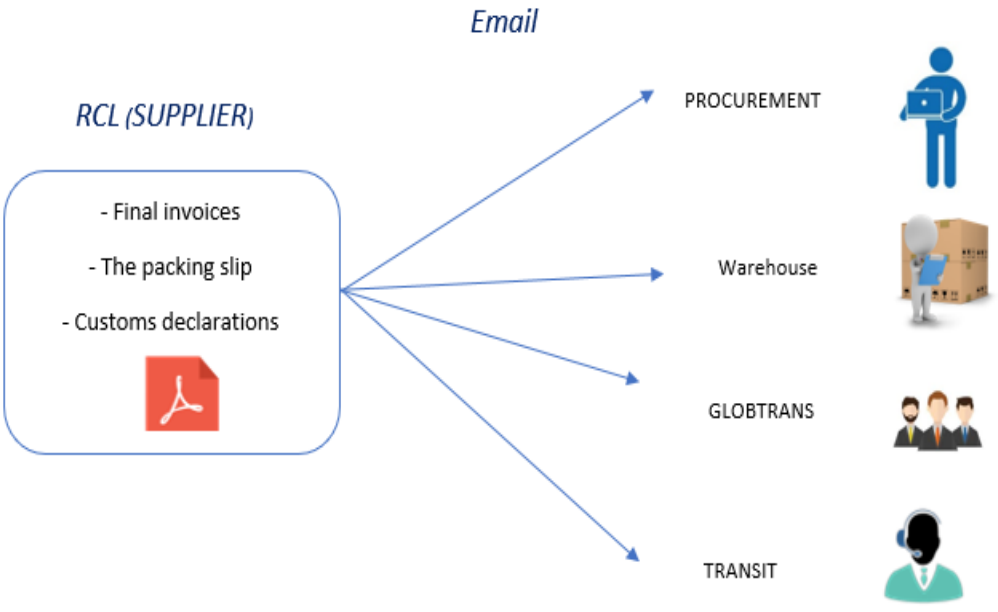
• **Step 1:** Sending the initial invoice

Figure 3-4: Sending the initial invoice



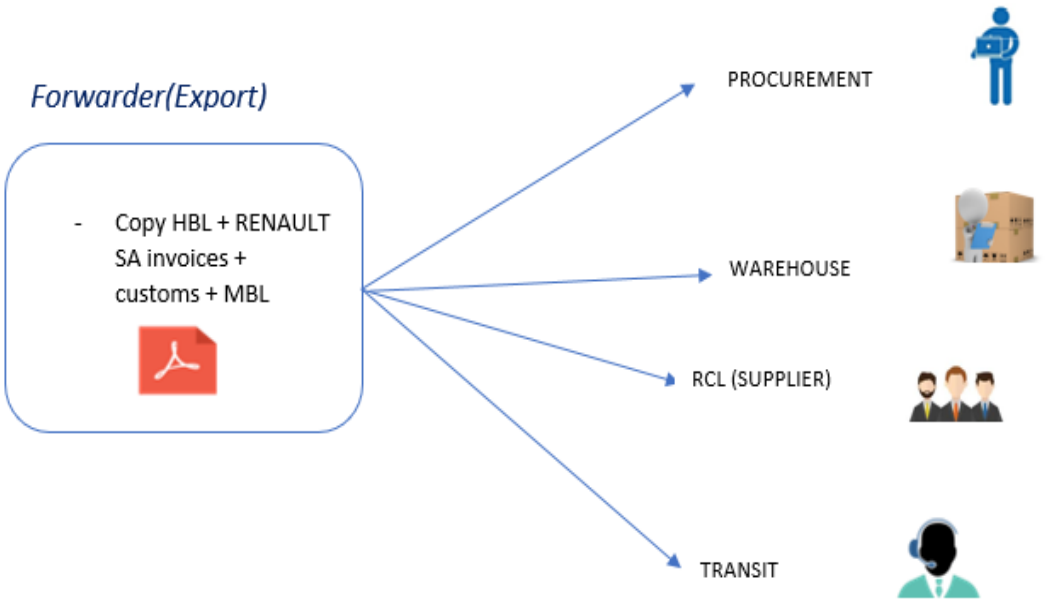
- **Step 2:** Sending the first part of the final documents for the export procedure:

Figure 3-5: Sending the first part of the final documents for the export procedure



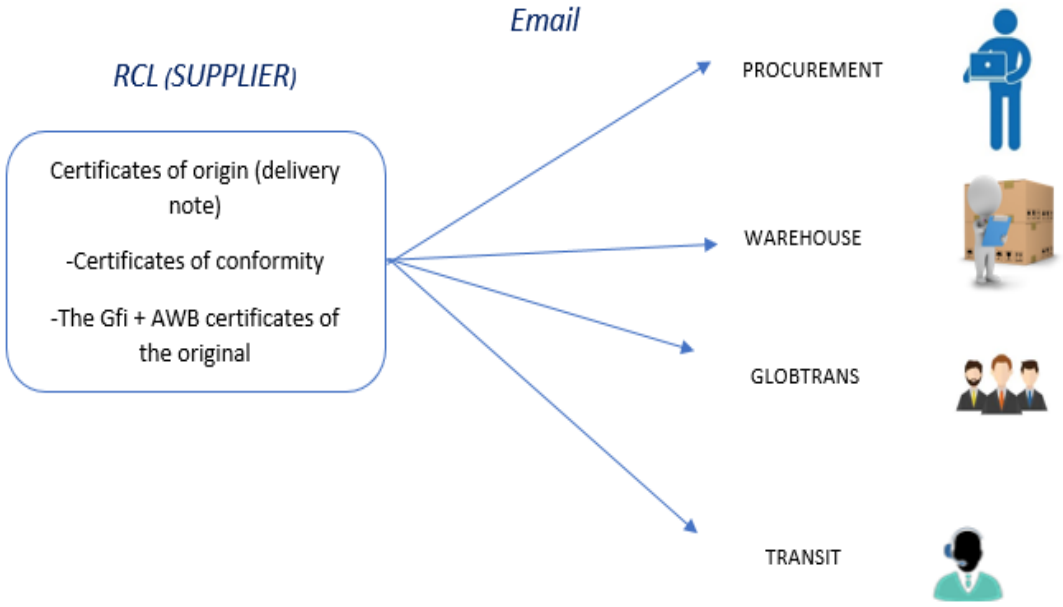
- **Step 3**: Sending the export documents for the embarkation operation:

Figure 3-6: Sending the export documents for the embarkation operation



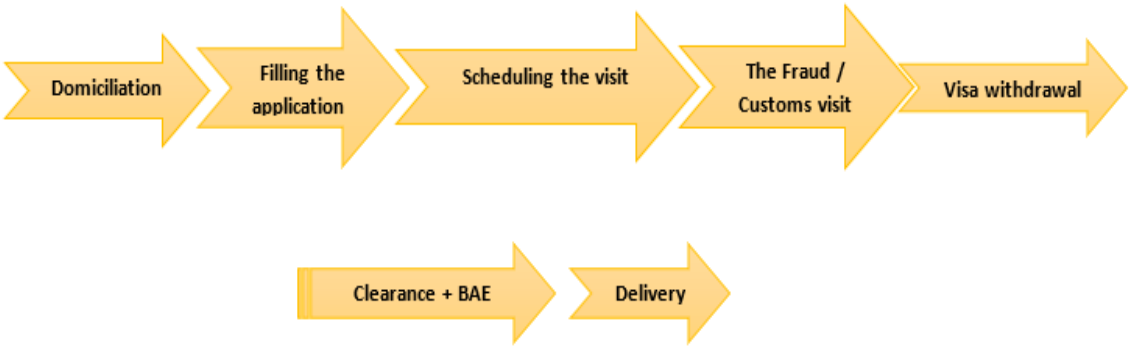
- **Step 4:** Sending the second part of the documents for the import operation (customs clearance):

Figure 3-7: Sending the second part of the documents for the import operation



- **Step:4 :** customs Clearance :

Figure 3-8: Customs Clearance



The customs clearance operation provided by the transit service mainly takes place in two stages:

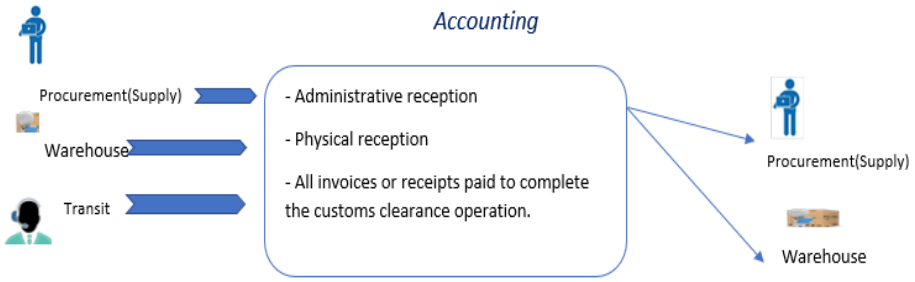
First step: Bank direct debit (Domiciliation), the launch of this operation is done upon receipt of the second part of the documents sent by RCL France.

The operation of encrypting franchises, in order to save on customs duties, is carried out in parallel with the bank direct debit operation.

Second step: Launch of the customs clearance procedure after receipt of the originals of the certificates of origin, and it proceeds as follows:

- Filing of the file; (In the event of the delay on the file) / INFO REQUESTS NEW procedure
- Schedule of the visit;
- The Fraud / Customs visit ;
- Withdrawal of the visa;
- Clearance + BAE ;
- Delivery.
- **Step:5** : Entering to storage :

