Development of a Quality Management System Based On the Requirements of the ISO 9001:2015 Standard for Ciek Logística Sas

Francy Alejandra Orduz Sánchez¹, Yunelys Lisbeth Vásquez Gonzales¹, MBA Ing. Ever Fuentes Rojas¹

¹(Industrial Engineering Program, Universidad Libre, Colombia)

SUMMARY

The main objective of implementing a quality management system is to improve the clarity and efficiency of organizational processes, in order to provide a satisfactory experience to all interested parties. This is achieved by reducing reprocessing and maintaining effective control over organizational management.

In the specific context of the project at Ciek Logística SAS, key aspects of the organization will be assessed. This includes management leadership and understanding of both the company's internal and external environment. On the other hand, planning processes will be reviewed to establish standards based on the company's internal perception. Potential deficiencies in the management of economic activity during its operation will be identified, and receptivity to proposed improvements will be assessed.

Considering the above, it is important for the company to implement the quality management system, evaluating it from each of the necessary aspects to be developed, such as a SWOT [2]. Likewise, the characterizations created for each process and the procedures developed for this logistics sector help to establish a better order in the formats, generating the documentary structure of the internal processes, facilitating the development of statistical control techniques. Similarly, audit guidelines are established for continuous improvement with the application of the standards to a critical process, which ends in a cost analysis that validates the Quality Management process [4].

KEYWORDS: Processes, quality, standards, audit, cost analysis

Date of Submission: 13-09-2024 Date of acceptance: 27-09-2024

Date of Submission: 13-09-2024

Date of acceptance: 27-09-2024

I. INTRODUCTION

CIEK LOGISTICA SAS was founded on November 8, 2002 and was authorized by the Ministry of Transportation Resolution No. 0503 of March 21, 2002. According to the Chamber of Commerce of Bogota, the main economic activity of the organization under the CIIU code 4923 is road freight transport; As a secondary activity under the same code 5210 is storage, warehousing and other activities for which it is authorized. 5229 as a complementary activity to transport and 5224 as cargo handling. What allows the organization to carry out the established logistical control to offer a complete service to customers.

For Ciek Logística, its vision is focused on positioning itself in 2026 as the cargo transportation company that provides excellent service, organization, coverage and security, with solid infrastructure and at the forefront of market demands and evolution; where it works for the well-being of its employees, seeking to be the preferred company for its customers and committed to the social, economic and environmental development of the country [10].

Based on the above, the organization has established a process map that segments the functional areas of the company, which are classified into mission processes, such as customer entry through sales in the commercial process, and the execution of the transportation of goods with the support of vehicles and drivers in operations [11]. This last process includes the tracking of the merchandise through satellite devices in the vehicles, providing reports to the clients; in addition, it has management processes that define policies, processes, bases to guide actions and standardized activities aligned with the business strategy. These include the management process and the integrated management systems; there are also support processes, such as human and administrative management, and finances, each one is designed to improve the experience of various interested parties, such as suppliers and collaborators, and to ensure efficient management of resources in the economic activity.

Therefore, within the scope of the business process, a thorough analysis is carried out to identify the costs arising from the lack of application of quality standards. This analysis focused on evaluating the financial and time resources that the company has had to allocate to recurring problems such as setbacks in operations, the need for additional repairs and the lack of standardized procedures and effective controls.

DOI: 10.35629/8028-1309177187 www.ijbmi.org 177 | Page

The initiative's main objective is to understand the economic and operational implications of not maintaining consistent levels of quality at each stage of the business process. This includes everything from the initial reception of customers to the final delivery of products or services, ensuring that each step is aligned with the organization's quality and efficiency expectations [6].

By carrying out this detailed analysis, the aim is not only to quantify the direct and indirect costs associated with the lack of quality, but also to establish a starting point for implementing significant improvements. This involves the introduction of corrective and preventive actions that strengthen the standardization of processes, improve operational control and reduce unnecessary expenses that could be avoided with more effective quality management [9].

1.1 Background Check

In the review of similar projects, some projects executed at national and international level were evaluated, in which similar implementations were carried out that served as the object of study for this article.

In the project on the implementation of the quality management system based on the ISO 9001:2015 standard at Servi Crown, Toyota not only mitigated internal and external non-conformities that affected its productivity, but also strengthened the organization by clearly defining procedures and training staff. This not only improved operational efficiency, but also raised the perception of value by customers, highlighting the importance of systematization in operations and staff competence [5].

