



**Arab Academy**

for Science , Technology and Maritime Transport



The International Maritime Transport  
and Logistics Conference

**“MARLOG 13”**

Towards \_\_\_\_\_  
**Smart Green Blue  
Infrastructure**

3-5 March 2024 - Alexandria, Egypt





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**Improving the Quality of  
Services in a Logistics  
Company Using the Pareto  
Analysis**





## INTRODUCTION

- Service quality is an important means to successfully compete in the service sector;
- The service is not a tangible good, and measuring its qualities is complex;
- The service is produced when it is delivered to the customer;
- Its quality can only be controlled once the customer tests it;
- A company's success in business depends to a significant extent on the quality of all activities directly or indirectly related to providing services.





# QUALITY OF SERVICES

## Five global dimensions of service quality:

- 1. Quality characteristics of the tangible part:** The tangible part of a service is what you “see”, i.e. the physical indicators such as buildings, equipment, and appearance of the contact staff etc.
  - 2. Credibility:** the company keeps its promise to its stakeholders, i.e. delivering the promised service properly and efficiently.
  - 3. Friendliness:** the willingness to serve customers promptly and efficiently;
  - 4. Safety:** it refers to the level of competence and attention to detail and customer concerns that the service provider gives, and that gains the confidence of the customers.
  - 5. Empathy:** the "commitment to the client", a willingness to understand the client's exact needs and find the answer to them, providing a caring, customized service that meets the customer's needs.
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# Description of the DB SCHENKER GBS BUCHAREST SRL



- Number one freight forwarder in Romania, with branches in Bucharest, Cluj-Napoca, Arad, Iasi, and Constanta;
- More than 60 working points in all regions of the country.
- The company offers a full range of road, rail, air, and sea transport services, logistics or customs services, and port operations.
- Main services offered: shipping, chartering, provisioning of sea and river vessels; cargo handling, shipping; sorting, packaging, distribution of goods; storage and warehousing.



# EVOLUTION OF FINANCIAL INDICATORS

## Description of the DB SCHENKER GBS BUCHAREST SRL

Year	Turnover (EUR)	Net Profit (EUR)	Debt (EUR)	Fixed Assets (EUR)	Current Assets (EUR)	Equity capital (EUR)	Employees (average)
2022	30232285.4	1103443	3578367.2	996472.6	12904010.4	290622	940
2021	26390357	1222706	2932546.4	593907.8	10381571.2	290622	933
2020	24976070	1420884.8	4368227.4	410854.6	10313494.2	290622	877

# IMPROVING SERVICE QUALITY IN DB SCHENKER GBS USING THE PARETO ANALYSIS

## Research objectives

- To conduct a comprehensive analysis of the maritime transport services provided by DB SCHENKER GBS Bucharest SRL;
- To identify and prioritize the key problems affecting the quality of maritime transport services using the Pareto analysis;
- To propose and prioritize the optimal solutions.

# RESEARCH METHODOLOGY

- The study employed a **quantitative methodology**.
- **Research instrument:** questionnaire employing variables:
  - the frequency of use of the shipping service;
  - the customers' opinions on the impact of different factors (price, time, safety);
  - the quality of service delivered by the company;
  - the main customers' complaints regarding the maritime transport service.
- For the paper, only the customers' complaints were analyzed using the Pareto method.
- **Data collection:** the questionnaire was applied online, using Google Forms;
- **Research method:** Pareto analysis, to find the critical factors affecting the company's performance.

# RESEARCH METHODOLOGY



## Description of the Pareto Method

- Based on the Pareto Principle (80/20 rule)
- Identifies problems and their frequency and emphasizes the optimal solutions;
- Advantages: it helps solve a problem efficiently by identifying and ranking its main causes in the order of their importance;
- It highlights the critical, most important 20% of the causes, which generate circa 80% of the problems the company is facing, offering a visual representation of problem areas, and facilitating clear communication and decision-making.



# RESEARCH METHODOLOGY

**Research sample:** 60 of the most important customers of DB Shenker, such as:

- **Roche:** a company offering healthcare products and services It has a range of products for patients, doctors, and hospitals.
- **Bosch:** systems and components for the automotive industry, manufacturing of consumer products (power tools, household items), industrial construction engineering services, packaging technology, etc.
- **Corning Incorporated:** an American multinational technology company specializing in glass, ceramics, and other related materials and technologies, including advanced optics, primarily for industrial and scientific applications.
- These three companies, along with other smaller customers, provided most of the complaints that were analyzed in this study.