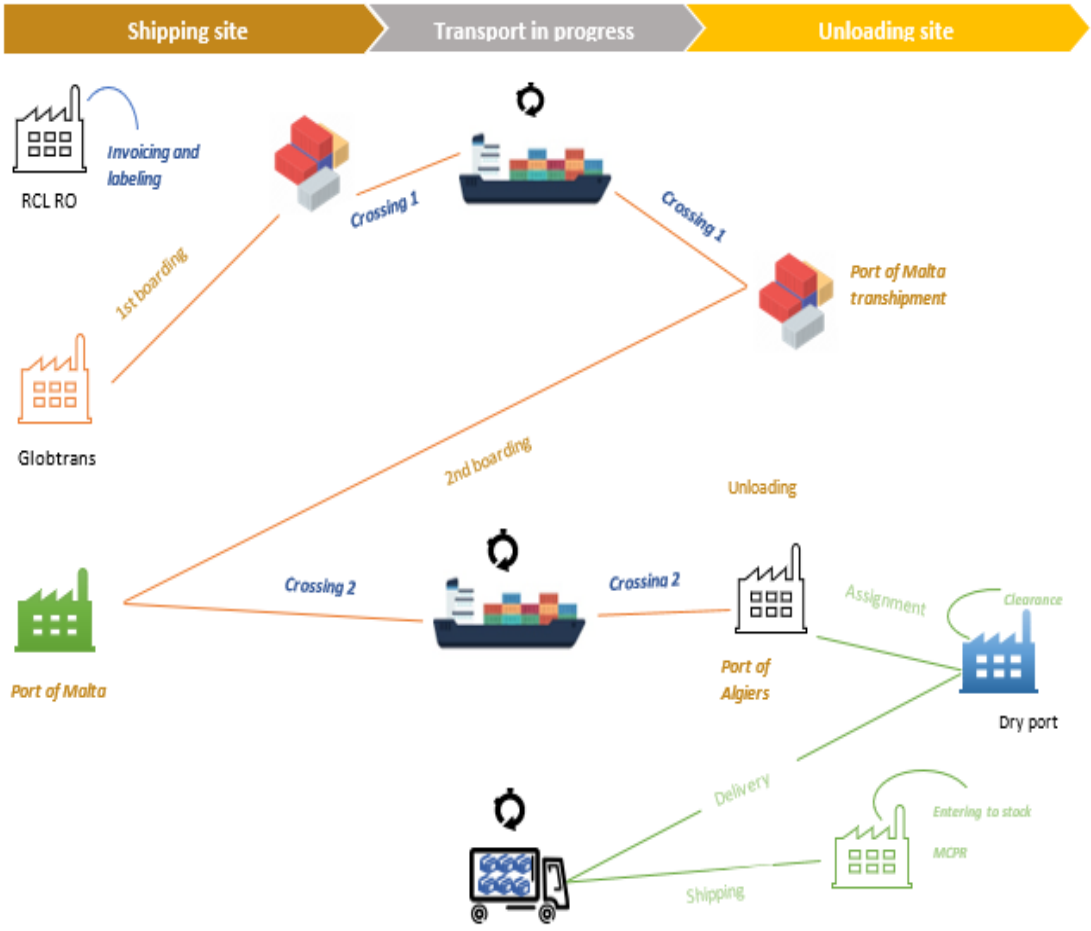
Figure 3-9 : Entering to storage



1.3.3. Romania Procedures:

1.3.3.1. Physical flows:

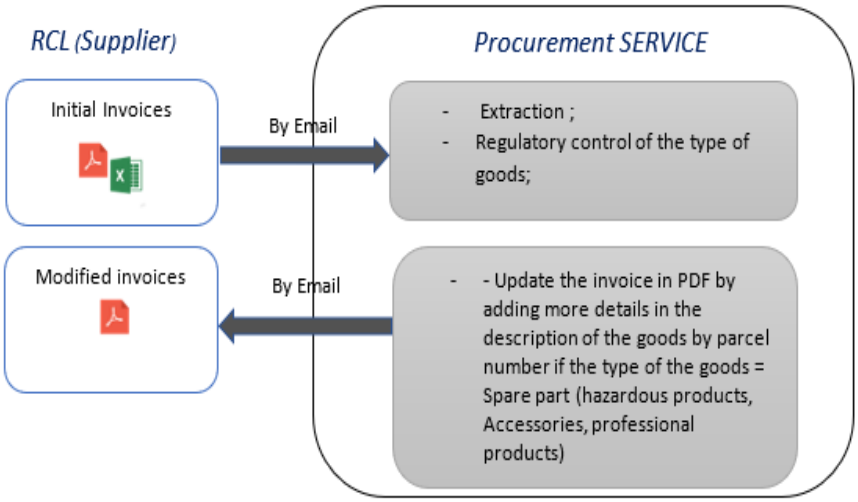
Figure 3-10: Romania Physical flows



1.3.3.2. Documentation flows:

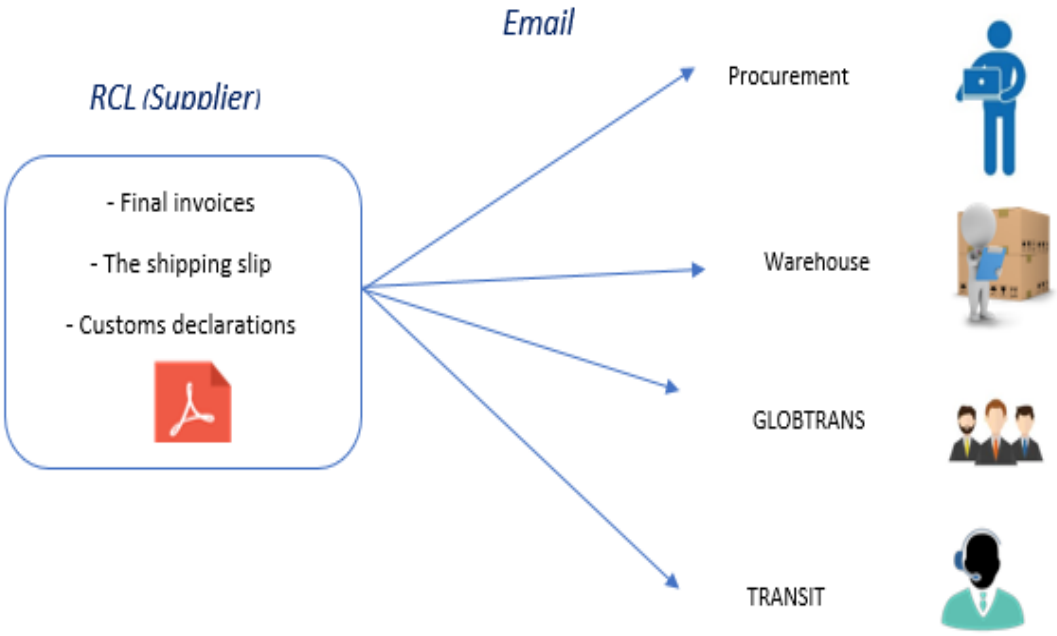
Step 1: Sending the invoice

Figure 3-11: Sending the invoice (Romania process)



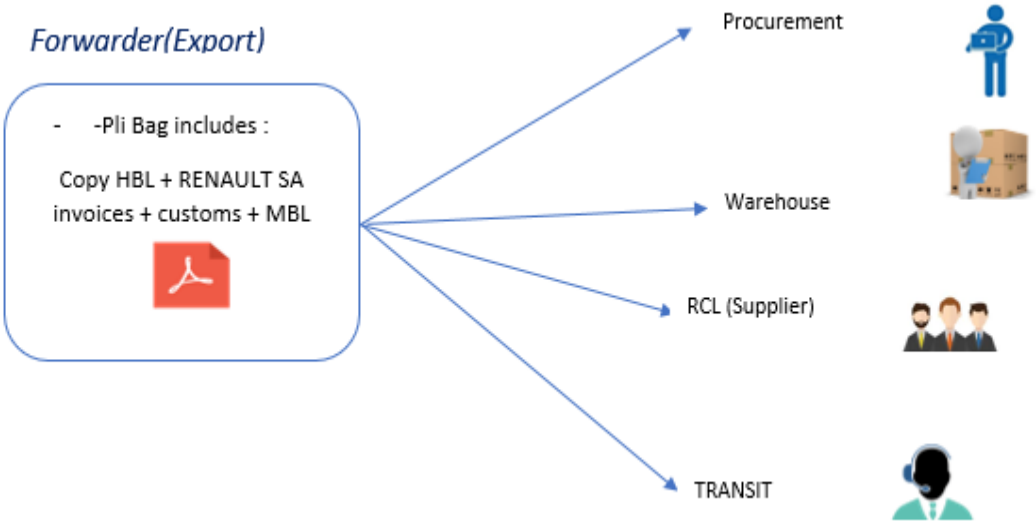
• **Step 2:** Sending the first part of the final documents for the export procedure

Figure 3-12: Sending the first part of the final documents for the export procedure (Romania Process)



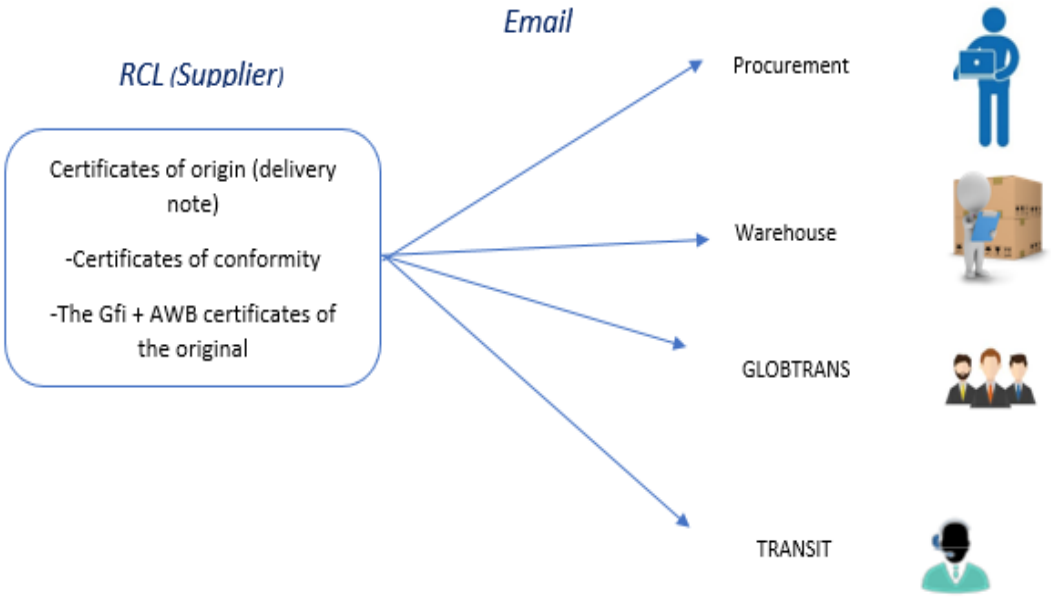
- **Step 3:** Sending the export documents for the embarkation operation

Figure 3-13: Sending the export documents for the embarkation operation(Romania Process)



• **Step 4:** Sending the second part of the documents for the import operation (customs clearance)

Figure 3-14: Sending the second part of the documents for the import operation (Romania Process)



• **Step 4:** Customs clearance

The customs clearance operation provided by the transit service mainly takes place in two stages:

First stage: Bank direct debit (Domiciliation), the launch of this operation is done upon receipt of the second part of the documents sent by RCL France.

