

EVALUATION OF THE TRAVEL ITINERARY PREPARATION PROCESS IN A CLOSED CARGO CARRIER

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Abstract: This article aims to present the process of preparing travel itineraries in a company in the closed cargo transport logistics sector, located in the state of Santa Catarina. Furthermore, as a general and specific objective, we sought to evaluate the macroprocess of preparing travel plans in its entirety, its positive and negative points, and propose improvements through a strategic plan based on the 5W2H tool, based on the diagnosis of the process, through information collected about it. To support this article, concepts about logistics and their costs were presented, emphasizing their importance, transport modes describing their perspectives, routing and logistical processes in organizations. This research was based on a qualitative approach, in terms of ends it was exploratory, and in relation to means, it was based on a case study. In view of the analysis of the research data, the academic acquired a clearer vision of what is obviously needed to improve the logistical process of the travel itineraries of the institution proposed in the study.

Keywords: logistics; scripting; organizational processes; 5W2H method.

INTRODUCTION

With current globalization, it is possible to observe that the road freight logistics sector is fundamental to the economy, as it is through it that a large part of the circulation of products and services occurs, so this sector needs to have its processes all aligned, especially those linked the preparation of travel itineraries so that the company can deliver products and services in the shortest possible time for its client, and with the reduction of its expenses.

For Daganzo (1996), logistics is based on a set of activities with the aim of transporting products between their origins and their destinations, that is, from the point of manufacture to the intended customers,

always targeting time and capacity.

To complement this idea, Nogueira (2018) presents logistics as the act of allocating a right product or service at the right time, in the right place and at a reduced cost.

Logistics comprises the process of planning, implementing and controlling efficiency, effective costs of raw material flows and stocks, circulating stock, finished goods and related information from the point of production to the point of consumption in order to meet customer needs. (PIRES, 1999).

Routing is the activity that aims to find the best routes that a vehicle must take through a road network. This search, generally aims to minimize time, distance and costs, is a current decision and is of paramount importance in business logistics (BALLOU, 2001).

Therefore, the problem question of this study is: How to evaluate the process of preparing travel itineraries to increase productivity levels?

This research's main objective is to evaluate the processes of preparing travel routes to reduce logistical costs and increase productivity levels in road freight transport in a transport company in Santa Catarina. In order to better develop the research, the following specific objectives were defined: a) observe the entire process of preparing the routes; b) analyze the positive and negative points in the process of preparing travel itineraries; c) propose ways to enhance and optimize the process.

This study is justified by the difficulties observed in the process of preparing travel plans that meet the needs of internal and external customers in an effective and efficient way, due to the lack of a method of analyzing the quality of the process of issuing travel routes that in a way general the company in the road freight transport sector is presenting. According to Harrington (1993), the process is defined as an activity that receives an input

(input), a transformation (adds value) and generates an output (output), whether for the internal or external customer, they happen both in products how many in services. Processes use the organization's resources to generate concrete results.

THEORETICAL FOUNDATION

The guiding axes that make up the theoretical framework for analyzing the problem faced by the company are logistics, costs, road transport, routing, route feasibility analysis and economic viability analysis.

LOGISTICS

According to Duarte (2016, p. 65), logistics is the “science that studies the order of money within the supply chain, in order to guarantee the best operational cost-benefit, with quality, punctuality, assertiveness, accuracy, control and security”.

The concept of logistics is not something that emerged recently, it has been used since before Christ in the great wars that were milestones in our history. Therefore, logistics is a term widely used by the military, due to the need for each team to be prepared to perform tasks at the right time (NOGUEIRA, 2018).

For Ballou (1993), the logistics conception as a set of activities linked to the movement of products and services collectively as the evolution of the administrative vision.

Following the same line of thought for Novaes (2007), logistics is the method of efficiently planning, implementing and controlling the circulation and storage of products, services and related information, from the point of origin to the point of consumption with the aim of meeting customer needs.

To complement the logistics process, it is necessary to understand the areas of supplies, production, distribution and marketing, from

the sources of raw materials until the finished product reaches the final consumer, in a format that minimizes the costs involved in the process and guarantees the improvement of service levels (NOGUEIRA, 2018).

COSTS

Costs, according to Martins (2001), are the financial efforts disbursed to obtain a good or service used in the production of another good or service, and according to Dutra (1995, p. 28), “cost is the portion of the expense that is applied to production, or to any other cost function, whether spent or not.”

According to Bruni and Famá (2004), costs symbolize expenses relating to goods or services used in the production of other goods or services. These are associated with the products or services produced by the organization.

According to Padoveze (2003), costs are expenses related to the company's industrial area. These are the expenses incurred by the company to produce its products or services, that is, they are directly linked to the acquisition of products and services.