On the other hand, at Formaq SAS, the adoption of a quality manual according to the parameters of ISO 9001:2015 allowed the company to effectively identify and address areas for improvement in its commercial and service processes. Through a structured approach that included quality standards assessments and the implementation of corrective and preventive actions, the company was able to boost its productivity and strengthen market confidence in the quality of its products and services offered [18].

Additionally, at an international level, the implementation of a quality management system based on the ISO 9001 standard in a non-destructive testing certification company sought to significantly improve operating procedures by implementing traceability and monitoring of operations. This approach allowed for increased efficiency and precision in specialized tests such as the use of ultrasound with magnetic particles, structuring a clear framework for analyzing regulatory requirements and human considerations during implementation [7]. The result was the creation of precise documents such as the quality and processes manual, providing a detailed guide for the documentation and execution of work within the company.

Similarly, the application of ISO 9001 at Pihuel SA, a gas distribution company in Argentina, focused on assessing and improving organizational procedures to adapt to changing market and regulatory needs. This project not only established robust document structures such as quality manuals and procedures, but also integrated coherence with other relevant regulations. In parallel, the implementation of the standard at the Archives, Documentation and Information Office of the Universidad de la Salle demonstrated how quality principles can be effectively applied in administrative environments [9], improving the accuracy and availability of essential information for operational support and institutional growth.

II. METHODOLOGY

Taking into account the specific objectives, the following methodology was established:

- To carry out the initial diagnosis of the knowledge and application of the ISO 9001:2015 standard in the institution, a meeting was held with the administrative and financial director to compare the standard with the existing procedures. A diagnostic matrix was used to assess the knowledge within the standard and the results obtained were tabulated to identify areas that required improvement. This analysis provided a clear view of the initial state of the company and served as a basis for future improvement actions in accordance with the standards of the ISO 9001:2015 standard [1].
- In order to achieve the generation of the documentary structure of the processes that would facilitate their development through continuous improvement, a methodology was implemented that focused on a direct approach with the staff of the different areas, focusing on the commercial area. Knowledge interviews were conducted to gather detailed information on the existing procedures. Subsequently, a matrix was used to structure and analyze the data obtained. This allowed the creation of graphs that visualized the behaviors and areas of potential improvement. Finally, the processes in which continuous improvements could be implemented based on the analytical results obtained were identified.
- In order to meet the objective of carrying out statistical control techniques to analyze the problems in the company's critical processes, a methodology was used that began with the collection of data through the times established for quotes to clients; that is, the times in which they must be given a response to the service requirement they are requesting [19]. Then, a detailed analysis was carried out using specific statistical

strategies and models in accordance with the guidelines of the NTC ISO 9001:2015[1]. This approach allowed determining the range in which it was and validating the deviation from these times mentioned above.

- In order to establish audit guidelines for continuous improvement in the company in relation to the services offered to users, a structured methodology was implemented. The first step was to develop an audit plan that included the integration of change management principles. This process began with the direct training of staff in the standards and requirements of NTC ISO 9001:2015 [1]. Subsequently, follow-up tests were carried out during the provision of services to ensure compliance with the established criteria. This approach ensured that audits were not only evaluation tools, but also facilitators of continuous improvement in the quality of the service offered to users [4].
- In order to apply the ISO 9001:2015 standard in a critical process to verify the effectiveness of the management system, a specific methodology was implemented. It started from existing documentation and a previously designed matrix. This methodology included the direct application of the standard in a selected critical process [20], crucial for obtaining relevant information for decision-making. This approach provided clear guidance on how to effectively integrate and execute the standard within the company's management system, ensuring continuous improvement and compliance with established quality standards [8].
- To meet the objective of preparing the feasibility analysis to assess the effectiveness of the management system and evaluate financial and operational alternatives for its implementation, a detailed methodology was followed. Meetings were held with the persons responsible for providing relevant financial information, using mathematical principles and performing thorough cost and operational analyses. These analyses allowed validating the financial viability of the proposed objective, ensuring that the decisions taken were supported by concrete data and accurate assessments.