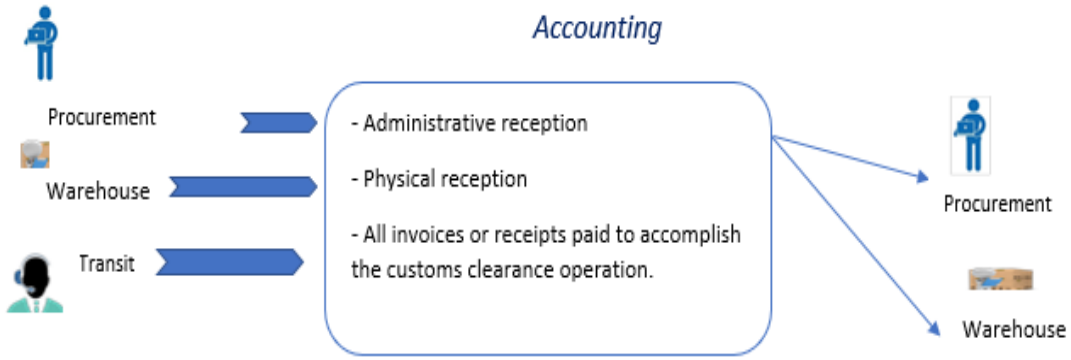
The operation of encrypting franchises, in order to save on customs duties, is carried out in parallel with the bank direct debit operation.

Second stage: Launch of the customs clearance procedure after receipt of the originals of the certificates of origin, and it proceeds as follows:

- Filing of the file; (In the event of the delay on the file) / INFO REQUEST NEW procedure
- Schedule of the visit;
- The Fraud / Customs visit;
- Withdrawal of the visa;
- Clearance + BAE;
- Delivery.

- **Step 5:** Entering to storage

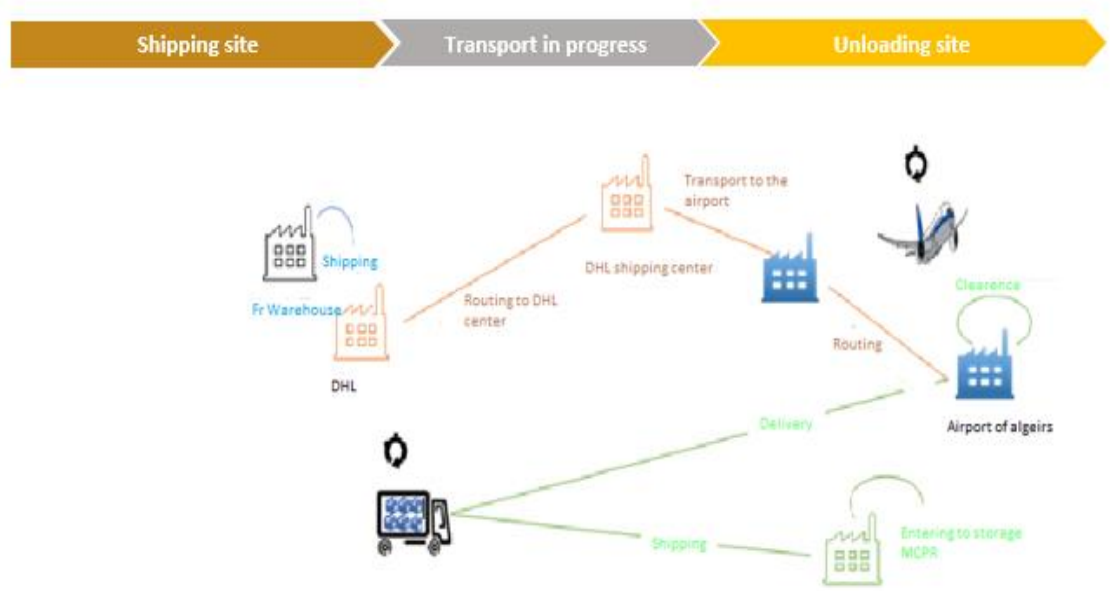
Figure 3-16: Entering to storage(Romania process)



1.3.4. Air Shipping (DHL):

1.3.4.1. Physical Flows:

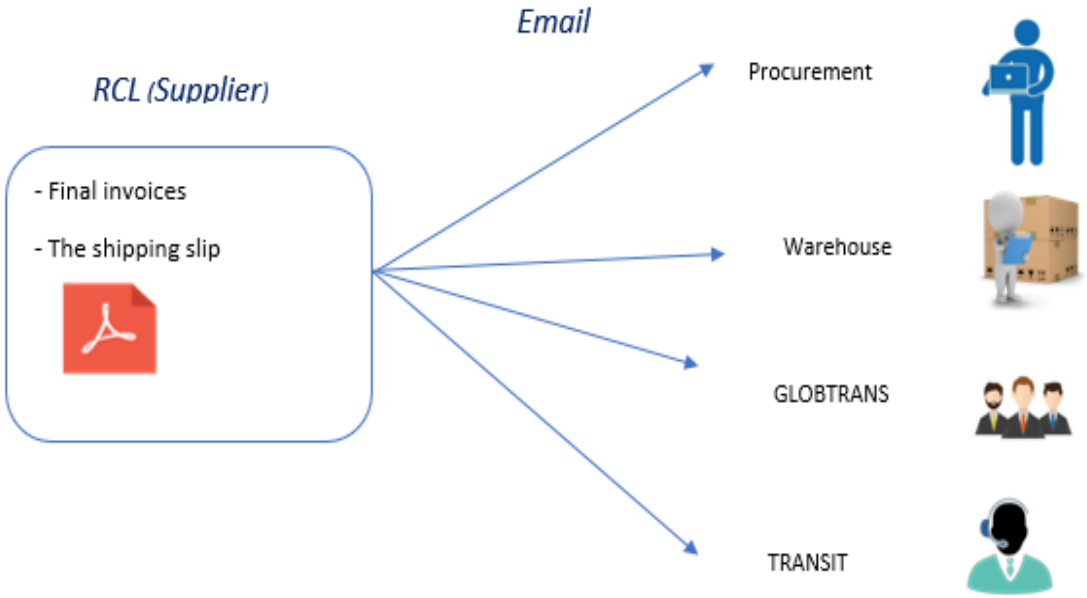
Figure 3-17: Physical flows (Air shipping)



1.3.4.2. Documentation Flows:

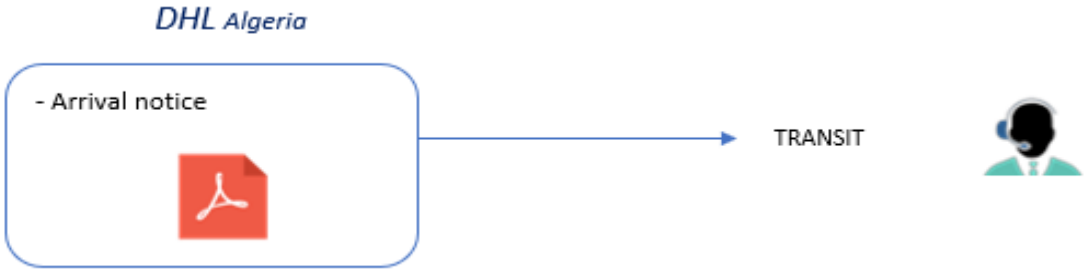
Step 1: Sending the first part of the final documents for the export procedure

Figure 3-18: Sending the first part of the final documents for the export procedure (Air shipping)



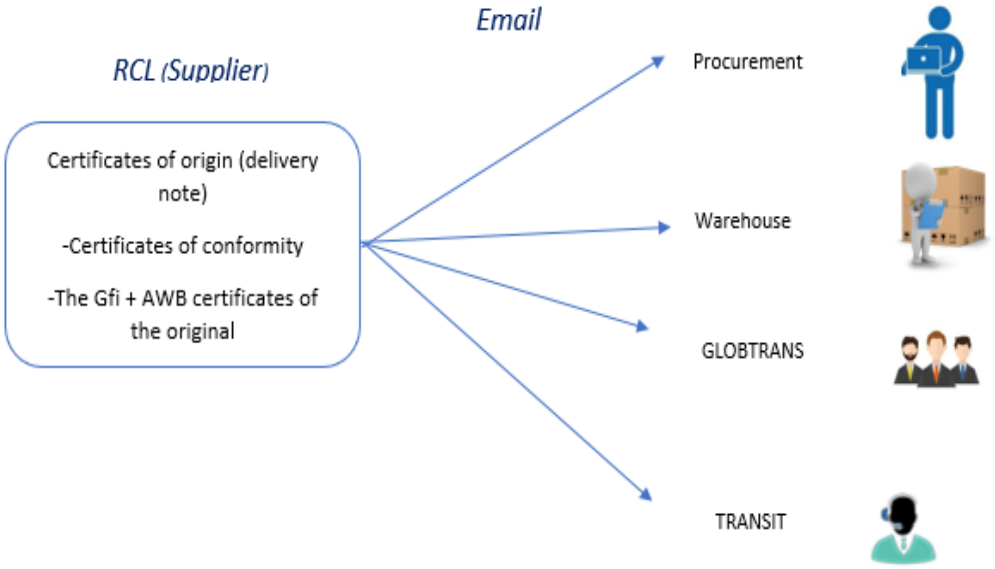
- **Step 2:** Sending the notice of arrival.

Figure 3-19: Sending the notice of arrival(Air Shipping)



- **Step 3:** Sending the second part of the documents for the import operation (customs clearance)

Figure 3-20: Sending the second part of the documents for the import operation (Air shipping):



- **Step 4:** Customs clearance

The customs clearance operation provided by the transit service mainly takes place in two stages:

First stage: Bank direct debit, the launch of this operation is done upon receipt of the second part of the documents sent by RCL France.

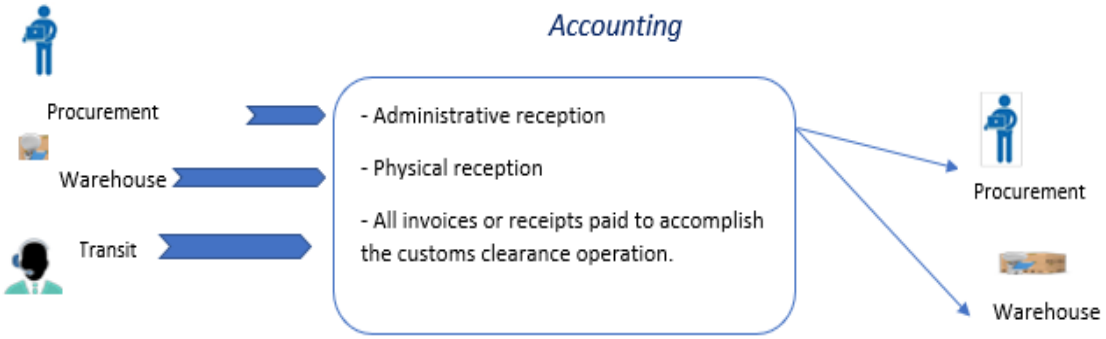
The operation of encrypting franchises, in order to save on customs duties, is carried out in parallel with the direct debit operation.