The definition of costs for Megliorini (2001) is that they are like monetary measures of the financial sacrifices that an organization, a person or a government, has to bear in order to achieve its objectives, considering these so-called objectives, the use of any product or service, used to obtain other goods or services.

LOGISTICS COSTS

According to Freires (2000), logistics costs refer to the planning, implementation and control activities of all incoming materials and services, in processing and the company's outgoing products or services, from their origin to the point of consumption.

Logistics costs are a consequence of the company's logistics operations, including supplies, physical conversion and distribution.

This way, these operations are considered service operations, they are of great esteem for companies, as they add value to customers, often considered even more important than productive operations (CHING, 2010). Along the same lines, Caxito (2019) highlights the importance of detailed and accurate analysis of the costs of logistics operations, so that these procedures are not rendered unfeasible due to the high cost.

According to Gonçalves (2013), logistics costs are elements that influence the competitiveness of companies and nations. The company's logistics aims to reduce, optimize and manage business costs. Being responsible for the following sector costs, inventory movement, number of batches, order processing, storage and transportation (JORGE, 2016).

For Ballou (2006), the three main objectives of a logistics strategy are: cost reduction, capital reduction and improvement of services. Therefore, they meet a greater objective: maximizing organizations' profits.

The characterization of logistics costs can be analyzed as the first step towards logistics decision-making (BALLOU, 2006).

TRANSPORT

Transport concerns the movement of product from one location to another. It is a fundamental aspect in the supply chain, as many products are not produced and consumed in the same place and is also a significant artifact of the costs incurred in production chains (CHOPRA; MEINDL, 2016).

According to Bertaglia (2013), transport is the methods for moving goods, goods and services. Some of the most popular alternatives are road, rail and air. Transport management generally seeks to decide on the method of transport, routes and the use of vehicle capacity.

The flow of products can be carried out through various modes, so its importance can be measured by distance, volume, revenue and nature of the traffic composition (BALLOU, 2001).

According to Nogueira (2018), for most companies, transport is the most important logistics action because it absorbs around one to two thirds of logistics costs.

ROAD CARGO TRANSPORT

The road mode is the most used in the transport of products, responsible for around 61% of the composition of the Brazilian matrix (CNT, 2016).

Road freight transport is that carried out by trucks and trailers and which, among all modes, is the most used due to its ease in transporting products, on short and medium distance trips, with finished and semi-finished products, as it allows multimodality and intermodality in transport occur (NOGUEIRA, 2018).

Since road freight transport needs, like other modes, an analysis of which equipment will be used, as well as the arrangement of fleets that will meet specific transport needs, due to the increasing diversification of products in the market (VALENTE et al, 2016).

For Nogueira (2018), road transport has different characteristics, some of which include speed and distance, size and delivery capacity, road conditions, vehicle performance, delivery cost and flexibility. These characteristics and particularities together define the best method for each organization.

SCRIPTING

For Ballou (2001), routing is the operation that aims to find the best routes that a vehicle must take through a network. This search, which most often aims to minimize time or distance, is a fundamental and everyday decision in business logistics.

According to Cunha (2000), vehicle routing is a method that focuses on determining one or more routes that must be followed by a fleet of vehicles, with the aim of reaching the pre-defined geographic points in the routing plan. Therefore, it is necessary to meet all pre-established points.

According to Ballou (1993), the operational measures of distribution and movement transport focus on the use of the fleet. Therefore, the best use of the fleet is manifested in the need for a smaller number of vehicles and lower operating costs. Still for Ballou (1993), the decision on the most profitable routes involves defining the shortest, shortest paths or a combination of both in a network of roads.

For Novaes (2007), the fundamental factors of scripting are: decisions, objectives and restrictions. Decisions concern the destination of each customer, which must be visited so that the goods can be delivered by drivers and helpers. The objective is found from the routing process, so that the company can provide a high level of service to its customers at a lower operating cost. The restrictions are the available resources that the company has, taking into consideration: time, distance to be covered, vehicle load capacity, speed conditions, average time of each delivery between loading and unloading.

ORGANIZATIONAL PROCESSES

The process is a fraction of tasks carried out in a logical order with the purpose of producing a good or service that has value for a distinct group of customers (HAMMER; CHAMPY, 1994).

Davenport (1994) considers a process as a specific sequence of work activities in time and space, with a beginning, an end, inputs and outputs visibly identified. According to the author, such activities are arranged with the aim of adding value to the inputs, resulting

in a product for customers.

According to Cury (2002), a process can be defined as a series of tasks or steps that receive resources (materials, information, people, machines, methods...) and generate a result (physical products, information, service...), with added value.

For Gonçalves (2000), it is not possible for a company to offer a product or service without having a defined business process. This way, the processes exist precisely to meet the production needs of any type of product or service.

