

**MASTER UNIVERSITY IN  
PROJECT MANAGEMENT**

**END OF MASTER THESIS**

***SUSTAINABILITY ANALYSIS IN THE PROJECT  
MANAGEMENT OF THE VIESGO ORGANIZATION  
THROUGH THE P5 STANDARD OF GPM.***

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## RESUMEN

La sostenibilidad es un tema creciente desde hace unos años, debido a los datos alarmantes del impacto del hombre en el mundo. Es por ello que, en la agenda del 2030, adoptada por la ONU se propone un plan de acción, guiado por los Objetivos de Desarrollo Sostenible, con el fin lograr un equilibrio social, ambiental y económico. Una gran mayoría de organizaciones han optado por acoger el plan de sostenibilidad en sus objetivos y compromisos empresariales, lo que ha significado realinear sus estrategias en los productos, servicios y procesos. Sin embargo, recopilar toda la información de la empresa y los impactos de sus actividades en la sostenibilidad, resulta un trabajo tedioso, a lo que la organización GPM responde con un estándar de sostenibilidad complementado con herramientas que agilizan esta gestión. P5IA es una herramienta holística, que permite analizar los impactos que tienen las actividades de la organización en los procesos, productos, personas, planeta y beneficios. Es decir, permite tener una visión de 360º de la organización en la sostenibilidad. En consecuencia, se obtienen resultados objetivos de los riesgos y oportunidades que facilitan tomar decisiones sostenibles a los gestores o encargados.

Es por esta razón que, con un Caso Estudio de una organización dedicada a la generación y distribución eléctrica conocida como Viesgo, se cumple el objetivo de este trabajo, que es conocer y analizar la funcionalidad y fiabilidad de la herramienta, así como, el nivel de sostenibilidad que tiene Viesgo. Con este Caso Estudio se concluye que la herramienta es sencilla e intuitiva, lo que facilita que el desarrollo del proceso de análisis se ejecute eficientemente, sin embargo, no es lo suficientemente objetiva en la calificación de los impactos que tienen los eventos en las dimensiones de la sostenibilidad. Aun así, el análisis permitió obtener resultados que demuestran que Viesgo es una organización comprometida con la sociedad, el planeta y el desarrollo económico y que puede seguir mejorando su nivel de sostenibilidad.

## ABSTRACT

Sustainability has been a growing issue for a few years, due to the alarming data of the impact of man in the world. That is why, in the 2030 agenda, adopted by the UN, an action plan is proposed, guided by the Sustainable Development Goals, to achieve a social, environmental and economic balance. A large majority of organizations have chosen to embrace the sustainability plan in their business objectives and commitments, which has meant realigning their strategies in products, services and processes. However, collecting all the information about the company and the impacts of its activities on sustainability is a tedious job, to which the GPM organization responds with a sustainability standard complemented with tools that streamline this management. P5IA is a holistic tool that allows analysing the impacts that the organization's activities have on processes, products, people, planet and benefits. It allows to have a 360º vision of the organization in sustainability. Consequently, objective results of risks and opportunities are obtained that facilitate making sustainable decisions for managers or managers.

It is for this reason that, with a Case Study of an organization dedicated to electricity generation and distribution known as Viesgo, the objective of this work is fulfilled, which is to know and analyse the functionality and reliability of the tool, as well as the level sustainability that Viesgo has. With this Case



Study it is concluded that the tool is simple and intuitive, which facilitates the development of the analysis process to be executed efficiently, however, it is not objective enough in the qualification of the impacts that events have on the dimensions of the sustainability. Even so, the analysis obtained obtain results that show that Viesgo is an organization committed to society, the planet and economic development and that it can continue to improve its level of sustainability.

#### **KEYWORDS**

Sustainability, P5 Standard, P5IA tool, Sustainability Analysis, Sustainable Development, Green Management, Sustainable Management



## MEMORY

### 1. Introduction

Demand for Sustainable Development, climate change and social responsibility has increased in recent years, so the demand for sustainable practices for organizations, programs and projects has also increased.

That is why several organizations around the world have come together to develop tools to participate and contribute to a healthy economy with a commitment to environmental and social management.

Many of these tools are relatively new, meaning they continue to be measured and improved. That is why, in this work, the tools of the P5 standard [1] will be used, applying it to a real case, which, in this case is the analysis of the corporate organization named Viesgo. That is, in this work the impact of the Company on the environment, on the economic side, on the processes and products of Viesgo are analysed, and alternatives and possible improvements are proposed. On the other hand, it seeks to analyse the tool proposed by the P5 standard, to know its level of reliability and precision, to propose improvement suggestions and be able to apply it not only to companies but also to projects, processes and programs.

The rest of this work is structured as follows: section 2 provides the objective and scope of the work; section 3 describes the state of the art of sustainability and its management in organizations. Section 4 describes the organization of the case study, its culture, structure, politics, among other features. Section 5 sets out the methodology used for the case study. Section 6 provides descriptive results of the analysis. Next to this section are the concluding observations and perspectives and finally in section 7 are the annexes of the analysis of this case study.

### 2. Context

Sustainability is an issue that in recent years has gained more strength among companies to generate social, environmental, and economic value to improve the well-being of the communities in which the companies operate and for future generations.

Sustainability has ceased to be a subjective to objective issue because several organizations have created standards or guides to develop strategic plans, indicators, and controls, however, due to its relative new emergence in the business and social world, research and knowledge does not they are deep enough, that a continuous rectification of the standards is needed to perfect them and improve the levels of sustainability in companies.

For this reason, we seek to analyse the P5 sustainability standard created by the Green Project Management organization, with a case study of a company to know in detail its physiology to obtain better results in the sustainability of the company.

The case study is of Viesgo, a company dedicated to the generation and distribution of electricity, of which the information available is obtained from its official website, the sustainability reports, non-financial reports and articles published by it. which means that the analysis of the standard tool will not



deepen the organization but will focus on the ease and agility to follow the guide of the standard and its tools.

### **3. Objectives and scope of work**

The objective of this work is to implement the P5 standard in an organization as a case study: evaluate its functionality and practicality when it comes to support the sustainable development of project management.

To do so, in this End of Master Thesis, the tools and techniques of the GPM P5 standard will be used to analyse the possible impacts that affect sustainability in the management of the organization of Viesgo, a company engaged in the generation and distribution of electricity in northern Spain.

Once the results of the analysis are obtained, a clearer and more objective view of the standard will be taken in the direction of organizations. This will facilitate demonstrating the reliability of the standard, posing strategies that allow the organization; improve expected benefits and increase positive impacts and reduce negative impacts on society, the environment, and the value of their projects.

### **4. State of the art analysis**

Over the years, generation after generation has pursued the same goal; improve their quality of life, which has resulted in more development, more people, more consumption and more waste. However, only in recent years, climate change has been the most controversial issue, in which it is clear that man is the main culprit [2].

According to the Global Footprint Network, humanity has gone from having the equivalent of 0.73 Ecological Footprint of the Earth in 1960 to consuming the equivalent of 1.73 Ecological Footprint of the Earth in 2017 [3]. That is, the ecological reserves are in deficit as shown in Figure 1.

In addition, the United Nations, analysis that by 2050 the population will reach 9,800 million people [4], which means that if today with the 7,837 million people there are [the world] and not they can cover all the basic needs for all people [5] what will it be like in 2050? What is clear is that the world needs to act now to create a social, environmental, and economic balance so that there is a liveable future.

Our World in Data has collected data on CO2 emissions from production processes worldwide, shown in Figure 2. The areas that have emitted the most tons of CO2 emissions are Asia, Australia, Saudi Arabia, the United States and Canada [6].

This data is alarming for everyone, remembering that not all the resources available on the planet are renewable. That is why in 2015 several organizations and world leaders decided to work together to find solutions that allow Planet Earth to be sustainable for thousands of more years. To do this, they created 17 Sustainable Development Goals (SDGs) to eradicate negative impacts on people such as poverty, protect the environment and ensure prosperity so that future generations can enjoy the same resources [7].

The global commitment to sustainable development has gone from policies to implementation in organizations, aligning the effort of the organization to make its projects, processes and products

sustainable [5]. In other words, sustainability has become a key indicator for business, which is why it has been included in the strategic plans of organizations [8] to achieve the goals of the 2030 Agenda.