III. RESULTS

The following aspects were considered for the generation of the diagnosis of the current state of the system:

- a) SURVEY: The research methodology that enabled the instantaneous collection of data was the questionnaire. This instrument was used for the purpose of obtaining the perspective, knowledge and opinion of the Administrative Coordinator of the organization. In this way, the aim was to record said information in order to carry out the corresponding analysis to provide an initial diagnosis, since it constitutes a direct means of obtaining relevant data on the object of study and the current state of the system.
- b) DIAGNOSTIC MATRIX: Through the tabulation of the survey, a diagnostic matrix was created with the requirements demanded by the ISO 9001 standard of 2015. The scope in which the organization is located was established and the results obtained are observed in figure 1.

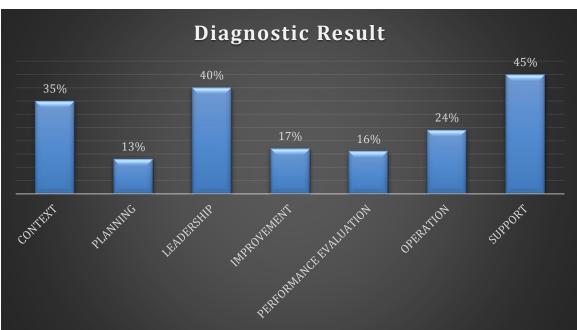


Figure 1.

Source: Authors, 2024

• Implementation Challenges: The consistent presence of "IMPLEMENT" across all areas suggests that the organization is facing challenges in implementing the requirements of ISO 9001:2015 [1]. This could be due to a lack of documented processes, clear procedures or effective practices in these areas.

Priority Areas for Improvement, Leadership and Support: Given the high scores assigned to "LEADERSHIP" (40%) and "SUPPORT" (45%), these areas are critical and should be addressed as priorities. Leadership should be more actively engaged with the quality management system, and organizational level support should be improved to facilitate effective implementation [19].

- Planning and Operation: The areas of "PLANNING" (13%) and "OPERATION" (24%) also require attention. It may be beneficial to review and strengthen the operations planning and execution processes to better align with the requirements of the standard.
- Emphasis on Continuous Improvement: The specific allocation of a percentage for "IMPROVEMENT" (17%) indicates that there is a recognition of the importance of continual improvement in the quality management system. More robust practices should be established to identify and address opportunities for improvement.
- Overall Results and Global Rating: The overall result of 27% and the overall rating of "LOW" indicate that the organization has ample room for improvement in terms of compliance with the ISO 9001:2015 [1] standards. It is essential to implement corrective and preventive actions in a comprehensive manner.
- Need for Detailed Review: For effective improvement, it is recommended that a more detailed review of each area be conducted and specific actions determined. This could involve reviewing and updating documents, training staff, and reviewing processes and procedures.
- Top Management Commitment: Top management must be committed to improving the quality management system. This may involve allocating resources, setting clear goals and providing the leadership needed to bring about significant changes.

In general, the diagnosis indicates that there are significant opportunities to strengthen the quality management system and improve compliance with the requirements of the ISO 9001:2015 standard [1], having an orientation towards its implementation in this case to develop it helping the company to have a greater visual of the aspects that need to be improved,

The SWOT was developed, which has a broad view of the critical processes that the company has from different aspects associated with the processes [2].

c) SWOT: Through the results of the survey carried out by the Administrative and Financial Coordinator, it was possible to evidence the weaknesses, strengths, opportunities and threats, which were completed in the related document, taking out each aspect to be evaluated in each of the processes, thus defining which is the most critical to take action on it [2].

The company faces a dynamic and competitive environment. Through the cross-SWOT analysis that helps develop strategies, make decisions, plan, optimize resources, among others, the following key interactions were identified.

Figure 2.
FO Strategies

FO Strategies F1-F2-O1: The company has specialized and trained personnel, which puts it in a favorable position to adapt to changes in transportation regulations. Business knowledge and the ability to adapt can help implement changes effectively. **F3-O2:**BASC certification and implementation of ISO 9001:2015 can improve access to new markets by demonstrating compliance with quality and safety standards, which can attract potential customers who value these aspects. 5 F4-O3: Efficient resource management can support the exploration of service diversification beyond traditional freight transport. Resource availability ensures the sustainability of new projects and services. F5-O5: Using customer satisfaction surveys can help identify changing consumer demands and adapt delivery services to meet their needs for speed, flexibility and sustainability. F6-O6: Having a master list to organize and control internal information can be beneficial in a growing supply chain environment, as it facilitates the management of information related to international transportation, storage and distribution.