The term “process management” refers to employees who work in different contexts in the organization, as a result of different projects and initiatives that have taken place over the years in organizations (SORDI, 2014).

5W2H TOOL

According to Possarle (2014), the 5W2H method can be described as an organized and concrete way of structuring an idea before implementing any solution in the business.

According to Bassan (2018), the 5W2H tool is extremely important for organizations in general, as it eliminates possible doubts about the activity or process that will be carried out. To complement Nakagawa (2014) states that the tool is useful both alone for making decisions in the organization and in conjunction with other quality tools.

Polacinski et al. (2012) assess that this method must result in an action plan that encompasses pre-defined tasks and needs to expand with greater scope and carry out a schematization, which defends the focus of the 5W2H tool, which is to respond, analyze questions and organize them.

According to Lucinda (2016), 5W2H acts as a checklist of very clear and defined tasks that must be performed in a project. This method aims to summarize daily activities and therefore help with planning, distribution

of tasks, defining the items proposed for an action plan, as well as exposing and establishing deadlines for its consolidation.

The 5W2H tool essentially consists of asking questions, with the aim of obtaining crucial information that will support planning in general (VALLE; OLIVEIRA, 2013).

Lucinda (2016) illustrates that 5W2H are the initial seven questions to be answered, with the intention of clarifying any doubts regarding what must be done. 5W and 2H are question starters in English. Therefore, the tool has the ability to characterize who will be responsible for the tasks, what must be done, how much time they have to carry out them, how much it will cost, why they are carried out and when they will be carried out. Table 1 reveals each of the questions in a more visual way.

	Original term	Translated	Action
5W	What	What	What will be accomplished?
	When	When	When will this action be carried out?
	Why	Why	Why will this be done?
	Where	Where	Where will this action be carried out?
	Who	Who	Who is responsible for this?
2H	How	How	How will this action be done?
	How Much	How much	How much will it cost to carry out this activity?

Table 1 – Principles of the 5W2H method.

Source: adapted from Lucinda (2016).

According to Table 1, to execute the action plan with 5W2H, it is necessary to answer the purpose of the action through the question “What?”, then justify why this action has to be performed, including identifying which where it will take place, how long it will take to consolidate and who will be responsible for its practice. As these questions are exemplified, one must plan how this activity will be carried out and, finally, how much the budget will be for this to be completed.

MATERIALS AND METHODS

In this study, the inductive method will be used, as the research will be carried out in a Transport Company located in Santa Catarina, where, through the data provided by it, it will be possible to observe, analyze and propose new solutions to the problems encountered.

As it was explained by Marconi and Lakatos (2003), the inductive method uses induction, which is a mental process through which, which starts from individual data, sufficiently examined, which concerns a general or universal truth, not contained in the parts analyzed. Thus, the objective of inductive arguments is to lead to the conclusion that the content is broader than that of the initial ideas on which they were based.

The level of research that will be used will be exploratory, which aims to explore all the organization’s relevant facts and perceptions on the subject, “such studies aim to familiarize themselves with the phenomenon or obtain a new perception of it and discover new ideas” (CERVO; BERVIAN, 2002, p. 88).

This article will also be characterized as a case study, as it will be carried out in a specific location, in this case the carrier, which will observe and analyze the current reality there through documents, interviews and observations, where real facts of functionality in the process will be explored. preparing travel itineraries.

According to Yin (1989), the case study has the aspect and competence of working with diverse evidence, such as documents, artifacts, interviews and observations and is appropriate when examining situations in which behaviors cannot be tampered with, but there is a application of systematic interviews, preferably of current events.

Thus, the objects of data collection will be documents, interviews and observations, which will be collected at a Transportation Company of Santa Catarina.

For Marconi and Lakatos (2003), documents are administrative yearbooks, private, official, parliamentary, legal documents, etc. The interview is adopted as a crucial investigation technique in several areas, due to its flexibility. Professionals who deal with human problems, such as psychologists, sociologists, pedagogues, social workers and others, use this technique, not only for data collection, but also with the aim of diagnosis and guidance. In other words, much of the growth of social sciences in recent decades was thanks to the application of interviews (GIL, 2008). And “observation enables close personal contact between the researcher and the phenomenon being researched” (LÜDKE; ANDRÉ, 1986, p. 26).

The population of this research will be a transport company located in the state of Santa Catarina that operates in the closed cargo sector and operates throughout the Brazilian market. Population is defined as all members who belong to a group of chosen people or items (PARENTE, 2005).

The sample will be limited to the sectors involved in the process of preparing the travel routes of the carrier located in the west of Santa Catarina. The sample is thus treated as “a portion of a pre-defined population” (PARENTE, 2005, p. 386).