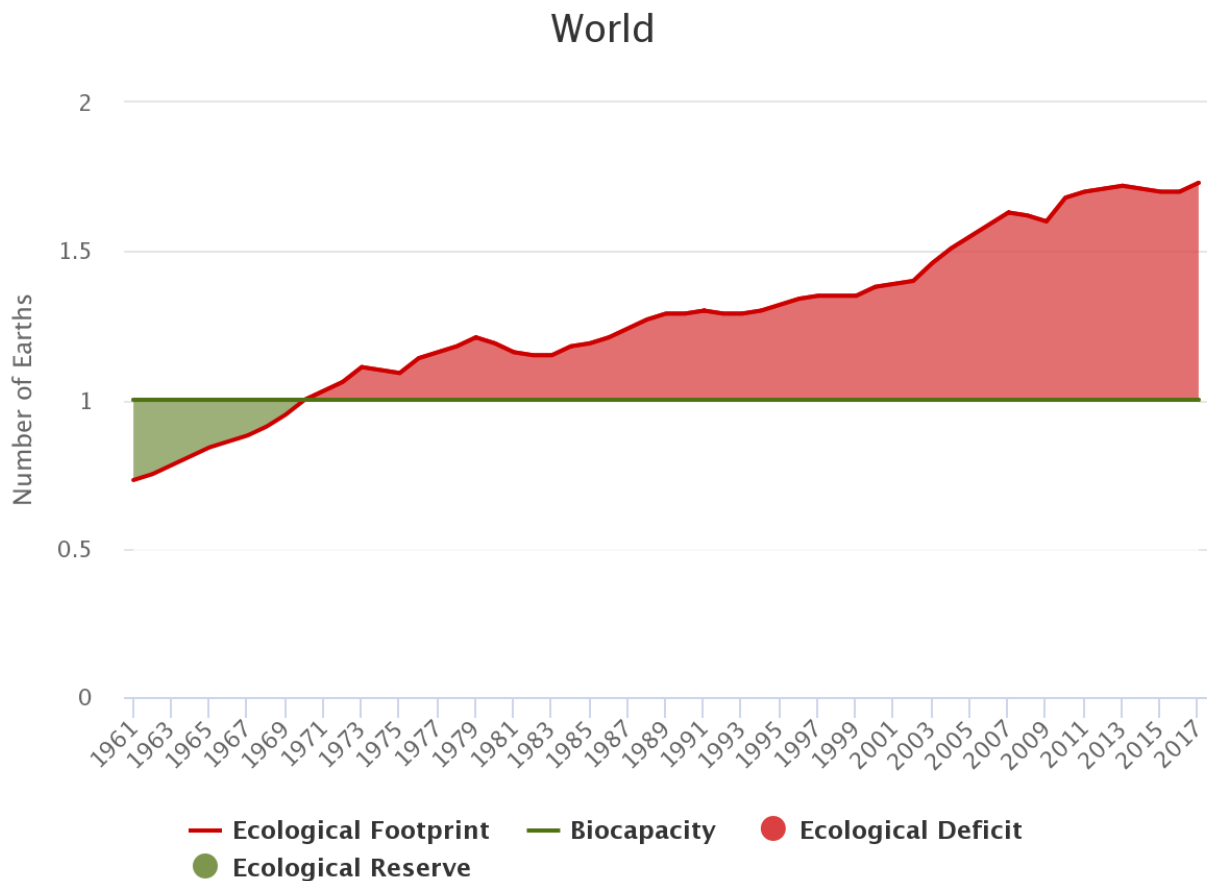


Figure 1: Global footprint [3]

Professionals in the project management branch have identified that they play a fundamental role in the achievement of the SDGs, since they are the perfect agents of change, for the achievement of "green". For this, it is necessary to change the way in which projects are thought and decisions are made that impact the environment, people and the prosperity of the project [9].

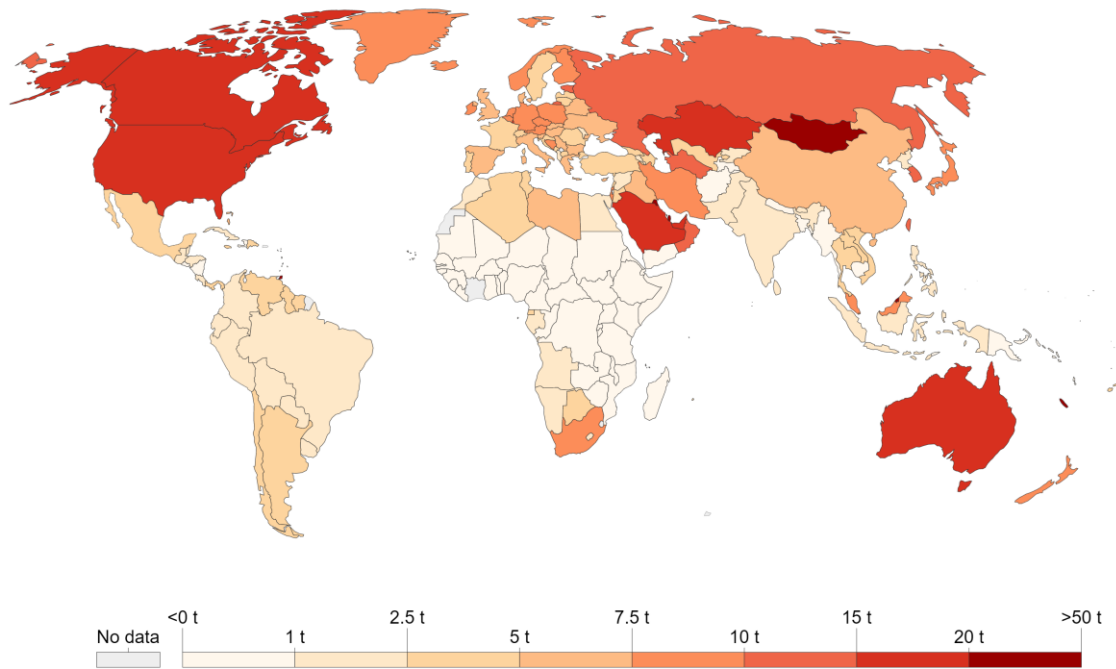
However, there is a critical part of this alignment process and that is being able to effectively focus these objectives and goals within the business framework. This is because there are very few studies and methodologies that help managers to organize and obtain the greatest amount of information to make decisions that bring projects closer to sustainability [10].

According to Castor et al. [7], there are some analytical tools for the sustainability of projects such as Environmental Impact Assessment (EIA), Life Cycle Assessment (LCA), Social Life Cycle Assessment (S-LCA), Impact Assessment of Sustainability (SIA), Multi-Criteria Decision Analysis (MCDA), SDSN SDG Impact Assessment Tool, and SDG Interaction Mapping. Although all these tools present holistic

limitations of sustainable development, that is, none of these tools propose a methodology that evaluates the three pillars of sustainability and the SDGs.

### Per capita CO<sub>2</sub> emissions, 2019

Carbon dioxide (CO<sub>2</sub>) emissions from the burning of fossil fuels for energy and cement production. Land use change is not included.



Source: Our World in Data based on the Global Carbon Project; Gapminder & UN [OurWorldInData.org/co2-and-other-greenhouse-gas-emissions/](https://OurWorldInData.org/co2-and-other-greenhouse-gas-emissions/) • CC BY  
 Note: CO<sub>2</sub> emissions are measured on a production basis, meaning they do not correct for emissions embedded in traded goods.

Figure 2: Per capita CO<sub>2</sub> emissions, 2019 [6]

Consequently, at present the number of publications and studies on the relationship between sustainability and project management [11] is increasing since a holistic, simple, intuitive and effective tool is needed to support and guide those who must make decisions in the projects towards sustainability. Projects. As the methodology proposed by Laurent et al. [12], in which technology plays a fundamental role to carry out sustainability evaluations of research projects and their impact on the UN SDGs to cover sustainability in all its dimensions to anticipate critical points, However, in the exploitation of the project, follows a wide margin of uncertainty and has limitations.

On the other hand, the sustainable value mapping and analysis methodology presented by Winans et al. [10], like the stochastic analysis of Moheb-Alizadeh [13] that addresses the efficiency problems of closed-loop supply chains, strategically assess social, economic and environmental needs, including multiple stakeholders of each operation in the supply chain, to improve the design and logistics of the chains. In addition to these analyses, Gavrilescu et al. [14] that allows obtaining realistic data to attack weak points and optimize strengths.





However, research has not only reached the industrial field, but tools have also been developed for the banking sector, such as the one presented by Chatzitheodorou et al. [15] that rates corporate sustainability risks through published information. Or the ClimACT methodology of Lizana et al. [16], implemented as a pilot plan in several European schools, in order to measure sustainable performance and propose strategic plans to encourage a more sustainable life, from which very positive improvement results were obtained. A methodology that is also applied in the academic field is the one proposed by Sánchez-Carracedo et al. [17] to measure the level of knowledge acquired in university careers about sustainability, showing that only a little more than half of what was expected is achieved.

As well as studies that analyse in depth the situation of sustainability such as the one proposed by Opon et al. [18], which demonstrates the need to include the uncertainties created throughout the multi-criteria methodologies, in the analysis to obtain more approximate conclusions. Or the review by Chen et al. [19] of the application of the Planetary Limits methodology in sustainability, concluding that to achieve the SDGs within the PBs, a transformation must occur in the socioeconomic systems.

