

INSTITUTO TECNOLÓGICO Y DE ESTUDIOS SUPERIORES DE OCCIDENTE

Reconocimiento de validez oficial de estudios de nivel superior según acuerdo secretarial 15018,
publicado en el Diario Oficial de la Federación el 29 de noviembre de 1976.

Departamento de Economía, Administración y Mercadología
ESPECIALIDAD EN GESTIÓN DE LA CADENA DE SUMINISTRO



SUPPLY CHAIN OPTIMIZATION FOR CA DISTRIBUTORS

Trabajo de Obtención del Grado que para obtener el grado de
ESPECIALISTA EN GESTIÓN DE LA CADENA DE SUMINISTRO

Presentan: Elizabeth Berenice Becerril Márquez

Asesor: Dr. Salvador Cervantes

Tlaquepaque, Jalisco, México. 3 de Mayo, 2019

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Abstract

CA DISTRIBUTORS COMPANY is a global distribution Company for wire and cable products. In 2017 CA DISTRIBUTORS COMPANY for the first time started operations with an Asian Company named CHINA TELECOM. The program objective is to store power cable sourced from an Asian vendor (Shenzhen Products) in local warehouses located Latin America (Guadalajara, Mexico & Colon, Panama).

The product is shipped from Shenzhen China via ocean freight with an average transit time from six to seven weeks to both warehouses.

CA DISTRIBUTORS COMPANY and CHINA TELECOM agreed to store eight weeks forecast worth material in each of their warehouses in order to meet CHINA TELECOM's demand.

Every week CHINA TELECOM sends an updated forecast which will show up to twelve weeks expected usage, based on a simple addition of the first eight weeks CA DISTRIBUTORS COMPANY will place an order to the Chinese vendor.

The purpose of this document is to explain the reasons why choosing a 3PL at Manzanillo Port, is the most suitable options for better inventory management, rather than using a consignment program, or increasing inventory quantity in local warehouses. In addition to that, CA DISTRIBUTORS COMPANY will implement new service cost to CHINA TELECOM in order to satisfy customer demand and keep business profitability in all additional services offered.

1.1 DESCRIPTION OF THE INTERVENTION PROBLEM

CA DISTRIBUTORS Company is a leading global distributor of network, security, electrical, electronic and solutions. CA DISTRIBUTORS has presence in over 50 countries, 300 cities and has over 65,000 products in stock.

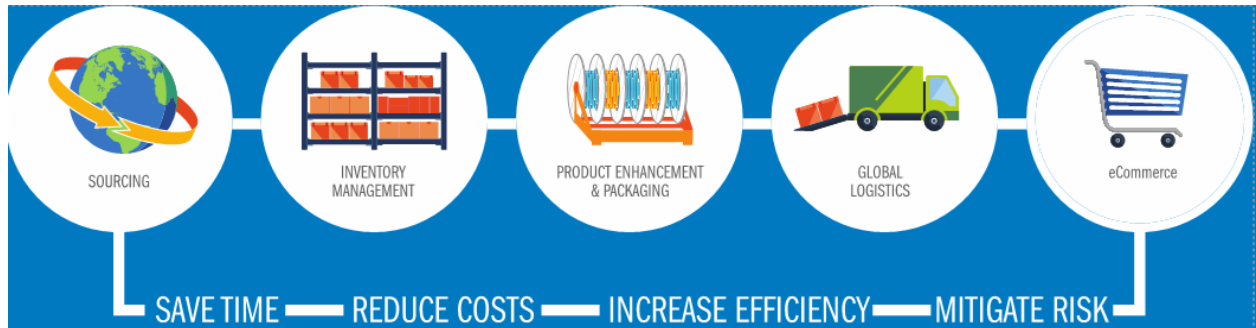


Image 1: CA DISTRIBUTORS Company Supply Chain Solutions Diagram – Own Source

Company Shenzhen products is a Chinese cable manufacturer located in Jiangsu province. Company Shenzhen products has developed high-tech cable products and has presence in countries such as Singapore, Germany, USA, Italy, Japan and Hong Kong.

CHINA TELECOM is a leading Chinese information and communication company provider. CHINA TELECOM has presence in more than 170 countries and regions, and currently serves more than three billion people around the world. With operations increasing in Latin America, CHINA TELECOM decided to open two distributions centers, one located in Guadalajara Mexico, that will be sourcing material to North America and one located in Colon, Panama in order to source materials in South America (Reuters, 2018)

Before operating the business with CA DISTRIBUTORS, CHINA TELECOM used to source the products directly through Chinese vendor named Shenzhen products.