Qualitative research classification will be used as a technique for analyzing the interpretation of data in this study, as the form of presentation of the collected data will be analyzed through the opinions, ideas and individual experiences of the interviewees in the process of preparing the routes and also through the information and factors collected about it.

Silva (2008, p. 30) portrays that “in qualitative research, the production of knowledge takes place in an interactive, intercommunicative way between researcher and investigated, resulting in a process of

circular knowledge”.

For Gil (2010), some techniques are necessary to analyze and interpret data, such as categorization, coding, tabulation, statistical and strategic data analysis, inference of casual relationships and data interpretation.

DATA PRESENTATION AND ANALYSIS

PRESENTATION OF THE ORGANIZATION

This study will be carried out in a transport company in the closed cargo road sector that operates throughout Brazil and in the international market: Argentina, Chile, Uruguay, Paraguay and Peru, which transports dry, refrigerated and frozen cargo. Structured by the headquarters located in the state of Santa Catarina and 5 more branches, 3 in Brazil and 2 international ones, for operational and physical support for the services provided.

PRESENTATION OF ROUTING PROCESSES

The routing process in the company studied occurs in a standardized way on routes that are frequently used by specific customers, with their viability being evaluated and analyzed when carried out for the first time, or only when one of the sectors involved requests a new analysis. However, this doesn't happen often. The routes are prepared through four stages, which involve the following interdependent sectors: operations planning and control, fleet management, risk management and supply.

Operation planning and control (PCO) is the sector responsible for vehicle management, cargo allocation and negotiation with customers, it is the core of operations, and the sector that initiates the preparation of the travel itinerary, through the vehicle's destination for collection, through the analysis of the need for vehicle maintenance,

driver time off, control of tolls, payments and scheduling of unloading and stays, always based on the following information negotiated with the customer, origin and destination of the freight, paying customer, weight of the load only when the invoice has already been issued.

The PCO is divided into two parts: programming and control, where programming is responsible for the destination of the vehicle and scheduling unloading, while control manages stays, which refers to the time that the vehicle is stopped during collections, unloading or customs after the deadline negotiated with the customer, and tolls.

The fleet management (GF) sector is responsible for the company's drivers, from controlling time off, vacations, payroll calculations, productivity and changing vehicles, and defining and changing routes.

Being the second sector to continue the process of preparing travel itineraries, they prepare the route, using information about the situation of the highway, such as whether it is asphalt or dirt, whether or not it has potholes and its level of deterioration, also evaluates the number of tolls implemented on the route, the terrain and climate of the stretch, the risks and safety of the roads and regions that will be traveled and to finalize this stage, it is observed which driver must continue with this trip.

The routing is issued based on the launch of the trip collection, which is done by the PCO, and carried out by fleet management in the communications satellite series tool, which is a risk management system, used to manage the risk of all loads, once approved, generates a code for each route, which will be inserted into the company's Integrated System to generate the monitoring request (SM) and be included for other sectors to continue their processes, such as supply and monitoring, as support they use a system to quantify tolls on

the route, in order to ensure the lowest cost.

The company's supply sector carries out the allocation of vehicles to gas stations, and also checks and inspects the supplies carried out, to launch them, so that there are no failures in this process, which is one of the biggest costs of the company.

This way, the supply is the one who finalizes the issuance of the travel itinerary, using the information previously released by the respective sectors, considering the distance that the truck will travel to calculate how much fuel the truck will consume, using the minimum average consumption of 2 liters per kilometer driven in Brazil and 2.30 liters per kilometer driven in Argentina for loaded vehicles. For empty vehicles, the average number of liters per kilometer driven increases, varying depending on the case. In both cases, this minimum average may fluctuate depending on some variables, and always with the analysis of the vehicle's tank capacity.

Finally, the supply will define and register in the company's integrated system which stations the fleet will refuel at and whether it will be a full or partial tank, based on the value of fuel negotiated with suppliers in that period, always at the cheapest suppliers compared. with others in the same region, according to the route registered by the fleet management sector.

Risk management (RM) is the sector responsible for monitoring the vehicle along the defined route, using the vehicle tracker, a tool used by the driver to inform the status of the trip, taking as an example the beginning and end of the trip between other information, obtained via macro or vehicle location. It has also assigned its functions to control the authorized points for the vehicle's overnight stay and stops, following the restrictions imposed by the company and the cargo insurer, and finally, it handles the sensors

attached to the vehicle.

Therefore, the GR acts at the same time as the supply, but is responsible for inspection and control after preparing the travel route, a procedure for monitoring and analyzing at full time whether the driver is following the route that the fleet management provides, through travel status, location and vehicle sensors. In cases of discrepancies between information and sensor violations, such as deviation from the original route registered in the integrated system, overnight stays or stops at unauthorized points, the sector takes action and implements the measures proposed in the risk management plan, to ensure that the trip occurs safely.