Second stage: Launch of the customs clearance procedure after receipt of the originals of the certificates of origin, and it proceeds as follows:

- Filing of the file; (In the event of the delay on the file) / REQUEST INFO NEW procedure

- Schedule of the visit;
- The Fraud / Customs visit;
- Withdrawal of the visa
- Clearance + BAE;
- Delivery.
- **Step 5** : Entering Storage

Figure 3-21: entering to storage (air shipping)



1.3.5. Chain of responsibilities (stakeholders)

The table described below establishes the functional responsibilities of the different stakeholders of the shipping operation:

Table 3-1: Chain of responsibilities

Stakeholders	*ROLE / RESPONSIBILITY*	*CONSTRAINTS*
RCL France	- Invoicing; -Modification request; -Request for translation; -Preparation and sending of documents by email; -Sending certificate of origin via DHL.	-Slowness of validation at the chamber of commerce; - Waiting for translation; -Awaiting invoice modification. -Strikes / holiday seasons
RCL Romania	-Labeling; -Invoicing; -Preparation and sending of documents by email; -Send certificate of origin via DHL.	-Slow validation at the chamber of commerce; -Lack of visibility at the transshipment port;
CRPA	-Labeling.	
-Transit / freight forwarder team to include: Globtrans (shipping agent) DHL Universal transit (forwarder)	-France process: Routing and handling of the goods until their arrival in Algiers: Routing to Marseille; Entry to CRPA; Exit from CRPA; boarding forecasts; confirmation of shipment; -Romania process: Boarding pre-alert, Boarding confirmation, Transhipment in Malta, Boarding 2	-Non visibility on the time of arrival at the station, and the waiting time for entering the CRPA -Waiting for the documents required for export
The warehouse team	-Unloading; -Sending an unloading email; -Physical reception on the system.	
Procurement team	-Administrative reception; -Modification of invoice; -Intermediary of the transit team to settle documentation constraints.	
Accounting team	-Entering storage	-System Mistakes ; -Incomplete files.

1.4. Reception:

1.4.1. Physical Reception:

one of the entrances of the warehouse is specially designed to be the same size as the container so it makes the operation of emptying the container an easy task.
Then the forklift driver starts to empty the container, usually when new goods arrive in the container they're not mixed between normal products and dangerous ones, but exceptions may happen
then before the products are stored, the storekeepers start to distinguish between the types of products (normal, dangerous, and accessories) before sending them to their storage spaces and check the invoices and receipts for these products in case there's some products missing. And they print stickers for these products with its id and its destination so that makes it easier to find when it's about to be sent to the client.
the products are stored in giant shelves, in the order of the most demanded products, for example the most demanded(living stock) are placed at the lowest level and closer to the entrance and it goes up and far inside as the demand reduces , plus an isolated box for new products that do not have a storage space yet.
Car accessories such as toy cars , pens , t-shirts, watches, are put in an isolated area from the other car parts, and that's because they're small and easy to be lost or stolen , so they're put in a closed space which is entered by 2 or 3 trusted storekeepers to avoid all suspicions.
Dangerous materials such as gasoline, paint, car batteries, and related stuff are also put in another isolated area highly secured entered only by specialized people to avoid accidents.
The products that aren't imported but are bought from within the country are only 3 products which are car tires, car oil and glass cleaner and the reason for that is that they're common products between all car companies so the state finds it relevant that it does the importation operation and sells them to the different car companies in order to make it easier for them.

1.4.2. System reception (integration of the products into the system):

When the products are received, they have to be integrated into the system using the following steps:
The steps of integration:

1. saving the invoice on excel:

Figure 3-21: Saving the invoice on excel

401277	DistributionetMaintenance AUTO											
ATE	TURE	code	agent	Type de Cd	CODE	BL	REF	DESI	QTS	PRIX	MONTANT	
30/08/2018	53008283	1200041	SNC MINA AUTO AGT SC			196/2018	7711554860	225/65R16C 112R CARRIE	50	13 994,40	699 720,00	
30/08/2018	53008283	1200041	SNC MINA AUTO AGT SC			196/2018	TAXE-PNEU	TAXE-PNEU	50	450,00	22 500,00	
30/08/2018	53008276	1260009	LIAISON SUCC 1 OUED SEMAR			192/2018	7711814043	205/50 R17 93W XLTL	6	7 600,00	45 600,00	
30/08/2018	53008276	1260009	LIAISON SUCC 1 OUED SEMAR			192/2018	TAXE-PNEU	TAXE-PNEU	6	450,00	2 700,00	
17/09/2018	53008427	1260009	LIAISON SUCC 1 OUED SEMAR			206/2018	7711814102	205/60 R 16 92H P7 CINT	8	11 080,00	88 640,00	
17/09/2018	53008427	1260009	LIAISON SUCC 1 OUED SEMAR			206/2018	TAXE-PNEU	TAXE-PNEU	8	450,00	3 600,00	
24/09/2018	53008421	1200016	KHERRAF LOTFI AGT SCE RENAULT			205/2018	7711554906	315/80R22.5154/150M156LD	20	40 128,00	802 560,00	
24/09/2018	53008421	1200016	KHERRAF LOTFI AGT SCE RENAULT			205/2018	TAXE-PNEU	TAXE-PNEU	20	450,00	9 000,00	

2. the integration in the system:

Figure 3-22: the integration in the system 1

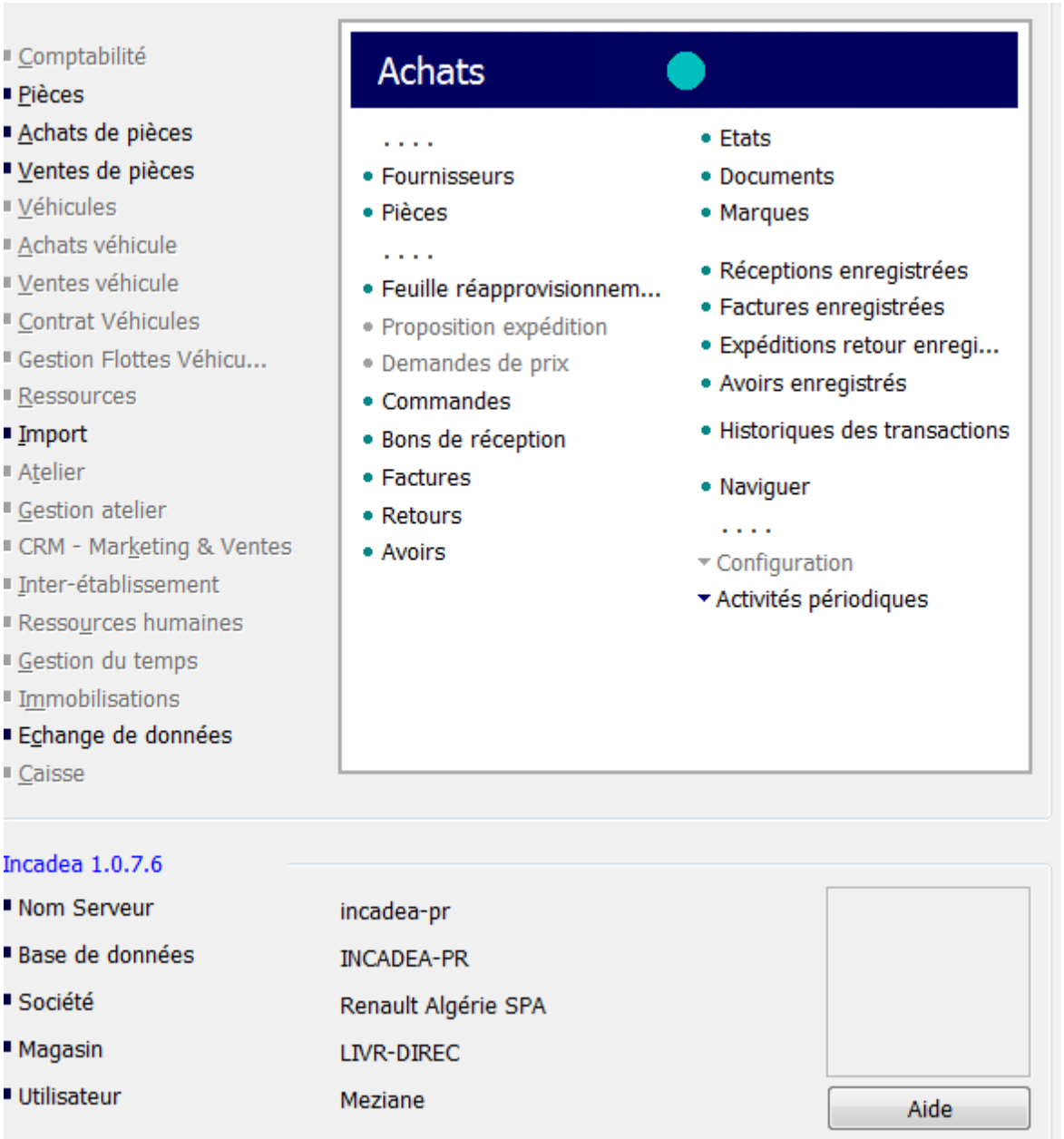
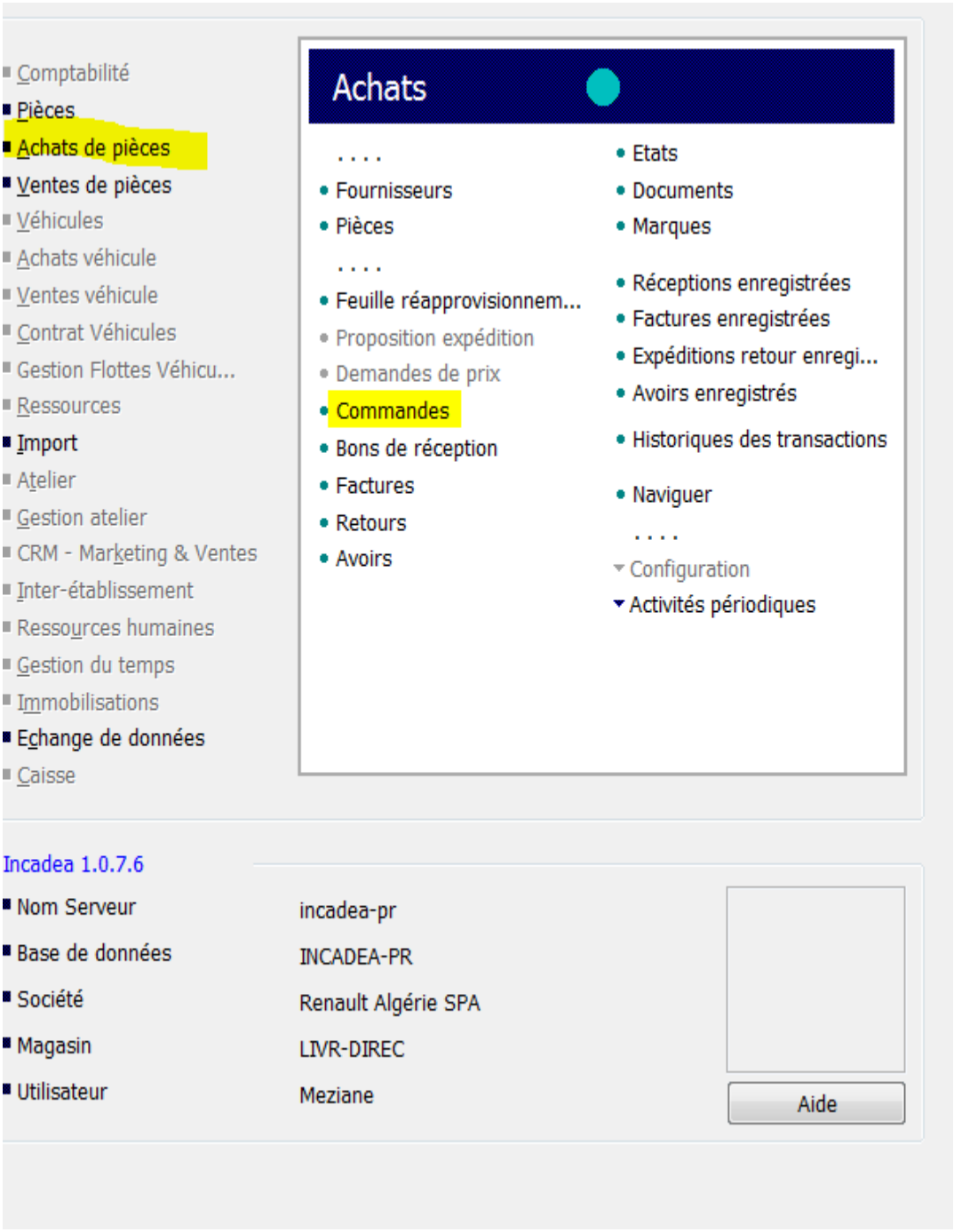
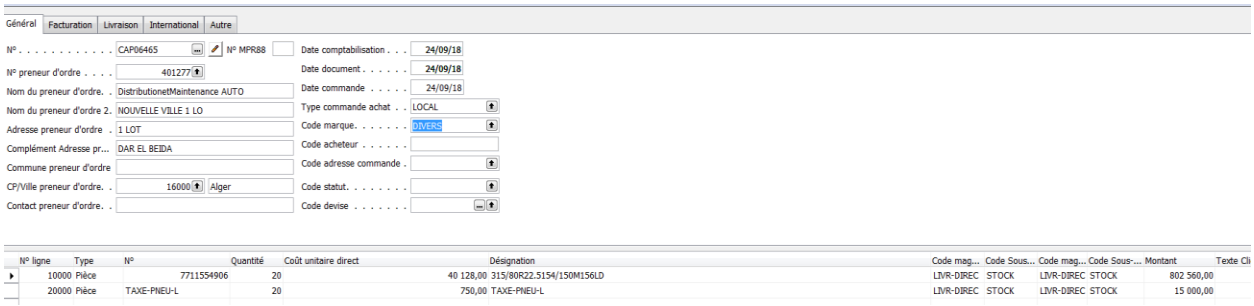