Shenzhen Products always had available stock for any urgent demand; however transportation lead-time from China can go from six to eight weeks.

CHINA TELECOM had to order the exact amount of material that was going to use for the upcoming six to eight weeks, if there was any demand ramp up material had to be shipped by air which can approximately cost \$5,000 USD per shipment to CHINA TELECOM. Total air shipments per year could go from five to ten, which represent an annual cost from \$ 25,000 USD to \$50,000 USD.

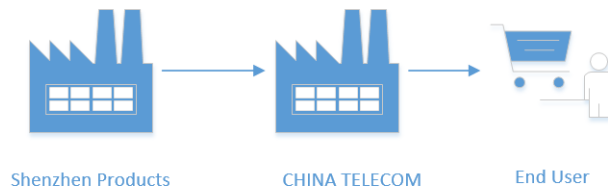


Image 2. Initial CHINA TELECOM business scheme – Own Source

First interaction between CA DISTRIBUTORS and CHINA TELECOM was during an Electronic and Electric tradeshows in Hong Kong back in 2016. Since 1966 the Hong Kong Development Council (HKTDC) has promoted and developed Hong Kong Trade around the world. Every year the HKTDC organizes a yearly electronic and electric exhibition in Hong Kong. (The Hong Kong Trade Development Council (HKTDC), 2019).

CA DISTRIBUTORS started business operations with CHINA TELECOM in 2017, under the terminology of Supply Chain Solutions for cable distribution in Latin America.

The new business scheme was presented to CHINA TELECOM and despite the fee charged by CA DISTRIBUTORS for inventory management; CHINA TELECOM agreed using a new business scheme that will immediately reduce additional logistics charges.



Image 3. New business scheme development – Own Source

During these two years, CA DISTRIBUTORS Company has realized that customer CHINA TELECOM forecast is extremely inaccurate. When the business started all parties agreed in storing and managed eight weeks forecast worth of material, however this amount has not been enough at times which is causing line down incidents, this directly affecting CA DISTRIBUTORS Company by incurring in poor score card results and high risk of losing the business.

The score card is an annual evaluation done by customer CHINA TELECOM that is focused on the following areas:

1. Technique

- R&D capability for advanced technology

- Ability for mass production

- Maturity of new products

- Technical communication performance

Technical support capability

2. Quality

Customer complaint

Quality problem

Prompt quality problem solving

Effectiveness of problem solving

3. Responding time

Responsibility ability for supply requirements, such as supplying flexibility/ early response/
timely notice

The responsibility about exceptional and urgent issues

Documentation of the critical commitments: provision of relevant information and status

4. Delivery

Demand meet rate

Performance of preparing safety stock or raw material according to customer requirement

No serious shortage issue

5. Cost

Price competitiveness

Cost reduction

6. Environment

Environment and social responsibility performance

The results of the 2017 yearly supplier/ score card evaluation from CHINA TELECOM to CA DISTRIBUTORS were very poor totaling 73.56 points out of 100. Future and continuing failure on the results can represent a possible cancelation of the contract.

In 2018, CA DISTRIBUTORS delivery performance improved, from 73.56 to final 90.0 out of a 100.