Source: Authors, 2024

Strengths-Opportunities (FO): The company has specialized personnel, relevant certifications such as BASC and ISO 9001:2015 [17], and a solid resource management capacity. These strengths can be leveraged to adapt to changes in transportation regulations, explore service diversification [6], and improve access to new markets, prioritizing customer satisfaction, which helps to have a better categorization with the competition and stand out more in the market; using the strengths to take advantage of opportunities in different aspects, such as innovation, compliance, and customer satisfaction [13] (See figure 2).

Figure 3. *FA Strategies*

STRATEGIES FA

A1-F2: In the face of poor road infrastructure, the company can use its consultative selling approach to work with customers on alternative solutions that minimize the impact of transit time and maintain the promise of service.

A2-F5: To mitigate customer loss to competing offerings, the company can use customer satisfaction surveys to identify areas for improvement and adjust its services to retain existing customers.

Source: Authors, 2024

Strengths-Threats (ST): Staff training and consultative selling can be instrumental in mitigating threats such as poor road infrastructure and competition. In addition, the implementation of customer satisfaction surveys can counteract customer loss to competitive offerings; strengths help counter threats, improving productivity, and facing them as aggressive competition [15] (See Figure 3).

Figure 4. *DO Strategies*

STRATEGIES DO

D1-O1: Seek collaborations to improve road infrastructure and reduce the dependence of the business center on changes in transportation regulations.

D2-O4: Invest in technology to improve service delivery and capitalize on the growth of e-commerce.

D3-O6: Explore strategic partnerships and diversification of services beyond traditional freight transport to counter fleet outsourcing.

D4-O5: Implement enhanced safety measures to meet consumer demands for safer and more sustainable delivery.

D5-O3: Use trained personnel to lead diversification strategies and compensate for the lack of current leadership.

D6-O2: Improve quality and safety standards to attract new suppliers and reduce dependence on critical suppliers.

Source: Authors, 2024

Weaknesses-Opportunities (DO): Despite the outsourcing of the fleet and the lack of leadership present, the company can take advantage of opportunities such as the growth of e-commerce and the exploration of new services beyond traditional cargo transportation through strategic partnerships and infrastructure improvements; it is also important to have trained personnel to lead strategies [11]; working to improve weaknesses by taking advantage of the opportunities that arise in its environment, or the help provided by third parties to improve the organization (See figure 4).

Figure 5. DA Strategies

DA

STRATEGIES

A3-D3: Faced with rising operating costs, the company may consider insourcing part of its fleet to have greater control over vehicles and drivers, which can help manage and reduce costs in the long term.

A3-D4: The lack of security protocols can be addressed by leveraging the training and experience of personnel (F1) to develop and implement effective security measures in cargo transportation.

A3-D5: The lack of leadership present can be mitigated by strengthening communication and alignment between senior management and managers, using staff training and experience to drive a shared strategic vision.

A3-D6: Dependence on critical suppliers can be mitigated by diversifying supply sources or establishing stronger relationships with key suppliers, leveraging resource management capabilities to ensure reliable and stable supply.

Source: Authors, 2024

Weaknesses-Threats (WTH): The lack of security protocols and the dependence on critical suppliers represent significant risks. However, by implementing improved security measures and updating quality standards, the company can mitigate these risks and reduce its dependence on suppliers [20]; minimizing weaknesses to face the threats that arise; that is, it can improve processes that help to stand out in the face of new ideas that arise, such as the quotation process, improving times which makes customer satisfaction better and can lead to more customers [14] (See figure 5).

Taking into account the process map that the organization had already defined, procedures are established for the mention of the activities carried out by each of them.

- Human resources: Manage purchases, physical resources and administer human talent through institutional policies that allow the attraction and selection of suitable, experienced personnel. Likewise, ensure the obtaining of salary benefits, as well as support the development and training of professional skills in accordance with the needs of the institution.
- Financial: Guarantee the collection, disbursement and administration of financial budgets, as well as the management of securities and investments, ensuring adequate levels of risk, profitability, service and administrative efficiency [6].
- Managerial: Establish an annual review and determination of resources in order to ensure and efficiently implement the safety management system.
- Commercial: Assist in attracting clients, linking and managing new orders to generate new negotiations and create strategic alliances.
- Operations: Establish the conditions for handling cargo and dispatching vehicles to their different destinations, perform traffic and security controls for measures aimed at ensuring the integrity and safety of transportation processes.