The Green Project Management (GPM) organization, upon learning of this situation, develops a standard and a tool that has begun to be used by clients, investors, stakeholders and competitors to make decisions that improve the level of sustainability of projects [20]. The P5 standard, being an integrating system that offers great benefits to both the organization and its stakeholders, is necessary for the implementation of the standard. Because the implementation of the standard requires important changes, such as in the structure and culture of the organization, top management plays a key role in locating the positive and negative impacts and gaps that the organization has for sustainability, so that the change is continuous. and the SDGs [1] are achieved.

That is why this document will develop a case study of an analysis of the sustainability of the organization through the implementation of the tools of the P5 standard, with two objectives: (1) the first is to obtain an objective report of the impacts and gaps of the organization, with a view to sustainability and proposing adequate solutions that improve the measurement indexes of the indicators of each thematic area; (2) the second objective is to analyse the efficiency and effectiveness of the tools proposed by the P5 standard to achieve sustainable solutions, so that organizations can achieve the Sustainable Development Goals.

#### **4.1. ¿What is the P5 GPM standard?**

To analyse the electrical distribution organization in northern Spain, Viesgo, the Green Project Management (GPM) P5 standard will be supplemented, which is a tool that helps align portfolios, programs and projects with the strategy of the organization, to achieve sustainability [20]. This standard focuses on the impact of project processes and deliverables on society, the environment, and the local and corporate economy.

The P5 standard links the iron triangle, the triple baseline approach, and newer approaches such as PRINCE2, MSP, and the Green Project Management (PRiSM), to have a better relationship in risk management and value and benefit delivery [1].

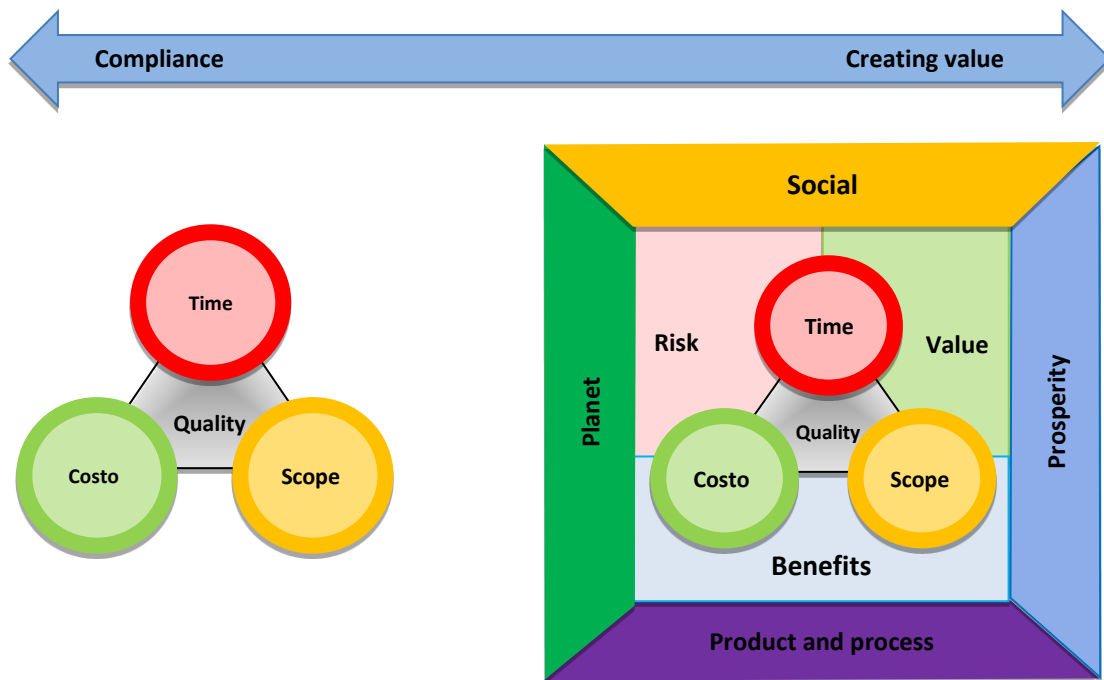


Figure 3: Evolution of the project management approaches [1]

The main objective of P5 is to identify potential positive and negative sustainability impacts that can be analysed and presented to management to support informed decisions and effective resource allocation [1].

Organizing all the information necessary to perform the analysis of the organization is tedious and complex, that is why, this standard is a tool that collects all the approaches mentioned above to facilitate the management of information. As seen in Figure 4 the top is based on Product, Processes, People, Planet and Prosperity impacts, that is why the standard receive the “P5 standard”.

At the bottom of the scheme are subdivided the impacts to People, into four categories, Planet, also into four categories and prosperity into three categories. Each category groups together a series of criteria that facilitate in-depth analysis of each approach.



PROJECT										
2.1 Product Impacts				2.2 Process (Project Management) Impacts						
2.1.2 Lifespan of the product		2.1.3 Servicing of product		2.2.1 Effectiveness of project processes		2.2.2 Efficiency of project processes		2.2.3 Fairness of project processes		
3 People (Social) Impacts				4 Planet (Environmental) Impacts				5 Prosperity (Economic) Impacts		
3.1 Labor Practices and Decent Work	3.2 Society and Customers	3.3 Human Rights	3.4 Ethical Behavior	4.1 Transport	4.2 Energy	4.3 Land, Water, and Air	4.4 Consumption	5.1 Business Case Analysis	5.2 Business Agility	5.3 Economic Stimulation
3.1.1 Employment and staffing	3.2.1 Community support	3.3.1 Non-discrimination	3.4.1 Procurement practices	4.1.1 Local procurement	4.2.1 Energy consumption	4.3.1 Biological diversity	4.4.1 Recycling and reuse	5.1.1 Modeling and simulation	5.2.1 Flexibility/optionality	5.3.1 Local economic impact
3.1.2 Labor/management relations	3.2.2 Public policy compliance	3.3.2 Age-appropriate labor	3.4.2 Anti-corruption	4.1.2 Digital communication	4.2.2 CO2 emissions	4.3.2 Water and air quality	4.4.2 Disposal	5.1.2 Present value	5.2.2 Business flexibility	5.3.2 Indirect benefits
3.1.3 Project health and safety	3.2.3 Protection for indigenous and tribal peoples	3.3.3 Voluntary labor	3.4.3 Fair competition	4.1.3 Traveling and commuting	4.2.3 Clean energy return	4.3.3 Water consumption	4.4.3 Contamination and pollution	5.1.3 Direct financial benefits		
3.1.4 Training and education	3.2.4 Customer health and safety			4.1.4 Logistics	4.2.4 Renewable energy	4.3.4 Sanitary water displacement	4.4.4 Waste generation	5.1.4 Return on investment		
3.1.5 Organizational learning	3.2.5 Product and service labeling							5.1.5 Benefit-cost ratio		
3.1.6 Diversity and equal opportunity	3.2.6 Market communications and advertising							5.1.6 Internal rate of return		
3.1.7 Local competence development	3.2.7 Customer privacy									

Figure 4: Ontology P5 [1]

#### 4.1.1. The Sustainable Development Goals

The Standard P5 is a synergy between the Principles of the United Nations Global Compact, the ONU Reporting Framework, and the Sustainable Development Goals (SDGs).



Figure 5: Sustainable Development Goals [21]

#### 4.1.2. Impacts of Processes

It refers to the impacts generated by the activities and results of the project on people, the planet and prosperity because of decisions made on product characteristics and project management practices. These impacts can overlap in several areas, as in the end everything is interrelated in an organization that seeks to be sustainable.

The impacts are analysed during and after the execution of the project, to have an analysis of the cradle to the grave, which collects the most variables that affect the development.