2017: Total Score 73.56				2018: Total Score 90.9			
Anixter, Inc.(442068) Total Scores:73.56 Grade:				Anixter, Inc.(442068) Total Scores:90.9 Grade:			
Item	Weight	Scores		Item	Weight	Scores	
Technique(16%)				Technique(16%)			
1.1 R&D capability for advanced technology/ new product/new technics	2	0.50		1.1 product roadmap	2	2.00	
1.2 Ability for mass producing new product/technology/technics according to it's schedule	2	0.50		1.2 Sample performance	4	4.00	
1.3 Maturity of new products	2	1.50		1.3 Product Change Notification	10	10.00	
1.4 Technical communication performance	1.5	1.00		Quality(20%)			
1.5 Technical support capability	1.5	1.00		2.1 Certification and assessment of quality management/quality system	2	2.00	
1.6 Whether supplier has the special technical team for Huawei	1	0.00		2.2 Timeliness and effectiveness of quality problem handling	10	8.00	
Quality(20%)				2.3 Quality KPI-Critical Issue	4	2.40	
2.1 LAR	3	3.00		2.4 Quality KPI-LAR	4	3.00	
2.2 Customer complaint	6	4.00		Responding(20%)			
2.3 Batch quality problem	3	3.00		3.1 Reply in time	10	8.67	
2.4 Timeliness of quality problem handling	2	2.00		3.2 High level support	10	9.33	
2.5 Effectiveness of quality problem handling	2	2.00		Delivery(30%)			
2.6 EO & SCAR	2	2.00		4.1 On time delivery	10	9.25	
2.7 Whether Huawei is notified of PCN on a timely basis	2	2.00		4.2 EPD meet rate	10	9.50	
Responding(15%)				4.3 Inve/Shortage	5	4.75	
3.1 Responsibility ability for supply requirements, such as supplying flexibility/ Diaphaneity of supplier's key activity/Early alarm of supplier's problem/Timely notice of supply market change	3	2.00		4.4 Team support	5	5.00	
3.2 The responsibility about the exceptional and urgent issue	2	0.89		Cost(10%)			
3.3 Documentation of the critical commitments, provision of the relevant status and feedback (in written form or orally), whether the communication method is simple, convenient, rapid and effective	3	2.67		5.1 Price competitiveness	4	4.00	
3.4 Responding ability for commercial requirements,such as response to LC, LT, DT, PT, Contract, RQDS and RFI	3	2.00		5.2 Supplier contribution in cost control and reduction	6	6.00	
3.5 Responding ability for technology and quality,Technical support during initial stages,quality pr oblems solving during late stages	2	2.00		Environment and CSR(4%)			
3.6 Responding ability for financial,Timeliness, accuracy and completeness of the invoices	2	2.00		6.1 Environment Management System (EMS)	1	0.00	
Delivery(20%)				6.2 Pro-environment characteristics of the product	1	1.00	
4.1 Demands meet rate (the rate on scheduled delivery)	9	9.00		6.3 Pass the Social responsibility, health, and security Authentication or assessment(Weight=1)	1	1.00	
4.2 The performance of preparing safety stock or raw material according to Huawei requirement?	6	6.00		6.4 Employment of child labor and protection of the minors and women(Weight=1)	1	1.00	
4.3 No serious shortage issue in Huawei	5	3.00					
Cost(30%)							
5.1 Price competitiveness in Huawei (relative to peers)	12	6.00					
5.2 If cost reduction meets Huawei requirements per year/half year/season	12	6.00					
5.3 Contribution to TCO reduction	4	3.00					
5.4 Timely informing Huawei of the market price change and adjusting the transaction price	2	2.00					
Environment and CSR(5%)							
6.1 Environment and social responsibility performance	5	4.50					

Image 4. CA DISTRIBUTORS 2017 vs 2018 score cards results – Own Source

After several forecast analysis done by CA DISTRIBUTORS, top management has determined that is nearly impossible to satisfy customer demand with the initial eight weeks commitment. Based on this tendency, CA DISTRIBUTORS has decided to increase inventory up to ten weeks demand, however every once in a while there are shortages that is costing around \$5,000 per event in order to fly in the material from China to Mexico.

The intervention will consist in CA DISTRIBUTORS Company supporting Chinese vendor (Shenzhen products) in setting up a 3PL provider for five weeks safety stock to be stored at Manzanillo, Mexico.

The 3PL will be storing additional five weeks inventory for which Shenzhen Products will be liable. This means CA DISTRIBUTORS will store initial eight weeks and Shenzhen Products five weeks safety stock, totaling thirteen weeks. This strategy will help reduce inventory cost and risk for CA DISTRIBUTORS Company and avoid any penalization fees from China TELECOM as well as scorecard results improvement.