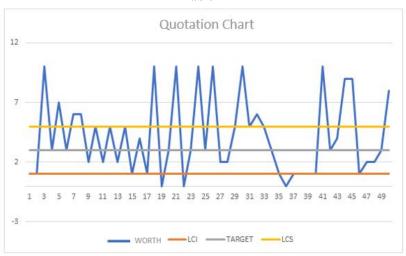
After establishing the definitions of the processes, the most critical items were determined, and this was carried out following a systematic and structured approach. Initially, a wide range of relevant data related to the development of the processes and the activities of each of them was collected.

Once the data has been collected, it is analyzed. This involves identifying a flow of activities carried out and the relationship that exists between each of these, taking into account inputs, activities and outputs that allow this flow.

After the analysis of the information is completed, it is applied to an evaluation and prioritization process to determine the most critical items. This process considers factors such as the potential impact on the overall success of the project, the probability of occurrence of problems associated with each item, and the mitigation capacity available.

Among them, the quotation process is considered by the commercial process, that is, it is the initial step when the client wants to take a service, since from the commercial area all the information will be provided clearly, all depending on the needs that the client has and/or the services that he is willing to acquire according to monetary issues, a time recording of different people is carried out, where it is possible to see that there are many critical points outside the established times (See table 1).





Source: Authors, 2024

Among the items to be evaluated in the process of making a quote, taking into account the established times, defining some parameters, that is, the same time must be for an arduous process as for a simpler process, knowing that the most important thing for the client is that all the doubts they require are resolved in order to have transparency in the service they are going to choose [6], taking into account the above, the following action plans can be defined:

- Strengthen the Management Information and Control System: Implementing an efficient management information and control system can improve decision-making and provide the company with a competitive advantage. This could include the adoption of appropriate information technologies and training staff in their use, to optimize times and have a more agile and assertive response flow [3].
- Develop Clear and Effective Communication: Working on the clarity of goals, objectives and strategies within the organization is crucial. Effective communication channels can be established to ensure that all team members are aligned with the company's vision and objectives, in this case, focused on the initial and perhaps most important process, since it is from this that the acquisition of new clients begins.
- Promote Participation and Ongoing Training: Encouraging active employee participation in defining goals and strategies can improve clarity and commitment. Ongoing training can also be key to ensuring that employees are well informed and empowered to contribute to the company's success.
- Evaluate and Adjust the Marketing and Sales Plan: Although it is highlighted as a strength, it is important to periodically evaluate and adjust the marketing and sales plan to adapt to changes in the business environment and maintain competitive advantage [3].
- Implementation of the Quality Management System: Given the obvious opportunity to implement a quality management system (ISO 9001), the company must plan and execute this initiative. This will not only improve the quality of services, but can also differentiate the company in a competitive market.
- Adoption of Technological Tools: The implementation of technological tools for efficient access to information can improve competitiveness and operational efficiency. It is recommended to evaluate the available solutions and their adaptability to the specific needs of the company.
- Threat Mitigation Strategies: In the face of identified threats, such as poor road infrastructure and intense competition, the company must develop mitigation strategies. This may include route diversification, optimizing delivery times, and constantly improving the value proposition.
- Continuous Monitoring of the Business Environment: Given the dynamic nature of the logistics sector, the company must continuously monitor the business environment to quickly adapt to changes in road infrastructure, market trends and competitor movements.
- Developing Integrated Services: With the opportunity to offer comprehensive logistics solutions, the company should consider developing integrated services that address all stages of the supply chain. This may include warehousing, transportation, distribution, and inventory management services [12].
- Promoting Flexibility as a Competitive Advantage: Given the company's flexibility, this characteristic should be highlighted as a competitive advantage. Actively promoting the ability to adapt quickly to market demands can differentiate the company from the competition [3].
- Monitoring Market Trends: Since the opportunities mentioned above are linked to market trends, the company must stay abreast of changes in customer preferences and needs. This involves closely monitoring industry trends and adjusting strategies accordingly.

www.ijbmi.org

- Adoption of Emerging Technologies: To support flexibility and efficiency, the company can explore the adoption of emerging technologies in logistics, such as real-time tracking systems, automation, and data analytics. These technologies can improve visibility and operational effectiveness.
- Developing Strategic Alliances: To address the threat of standardization, the company might consider developing strategic alliances with other companies that share a similar vision. These alliances can provide flexibility while meeting certain industry standards [12].