# IMPROVING SERVICE QUALITY IN DB SCHENKER GBS USING THE PARETO ANALYSIS

Identification of problems reported by customers regarding the quality of service in maritime transport

Crt. no.	Reported problems
1	Incorrect placement of dangerous/non-hazardous goods
2	Exceeding transport time
3	Incomplete documentation for the transport of goods
4	Poor communication between the client and the import/export team
5	Poor ventilation of goods
6	Essential systems for improving navigation safety
7	Total cost of transport

# IMPROVING SERVICE QUALITY IN DB SCHENKER GBS USING THE PARETO ANALYSIS



## Identification of the causes of each reported problem

1. *Incorrect placement of dangerous/non-hazardous goods:* Goods destined for loading are often handled and stored, and the packaging and even the goods may be damaged;

2. *Exceeding transport time:* when the cargo has not been delivered within the agreed time or if the documents have not been completed on time. The company bears the related costs.

3. *Incomplete documentation for the transport of goods:* only if the beneficiary has the original bill of lading received from the bank which ordered the payment, to be made to the account of the concerned importer. The company may experience poor management of daily work documents.

# IMPROVING SERVICE QUALITY IN DB SCHENKER GBS USING THE PARETO ANALYSIS



## Identification of the causes of each reported problem

4. *Poor communication between the client and the import/export team:* Through the Technical Support Department in Germany. The response time to customers' complaints is quite long, leading to customer dissatisfaction.

5. *Poor ventilation of goods:* Because the ship crosses different temperature zones, there are large differences in humidity, which can degrade the cargo.

6. *Essential systems for improving navigation safety:* The sealed container(s) intended for carriage will leave the country of origin only after its representative at the port of loading receives the written instructions for the transport documents.

7. *Total cost of transport:* Numerous factors may increase the cost of transport.

topics

# IMPROVING SERVICE QUALITY IN DB SCHENKER GBS USING THE PARETO ANALYSIS

## Number of reported customer complaints

Crt. no.	Customer complaints	Number of complaints
1.	Incomplete documentation	18
2.	Exceeding transport time	15
3.	Incorrect placement of goods	9
4.	Poor customer-team communication	7
5.	Increased costs	6
6.	Incomplete safety systems	3
7.	Incorrect cargo ventilation	2
	<b>Total</b>	<b>60</b>