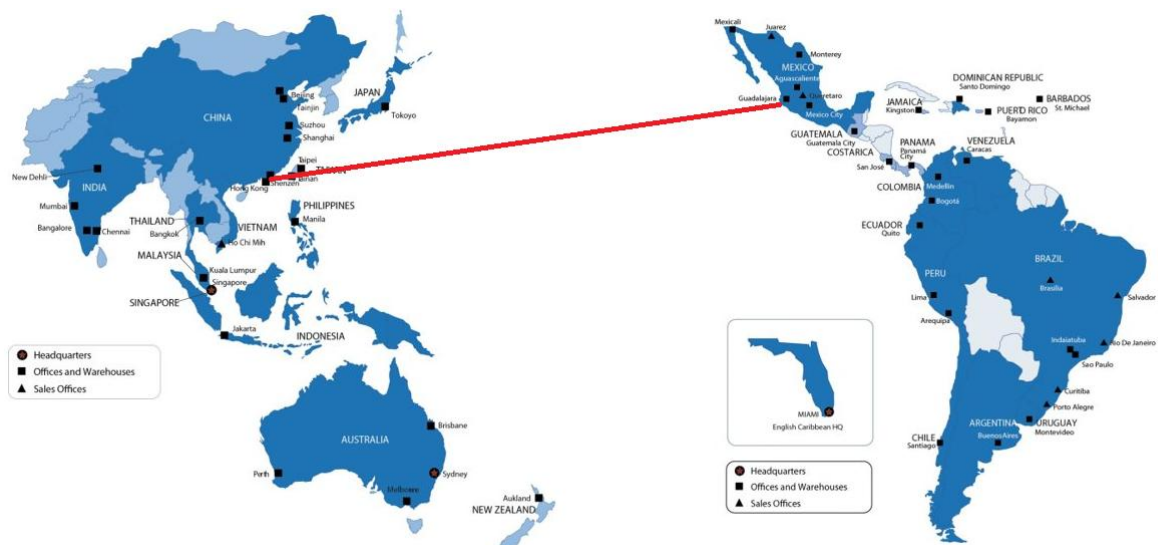


Image 5: CA DISTRIBUTORS representation of Shenzhen products Warehouse location and CA DISTRIBUTORS Company Warehouse – Own Source

1.2 OVERALL OBJECTIVE

The overall objective is to reduce CA DISTRIBUTION inventory cost and financial liability, as well as penalization fees and score card results improvement that will lead to growth opportunities, while assuring material availability at all times including considering demand ramp up.

1.2 PARTICULAR OBJECTIVES

The particular objectives for CA DISTRIBUTORS to implement a new cost & fee strategy for all “additional services” provided to CHINA TELECOM that were not considered in the initial contract and that represent additional cost that is draining the operation profitability.

Implementing this “additional services fee” will improve business profitability and decrease quality incidents that might occur due procedures failure and that directly impact CA DISTRIBUTORS yearly score card results.



Image 6: CA DISTRUBUTORS better practices representation- Own Source

CA DISTRIBUTORS will support Shenzhen products with the negotiation and contact of 3PL located in Manzanillo, Mexico free trade Zone in order to store five weeks worth inventory.

CA DISTRIBUTORS has researched and contacted certified 3PLs located in the area and has prepared the following comparison table for Shenzhen products to choose the most suitable option.

3PL Vendor	Location	Inventory Control	Cost*	Industry Experience	Website
Woodward Mexico	Av. Teniente Azueta 25-1 Col. Burócrata, C.P. 28250 Manzanillo, Colima,	Yes	\$13	Food Automotive Mining Oil & Gas Wood Metal Special Projects	https://www.woodward.com.mx/
Grupo Cargoquin	Boulevard Miguel de la Madrid No, 308 Local 3 Col.	Yes	\$12	Automotive Electronic	https://www.cargoquin.com

	Tapeixtles C.P. 28239 Manzanillo Colima,				
Grupo Sercomex	Less tan 5km away from the port	Yes	\$12	All type of products	https://www.sercomex.com.mx

* Cost per pallet position in USD – Own Source

Based on the previous information available, Shenzhen products has determined that the most suitable option is Grupo Cargoquin. The main reason is the previous working experience and service satisfaction CA DISTRIBUTORS has from working with Grupo Cargoquin for the past ten years.

In regards the new service fees politics to be implemented, CA DISTRIBUTORS is considering the following services:



Image 7: CA DISTRIBUTORS Cost representation – Own Source

Cost Name	Description	USD Value
Freight	Any additional freight besides local deliveries incurred due CHINA TELECOM requirement need and confirmation. This could be Air or Sea	Vary according volume. Range goes from \$5000 USD to \$50,000 USD. Upon confirmation from Sales Representative
Cost Pass Through	Any additional fees incurred due lack of information originated from CHINA TELECOM	Vary according the incident <ul style="list-style-type: none"> • Demurrages at port - \$250 USD per day • Overtime at any point of cargo arrival to destination port to final destination - \$150 USD per person per day.
Cost to Serve Small Orders	MOQ per order is \$250 USD	Any order below \$250 USD will have a \$250USD cost to serve fee
Restocking	An amount of money charged by a company or store for accepting returned goods and giving the customer their money back	25% of invoice value

(Cambridge Dictionary, 2019)

1.3 CONTEXT AND ECONOMIC AND STRATEGIC JUSTIFICATION – Own Source

As previously mentioned CHINA TELECOM is a leading telecommunications company that was just founded in 1987 and that is currently employing 180,000 people around the world (Reuters, 2018). Main CHINA TELECOM competitors are Cysco systems and Motorola (Reuters, 2018).