To establish a follow-up, an audit procedure is carried out, focused on establishing and defining the methodology, responsibilities and requirements to plan and carry out audits of the Comprehensive Management System.

Aspects that help the development of the project are taken into account, such as the audit carried out taking into account its respective organization, the execution, the post-execution reports, the records of non-conformities. All of this is summarized in corrective and preventive actions; internal audit reports; audit plans and audit procedures, defined under special formats for each item [4].

The above is applied to a critical process, in this case, as already mentioned, the process of quotations, initiating the application of the standard in said process, where the result is that in most cases it depends on the requirements and quantities requested by clients where the established times merit a greater number of days to provide a solution.

By creating action plans, we seek to implement an efficient system to improve decision making and provide the company with a competitive advantage; also, to have clear and effective communication, promote continuous training, adjust the marketing plan, implement the system, mitigate threats, continuous monitoring of the business environment, among others. All this adds up and helps to improve the process, to be within the established time range to respond to customers.

Finally, a cost analysis is carried out, where it is shown that the quotes have a high priority as observed in figure 6.

Risk Prioritization Diagram

Quotation

47%

27%

Request for documents

Figure 6.

Source: Authors, 2024

From the commercial area, the process must be improved, as previously mentioned, it leads to customer loyalty and they prefer to make their shipments with CIEK LOGISTICA, over other companies.

The costs broken down for each risk provide a total sum of each cost, prevention, evaluation, internal failures and external failures.

IV. DISCUSSION

In the provision of a service, there are always obstacles of any kind, including failures that make customers feel dissatisfied with the services they are paying for, because sometimes it is difficult to have a 360° view of all the services being offered, so it is important to find the failures and correct them in order to offer a value proposition to the customer that allows for more accurate decision-making. Because of this, different points of view are seen in the process, including:

Poor Vehicle Maintenance: Mechanical problems and poor vehicle condition can cause delays, accidents and increased operating costs.

Problems with Route Management: Lack of efficient route planning can lead to long delivery times, increased fuel costs and customer dissatisfaction [13].

Lack of Staff Training: Poorly trained drivers and logistics staff can make mistakes that impact safety, efficiency and customer service.

Communication Deficiencies: Lack of clear and effective communication between internal teams and with clients can lead to misunderstandings, delays and delivery errors.

Problems with Technology: Outdated or poorly implemented systems can impact reservation management, shipment tracking and route optimization.

Inadequate Inventory Management: Poor inventory management can lead to resource shortages, lost business opportunities and additional costs.

Regulatory and Legal Aspects: Failure to comply with local and national regulations can result in fines and legal issues.

Financial Problems: Lack of good financial management can lead to cash flow problems, inability to invest in improvements and solvency issues.

Lack of Security Strategy: Failure to follow proper safety protocols can result in accidents and property damage, which can affect both employees and customers.

Customer Dissatisfaction: Poor customer service, with frequent delays, poor handling of complaints and lack of attention to customer needs, can lead to loss of customers and a poor reputation [13].

Staff Shortage: Lack of drivers or support staff can cause delays in deliveries and overload existing employees.

Environmental Problems: Failure to comply with environmental regulations can result in fines and damage to the company's reputation.

The above can be improved with the implementation of the ISO 9001;2015 standard because it allows for greater control of the company's processes; that is, it helps mitigate the risks that exist by identifying opportunities for improvement within each area, in a slightly broader aspect, always having a focus on the client, ensuring that needs and expectations are understood and met.

All this combined with positive leadership, which adds to the commitment of people, with a focus based on processes, to always have a goal of continuous improvement and thus make decisions based on evidence. The above helps the company to improve its quality standards, based on:

Customer Focus

- **Transport Services**: Ensure that the services offered meet the needs and expectations of customers, such as punctuality, safety and adequate vehicle conditions.
- **Customer Satisfaction:** Implement mechanisms to collect and analyze customer feedback on the transportation service [13].

Leadership

- **Management Commitment**: Company leaders must demonstrate their commitment to quality by establishing clear policies and allocating adequate resources for quality management.
- **Quality Objectives**: Define and communicate specific quality objectives related to transportation, such as reducing delivery times or improving safety.