Risk management plans (PGR) are specific to each customer and load, but the most common security measures are blocking the vehicle, and immediate contact with the driver and GF, to understand if changes have occurred on the route and have not been informed, if the GF has not changed the route, security authorities in the region are called to take the appropriate measures.

Therefore, the analysis of the macroprocess of preparing travel itineraries in its total description occurred through conversations with the coordinators of the sectors involved, in such a way that it made it possible to identify the beginning with the PCO, the middle with fleet management, the end with the supply and post-elaboration, which involves monitoring the preparation of the same with the GR, each with its peculiarities and particularities are of paramount importance for this process and for the company.

ANALYSIS OF INTERVIEWS IN THE TRAVEL ITINERARY PREPARATION PROCESS

During the data collection procedure, 4 employees were interviewed from the operational planning and control (PCO), Fleet Management (GF), Risk Management (GR) and supply sectors. Considering that the data collected aimed to qualitatively analyze the entire process of preparing travel itineraries from the point of view of those involved in it.

The interviews were designed so that each sector could express its vision, opinions and sides of this process. Each of the interviews was carried out personally with each interviewee and was organized and tabulated in electronic spreadsheets and also in text format, which served for the entry, application and development of the 5W2H method, which will help to redefine and improve the current process of preparing the scripts.

From the first question it is possible to identify that each interviewee belongs to one of the sectors analyzed, and with different functions within the organization, which corroborates the analysis, as each one brings their positioning according to the function performed. According to the table below.

Identification	Sector	Role
Interviewee 1	Operation planning and control	Commercial coordinator
Interviewee 2	Fleet management	Senior Traffic Analyst
Interviewee 3	Fleet management	GR Supervisor
Interviewee 4	Supply	Supply analyst

Table 2 – Identification of interviewees.

Source: author's elaboration (2022).

Starting with Interviewee 1 who is the Coordinator of the PCO sector, followed by Interviewee 3 who is the GR supervisor, Interviewees 2 and Interviewee 4 are analysts, but at different levels.

With the second question, it was found that the organization uses a documentary standard in this process, as all interviewees

mentioned that they follow the documentary standard when carrying out their activities, and that it is presented in a flowchart format, but Interviewee 2 mentioned that it is not reviewed regularly.

Therefore, the responses obtained in this item were very positive, and when processes are defined, they facilitate their execution and reduce rework, however they must be monitored frequently and if necessary adjustments are made so that the process is carried out in the best way possible.

In the third question, the interviewees discussed their knowledge of the process of preparing travel plans, and the answers were unanimous, everyone knows the entire process of preparing itineraries.

However, of the four interviewees, only Interviewee 4 mentioned all parts of the process, he spoke from the beginning to the end of the process, which begins with the launch of trip collection by the PCO, moving on to fleet management to define which route the vehicle will follow, and subsequently the supply, prepare the supply plan according to the route and together the GR begins monitoring and tracking the imminent risks of the trip, regarding the vehicle and cargo.

The following question addressed the importance of the process of preparing travel itineraries for the company, and again the opinion of the interviewees was general about the importance, those questioned emphasized that it is fundamental for the performance of the activity in the area of transport, and also of great value for controlling and reducing logistical operational costs.

However, in the next question that complements this one, which deals with the importance of each sector involved in this process, each interviewee brought a different position from each other, due to each seeing the process from their department's point of view.

For Interviewee 1, the commercial sector is important in this process, as it is through it that negotiations with internal and external customers take place, ranging from freight agreed with customers to information on travel costs and expenses generated by other sectors, which must always be taken into consideration, in this process. Interviewee 2, on the other hand, brings the route management sector as crucial in this process, because they are responsible for preparing the routes with the best cost-benefit, and also to the detriment of being linked to the company's productivity.

Interviewee 3 brought up the risk management department as essential in supervising this process, as it aims to evaluate, analyze and control peripheral factors of vehicles in relation to situations encountered along the routes carried out, with the aim of ensuring that freight occur safely. And finally, Interviewee 4 defined the supply sector as fundamental, as it guides and directs drivers to fill up at stations with the lowest prices, thus helping to reduce the company's operating costs.

Therefore, with this question it was possible to conclude that each department has different points of view, and that the uniqueness of each one contributes and adds to the results that will be obtained with this process for the organization, from the best performance and productivity in freight, the increasing profits or reducing expenses and waste.