CHINA TELECOM became the world’s seventh largest tech firm with presence in more than 170 countries. (The Washington Post)

1.3.1 TELECOMMUNICATION EVOLUTION IN MEXICO

Mexico’s evolution in the telecommunication sector comes from thirty years history of partially privatizing services (Prieto, 2011).

Current key plays in the sector are focused in five main services, such as mobile, fixed telephone, internet, broadcast and per-pay TV. This key players are America Movil, Televisa, Grupo Salinas. (Prieto, 2011)

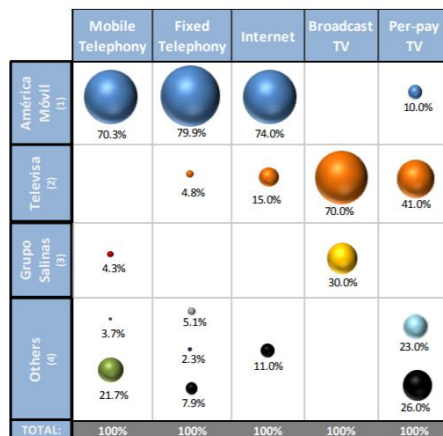


Image 8. Telecomm Market Share per Service per Player (Prieto, 2011)

Internet penetration in Latin American had been rapidly increasing and is one of the most dynamic sectors in Mexico (Prieto, 2011).

Country	Internet users per 100 inhabitants*	Percentage of households with a computer	Percentage of households with Internet access
Argentina	28.1	36.4	27.5
Brazil	34.8	20.8	15.4
Canada	72.4	79.1	72.1
Chile	32.5	36.4	22.1
Colombia	17.6	27.4	8
United States	71.2	70.2	61.7
Mexico	21.6	22.1	12
Uruguay	40	27	13.5
Venezuela	25	11.9	3

Source. International Telecommunication Union, Statistical Profiles 2009 Americas
 (*) For the year 2008

Image 8. Internet use and computer penetration, year 2007 (Select countries in the Americas)
 (Prieto, 2011)

1.3.2 EVOLUTION OF 3PL INDUSTRY

A 3PL stands for a third party logistics, which is an external supplier that manages s supply chain services such as transportation, consolidation, warehouse management, custom brokerage, consulting services and order processing. (Incae Business Review, 2009).

Back in 2009 the 3PL industry was considered relatively a young industry in Central America, while 2006 in the USA had yearly sales of \$85 million USD (Incae Business Review, 2009)

According to Grand View Research the size of the third party logistics market is expected to reach \$1.2 USD trillion by 2025, which gives plenty of options and growth opportunities in the current globalized market (Grand View Research, 2019)

Due to new technologies trend is to transform 3PL services due digitalization, automation and data collection capabilities (Grand View Research, 2019)

Based on the expected revenue from 2014 to 2025, the following end-users are expected:

- Manufacturing
- Retail
- Healthcare
- Automotive

1.4 SCOPE AND LIMITATIONS

CA DISTRIBUTORS COMPANY limitation will be warehousing capabilities specifically in Guadalajara, due the lack of racking available for storage. CA DISTRIBUTORS can only store a thousand pallet positions in each of their warehouses.

On the other hand CHINA TELECOM does not share accurate and relevant project data that could help CA DISTRIBUTORS for decision making, for that reason using historical usage data will be key for decision making.

CHAPTER 2. THEORETICAL FRAMEWORK

The Department of Supply Chain and Information Management from Hang Seng Management College, has researched and analyzed the behavior of spare parts and the complexity of logistics networks. The analysis is extended from the traditional on-site stocking management in order to improve profitability. (IEEE International Conference on Industrial Engineering and Engineering Management, 2017).

The objective of the analysis is to reduce the inventory excess for spare with non-stationary demand parts by using a reverse logistics network which will allow selecting optimal location and manufacturing facilities. (IEEE International Conference on Industrial Engineering and Engineering Management, 2017).

This supply chain is specifically characterized by handling high spare parts cost and low demand with high uncertainty. Since handling this type of Supply Chain represent high maintenance and high management cost, the trend is to outsource the process to service providers located in multiple locations that will be able to supply during emergencies and still assure short lead times. (IEEE International Conference on Industrial Engineering and Engineering Management, 2017).

The research conclusion proposed an inventory pooling or sharing strategies with logistic partners for cost optimization (holding, expedited shipments, stock out). In case customer has a ramp up situation, there demand could be satisfied by local stocking facility. (IEEE International Conference on Industrial Engineering and Engineering Management, 2017).