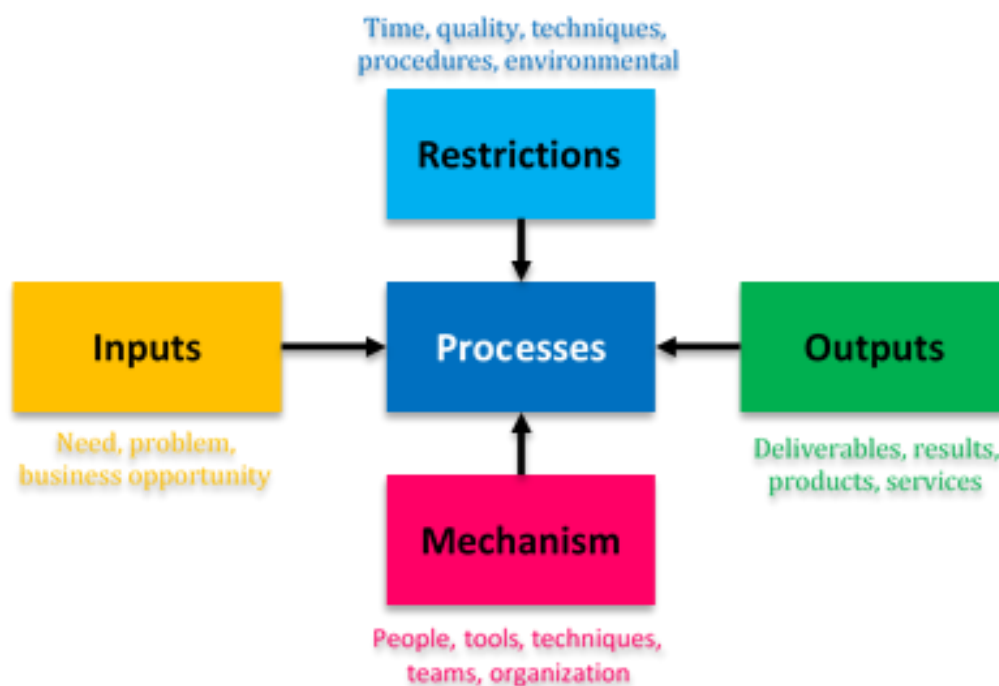


Figure 5: Process components [1]

#### 4.1.3. Product Impacts

Products are physical elements, services, an asset, result or a business change of an organization to create profit. Their impacts not only occur during the project, but also, after the project. It is for that analysis should be done from the cradle to the grave, to prevent any detail.

#### 4.1.4. Impacts on People.

The standard includes in the category of "People" the entire set of variables or factors that affect the society that the project reaches, based on international standards. The impacts of project activities or products on individuals, society and communities focus on ethics, mutually beneficial relationships, customers, suppliers, supply chains and the community at large [1].

They are classified into, Work practices and decent work, Society and customers, Human rights and Ethical behaviour. Each of these classifications is composed of other subcategories.

#### 4.1.5. Impacts to the Planet.

This category classifies the factors of the project that impact on the alive or not alive natural systems; that is, land, water, air, flora, fauna and people who live in them. They are classified into, Transportation, Energy, Earth, air, and water and Consumption.

#### 4.1.6. Impacts on Prosperity.

This category refers to all the factors that affect the economic profitability and external costs when calculating the return value of the projects. Identifying impacts can maximize positive stakeholder yields. They are classified into, Business case analysis, Business agility and Economic stimulation.

### 4.2. ¿Who is Viesgo?

Viesgo is an energy company focused on generating and distributing energy in northern Spain, which goes from Galicia, passing through Asturias, Castilla y León and Cantabria, with a network of approximately 31,000 km, becoming the fourth distributor of electricity [22].

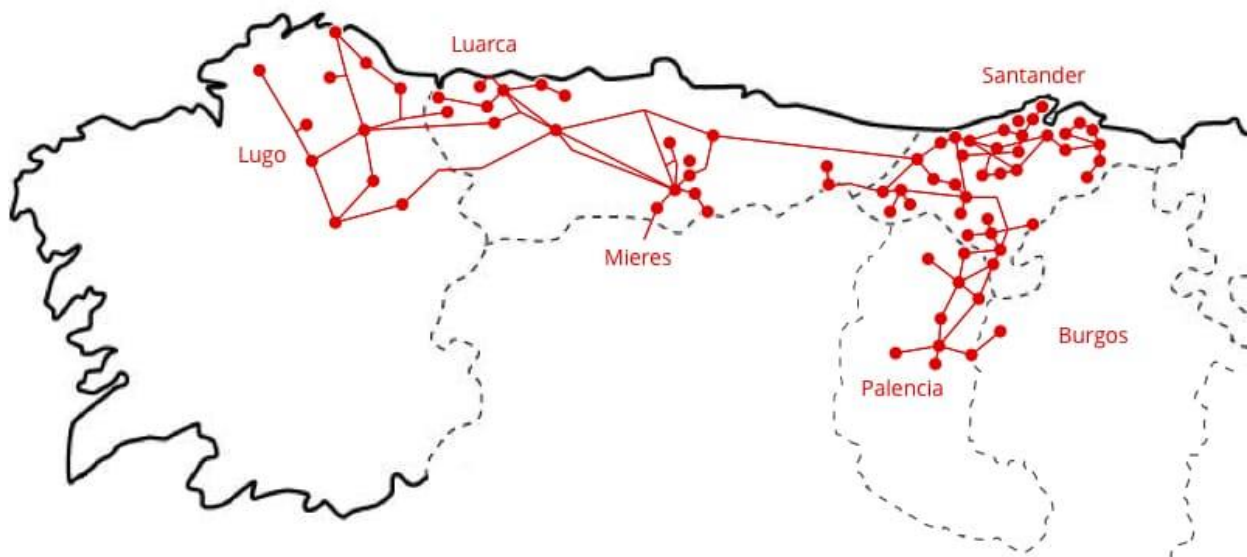


Figure 6: Viesgo Distribution Network [22]

Viesgo Renewable Energy, committed to inexhaustible, clean, and efficient resources, is why it has 24 wind farms located in the Iberian Peninsula, producing approximately 405 MW per year. In addition, it has two hydraulic power plants in Spain that allows them to produce 25 MW more [22].

The objective of Viesgo is to be a benchmark in the energy transition, boosting energies, renewables, and digitization, being in the first 100% decarbonized power company in Spain, actively collaborating in

the electrification of society, increasing investments for the reactivation of the economy, generating a positive impact on society and the environment, investing in new technologies and training to achieve digital transformation and modernization. Therefore, it is a company that is committed to sustainability and digitization [23].

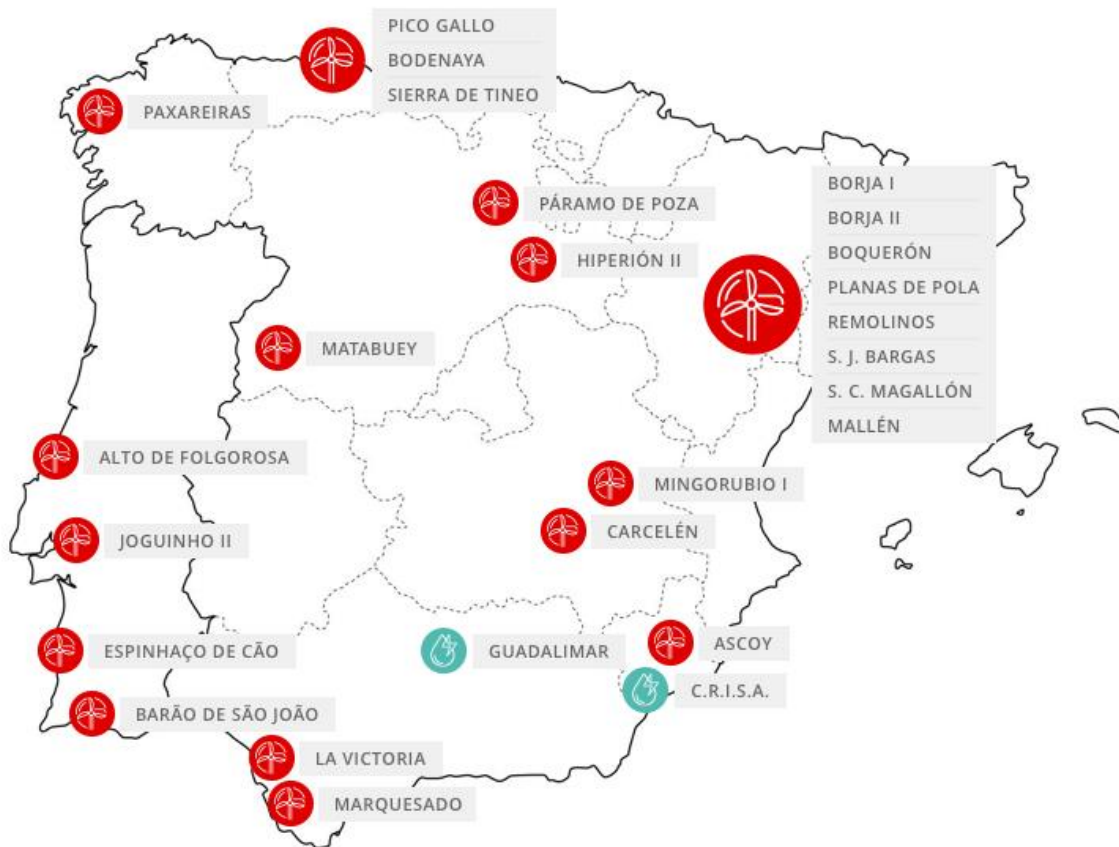


Figure 7: Map of wind farms and power plants [22]

#### 4.2.1. Values

The organization is governed by excellence, to achieve ever greater levels of efficiency and generate value in all areas of activity, innovation, promoting technological development to continuously improve, acting with flexibility and agility, leadership, being benchmarks in the infrastructure sector, working as a team to find the best solutions. finally, responsibility, with people and the environment to make a positive impact on working communities [23].