The sixth question refers to the deadlines within which travel itineraries are delivered to drivers, and all interviewees highlighted that the deadlines are normally long, where the itineraries are delivered to drivers before starting their trips, however, Interviewee 4 mentioned that on some sporadic weekends, some scripts are delivered with some delays, due to the relationship between work schedules and workflow. For Interviewee 1,

they are prepared in advance as they are issued shortly after the launch of the collections by the commercial, while for Interviewee 2 and Interviewee 3 they are delivered in advance as the company works with standard routes, which makes it easier, speeds up and simplifies the process.

The seventh question was about what communication tools were used in this process, both interviewees mentioned that the tools used in communication are the company's integrated system, telephone, email, messaging applications and also through conversations to alignments.

In the following question, communication was discussed between the sectors involved in this process, according to Interviewee 1, communication normally occurs through the tools mentioned, Interviewee 2 did not make it clear what communication is like, he only highlighted that it occurs through meetings and conversations between those involved, in turn Interviewees 3 and Interviewee 4 bring other perspectives on this topic, with Interviewee 3 describing that it has a lot of noise, and emphasizes that this happens because the FG sector does not take into account some collection information and other times because they do not pass on some important information to the following sectors, such as driver changes, route changes and vehicle maintenance, which can cause serious problems for the GR department, because if they do not have information about the changes caused on the routes, the system will identify possible risks to the cargo. Interviewee 4 also highlighted that communication is very poor, in atypical cases, where information is not passed on to all sectors involved.

Question 9 identifies the positive and beneficial points identified by the interviewees, with the aim of identifying the points that need to be maintained in this

macro process of preparing travel itineraries. This way, Interviewee 1 generally defended the process as positive for the company, as it helps in controlling all expenses related to travel, which are very high and fundamental to the company's financial health, however he did not mention which part must be maintained in the process.

Interviewee 2, on the other hand, was more direct and specific when answering this question. He argues that standard routes are of great value, as with them drivers acquire more knowledge of the routes, collaborating with the company's database, adding stations and safe stopping points for the trip, in relation to new routes, which are little known and more dangerous.

Interviewee 3 identified that the positive points of the process are the guidelines and information that are passed on to drivers, which have a positive effect on the risk management sector, as they reduce route deviations. Following a similar line, Interviewee 4 shows that this entire process guarantees cohesive and accurate information to drivers, enabling them to plan the trip and carry it out with greater peace of mind and safety, reducing risks and dangers for the company.

Question 10 works with the same intention as the previous question, but analyzing the negative points and flaws observed in this process, which need to be reviewed and improved. Interviewee 1 brought the failure in communication as a negative point, and in question 8, where he was asked about it, he mentioned that it occurred normally, but at this point he emphasized that failures in communication cause deviations of routes. For Interviewee 2, the points that hinder the progress of this process is the lack of some crucial information, which comes from the commercial, such as customs, weighing, the peculiarities of each customer and also some

information about vehicle maintenance, be it technical inspections. or mechanics, which again ends up generating route diversion, as this information is not available to everyone, and in question 8, he did not take a position on this.

Interviewee 3 reinforced the failures in communication, due to many exchanges occurring at destination customers and unloading locations, with a lack of clear information, which leads to poor and unproductive results in this process. Likewise, Interviewee 4 cited the lack of information at the same speed for everyone involved, and added that there is a lack of analysis when creating routes.

To conclude the interview, we asked what suggestions and improvements the interviewees saw in this process, to enhance the results sought with the same, since in this question each of those questioned poses a different need. Interviewee 1's opening was to improve the integrated system in relation to the process of analyzing and monitoring empty vehicles, although this issue is not very relevant to this process. Interviewee 2 suggested the development of a unified system that contains all programming, traffic, supply, maintenance and tracking information together, to facilitate the flow of information.

Interviewee 3 mentioned that a more critical analysis must be carried out when registering routes, which impact the sectors included. And finally, Interviewee 4 talked about developing a tool to link and interconnect gas stations with stopping points, which are currently different things.

From this, it is possible to conclude that the interviews were of paramount importance for this study, as with them we were able to extract valuable and unique information from the collaborators, namely the importance of the activities carried out by them in order to plan the trips and routes taken by the

company. company, in the best possible way, with lower costs and expenses and greater productivity and performance. However, positive and negative points were also seen, as it is a macro process and involves many areas and employees of the company. This will make it worthwhile to apply and develop continuous improvement strategies.

APPLICATION OF THE 5W2H METHOD

From the data collected in the interviews, about the process of preparing travel itineraries, two problems were identified that are recurrent. The first is failures in communication and secondly, the lack of analytical vision of employees in this procedure.

In view of this, the identified causes, as well as possible solutions to them, will be exposed through the Action Plan (5W2H), according to Meira (2003) the purpose of the 5W2H method is to answer seven basic questions and thus plan them efficiently.