Process-Based Approach

- **Transport Processes**: Identify and manage key transportation processes, such as route planning, fleet management, vehicle maintenance and customer service.
- **Operational Efficiency**: Use key performance indicators (KPIs) to measure the efficiency and effectiveness of transportation processes.

Continuous Improvement

- **Internal Audits**: Conduct internal audits to identify areas for improvement in transportation processes.
- Corrective and Preventive Actions: Implement actions to address nonconformities and prevent future problems.

Evidence-based decision making

- **Performance data:** Collect and analyze data related to transportation performance, such as delivery times, operating costs and customer satisfaction, to make decisions based on real data [14]

Relationship Management

- **Suppliers and Partners:** Manages quality in relationships with suppliers and partners, such as maintenance workshops and logistics companies, to ensure they meet the required standards.
- Clients and Communities: Maintain effective communication with customers and the communities you serve to better understand their needs and expectations.

Dry cargo transport in Colombia can be understood as goods that are transported in large quantities without the need to be packaged or packed. When we mention "dry" we understand it as merchandise that does not have liquids or gases present, so it must be transported in vehicles specialized for this purpose, complying

with all environmental and health procedures so that when it reaches its destination it is distributed and consumed by the selected public.

It is important to note that land transport of dry cargo in Colombia is a vital and important activity because it supports a large part of the country's economy, facilitating the distribution of products and raw materials throughout the territory [16].

Taking into account the above, it is important to have a very solid structure in each of the processes that help to have an excellent service, since it is important for customers to have a positive perception of the service they are paying for and also for the company to have high standards that will position it in a higher category compared to the competition. For this reason, from the commercial area, which is the main one where customer service begins, providing a solution to each of the doubts that the customer has in the process, there must be a very relevant management and trained personnel that allows providing all the updated and precise information regarding the requirements, so that the customer feels satisfied and has no doubts regarding the service that will be offered, this as a first instance, likewise when the final delivery is made, it must be within the times indicated to the customer, the merchandise must be in excellent condition, and everything that the customer paid for must be fulfilled, in case the merchandise is stolen, the customer must be responded to by validating whether the security service was offered from the beginning or in such case he did not want to obtain it, all processes must be very well defined and aligned with everything required to have a clean and transparent process.

V. CONCLUSION

In order for CIEK LOGISTICA SAS to meet the objectives outlined in this project, it is important to begin executing the processes described, which lead to the conclusion that implementation is necessary, since the company needs to adopt an ISO 9001:2015 quality management system to improve processes, efficiency and customer satisfaction [15]. On the other hand, each of the critical areas detected in the diagnosis must be strengthened.

It is important to recognize the opportunities that the company has, in order to take full advantage of the benefits that each area has, to strengthen negative points that prevent them from having a better position in the market; therefore, this means that they have to focus on continuous improvements and evaluations, carrying out audits, monitoring, conducting training workshops, establishing effective communication, all this in order to comply with the standards and adjust strategies as appropriate [4].

The standard offers a solid framework for quality management, helping to reduce errors, in this case the transport company guarantees its services and optimizes its operations; also, with the implementation of the standard, the punctuality of deliveries could be improved, operating costs could be reduced through efficient fleet management and proactive vehicle maintenance. In addition, the standard fosters a quality culture in the organization, where all employees are committed to continuous improvement and compliance with standards. This not only improves operational efficiency, but also strengthens the competitive position in the market. Although the implementation of ISO 9001:2015 [1] for CIEK LOGISTICA SAS offers numerous benefits, it also presents challenges, such as the need for continuous staff training and adaptation of internal processes to the requirements of the standard. The company knows that it must invest in training for its employees, carrying out regular internal audits and using key performance indicators to continuously monitor and evaluate the effectiveness of the quality management system.

Finally, the company has the ability to adapt to changing market demands and customer expectations in order to maintain competitiveness, looking to the future with the need to integrate emerging technologies and sustainable practices into its quality management systems.