#### 4.2.2. Viesgo Organization

For the management and control of portfolios, programs, and projects, Viesgo opted for a functional organizational structure, which is a simple structure, promoting synergies between employees and functions, which has allowed to have greater stability in its processes and products.



### 4.2.3. Interest groups

For Viesgo to maintain an active relationship and communication with stakeholders, it is what has allowed it to be business success. That is why, which recognizes that its stakeholders are, its clients, shareholders, employees, society, suppliers and having regulated its activities, public administrations are also part of this group.

### 4.2.4. Communication channels

According to the 2019 Sustainability Memory of Viesgo [24], this organization has divided the information channels according to each interest group, this in order to open, coherent, proactive and agile relationships. In the case of shareholders, being part of the Corporate Governing Body communication is kept and maintained through telematic meetings and communications, allowing them to participate, in the management and decision-making.

On the other hand, communication with employees is maintained with the channels of complaints, suggestions, surveys, intranet, direct communication and commissions. While communication with suppliers needs to be constant to have better management, it is therefore for the channels used to be meetings, through platforms such as SAP, ALFRESCO and the corporate web.

Communication with society and public administrations is maintained less frequently than those mentioned above, when it comes to face-to-face meetings, telematics, mailboxes, or corporate web, however, there are constant communication staff with the media.

Finally, customers are constantly informed of indicators such as the Net Promoter Score NPS, which measures the level of customer satisfaction and their loyalty. They also have customer service and multi-channel complaint management.

- **NPS Index**

It is the degree of loyalty and customer satisfaction (Net Promoter Score). To get the relationship of these two variables is done through customer-provided data in a survey and then transformed into statistical data.

	2017	2018	2019	
<b>Troubleshooting</b>	37	49	54	<b>17%</b>
<b>New connections</b>	39	52	58	<b>19%</b>
<b>Complaints</b>	33	22	16	<b>-17%</b>
<b>Non-remote connections</b>	43	55	68	<b>25%</b>

Chart 1: Customer experience and registered quality from 2017 to 2019 [11]

The average data that collects in the sustainability report of the company in 2019 [24], customer satisfaction from 2017 to 2019, in breakdowns is 37, 49 and 54 points. On new connections it is 39, 52 and 58 points. In complaint management it is 33, 22 and 16 points and on non-remote connections it is





43, 55 and 68 points. This means that the management of the service of the company in breakdowns increased by 17%, the management of new connections increased by 19%, complaint management decreased by 17% and finally, increased by 25% in the management of non-remote connections.

- **Risk Management**

The market in which this immersed Viesgo is exposed to different risks that it must face with proper management and organization. Risk management is based on the Risk Management Policy of the Viesgo Administrative Council, which presents a risk management structure and several parameters to identify, measure, monitor and control risks.

The organizational structure is represented in pyramidal form, according to the 2019 Sustainability Report [24]. At the base is the Audit and Risk Committee, in charge of supervising 16th annually the effectiveness of the methodologies applied and reporting it to the Administrative Council. In the middle and at the top of the pyramid is the Chief Risk Officer and the Risk Committee, which quarterly meet to track global risk management.

Management is responsible for monitoring risk management, which are identified, measured and managed by each business unit, with the aim of ensuring that the methodologies are applied correctly.

The risks identified by the corporation are:

- Regulatory risks; amendments to laws or regulations.
- Operational risks: events that negatively impact construction and office operations.
- Strategic and Project Risks; economic, political, cultural, and environmental changes affecting strategic planning and project implementation.
- Safety, health, and environmental risks; related to the daily activities carried out by employees, suppliers, and communities in which it operates.
- Compliance and ethical risks; all events where ethical laws, procedures and conduct are violated.

- **Commitment to Digitalization and Innovation**

According to the 2019 Viesgo Sustainability Report [24] it demonstrates its commitment to innovation, which takes it as one of its main values, which means that all its activities are developed with a touch of innovation. It recognizes that innovation and digitization are the keys to energy development and that a correct analysis of their implementation is necessary to improve production processes and positively impact the environment.

- **Commitment to Sustainability**

The company integrates its processes into a sustainable model that includes practices to improve its performance in society, the environment and energy development, as mentioned in the 2019 Viesgo





Sustainability Report [24]. In this Report they expose the impact of their activities and policies, showing that they are a company committed to the axes of sustainability and the Sustainable Development Goals.

- **Commitment to the SDGs**

As mentioned in the [25]Viesgo, it joins the fulfilment of the Sustainable Development Goals, including those that correspond to its business strategy, such as goal 3 "Health and well-being", 5 "Gender equality", 7 "Non-polluting affordable energy ", 9 "Industry, innovation and infrastructure" and 13 "Climate action", as well as, indirectly, with the agreements signed with other institutions, it also collaborates with the rest of the objectives.

- **GRESB Index**

index that is used as a tool to measure and assess the degree of sustainability of infrastructure, considering three fundamental principles ESG, environment, social and governance. The Environmental criterion, which evaluates the actions and efficiency measures carried out to minimize the environmental footprint. The social principle, which measures relationships and the impact the entity has on stakeholders. Finally, the principle of governance, which evaluates sustainable policies, procedures and culture in the entity [26].

Viesgo has scored 96.45 out of 100 points, highlighting that its sustainable strategies are properly aligned with ESG principles. According to the information of its corporate website (Model Sustainability Citation), Viesgo took seventh place in the GRESB ranking, ranked it as one of the most sustainable organizations in the world, for creating corrective actions of the carbon footprint in its activities, minimizing negative impacts on the Company, and creating a sustainable business model.

#### **4.2.5. Sustainability strategies**

To achieve a sustainable business model, Viesgo has developed a strategic plan that allows it to align its actions with the commitments made by the organization to meet the Sustainable Development Goals, following three principles: long-term value generation for stakeholders, resilience, and efficiency.

Transparency, good governance, human team, and responsible business are the lines of work to generate value for internal and external stakeholders, this means that Viesgo is focused on identifying the needs of these groups, providing solutions communicating with transparency and with a strong governance model.

Focusing on risks and opportunities, reducing Greenhouse Gases and cybersecurity are the resilient lines of work, so that climate change management occurs at all levels of the organization, identifying potential risks and opportunities, enabling them to make sustainable decisions.



The path to being a more efficient organization is achieved by improving the quality and minimizing the risks of work, in the shortest time, with as few resources as possible, that is why the lines of work are innovation, digitization and environmental management.

- **Responsible supply chain**

According to the 2019 Non-Financial Report of Viesgo [27], the volume of purchases of that year was 98% from national suppliers, demonstrating its responsibility with the economic and social development of the country, due to the fact that with this action it generated direct and indirect jobs .

In addition, to ensure that suppliers comply with the technical and sustainable requirements, raised by Viesgo, a preliminary analysis is carried out in the bidding phase, with an objective, pre-qualifying model that the company developed that allows it to choose with agility and efficiency [24].

- **Commitment to the environment**

Among the strategic points that Viesgo deals with is caring for the environment, because its activity affects birdlife and their habitat with the greatest impact. That is why, to minimize the impact of its activity, it sets objectives, which are found in its Sustainability Report [24], which are the following:

- Create actions that reduce greenhouse gas emissions.
- Focus on creating sustainable and energy efficiency.
- Bet on renewable energy.
- Efficiently manage waste following current regulations.
- Strengthen the rule of the 3Rs, Reduce, Recycle and Reuse in business.
- Collaborate with institutes for the protection of fauna.
- Make the academic group aware of the need to respect and care for the natural heritage.
- Collaborate with the research community to disseminate knowledge on issues of efficiency and sustainability in the sector.
- Bet on sustainable mobility.

Viesgo asks to produce reports that verify the levels of greenhouse gases that the organization emits in its activities comply with the regulations. This report is divided into two scopes; The first scope includes the inventory of the activities of: movement in vehicles, refrigeration and air conditioning in buildings,



and finally, the release of sulphur hexafluoride (SF<sub>6</sub>) in substations. The second scope includes activities related to the organization's electricity consumption and energy losses in transport and distribution. the 2019 Viesgo Carbon Footprint report [28].

The result of the report reflects that the organization in 2018 reached a total of 89,375.86 tCO<sub>2</sub> eq, which compared to the 91,719.89 tCO<sub>2</sub> eq resulting in the 2016 Viesgo Carbon Footprint Report [29], is 2,344.03 tCO<sub>2</sub> eq difference, that is, emissions were reduced by 3%. Viesgo carried out actions such as replacing 36% of the vehicle fleet with hybrids and electric vehicles or activating innovation projects to reduce energy losses or sustainable construction of buildings and work centres [24], to reduce the carbon footprint with respect to the base year which is 2016.

Consequently, Viesgo demonstrates its commitment to improve the efficiency of its activities to reduce the impact on the environment.