Figure 3-24: the integration in the system 2



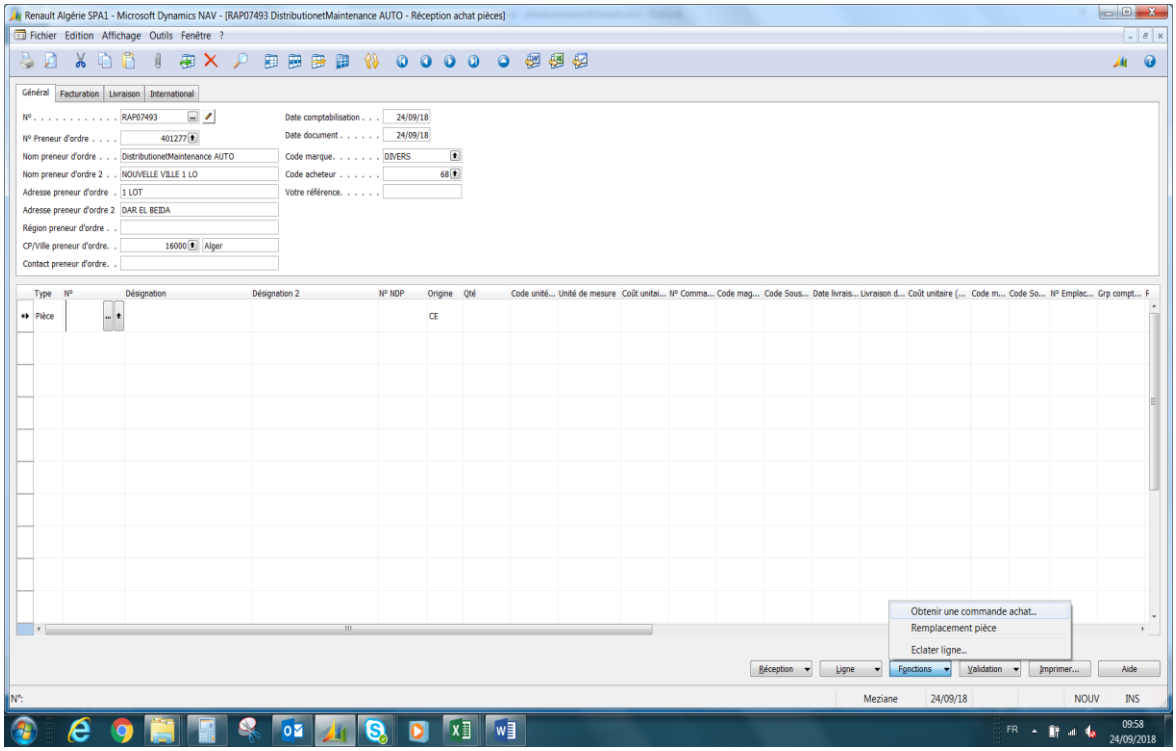
3.The creation of the order for the car parts :

Figure 3-25: The creation of the order for the car parts



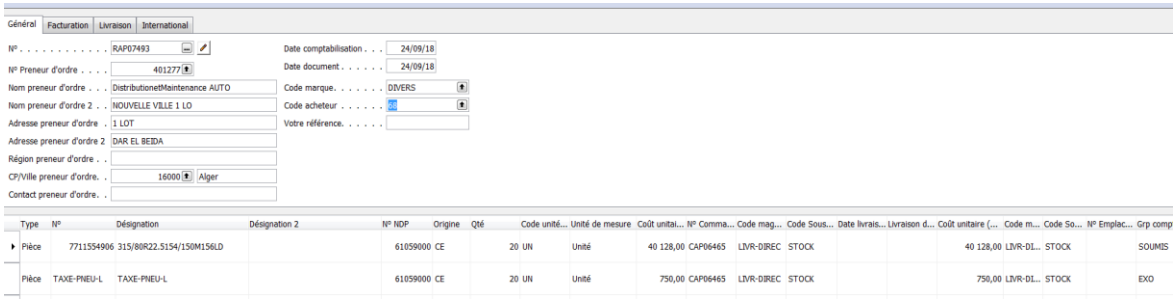
4.Creation of the reception :

Figure 3-26 : Creation of the reception



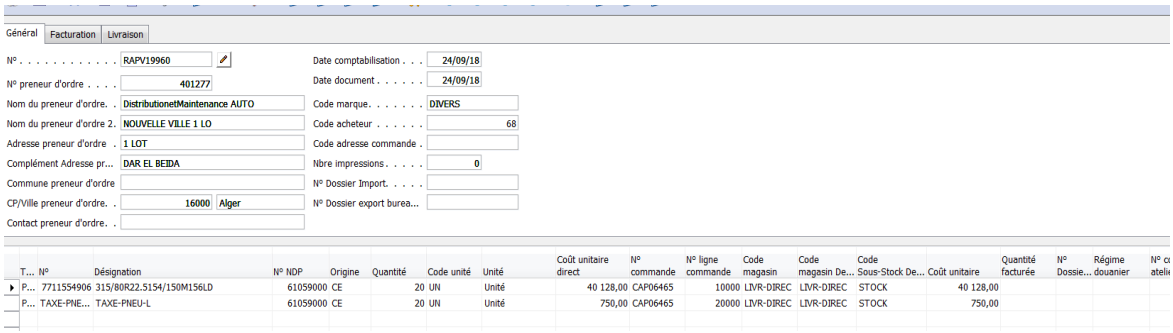
5.To get a purchase order function:

Figure 3-27:Getting a purchase order function



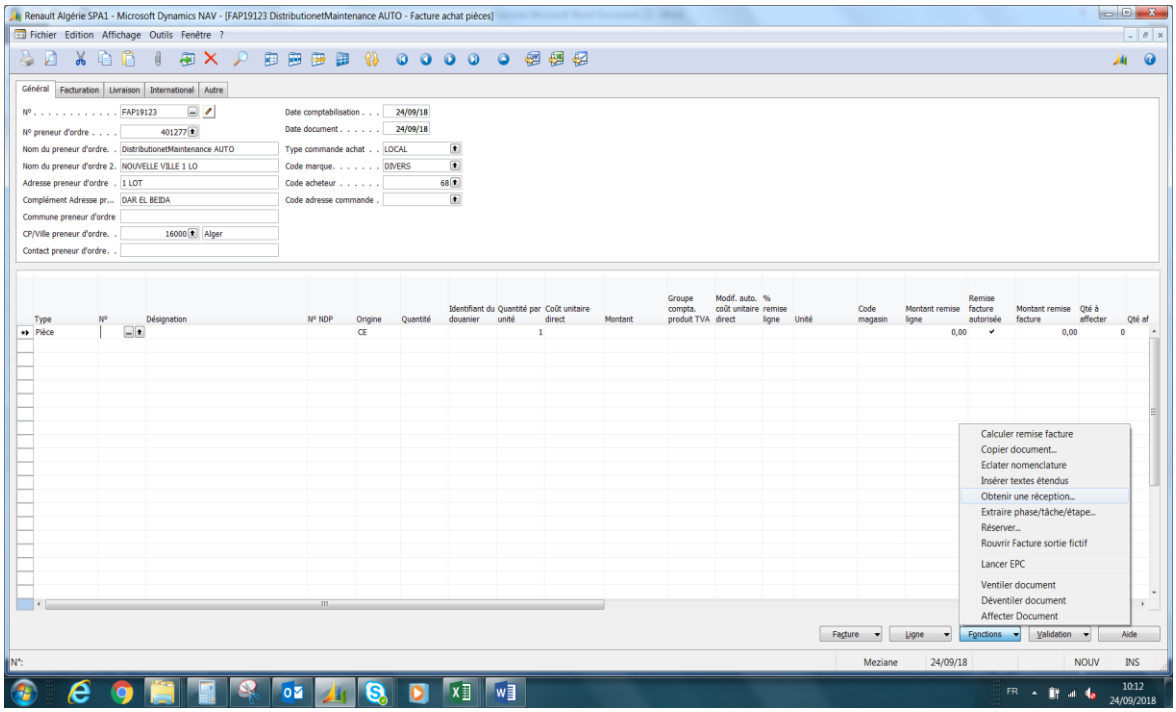
6.Confirmation of receipt

Figure 3-28 : Confirmation of receipt



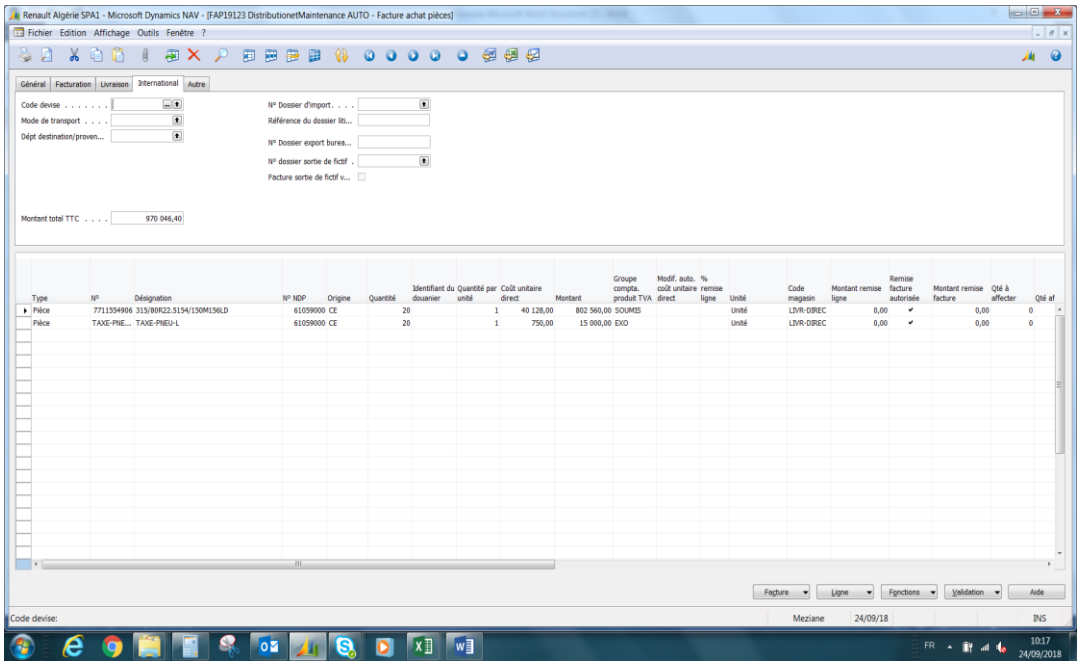
7.Validation of the invoice:

Figure 3-29: Validation of the invoice



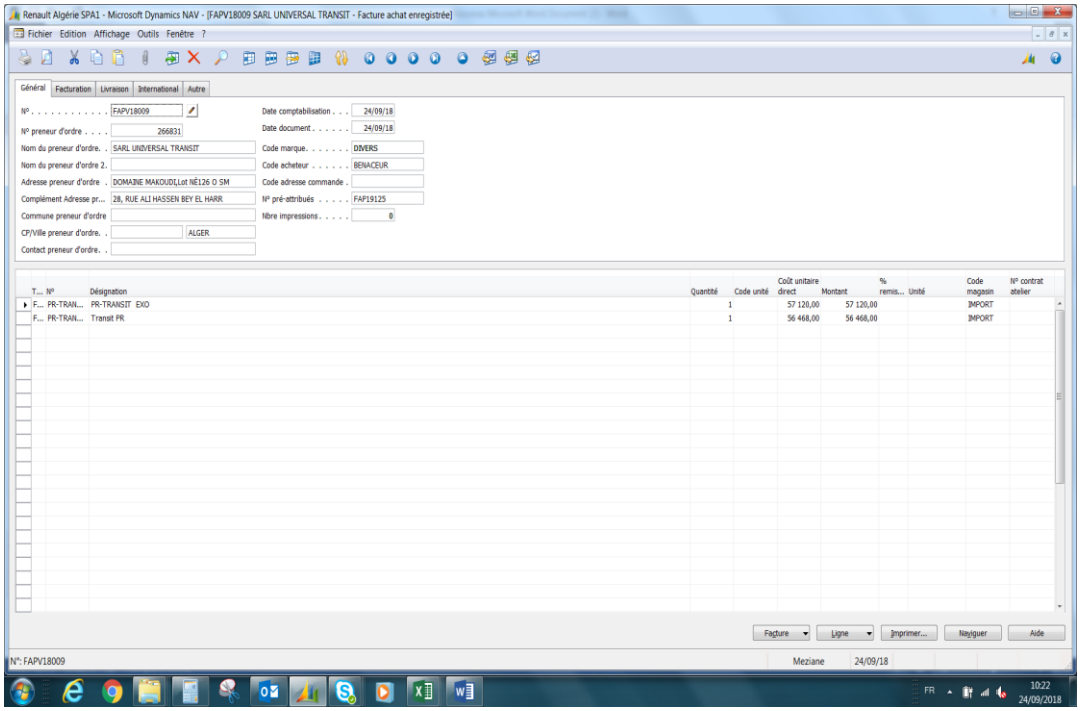
8.Mention the invoice amount as well as the invoice number

Figure 3-30: mentioning the invoice amount as well as the invoice number



9.Confirmation of the invoice

Figure 3-31: Confirmation of the invoice



10.Once the invoice is integrated, a report must be sent to the pole manager for invoicing

1.5. Storage(stocking):

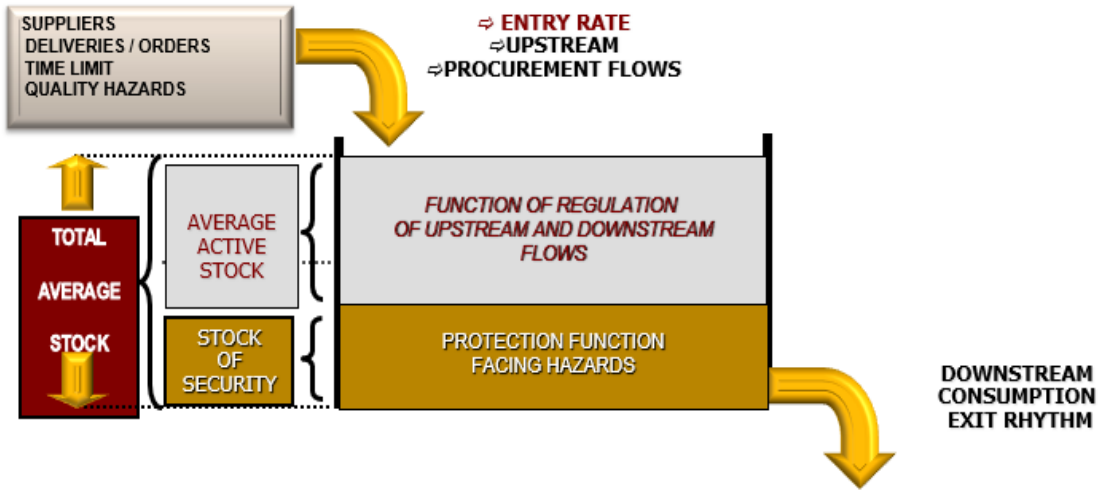
Why have stock?

- To protect the client
- Respond to the desynchronization of manufacturing and sales.
- Respond to supplier contingencies (lead time).
- Ensure the availability of parts to satisfy the end customer.
- Respond to variability in customer demand (seasonal variations and increasing sales).
- Achieve economies of scale.
- Make bargain purchases in certain speculative or shortage markets.

Why not have stock ?

- Reduce the financial costs of inventory (cost of ownership and transporting)
- Reduce the risk of obsolescence of componants and products.
- Allow the supply manager to place orders optimally

Figure 3-32: Stock and safety stock (stock of security)



1.5.1. Stock policy:

1.5.1.1.the ABC ranking:

Figure 3-33: the ABC ranking

REFERENCE	VALEUR	%/ VALEUR	CUMUL EN VALEUR	CLASSE
1	672,00 €	32%	32	A
2	424,00 €	20%	52	A
3	280,00 €	13%	65	A
4	150,00 €	7%	72	A
5	140,00 €	7%	79	A
6	84,00 €	4%	83	B
8	72,00 €	3%	86	B
10	64,00 €	3%	89	B
11	39,00 €	2%	91	B
9	36,00 €	2%	93	B
12	32,00 €	2%	95	B
7	21,00 €	1%	96	C
13	20,00 €	1%	97	C
14	18,00 €	1%	98	C
16	16,00 €	1%	99	C
18	12,00 €	1%	100	C
TOTAL	**2 080,00 €**			

Class A: 20% of references represent approximately 80% of the total value of the stock or of the turnover or of the number of lines or volumes;

Class B: 30% of the following references represent approximately 15% of the total value of stock or turnover or number of lines or volumes;

Class C: 50% of the remaining references represent approximately 5% of the total value of stock or turnover or number of lines or volumes.

1-5-1-2-The definition of the stock policy:

Step 1: define the stock classes;

- Group items into homogeneous families in terms of supply management.
- Determine management classes.

Two types of classification:

- By threshold: finer and more precise classification requiring regular monitoring.
- Pareto law: automatic management.