REFERENCES

- [1] ISO 9001, Quality management systems Requirements. Recovered from:https://www.iso.org/obp/ui/#iso:std:iso:9001:ed-5:v1:es Salazar, B. (2021). SWOT strategic alternatives. Retrieved from:https://ingenieriaindustrialonline.com/gestion-y-control-de-
- calidad/matriz-foda-dafo/
- [3] Salazar, B. (2021). Quality management and control. Retrieved from:https://ingenieriaindustrialonline.com/gestion-de-calidad/gestion-y-control-de-la-calidad/
- [4] ASQ, What is ISO 9001:2015 Quality management systems?. Recovered from:https://asq.org/quality-resources/iso-9001
- [5] Chavarro Bernal, J (2016) Quality management system based on the ISO 90001:2015 standard for the Servi Crown Toyota company [online]. Specialization in quality management. Villavicencio: Universidad de los Llanos [accessed: February 2, 2022]. Retrieved from:
 - https://repositorio.unillanos.edu.co/bitstream/handle/001/1081/RUNILLANOS%20EGEC%200063%20SISTEMA%20DE%20GESTION%20DE%20LA%20CALIDAD%20BASADO%20EN%20LA%20NORMA%20ISO%2090012015%20PARA%20LA%20EMPRESA%20SERVI%20CROWN%20TOYOTA.pdf?sequence=8&isAllowed=y
- [6] Cruz, F. Lopez, A. Ruiz, C. (2016). Management system ISO 9001-2015: techniques and tools of quality engineering for the implementation. Recovered from:https://dialnet.unirioja.es/servlet/articulo?codigo=6096091
- [7] Anttila, J. Jusilla, K. (2017). ISO 9001:2015 a questionable reform. What should the implementing organizations understand and do? Recovered from:https://www.tandfonline.com/doi/abs/10.1080/14783363.2017.1309119

- [8] Salazar, J. Mora, N. Romero, W. Ollague, J. (2020). Diagnosis of the application of the PHVA cycle according to ISO 9001: 2015 in the INCARPALM Company. Recovered from:https://dialnet.unirioja.es/servlet/articulo?codigo=7897683
- [9] International Organization for Standardization. (2015). ISO 9001:2015 Quality management systems Requirements. ISO. https://www.iso.org/standard/62085.html
- [10] Covolco. (2014). Dry cargo transport. Retrieved from:https://www.covolco.com/s8/servicios/transporte-carga-seca
- [11] quality environment & strategies. (2023). ISO 9001 transport and logistics sector. Retrieved from:https://solucionesqes.com/sectores/iso-9001-transporte-logistico/
- [12] Global Certification Agency. ISO Certification in Transport. Retrieved from:https://www.nqa.com/es-co/certification/sectors/transportation
- [13] ESGinnovaGroup, (2014). ISO 9001: Customer satisfaction. Retrieved from:https://www.nueva-iso-9001-2015.com/2014/12/iso-9001-satisfaccion-cliente/
- [14] European School of Excellence, (2023). 3 steps to increase customer satisfaction with ISO 9001. Retrieved from:https://www.escuelaeuropeaexcelencia.com/2023/06/3-pasos-para-aumentar-la-satisfaccion-del-cliente-con-iso-9001/
- [15] Arango, Y, (2021). Customer Satisfaction in the ISO 9001 Standard. Retrieved from:https://www.dqsglobal.com/es-mx/aprenda/blog/la-satisfaccion-del-cliente-en-la-norma-iso-9001
- Velarde Huamán, M.P. (2020). Implementation of a quality management system based on the ISO 9001:2015 standard for a land freight transportation company. University of Lima. Recovered from:https://repositorio.ulima.edu.pe/handle/20.500.12724/11659
- [17] Margffoy, A. Cipagauta, E. Fonseca, A. (2024). Integration of ISO 9001:2015 and ISO 45001:2018 management systems. Case study Intrapauto SAS Recovered from:https://revistas.usantotomas.edu.co/index.php/signos/article/view/10083
- [18] Reyes C, C. (2018). Development of the quality manual according to the parameters of the ISO 9001:2015 standard in the processes of the company Formaq SAS [online]. Undergraduate degree in Engineering. Tunja. Pedagogical and Technological University of Colombia. [accessed: February 2, [2022]. Retrieved from: https://repositorio.uptc.edu.co/bitstream/001/3041/1/TGT_1625.pdf
- Betancourt, G. (2017). Identification, survey and proposal for improvement of the critical processes of the company "Santos Distribuidores", Recovered from:https://repositorio.puce.edu.ec/items/a1a0ec02-ea81-42b9-b718-c06b6731f292
- [20] Carrillo, C. (2022). Improvement of critical processes of the Veritex Company. Recovered from:https://repositorio.puce.edu.ec/items/c63c71f1-7cb5-48fd-a541-6582b470f7a7