- **Commitment to the circular economy**

To promote the circular economy, Viesgo has an environmental management system that exposes the procedures and controls of raw materials to ensure continuous improvement and minimize the impact on the environment [24]. The priority of the organization is to minimize the sum of waste, maximize the value of waste and for those waste that cannot be recovered, seek other options for use.

- **Commitment to society**

Viesgo works to positively impact the communities where it operates through the electrification of society, which is why one of the four values of Viesgo is responsibility, which frames the importance that people represent for the organization [27]. Most of the commitments that Viesgo acquires with the communities, seek through actions, the integral well-being that it encompasses, health, environment, culture, service and human rights.

However, to follow the path of social commitment, Viesgo also creates links with Public Administrations to provide solutions to social problems and follow the code of Good Tax Practices developed by the Tax Agency. As well as, collaborations in different associations [24].



## METHODOLOGY FOLLOWED IN THE DEVELOPMENT OF WORK

### 5. P5 Impact Analysis

As the GPM Global comments in the P5TM Standard version 2.0 [20], the content of the P5 was designed for projects. However, most projects are part of programs and portfolios, although there may be differences in how these contents are used, they can also be applied by changing the word project to program or portfolio. Thanks to this standard it is easy provide useful information to those who must make the decisions, justify the changes and achieve the expected benefits of the project, increase the positive impacts, minimize the negative impacts, and contribute to the fulfilment of the sustainability objectives.

Therefore, Standard P5 is applicable in the analysis of an organization, to provide significant value and benefits in the sustainability plan. For this reason, in this work it is decided to analyse the corporate organization of Viesgo, with two objectives, the first one is to obtain the level of sustainability of Viesgo according to the P5 Standard and propose solutions to improve it, and the second one is to analyse the efficiency and effectiveness of the tool proposed by the P5 standard to plan the management of the sustainability impacts of projects, programs or portfolios.

The GPM organization created a tool for better management of the P5 standard, it is a template that it calls P5IA, that is, Impact Analysis P5. This template can be downloaded from their website. It consists of a table divided into five groups of sustainability impacts; Product Impacts, Process Impacts (Project Management), People Impacts (Social), Planet Impacts (Environmental) and Prosperity Impacts (Economic). And these in turn are divided into their classes and subclasses.

The first thing the Organization proposes is that the personnel in charge of carrying out this analysis be a group of people or a manager who knows in detail the organization, project or program that wants to analyse, in this case the Viesgo organization. A Case Study to evaluate the tool and at the same time know the level of sustainability of Viesgo, the non-Financial Report of Viesgo 2019 [27], the 2019 Sustainability Report of Viesgo [24], was taken as an informative basis, the VIESGO Carbon Footprint Report - Year 2019 [28] and the VIESGO Carbon Footprint Report - Year 2016 [29].

The second point recommended by the GPM organization is to complete as soon as possible the tool to execute the analysis in the Discovery phase, as proposed in the PRISM [20], to speed up the identification of risks and opportunities in the Execution phase.

Now, to complete the P5IA tool, five steps are followed. The first has been identified the events that occur during the life cycle of Viesgo, identifying once what type of impacts each event generates for its correct classification. Then, the causes of the sustainability impact of these events are indicated. Once all this information has been obtained, the impacts are made according to the magnitude of their effect on sustainability. The fourth step is to propose possible responses to each event to maximize the positive impacts and minimize the negative ones and, finally, the impacts are re-rated because the proposed solutions could be implemented [20].



The first column of the template lists the impact, class, and subclass. The second column describes the causes of each event. The third column indicates the impact of the event. In the fourth column, it corresponds to the proposed answer. The last two columns correspond to the first and second impact classification, respectively.

Events can affect various measures analysed in the classes and subclasses of the standard; However, this is not a problem, on the contrary, this serves to identify from different points the impacts on sustainability that an event may have and give it adequate visibility.

Once the process of filling in the tool is finished, a summation of all the points of the previous impact qualification and a sum of the impact qualification points must be made once the proposed solutions have been applied. As well as analyse which would be the worst, neutral and the best case of the evaluated impacts, to make a comparison and take the Optimistic Case as the indicator to which it should arrive. The Neutral and Pessimistic Cases can be considered if it is the case of wanting to analyse how far one is from the negative case, although it would not be as efficient as if it is studied from the Optimistic Case, which is the one we want to reach.

The analysis of the current state of the organization, project, or program, in this case the Viesgo organization, is contrasted with the indicator that is the highest possible score to obtain or the Optimistic Case, which allows knowing how many points it takes to achieve it or what percentage is necessary to be 100% sustainable with the events and impacts evaluated. In the same way, the analysis of the state is carried out once the proposed solutions are implemented to improve the rating of the impact on sustainability.

At the end of the comparison, there will be information on the risks, weaknesses, strengths, and opportunities that the organization has, which allows decision-makers to carry out this work with greater precision, safety and focused on sustainability.

### **5.1. Description of the Viesgo P5IA processes**

To carry out the Analysis of the Sustainability Impacts of Viesgo with the P5 standard, the 2019 Sustainability Report of Viesgo [8], the 2019 Non-Financial Information Statement of Viesgo [14], the Report of VIESGO carbon footprint - Year 2016 [29] and the VIESGO carbon footprint report - Year 2018 [28].

Following the five steps that the standard proposes to complete the template, first a list was made of all the internal and external events of the organization, which had a positive or negative effect on society, the planet, and the economy. The events identified are the following:

- 1) Viesgo is a power company focused on distribution and renewables [27].
- 2) Be the first company 100% decarbonized [24].
- 3) Viesgo has begun a stage focused on regulated businesses, which will be paramount in the energy transition [27]



- 4) Minimizing CO2 emissions to the atmosphere [24].
- 5) Increased MWh generated from renewable resources [24].
- 6) Reducing MWh losses by transporting and distributing electricity [24].
- 7) Increased consumption of MWh [24].
- 8) Increased number of deployment of anti-electrocution and collision devices of the bird [24].
- 9) Minimizing tree felling [24].
- 10) Minimizing investments in social programs and initiatives [24].
- 11) Increased emissions of sulphur hexafluoride release tCO2 eq (SF6) in the substations associated with the distribution network between 2016 and 2018 [29] and [28].
- 12) Reduced emissions of tCO2 eq in fluorinated gas leaks refrigeration and electrical air conditioning equipment in offices [29] and [28].
- 13) Reduced emissions of tCO2 eq of displacement in vehicles [29] and [28].
- 14) Increased emissions of tCO2 eq of electricity consumption and own consumption in substations [29] and [28].
- 15) Reduced emissions of tCO2 eq of losses by transport and distribution of electricity [29] and [28].
- 16) Minimizing total employees [24].
- 17) Increasing the average age of staff [24].
- 18) Minimizing the percentage of working women [24].
- 19) Stabilization of the proportion of employees with indefinite contract [24].
- 20) Minimizing new hires [24].
- 21) Zero-death stability [24].
- 22) Increased number of breakdowns [24].
- 23) Increasing the number of connections [24].
- 24) Minimizing the number of complaints [24].
- 25) Minimization of supply interruption time and number of interruptions (indicators correspondingly are; TIEPI and NEIPI) [24].

The second step indicated in the P5 standard for the correct Impact Analysis and completing the P5IA template is to identify the impact it has on sustainability for each event. For this step, the correspondence of the impacts of each event has been analysed, according to the data reflected by the sustainability report, the non-financial Report, the Carbon Footprint Reports and other references. The impacts of each event are presented below:



- 1) Viesgo is a power company focused on distribution and renewables [27].
  - a) The energy creation processes have a direct impact on the environment, the communities in which Viesgo works and the economy of the organization.
- 2) Be the first company 100% decarbonized [24].
  - a) Eliminating carbon-based production processes positively impacts the environment.
- 3) Viesgo has begun a stage focused on regulated businesses, which will be paramount in the energy transition [27]
  - a) These projects positively affect the electrification of the economy.
- 4) Minimizing CO<sub>2</sub> emissions to the atmosphere [24].
  - a) This event affects environment of people and health.
- 5) Increased MWh generated from renewable resources [24].
  - a) It impacts the environment, the resources of future generations and the economic development of the country and the organization.
- 6) Reducing MWh losses by transporting and distributing electricity [24].
  - a) Reducing power losses in the core activities of the company impacts environmental maintenance and economic benefits for the company.
- 7) Increased consumption of MWh [24].
  - a) Increasing electricity consumption within the company impacts environmental maintenance and economic benefits for the company.
- 8) Increased number of deployment of anti-electrocution and collision devices of the bird [24].
  - a) Thinking about biodiversity within asset designs impacts the environmental and economic viability of projects.
- 9) Minimizing tree felling [24].
  - a) Trees are an indispensable part of creating oxygen in the environment, so this event mainly affects the environment.
- 10) Minimizing investments in social programs and initiatives [24].
  - a) This event impacts the communities closest to Viesgo and the economy of the company.
- 11) Increased emissions of sulphur hexafluoride release tCO<sub>2</sub> eq (SF<sub>6</sub>) in the substations associated with the distribution network between 2016 and 2018 [29] and [28].
  - a) Sulphur hexafluoride is a gas that impacts on the health of people and enhances the greenhouse effect [30].