Even do the above theory has specifically applied for spare parts logistics in different sectors, such as healthcare, military and aerospace, this theory is suitable for the power cable analysis that is being currently done for CA DISTRIBUTORS and CHINA TELECOM program,

since the essence of the program is related to handling high cost, low demand products through different logistic partners which will be able to decrease the risk of having overstock.

In addition to that it is important to describe the following key concepts that will allow a better understanding of the theoretical framework.

- a) Supply Chain Management: is a conglomerate of activities that help maximize resources and give the customer an competitive advantage. These activities go from product development, sourcing, production, logistics as well as information systems. (North Carolina University, 2017)
- b) Physical flow: refers to the movement and storage of goods and materials and Information flows (North Carolina University, 2017)
- c) Information flow: is referring to the information that allow the activity coordination of all supply chain partners. (North Carolina University, 2017)
- d) Forecasting: according to the definition provided, forecasting is determining what is going to happen in the future by analyzing historical and current available data. (Market Business News)

CHAPTER 3 - METHODOLOGICAL FRAMEWORK

Based on the methodology applied by the Department of Supply Chain and Information Management from the Hang Seng Management College, the inventory and excess analysis consist in directing distribution flows from a centralized distribution center to country depots, and finally city depots. (IEEE International Conference on Industrial Engineering and Engineering Management, 2017). The use of a 3PL methodology for inventory management of CA DISTRIBUTION is supported by the methodological framework mentioned above.

The analysis will start with the data collection such as the past usage, part cost, on hand, on order and target inventory levels (IEEE International Conference on Industrial Engineering and Engineering Management, 2017).

The information is provided through a weekly forecast sent by CHINA TELECOM where we will be able to analyze the data for the incoming demand. This will allow determining the excess inventory quantity based on the following calculation

= On Hand + On Order – Months of forecast usage (IEEE International Conference on Industrial Engineering and Engineering Management, 2017).

The following table is a representation the weekly forecast sent to CA DISTRIBUTORS by CHINA TELECOM. This particular forecast is showing how inventory liability will be shared with the vendor Shenzhen products.

Location	Huawei Item	CA DISTRIBUTORS INVENTORY LIABILITY								SHENZHEN PRODUCTS LIABILITY			
		06-May-19	13-May-19	20-May-19	27-May-19	03-Jun-19	10-Jun-19	17-Jun-19	24-Jun-19	01-Jul-19	08-Jul-19	15-Jul-19	22-Jul-19
in Guadalajara Mexico	25030671	6,000	9,600	9,600	9,600	9,600	9,600	6,000	6,000	6,000	6,000	6,000	6,000
		61500	51,900	42,300	32,700	101,100	91,500	87,500	81,500	75,500	69,500	63,500	57,500
	25030749	5,000	10,000	10,000	10,000	10,000	7,200	5,000	5,000	5,000	5,000	5,000	7,200
		80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000
	25030891	80,000	80,000	65,000	65,000	65,000	60,000	60,000	60,000	70,000	70,000	70,000	70,000
		160,000	160,000	160,000	200,000	80,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000
		-25,500	54,500	-10,500	124,500	139,500	79,500	139,500	79,500	129,500	59,500	-10,500	-80,500
Location	Huawei Item	06-May-19	13-May-19	20-May-19	27-May-19	03-Jun-19	10-Jun-19	17-Jun-19	24-Jun-19	01-Jul-19	08-Jul-19	15-Jul-19	22-Jul-19
in Colon Panama	25030671	10,000	5,000	5,000	5,000	5,000	10,000	10,000	5,000	5,000	5,000	5,000	5,000
		184,000	179,000	174,000	169,000	164,000	154,000	144,000	139,000	134,000	129,000	124,000	119,000
	25030749	10,000	10,000	10,000	10,000	10,000	20,000	20,000	20,000	10,000	10,000	10,000	10,000
		202,000	192,000	182,000	172,000	162,000	142,000	122,000	102,000	92,000	82,000	72,000	62,000
	25030891	150,000	150,000	120,000	120,000	120,000	250,000	250,000	150,000	150,000	150,000	100,000	100,000
		160,000	160,000	312,000	120,000	328,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000
		224,000	74,000	266,000	266,000	146,000	224,000	94,000	-56,000	-206,000	-356,000	-456,000	-556,000

Image 9. CHINA TELECOM forecast representation expressed in meters – Own Source

CHAPTER 4. MEASUREMENT OF THE PROBLEM

Based on the initial statement of this document, the problem is the frequency of flying urgent material from China to Mexico or Panama.