It was shown below, the first action plan aimed at reducing communication failures:

The first action was developed with the aim of improving communication between everyone involved, and minimizing the problems and failures that are caused by the lack of communication and information retention, which often cause problems with route deviations and unnecessary expenditure of employees. vehicles, and also with fuel and maintenance that were mentioned by the interviewees several times.

The action plan presented in Table 1 will be developed with the analysts and assistants from the teams involved in this procedure, through the EAD course on "How to speak well in public" lasting 20 hours, which seeks to develop the ability to speak in public, using adequately the elements of communication, for the desired success and also the EAD

Action 001 – Reduction of failures in communication in the current process of preparing travel routes		
5W	What	In the current process, carry out a survey of the gaps in communication that cause failures in the script development process.
	Why	To remedy these failures and minimize problems in the process of preparing travel routes, which are caused by communication failures.
	Who	Analysts and Assistants in the operational planning and control (PCO), Fleet Management (GF), Risk Management (GR), and company supply sectors.
	When	After completing the training and internal communication development course.
	Where	In the sectors involved in the process of executing travel itineraries, including operation planning and control (PCO), fleet management (GF), risk management (GR), and supply.
2H	How	Analysts, together with assistants, must apply the knowledge acquired through training in their day-to-day work in the macro procedure for creating routes.
		Distance learning course with the theme: "How to speak well in public" which is free at SEST SENAT.
	How much	Distance learning course with the theme: "Interpersonal communication and customer service" which is free at SEST SENAT.

Table 3 – Action Plan (5W2H) 1.

Source: author's elaboration (2022).

Action 002 - Train those involved in the macro process of preparing the itineraries.		
5W	What	Train teams involved in the travel route development process.
	Why	Because there is a lack of analytical vision on the part of the employees involved in the process of preparing Travel plans, who can create the most viable plans for the company.
	Who	Employees from the areas of planning and operation control (PCO), fleet management (GF), risk management (GR), and company supply, including assistants and analysts from the company's respective sectors.
	When	Training will begin immediately.
	Where	Training will be performed in the company in the transmission of information.
2H		The training will be done in two stages: 1 – External training: all analysts on the teams involved in this process will take the following courses: "Strategy and Analytical Vision" and "Training on data analysis", both are distance learning courses. 2 – Internal training: analysts who participate in the course must pass on information to the teams of assistants regarding all the knowledge that was taught in the course.
	How	
	How much	Distance learning course with the theme: "Strategy and analytical vision", worth R\$398, for each employee at the corporate travel academy. Distance learning course with the theme: "Data Analysis", worth 110 reais, with the access plan for each employee on the platform: "ALURA".

Table 4 – Action Plan (5W2H) 2.

Source: author's elaboration (2022).

course on “Interpersonal Communication and Customer Service” lasting 30 hours, to develop clear and assertive communication, understanding who the internal and external customers are and what their real need, both are applied by the SEST SENAT institution completely free of charge, which is a partner of the study company, to train both employees who are linked by the macro process of developing travel itineraries.

This way, as soon as the first action plan is implemented by the organization, it will bring a solution to the problems and causes mentioned above, as it only needs to polish and improve communication and the flow of information that already exists, which in a way is easier than having to develop something entirely new.

In Table 4 we have the second action plan that will be aimed at training employees’ analytical and critical skills:

The second action was developed with the purpose of improving all employees involved in this macro-process, so that they can identify atypical situations and anomalies in the process more easily and quickly, reducing the impacts caused by them, and thus reducing costs and logistical expenses with errors in launching collections, routes, supply plans and route deviations, which were mentioned in the interviews.

The action plan set out in Table 2 will be applied with employees from the areas involved in the stages of preparing travel itineraries, more specifically in two stages, the first will occur with the training of analyst teams, and the second with the transfer of information that the analysts acquired for the assistants. The courses will be in the EAD modality, with Strategy and Analytical Vision as a 3-hour workload applied by the Corporate Travel Academy worth R\$ 398.00 for each employee, and the Data Analysis course lasting 6 hours, will be delivered by the Alura teaching

platform, with a monthly cost of R\$ 110.00 per employee to access it, the two courses seek to improve and develop the analytical and detailed vision of employees, who are linked by this macro process. However, it was not possible to define what the total investment of this action plan will be, as the company did not provide information on the number of analysts who are involved in this process of preparing travel itineraries.

Therefore, with the application of the second action plan by the company, it will gain excellence, efficiency, effectiveness and time in processes, also reducing expenses and waste caused by employees’ lack of critical vision of the procedure carried out daily.

However, after implementing both actions described previously, it will be necessary to carry out frequent maintenance and repairs to ensure that new employees who join this process receive adequate training and qualification, so that the results of the action plan 1 and 2 are maintained.