- 12) Reduced emissions of tCO<sub>2</sub> eq in fluorinated gas leaks refrigeration and electrical air conditioning equipment in offices [29] and [28].
  - a) Fluorinated gases are used for industrial fire cooling and extinguishing processes [31], that is, its effects impact the environment and the economic viability of the projects.
- 13) Reduced emissions of tCO<sub>2</sub> eq of displacement in vehicles [29] and [28].
  - a) The tons of CO<sub>2</sub> emitted have a direct effect on the environment, human health and economic losses due to the fees payable.
- 14) Increased emissions of tCO<sub>2</sub> eq of electricity consumption and own consumption in substations [29] and [28].
  - a) The tons of CO<sub>2</sub> emitted have a direct effect on the environment, human health and economic losses.
- 15) Reduced emissions of tCO<sub>2</sub> eq of losses by transport and distribution of electricity [29] and [28].
  - a) The tons of CO<sub>2</sub> emitted have a direct effect on the environment, human health and the economic viability of projects.
- 16) Minimizing total employees [24].
  - a) This event affects the interest group, it means that it has a social impact.
- 17) Increasing the average age of staff [24].
  - a) Affects the nearest community of the company.
- 18) Minimizing the percentage of working women [24].
  - a) Equal rights and opportunities affect the female community.
- 19) Stabilization of the proportion of employees with indefinite contract [24].
  - a) Stability impacts employees, the nearby community and the economy of the company.
- 20) Minimizing new hires [24].
  - a) Affects stakeholders and the economics of projects.
- 21) Zero-death stability [24].
  - a) The safety and health of the workers and communities in which Viesgo operates are two very important agents for the company because of its impact on society and economy.
- 22) Increased number of breakdowns [24].
  - a) Providing quality service affects customers, stakeholders, and project benefits.
- 23) Increasing the number of connections [24].
  - a) This event impacts the economy of the company, environment and stakeholders.





24) Minimizing the number of complaints [24].

- a) The quality of the services offered by the company at all levels affects the interest groups and economic benefits of the same.

25) Minimization of supply interruption time and number of interruptions (indicators correspondingly are; TIEPI and NEIPI) [24].

- a) The quality of the services offered by the company at all levels affects the interest groups and economic benefits of the same.

The next step is to describe the causes why the events listed above occur and create a positive or negative impact on the sustainability of the organization. As shown below:

1) Viesgo is a power company focused on distribution and renewables [27].

- a) The energy creation processes have a direct impact on the environment, the communities in which Viesgo works and the economy of the organization.
  - i) Market strongly regulated by the requirements of the Administrations, Electric Network, Electric Market Operator and Competition [24].

2) Be the first company 100% decarbonized [24].

- a) Eliminating carbon-based production processes positively impacts the environment.
  - i) Closure of the thermal power plant and becomes the first integrated company in Spain to completely decarbonize [32].
  - ii) Viesgo has two hydraulic power plants in Spain and mini-hydraulic, which is divided by five waterfalls [24].

3) Viesgo has begun a stage focused on regulated businesses, which will be paramount in the energy transition [27]

- b) These projects positively affect the electrification of the economy.
  - i) Market strongly regulated by the requirements of the Administrations, Electric Network, Electric Market Operator and Competition [24].
  - ii) Interest groups require information on the status of their requests [27].
  - iii) Choosing suppliers for their good work and sustainable performance [24].
  - iv) Customers want to know their consumption habits and consumption spikes to reduce their bill and adjust their rate.
  - v) Compliance with internal regulations and regulations on ethics and conduct [23].
  - vi) Maintain the privacy of projects.



- vii) Technical and economic management of distribution assets during the project lifecycle; planning, processing, construction, commissioning, operation, maintenance, and replacement.
  - viii) In 2019, the supply chain of Viesgo had 413 suppliers and a purchase volume of 32.3 million euros [24].
  - ix) Viesgo has clients from organizations, administrations, seniors and young people, that is, its interest groups are varied.
- 4) Minimizing CO2 emissions to the atmosphere [24].
- b) This event affects the environment of people and health.
    - i) Facilitate a better conciliation, as well as reduce as far as possible travel, business trips [27].
    - ii) The displacement of operators whenever there is a breakdown or to carry out the measurements of the asset data.
    - iii) Execution of civil works both in urban and rural areas, needing displacement of operators and construction machinery.
    - iv) Viesgo has substations with shielded positions and GIS switches that require SF6 gas [28].
- 5) Increased MWh generated from renewable resources [24].
- b) It impacts the environment, the resources of future generations and the economic development of the country and the organization.
    - i) Throughout the entire Peninsula Viesgo has 24 wind farms and 2 mini-hydroelectric plants that generate 506.65 MW of installed power [24].
- 6) Reducing MWh losses by transporting and distributing electricity [24].
- b) Reducing power losses in the core activities of the company impacts environmental maintenance and economic benefits for the company.
    - i) The biggest energy consumption in the business is the energy losses, inherent in the activity, that occur throughout the distribution network, which translate into greenhouse gas emissions [24].
- 7) Increased consumption of MWh [24].
- b) Increasing electricity consumption within the company impacts environmental maintenance and economic benefits for the company.
    - i) Energy consumption in office buildings is mainly for air conditioning, lighting, domestic hot water generation, computer equipment and others [28].
- 8) Increased number of deployment of anti-electrocution and collision devices of the bird [24].



- b) Thinking about biodiversity within asset designs impacts the environmental and economic viability of projects.
  - i) Risk of collision and electrification of birds and other animals around the assets and the removal of nests [27].
- 9) Minimizing tree felling [24].
  - b) Trees are an indispensable part of creating oxygen in the environment, so this event mainly affects the environment.
    - i) Viesgo operates in protected natural areas or areas of great value for biodiversity [27].
- 10) Minimizing investments in social programs and initiatives [24].
  - b) This event impacts the communities closest to Viesgo and the economy of the company.
    - i) Promoting sport and healthy lifestyle habits and spreading the values of teamwork [24].
    - ii) Ensuring the well-being of the communities in which Viesgo operates [24].
    - iii) Support and promote the artistic and cultural manifestations of the communities in which Viesgo operates [24].
    - iv) Take inclusive action to help vulnerable groups in collaboration with NGOs and institutions [24].
    - v) Support the dissemination of knowledge and research activities, especially those related to the energy transition [24].
- 11) Increased emissions of sulphur hexafluoride release tCO<sub>2</sub> eq (SF<sub>6</sub>) in the substations associated with the distribution network between 2016 and 2018 [29] and [28].
  - b) Sulphur hexafluoride is a gas that impacts on health of people and enhances the greenhouse effect [30].
    - i) Viesgo has substations with shielded positions and GIS switches that require SF<sub>6</sub> gas [28].
- 12) Reduced emissions of tCO<sub>2</sub> eq in fluorinated gas leaks refrigeration and electrical air conditioning equipment in offices [29] and [28].
  - b) Fluorinated gases are used for industrial fire cooling and extinguishing processes [31], that is, its effects impact the environment and the economic viability of the projects.
    - i) Viesgo has substations with shielded positions and GIS switches that require SF<sub>6</sub> gas [15].
- 13) Reduced emissions of tCO<sub>2</sub> eq of displacement in vehicles [29] and [28].
  - b) The tons of CO<sub>2</sub> emitted have a direct effect on the environment, human health and economic losses due to the fees payable.
    - i) With the calculation of the Carbon Footprint, Viesgo knows its critical points related to energy consumption and GHG emissions [27].



- 14) Increased emissions of tCO<sub>2</sub> eq of electricity consumption and own consumption in substations [29] and [28].
- b) The tons of CO<sub>2</sub> emitted have a direct effect on the environment, human health and economic losses.
    - i) Energy consumption in office buildings is mainly for air conditioning, lighting, domestic hot water generation, computer equipment and others [28].
- 15) Reduced emissions of tCO<sub>2</sub> eq of losses by transport and distribution of electricity [29] and [28].
- b) The tons of CO<sub>2</sub> emitted have a direct effect on the environment, human health and the economic viability of projects.
    - i) The biggest energy consumption in the business is the energy losses, inherent in the activity, that occur throughout the distribution network, which translate into greenhouse gas emissions [24].
- 16) Minimizing total employees [24].
- b) This event affects the interest group, it means that it has a social impact.
    - i) Increase employees benefits.
    - ii) Recruitment not based on stereotypes or assumptions associated with gender, race, age, disability, religion or ethnic group, religion, marital status, social status, political ideas, sexual orientation and linkage or kinship [24].
    - iii) Market strongly regulated by the requirements of the Administrations, Electric Network, Electric Market Operator and Competition [24].
- 17) Increasing the average age of staff [24].
- b) Affects the nearest community of the company.
    - i) Market strongly regulated by the requirements of the Administrations, Electric Network, Electric Market Operator and Competition [24].
    - ii) Employees of all social and educational levels, working in the organization [27].
- 18) Minimizing the percentage of working women [24].
- b) Equal rights and opportunities affect the female community.
    - i) Market strongly regulated by the requirements of the Administrations, Electric Network, Electric Market Operator and Competition [24].
    - ii) Employees of all social and educational levels, working in the organization [27].
    - iii) Equal working conditions for women and men [24].
    - iv) Infrastructure seeks women and men with talent and abilities [24]



19) Stabilization of the proportion of employees with indefinite contract [24].

b) Stability impacts employees, the nearby community and the economy of the company.

i) Market strongly regulated by the requirements of the Administrations, Electric Network, Electric Market Operator and Competition [24].

ii) Capacity building professions of employees to motivate them [27].

iii) Employees of all social and educational levels, working in the organization [27].