According to the initial business model, in which CA DISTRIBUTORS is not involved in the Supply Chain Management, CHINA TELECOM would have to pay a ranging cost from \$25,000 USD to \$50,000 USD for urgent air shipments. However if CA DISTRIBUTORS does not have enough inventory in their HUB, it will cost them the same amount of money to fly in urgent material. This is the main reason why is so important to get Shenzhen products involved in the process in order to assure the supplying demand from the customer is covered.

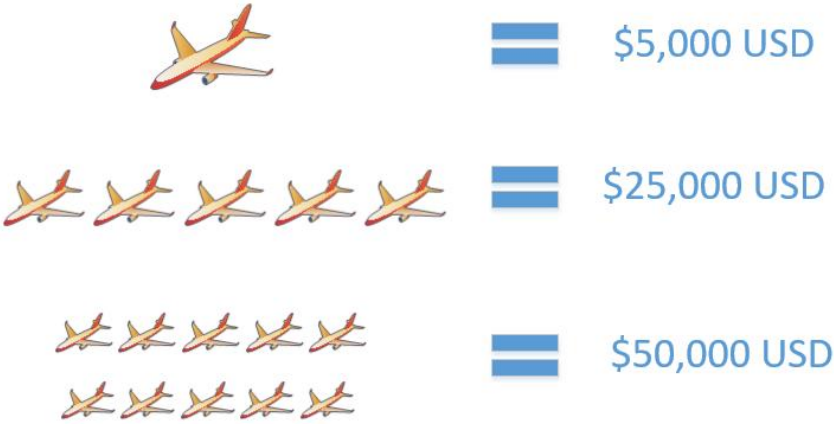


Image 10. CHINA TELECOM air freight cost representation – Own Source

The second measurement will be the amount of “additional fees” billed to customer CHINA TELECOM as part of the new pricing strategy.

CHAPTER 5. ANALYSIS OF THE PROBLEM

The main problematic is the forecast uncertainty that is forcing CA DISTRIBUTORS COMPANY to have a larger stock on hand in order to avoid shortages for material; however the financial risk for CA DISTRIBUTORS COMPANY is considerably increasing.

The lack of information provided by the customer and long lead-times represents a problematic to the accuracy of inventory calculation

CHAPTER 6. PROPOSALS FOR IMPROVEMENT AND IMPLEMENTATION

CA DISTRIBUTORS has to keep building a strong trust relationship between CHINA TELECOM and Shenzhen Products in order to be able to obtain more reliable information that would be able to help decide to go back to the previous operation model, the program will become inefficient and expensive to handle.

Analysis has shown the following areas of optimization and improvement achieved ever since CA DISTRIBUTORS has been involved in the operation.

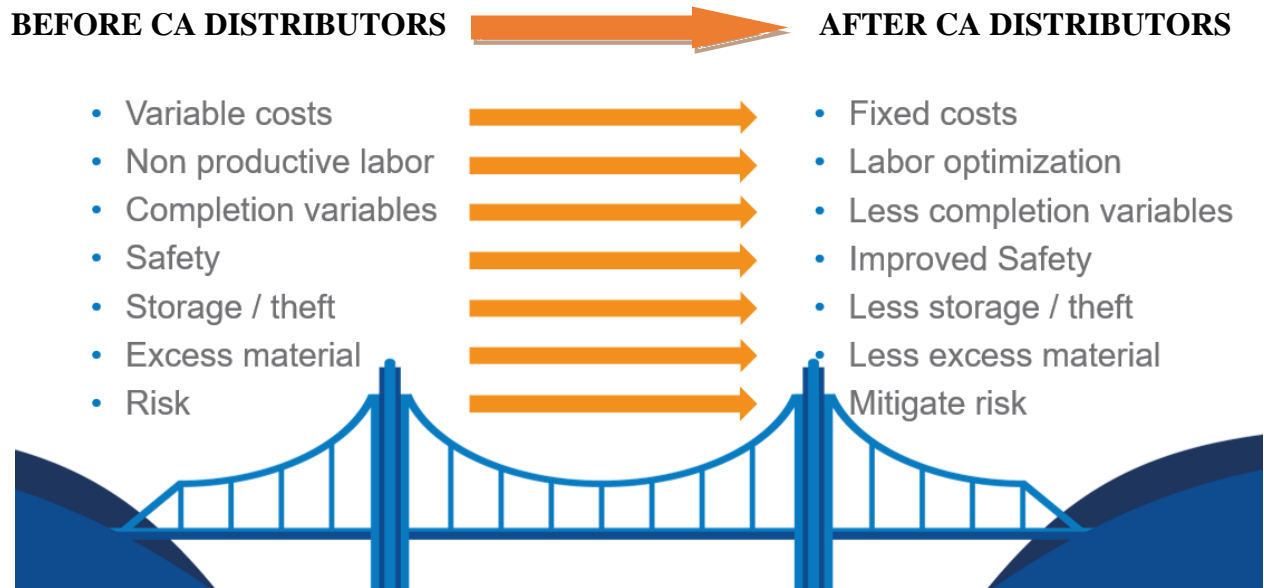


Image 6: CA DISTRIBUTORS optimization areas representation – Own source

Bellow is the detail of saving concepts for implementing the 3PL str and charging fees for additional services