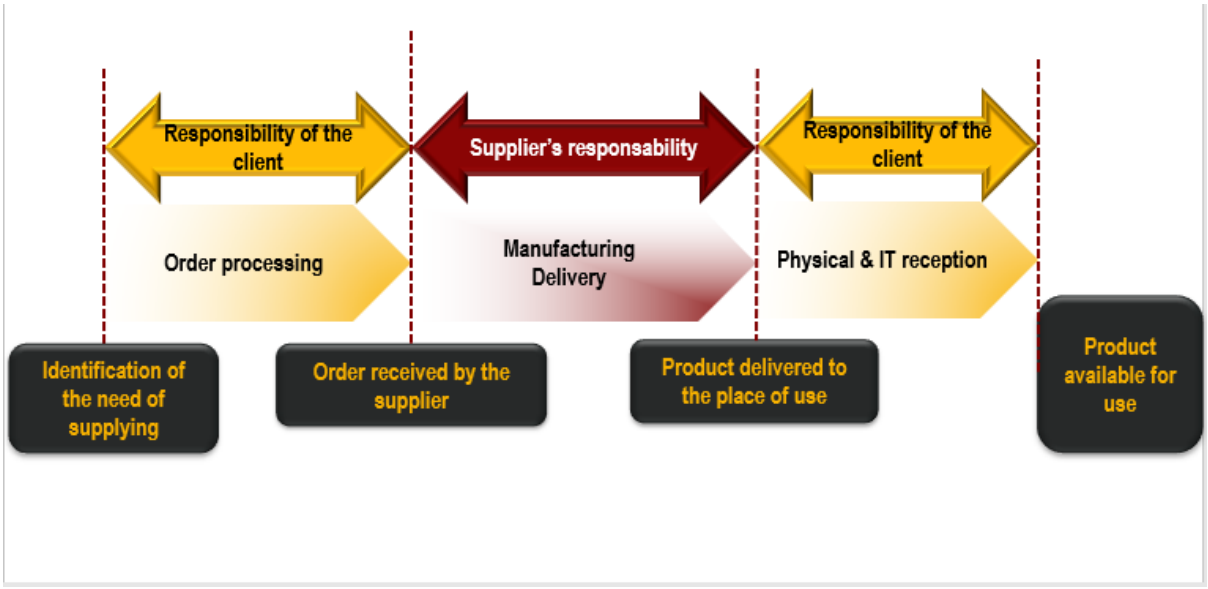
Step 2: associate different parameters with these stock classes;

- Mode of supply
- Number of days of coverage
- Positioning or not of a safety stock
- Sizing of the safety stock
- Batch size
- Availability rate

1.5.2. The safety stock :

1.5.2.1. The lead time:

Figure 3-34: Lead time notion

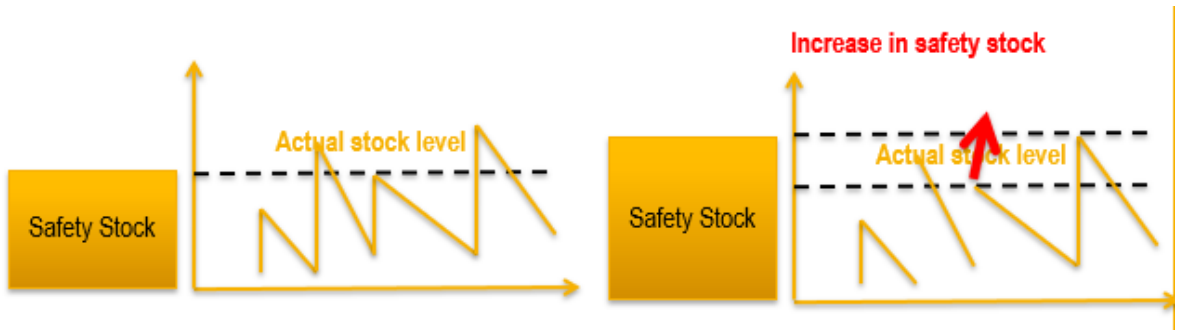


1.5.2.2. Safety stock: the response to the volatility of supply and demand:

Why have safety stock?

- To guarantee the desired level of service by covering the variability of demand and supply
- To cover contingencies on supplier and carrier deadlines
- To cover the variability of demand: increasing orders

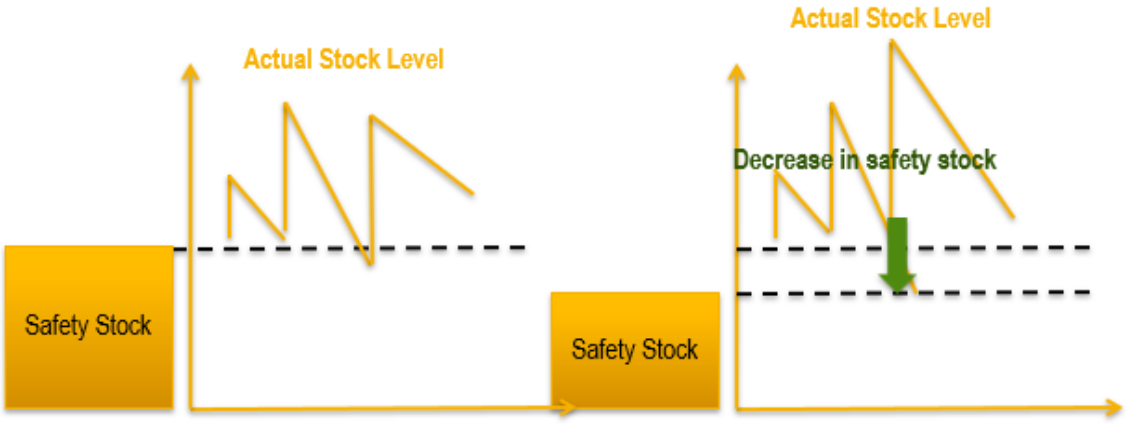
Figure 3-35: increasing safety stock



Why reduce safety stocks?

Reliable supplier: de-security

Figure 3-36: decreasing safety stock



Levers for optimizing the safety stock:

- Carry out regular portfolio reviews
- Control lead times
- Analyze supplier performance
- Reduce carrier lead time
- Reduce store lead time
- Carry out continuous improvement actions with suppliers
- Monitor in-progress carriers supplies
- Constantly challenge suppliers on their service rate
- Adjust forecasts

1.6. The quality service :

The service quality is -and I quote- the lungs of the whole company, which does so many missions and activities, but the main 2 activities are:

- weekly inventories to know what there is and what there isn't and to keep track of the existing products and the departed and arrived ones and in case of harmed products they file a complaint. , and in the case of finding a fractured product, a complaint should be made to the supplier so that the next imported product would have its price reduced because refunds are not possible due to the state's law. And only in the case of missing product it will be refunded.
- always verifying that the whole network is going smooth without any problems including clients complaints and finding ways to deal with them, in short all the matters related to the quality and well-being of the product and its circulation is the responsibility of the quality service.

1.7. Sales (order and invoicing):

This process starts with customer Demand for Parts and Accessories recognised by personnel and ends with a completed transaction to the client and meeting customer requirements.

There are so many methods of dealing with orders that depend on the type of the costumer or the order:

1.7.1. Process an Order for an Existing Customer:

1.7.1.1. Prepare for the Transaction:

Objective: initiate the transaction and prepare for Order development

This goes through many steps:

a. Open the Parts Sales Order & Invoicing window
b. Select Parts Branch (if required).
c. Identify the customer - awareness of the terms and conditions applicable to the transaction (Account, Cash etc.).
d. Enter / Select / Search for the appropriate Customer Number – utilize Smartsearch if required. If the transaction is for Cash / Cheque / Credit Card and Customer Name & Address is required for invoice, ensure that customer contact Code is selected after the Customer No.
e. Respond to Credit Warning Message – if displayed
   – refer below to 'Response to System Messages and Prompts' Process Step 1.
f. Verify the Customer Data as displayed before proceeding.

1.7.1.2. Develop Order Requirements:

Objective: Develop customer Order Line items, resolve issues as applicable.

a. Open a line in the Parts on Order panel.
b. Populate Part No. (Enter / Select or Search for Part No. or utilise an EPC (PMPRO) with Shopping Basket importation to EQUIP®).
c. If Part No. is not present on Dealer Part Master File respond to New Part Found message – refer below to 'Response to System Messages and Prompts' Process Step 2 if initial data input is correct and Part is to be added.
d. Respond to Current Out of Stock Resolution window if full supply is not available OR if there are Related Parts associated with the Part ordered.
– refer below to 'Response to System Messages and Prompts' Process Step 3

e. Modify Qty# (which defaults to 1) if required (may have already been changed in Out of Stock Resolution process – refer below to ‘Response to System Messages and Prompts’).

f. Respond to any Special Pricing Message –at the same time consider whether the Special Pricing warning should be displayed for other line items in this order.

g. Adjust selling price if required and authorized – Parts with Selling Price to achieve GP% less than a predetermined level will be highlighted in bold red type. Price Changes that are below minimum sell prices or Replacement Cost (if parameters are set) will generate a Check ex GST message – refer
below to ‘Response to System Messages and Prompts’ Process Step 5.

h. Add any Notes (Serial Number) or Comments to the Line Item – will be printed on the Invoice – and enter / select / search for the Machine ID (if required – does not print on invoice).

i. Repeat process until all Order Line Item requirements are complete.

1.7.1.3. Review and adjust Sales Order Detail:

Objective: Prepare for finalization of Order.

a. Review / Select Order Type – parameter settings may default the Order Type and / or restrict the Order Types available to the user.

b. Use the ‘tab forward’ key to:

i. Enter Salesperson PIN.

ii. Enter the Customer Order No.

iii. Freight Value.

iv. Template Note.

v. Delivery Note.

vi. Payment Method.

vii. Deposit Amount.

viii. Indicate B/O Pre-pay (if available & no default setting).

c. Set Print Options.

1.7.1.4. Finalize the Order:

Objective: Complete the transaction.

a. Complete final validation of the transaction.

b. Click ‘Accept Order’.

c. Respond to Emergency Order Confirmation warning (if displayed). If ‘Yes’ action the PMLink interface displayed.

d. Respond to System Messages and Prompts – if applicable.

i. Credit Warning Message – refer below to 'Response to System Messages and Prompts' Process Step 1.

ii. Check Ex GST Message - refer below to 'Response to System Messages and Prompts' Process Step 5.

d. If 'Print Preview' Print Option has been selected review output as displayed and complete appropriate sensibility checks.

e. Collect and action output as follows:

i. Order Type 'O' – in line with internal procedures.

ii. Order Type 'I' or 'S' – Pick and deliver Parts as per order. Provide Invoice for Customer and, where transaction is Cash / Cheque / Credit Card collect payment utilizing the Counter Receipt Entry process.

iii. If the Order Type is 'P' initiate parts picking and when complete refer below to procedure Process an Existing Open Order.

iv. If the Order Type is 'Q' deliver Quotation to Customer and ensure appropriate follow up is scheduled.

v. If the Order Type is 'L' – no further action required

f. Deliver Parts to Customer.

1.7.2. Process an Order for a New Customer:

1.7.2.1. Prepare for the Transaction.

Objective: initiate the transaction and prepare for Order development.

a. Open the Parts Sales Order & Invoicing window.

b. Select Parts Branch (if required).

c. Identify the customer and the terms and conditions applicable to the transaction (Account, Cash etc.).

i. If Customer wishes to conduct business with Credit Facilities ensure appropriate Credit Applications etc. are completed and approved. When customer record is established follow Process an Order for an Existing Customer.

d. Enter / Select / Search for the appropriate Customer Number to support the transaction – utilise Smartsearch if required.

e. Collect Customer Name and Address etc. data if required – establish a new Contact Record.

f. Verify the Customer Data as displayed before proceeding.

1.7.2.2. Develop Order Requirements

Objective: Develop customer Order Line items, resolve issues as applicable.

a. Open a line in the Parts on Order panel.

b. Populate Part No. (Enter / Select or Search for Part No. or utilise an EPC with Shopping Basket importation to EQUIP®).

c. If Part No. is not present on Dealer Part Master File respond to New Part Found message – refer below to 'Response to System Messages and Prompts'

Process Step 2.

d. Respond to Current Out of Stock Resolution window if full supply is not available OR there are Related Parts associated with the Part ordered – refer below to 'Response to System Messages and Prompts'.