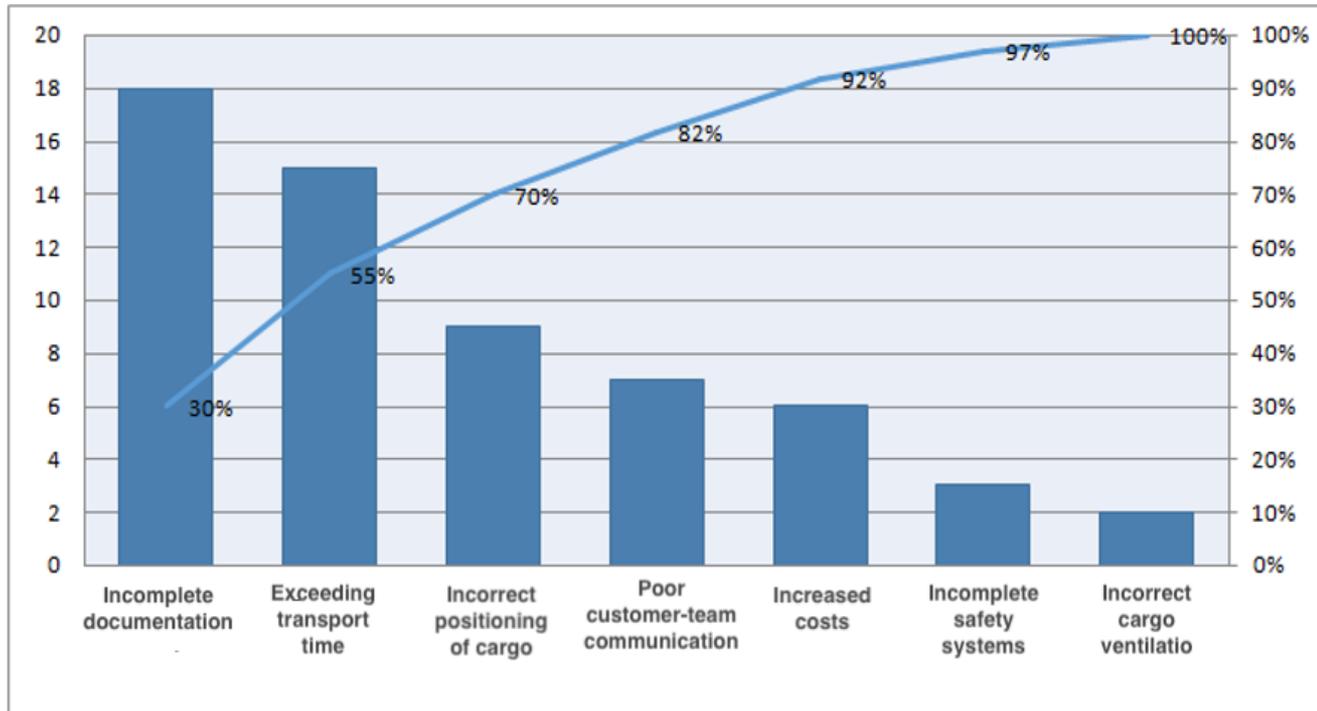
# IMPROVING SERVICE QUALITY IN DB SCHENKER GBS USING THE PARETO ANALYSIS

## Pareto analysis of the customer complaints of DB SCHENKER GBS

Crt. no.	Complaints	Frequency of complaints	Cumulated frequency	Percent
1.	Incomplete documentation	18	18	30%
2.	Exceeding transport time	15	33	55%
3.	Incorrect placement of cargo	9	42	70%
4.	Poor customer-team communication	7	49	82%
5.	Increased costs	6	55	92%
6.	Incomplete safety systems	3	58	97%
7.	Incorrect cargo ventilation	2	60	100%

# IMPROVING SERVICE QUALITY IN DB SCHENKER GBS USING THE PARETO ANALYSIS

## Pareto diagram



# IMPROVING SERVICE QUALITY IN DB SCHENKER GBS USING THE PARETO ANALYSIS

## Description of the Pareto Method

- The first 4 reported problems account for more than 80% of the dissatisfaction of customers: incomplete documentation, extended transport time, incorrect placement of cargo, and poor communication between the customers and the import-export team;
- If the company manages to solve them, more than **80%** of the customer issues with the company will be solved effectively;
- Solving the first three causes (incomplete documentation, exceeding transport time, and incorrect placement of cargo) can solve around **70%** of the company's current problems.

# IMPROVING SERVICE QUALITY IN DB SCHENKER GBS USING THE PARETO ANALYSIS

- ***Incomplete documentation:*** The most important problem the company faces; Causes: short processing time for the transport data leading to erroneous transport documents, negligence of the employees regarding the transmission of updated documents to customers or various authorities in time, or even the loss of official documents before loading cargo onto the ship;
- ***Exceeding transport time:*** transport or customs documents not sent on time, generating delays in the transport chain that increase the time of the overall transport process, and bad weather conditions which force the company to adapt and cause the transport time to exceed the initial timeline;
- ***Cargo mispositioning:*** extremely important for dangerous goods. If the cargo is not properly secured, it can break loose and roll inside the ship, causing ship and cargo damage, or it can remain on one side of the ship, endangering its stability.

# IMPROVING SERVICE QUALITY IN DB SCHENKER GBS USING THE PARETO ANALYSIS

- **Documentation of dangerous/hazardous goods transport** is extremely important to comply with regulations and to avoid and mitigate major risks and incidents, both for the company and its clients;
- An important problem: employees' performance, and therefore training. One solution would be to provide **additional theoretical and practical training for employees** through specialized courses on transport documentation and customs formalities so that they can better handle the intricate and specific travel documents on time and with professionalism;
- Another mitigating solution: to invest in **the purchase and implementation of customized software**, to make it easier and partially automated for employees to prepare documents for freight shipments; **topics**
- Bad weather that affects the company's operations: **training weather staff** to liaise directly between ship and port, and **efficiently plan alternative routes** if the weather proves to be bad.

# CONCLUSIONS

- Research aim: to analyze the maritime transport service of DB SCHENKER GBS Bucharest SRL by identifying the most important problems based on customers' feedback, and finding optimal solutions to improve its service quality;
- The study reviewed some of the theoretical aspects regarding the quality of services, followed by the case study consisting of the application of the Pareto method to highlight the problems that the company is facing in its maritime transport service;
- Seven major complaints were advanced by the customers. The Pareto method was used to investigate which were the critical ones.

## CONCLUSIONS

- The most significant problems reported by the 60 customer complaint forms were: incomplete documentation, exceeding transport time, and incorrect placement of cargo;
- The paper also advanced recommendations for mitigating solutions for the major drawbacks identified in the analysis;
- The performed Pareto analysis revealed that if the company focuses on solving these critical issues, around 80% of the company's current problems can be solved, leading to increased quality of services and higher customer satisfaction.



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*Thank You*