- Total freight savings:
 - Air freight cost: \$5,000 USD per shipment
 - Total air shipments per year: 10**
 - Total air shipment cost: **\$50,000USD** per year
 - ** Estimated annual air shipments

- Cost Past Through
 - Demurrages: \$250USD per shipment
 - Total shipments per year: 30 shipments**
 - Total demurrage expense: **\$7,500 USD**
 - **Estimated annual shipments
 - Overtime: \$150USD per person per day
 - Total average overtime days per shipment: 2 days
 - Total Shipments per year: 30 shipments
 - Total overtime charges: **\$9,000 USD**
 - **Estimated annual shipments

- Cost to serve small orders: \$250 USD fee charge for orders worth less than \$250 USD
 - Total orders worth less than \$250USD: 50 orders**
 - Total MOQ fees per year: **\$12,500 USD**
 - **Estimated annual order quantity

- Restocking fee: 25% of invoice value
 - Average invoice value: \$250,000 USD**
 - Average returns per year: 2**
 - Total restocking fee per invoice: \$62,500 USD

Total restocking fee per year: **\$125,000 USD**

** Estimation values based on historical data

- Total operational savings/earnings: **\$204,000 USD per year!**
- Annual Sales 2018 - \$ 10 USD million per year
- Total operational savings represent: 2.04% of annual sales

CHAPTER 7. CONTROL

The project control will be through a quarterly both internal and external performance review with all departments involved within CA DISTRIBUTORS and a final sales meeting with customer (CHINA TELECOM)

The areas involved during this internal performance review will be as follows:

1. Sales – Efficiency and effectiveness while communicating the message from the customer to other areas.
 - Was the sales order entered in the system on time?
 - How many sales orders were entered per day?
 - Was the cost and price of the goods correctly communicated to the purchasing team?
 - Was the forecast analyzed and discussed with the Procurement and Operations area for space capabilities?
2. Operations - During the evaluation, all operational areas as well as the sales will be providing evidence of how individual's performance affected the final outcome and perception from the customer.
 - Were the sales orders processed right after credit release?
 - Was the material inspected and clearly labeled?

- Was all documentation, such as packing list & checklist prepared and sent to the sales team for final review?
- Did the truck operator check the date accuracy on the proof of delivery received after delivering the cargo?
- How many sales order did the Operations team processed per day?
- Was the proof of delivery sent to the sales team within twenty four hours after cargo delivery?

3. Customer service – Measure daily customer service complaints received from CHINA TELECOM

- How many emails did the customer service team response in less than twenty two hours from customer notification?
- How many complaint emails did the customer service team received in a daily basis?
- How many quality complaints did CA DISTRIBUTORS received from CHINA TELECOM?
- What's the average response time for quality related issues?

CONCLUSIONS & RECOMMENDATIONS

- a) After current situation analysis and before any intervention, it's important to realize that CA DISTRIBUTORS did not consider any kind of additional fees for activities that were not initially requested by the customer. In addition to that the lack of experience that CA DISTRIBUTORS had handling volatile demand in the telecommunication sector created massive problems in terms of over stock.
- b) CA DISTRIBUTORS will have to keep close communication with both Shenzhen products & CHINA TELECOM in order to keep identifying areas of opportunity and most of all get all partners involved in the process. CA DISTRIBUTORS need to enforce Shenzhen products in order to share the inventory liability, especially since Shenzhen products has more valuable experience handling the customer
- c) CA DISTRIBUTORS has to raise awareness through the sales team about the importance of identifying all activities in which the company gets involved in order to assure the material arrives on time to CA DISTRIBUTORS warehouse and finally to the customer warehouse, since those activities represent a value added to the customer that is not being charged and that is costing the company money in order to be performed.
- d) CA DISTRIBUTORS will have to keep a close eye on international trade trends and regulations in order to avoid any penalization due to unfair trade practices that are usually performed by Chinese companies in order to increase their market share internationally.

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