Process Step 3

j. Modify Qty# (which defaults to 1) if required (may have already been changed in Out of Stock Resolution process – refer 'Response to System Messages and Prompts').

e. Respond to any Special Pricing Message –at the same time consider whether the Special Pricing warning should be displayed for other line items in this order - refer below to 'Response to System.

Messages and Prompts' Process Step 4.

f. Adjust selling price if required and authorized – Parts with Selling Price to achieve GP% less than a predetermined level will be highlighted in bold red type. Price Changes that are below minimum sell prices or Replacement Cost (if parameters are set) will generate a Check ex GST message – refer below to 'Response to System Messages and Prompts' Process Step 5.

k. Add any Notes (Serial Number) or Comments to the Line Item – will be printed on the Invoice – and enter / select / search for the Machine ID (if required – does not print on invoice).

l. Repeat process until all Order Line Item requirements are complete.

1.7.2.3. Review and adjust Sales Order Detail:

Objective: Prepare for finalization of the Order.

a. Review / Select Order Type – parameter settings may default the Order Type and / or restrict the Order Types available to the user.

b. Use the 'tab forward' key to:

i. Enter Salesperson PIN.

ii. Enter the Customer Order No.

iii. Freight Value.

iv. Template Note.

v. Delivery Note.

vi. Payment Method.

vii. Deposit Amount.

viii. Indicate B/O Pre-pay.

c. Set Print Options.

1.7.2.4. Finalize the Order:

Objective: To complete transaction.

a. Complete final validation of the transaction.

b. Click ‘Accept Order’.

c. Respond to Emergency Order Confirmation warning (if displayed). If ‘Yes’ action the PMLink interface displayed.

d. Respond to System Messages and Prompts – if applicable.

i. Credit Warning Message – refer below to ‘Response to System Messages and Prompts’ Process Step 1.

ii. Check Ex GST Message - refer below to ‘Response to System Messages and Prompts’ Process Step 5.

e. If ‘Print Preview’ Print Option has been selected review output as displayed and complete appropriate sensibility checks.

f. Collect and action output as follows:

i. Order Type ‘O’ – in line with internal procedures.

ii. Order Type ‘I’ or ‘S’ – Pick and deliver Parts as per order. Provide Invoice for Customer and, where transaction is Cash / Cheque / Credit Card collect payment utilizing the Counter Receipt Entry process.

iii. If the Order Type is ‘P’ initiate parts picking and when complete refer below to procedure Process an Existing Open Order.

iv. If the Order Type is ‘Q’ deliver Quotation to Customer and ensure appropriate follow up is scheduled.

v. If the Order Type is ‘L’ – no further action required.

f. Deliver Parts to Customer.

1.7.3. Process an Existing Open Order.

1.7.3.1. Prepare for the Transaction:

Objective: Initiate the transaction and prepare to process the Order.

a. Open the Parts Sales Order and Invoicing window.

b. Select the Parts Branch (if required).

c. Identify and select the Open Order to be processed.

– either identify and select the customer and then view open orders associated with the customer OR Enter / Select / Search for the open order in the Sales Order No. field which is highlighted in green when open orders are present.

d. Respond to Credit Warning Message – if displayed -

refer below to 'Response to System Messages and Prompts' Process Step 1

Verify that Order Selection is correct.

1.7.3.2. Review and Finalize Open Order Detail.

Objective: to complete development of Order Lines (if Required) and resolve issues as applicable.

a. Review and adjust Order Line items as required.

b. Add or delete line items as required.

c. Respond to and resolve any issues associated with Order Line Items – refer to 'Process an Order for an Existing Customer' and to 'Response to System Messages and Prompts'.

1.7.3.3. Review and Adjust Sales Order Detail:

Objective: Prepare for finalization of the Order.

a. Review / Select Order Type – parameter settings may default the Order Type and / or restrict the Order Types available to the user.

b. Use the 'tab forward' key to:

i. Enter Salesperson PIN.

ii. Enter the Customer Order No.

iii. Freight Value.

iv. Template Note.

v. Delivery Note.

vi. Payment Method.

vii. Deposit Amount.

viii. Indicate B/O Pre-pay.

ix. Set Print Options.

1.7.3.4. Finalize the Order.

Objective: to complete the transaction.

a. Complete final validation of the transaction.

b. Click ‘Accept Order’.

c. Respond to Emergency Order Confirmation warning (if displayed). If ‘Yes’ action the PMLink interface displayed.

d. Respond to System Messages and Prompts – if applicable.

i. Credit Warning Message – refer below to ‘Response to System Messages and Prompts’ Process Step 1.

ii. Check Ex GST Message - refer below to ‘Response to System Messages and Prompts’ Process Step 5.

e. If ‘Print Preview’ Print Option has been selected review output as displayed and complete appropriate sensibility checks.

f. Collect and action output as follows:

i. Order Type ‘O’ – in line with internal procedures.

ii. Order Type ‘I’ or ‘S’ – Pick and deliver Parts as per order. Provide Invoice for Customer and, where transaction is Cash / Cheque / Credit Card collect payment utilizing the Counter Receipt Entry process.

iii. If the Order Type is ‘P’ initiate parts picking and when complete refer below to procedure Process an Existing Open Order.

iv. If the Order Type is ‘Q’ deliver Quotation to Customer and ensure appropriate follow up is scheduled.

v. If the Order Type is ‘L’ – no further action required.

g. Deliver Parts to Customer.

1.7.4. Response to System Messages and Prompts:

1.7.4.1. Credit Issues:

a. Credit issue Warning Message displayed.

b. Verify that correct customer has been selected.

c. Consider options to respond to situation:

i. Reject Order.

ii. Apply for Credit Over-ride.

iii. Increase Credit Limit.

iv. Change Payment Method.

d. Respond accordingly.

1.7.4.2. Part not on Dealer Part Master:

a. New Part found message displays.

b. Verify input accuracy.

c. If input is inaccurate click NO and re-key Part Number.

d. If input is accurate and sale is to proceed click YES.

e. Stock Item Maintenance window is displayed.

i. Review displayed information for accuracy etc.

ii. Select Franchise.

iii. Select or modify Supplier – Supplier Code default set up in System config Maintenance.

iv. Modify other data as required – e.g.

Pricing.

g. Click Save and return to Parts Sales Order and Invoicing window.

1.7.4.3. Partial / Nil Supply / Related Parts:

a. Current Out of Stock Resolution window displays.

b. Review Resolution Status Panel to determine if display relates to a Supply Issue OR Related Parts.

c. If a Supply Issue consider if it is to be resolved Now or Later and if the Out of Stock Resolution window display should be suppressed for the balance of lines in the Order:

i. If later resolution is required and the Out of Stock Resolution window suppression is required tick the 'Don't show again….' Box then 'Select' and follow system prompts.

ii. If immediate resolution is required resolve supply issues using options available.

i. Alternate Parts.

ii. Stock Ordering.

iii. PO Reservation.

iv. Inter Branch Transfer.

Click Select to return to Sales Order & Invoicing window.

d. If display relates to Related Parts consider if all or some Related Parts are to be included in the Order and respond.

e. Click Select for Related Parts to be populated to the Sales Orders and system to return to the Sales Order and Invoicing window.

1.7.4.4. Special Price Applicable:

a. Special Pricing warning message appears.

b. Determine application of Special Price to the Line item.

c. Consider if initial decision re Special Price will apply for balance of Order – if Special Price parameter is set user will have the option to suppress the Special Price Warning for the balance of the order.

d. Respond to Special Pricing warning in line with decision at 'c' above.

e. If applicable and required tick the 'Don't show this message….' box.

1.7.4.5. Selling Prices below minimum:

a. Check if Ex GST message appears.

b. Consider required action:

i. If NO response system resets previous values if applicable and returns user to Sales Order & Invoicing window.

ii. If YES response user can proceed EXCEPT if selling price set in the Sales Order is below In-Stock Cost the transaction will not proceed until the issue is rectified.

The operation of delivering the products to customers is done by sending them with independent deliverers that are related to the company through a contact , but aren't an internal stakeholder, once their contract ends they no longer work with the company unless with a renewed contract.

Conclusion

Conclusion

Growth is one of the necessary preconditions for survival in the market. It obliges companies to be competitive on the international market while defending their share of the domestic market in international competition. This leads to increased complexity in the supply chain, pressure to reduce costs and improve service levels. In order to cope with the complexity and increasing customer demands, active supply chain management is a prerequisite.

As the supply chain is a network made up of three or more entities, directly involving the upstream and downstream processes of products, services, finance and / or information from source to customer, its management is a complex task.

Therefore, supply chain management must plan and control activities to achieve desired goals and shape the organization by coordinating activities, goals, interests and relationships, so that it can resolve conflicts and take informed decisions.

Therefore, in order to effectively coordinate decisions in the supply chain, integrated supply chain management is essential. The essence of integrated supply chain management is supply chain planning and control, which has three important aspects. The first aspect is functional integration, which involves decisions about purchasing, manufacturing and distribution activities within the company and between the company and its suppliers and customers. The second aspect is the geographical integration of these functions through physical installations located on one or more continents. The third aspect is the integration over time of supply chain strategy, tactics and operational decisions.

Businesses that focus on supply chain management can gain a competitive advantage by reducing costs while increasing customer satisfaction.

As early as 2007, Renault recognized these market trends and the potential for improvement that active supply chain management can offer. After the implementation of the new management concept, in the supply chain management in 2007, this article discussed the evaluation of these concepts. Measured in terms of availability, logistics costs and inventory, the results of current efforts show that there have been significant improvements in recent years.

The aim of this article is to discover the reasons for this evolution and to highlight the theoretical framework that can improve the performance of the supply chain. The goal of the thesis is to know how supply chain management works and what good or bad management may result into.

For Renault, the most relevant definition of supply chain management is the implementation of key business processes. As the processes implemented in 2007 and 2008 were based on the SCOR model, most comparisons are based on this model and Cohen's strategic supply chain management model.

In order to achieve the goal, the main modules necessary for a successful supply chain management available by Cohen were analyzed and opportunities for improvement were identified. The analysis is based on the theoretical results as well as on the practical experience of Renualt's supply chain managers.

The assessment of the strategic supply chain vision of the Renault academy case shows the following. The original vision of the Renault academy supply chain is to synchronize the supply chain, and its goal is to coordinate sales orders with purchase orders in less than a week. By analyzing its achievement and development, we can conclude that the current vision is expressed differently, but in the same direction. The main difference is that the current vision does not answer the question of how to get there. As a result, it is more difficult to coordinate activities along the supply chain. The suggestion for the future is to communicate the vision better.

The Supply Chain Management of spare parts is larger than the supply chain management of the original product itself and it's even harder and more complicated , and for that it is necessary to Adjust decisions about distribution channels, position inventory, and improve process efficiency which can create value for companies that are part of the supply chain.

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