It can be concluded that the two action plans prepared with the 5W2H methodology are very useful for the company and are very simple to implement by the organization, with application costs not being high, and will bring results to the company quickly. The proposed measures are simple, but nevertheless, they added a lot of knowledge to the organization and its employees.

RESULTS AND DISCUSSIONS

Based on studies carried out in the presentation stages of the routing processes with data collected through conversations with managers from each area involved, interviews with employees and applications of the 5W2H method, it was found that this process contains essential points for institution under study, as we can see below:

With the conversation with the coordinators, about the process of preparing

travel itineraries, it was possible to understand and collect data on what this whole process was like in a detailed and thorough way, while the interviews served to show the points of view, opinions and understandings of 4 employees, one from each area linked to this procedure, from its importance to the organization, the positive and negative points, and even suggestions for improvements.

With the collection of this information, it was possible to evaluate this macroprocess of preparing travel routes, as fundamental and crucial for the health of the company, as it is from this that all logistical operations carried out by the company begin, as the process is responsible for controlling collections and unloading in the PCO area, for defining the routes that will be used by the GF sector, based on the history of trips already carried out, for the safety of freight carried out to guarantee the quality and excellence of services to customers with the GR sector and finally control of fuel costs with the supply team.

With this, it is possible to understand that this macroprocess must be constantly improved and improved, as it is with it and from it that the organization generates essential indicators of costs, revenues, expenses, profits, and thus define the best path to evolve and grow in the Marketplace.

The positive and negative points of this elaboration process were mostly defined respectively, as the positive ones we have all the company's controls, revenue and expenses, and generate benefits in the productivity and performance of both vehicles and drivers, who are able to drive like this a more peaceful, calm and safe trip, due to having a support network, to inform and guide the most important events that will be faced on the trip. The negative aspects that prevent the organization from producing more and with higher quality are the failures in communication and lack of critical development of employees at the ends

of the process, which causes waste and rework that could easily be avoided.

This way, with this information collected, it was possible to define the parts of this macroprocess that must be maintained in this current format and those that need to be improved. Therefore, with the causes defined, as well as the possible solutions to them, two action plans, with the 5W2H tool, which serves to help companies define and implement improvement proposals.

In this case, the action plans in the 5W2H method simply show and exemplify the measures that the company must follow so that the process becomes more effective and efficient, considering that both proposed measures to reduce communication failures and training. From the analytical perspective of employees, they are through courses, lectures and training in the two areas that are deficient, and they are not very costly, considering the benefits for the process, and even more so for the organization.

Therefore, it was verified that the results were achieved effectively, as it was possible to respond to the general and specific objectives, according to the evaluations and observations of the process of preparing the travel routes in their entirety, analyzing the positive and valuable points and also the negative and unfavorable aspects of it, and finally, propose ways and tools for improvements. And this was only conceivable with the help of the content acquired in classes, through knowledge in logistics, costs, transport, organizational processes and quality tools.

FINAL CONSIDERATIONS

The proposal for carrying out this case study was based on the analysis and evaluation of the organizational processes of a company located in the state of Santa Catarina that operates in the logistics sector, with road transport of closed loads.

For this purpose, conversations were developed, and interviews were applied with pre-defined questions, on site, which allowed us to clearly visualize what the macro process of preparing travel itineraries is like, the factors that make it important and very beneficial for the company, and the shortcomings and failures in this institution's logistical process, among which the following stand out: failures in communication and information retention and lack of strategic vision regarding the activities carried out belonging to the process.

Therefore, it is extremely important to pay attention to the processes carried out and their changes, both good and bad, with an emphasis on what possibilities for growth and development these changes can generate results for the institution.

Therefore, seeking to present strategies and solutions compatible with the logistical needs and realities of the current process used by the organization, it was recommended the use of knowledge about logistics, organizational processes, logistics costs, modes of transport for evaluation and observation of the process in its entirety, and thus, the application of the 5W2H method, as a form of continuous improvement, to execute action plans for problems and, this way, achieve the general and specific objectives of the study, which

are respectively, evaluate the current process, analyze the benefits and difficulties of the same and subsequently propose suggestions for improvement.

Due to the limitations of this study not being applied by the company, it was not possible to observe how the action plans developed behave in practice, therefore, some questions will be left open, including checking the effectiveness of the tool in all items indicated as suggestions for the process used by the company.

For future studies, it is suggested to evaluate the results that the company will obtain with the implementation of both action plans prepared with the 5W2H tool, to improve the macroprocess of preparing the travel plans for this case study.

The research generated great importance for the academic and the company. It provided the student with practical experience, based on the knowledge, teachings and theories taught in the course. Furthermore, the studied institution provided assiduous information based on conversations and interviews applied, in which the company can evaluate how its process of preparing travel itineraries works, point out strengths and weaknesses, thus being able to overcome itself in these processes.

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