20) Minimizing new hires [24].

b) Affects stakeholders and the economics of projects.

i) Market strongly regulated by the requirements of the Administrations, Electric Network, Electric Market Operator and Competition [24].

ii) Capacity building professions of employees to motivate them [27]

iii) Employees of all social and educational levels, working in the organization [27].

21) Zero-death stability [24].

b) The safety and health of the workers and communities in which Viesgo operates are two very important agents for the company because of its impact on society and economy.

i) Commitment to society is demonstrated through the quality of supply [24].

ii) Effective management is the integral security in the operations of the company and procedures [24].

22) Increased number of breakdowns [24].

b) Providing quality service affects customers, stakeholders, and project benefits.

i) Renewable energy is generated in wind farms and mini hydroelectric plants [24].

ii) Effective management is the integral security in the operations of the company and procedures [24].

iii) Customers call for quality and trust service [24].

iv) The biggest energy consumption in the business is the energy losses, inherent in the activity, that occur throughout the distribution network, which translate into greenhouse gas emissions [24].

23) Increasing the number of connections [24].

b) This event impacts the economy of the company, environment, and stakeholders.

i) Market strongly regulated by the requirements of the Administrations, Electric Network, Electric Market Operator and Competition [24].



- ii) Customers call for quality and trust service [24].
- iii) Interest groups require information on the status of their requests [24].
- iv) Technical and economic management of distribution assets during the project lifecycle; planning, processing, construction, commissioning, operation, maintenance and replacement

24) Minimizing the number of complaints [24].

- b) The quality of the services offered by the company at all levels affects the interest groups and economic benefits of the same.
  - i) Market strongly regulated by the requirements of the Administrations, Electric Network, Electric Market Operator and Competition [24].
  - ii) Customers call for quality and trust service [24].
  - iii) Interest groups require information on the status of their requests [24].
  - iv) Technical and economic management of distribution assets during the project lifecycle; planning, processing, construction, commissioning, operation, maintenance, and replacement

25) Minimization of supply interruption time and number of interruptions (indicators correspondingly are; TIEPI and NEIPI) [24].

- b) The quality of the services offered by the company at all levels affects the interest groups and economic benefits of the same.
  - i) Market strongly regulated by the requirements of the Administrations, Electric Network, Electric Market Operator and Competition [11].
  - ii) The displacement of operators whenever there is a breakdown or to carry out the measurements of the asset data.
  - iii) The biggest energy consumption in the business is the energy losses, inherent in the activity, that occur throughout the distribution network, which translate into greenhouse gas emissions [11].

For the rating of the impacts depending on the magnitude of their effect on sustainability, GPM proposes two rating scale, the first is from 1 to 5, where 1 is "Totally disagree", that is, this impact will worsen the results of the project from the beginning. sustainability perspective, while 5 is "Fully agree" which means that this impact is expected to have positive effects on project results from a sustainability perspective [20]. The second, is based on a scale of positive, neutral, and negative, in which the neutral score is 0, the maximum score of the positive impact is -3 and the maximum of the negative impact is +3.

The second system of punctuation proposed allows giving a more exact assessment than the first, which is why this system is used in this work. This form of rating gives -3 points to high negative impacts, -2 to medium negative impacts, -1 to low negative impacts, 0 to neutral impacts, +1 to low positive impacts,

+2 to medium positive impacts and +3 to high positive impacts, as is shown in Chart 2. In this way, when accounting for all the points, if the sum is positive, the organization has a generally positive impact on sustainability and, conversely, if it is negative, the impact on sustainability is negative. This step was carried out directly in the table in the ANNEX I: P5IA.

Impact assessment	
High negative impact	+3
Medium negative impact	+2
Low negative impact	+1
Not applicable or Neutral	0
Low positive impact	-1
Medium positive impact	-2
High positive impact	-3

Chart 2: impact assessment.

The last steps are the following: propose solutions that help to maximize positive impacts and minimize negative impacts and re-qualify impacts by applying these new solutions. As can be seen in ANNEX II:

In other words, the process for completing the P5 standard tool for Impact Analysis is summarized in the following flow chart:

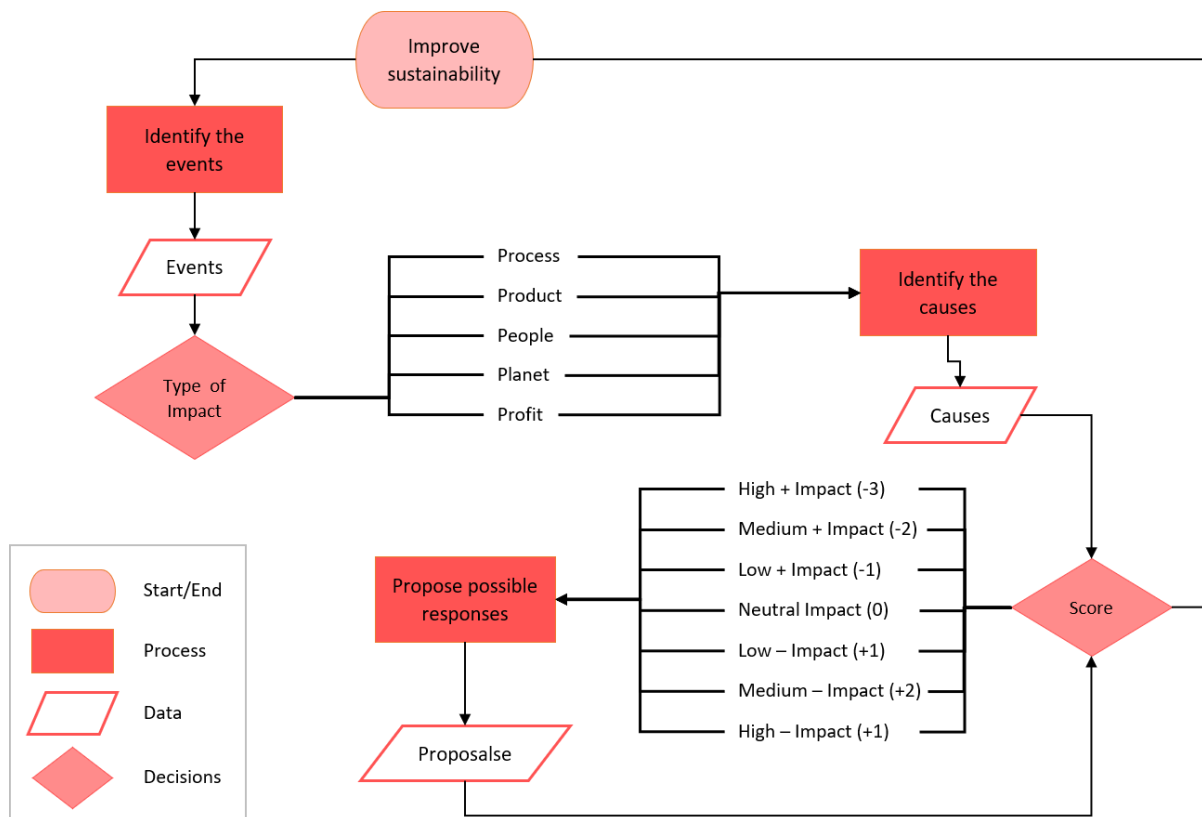


Chart 3: P5IA tool process flow chart.



## 6. Analysis of the results

To analyse the level of sustainability that the Viesgo organization has, the P5IA tool is used, proposed by the P5 sustainability standard of the GPM, in which each subcategory is assigned an event, an impact that this event causes on sustainability. The level of impact on the impact is evaluated on a scale ranging from -3 to +3; -3 being the most positive impact and +3 the most negative impact. Then solutions or alternatives are proposed that can improve the impact compared to sustainability and the effect of the impact is re-evaluated with this new solution, to align the events of a project towards sustainability.

The sustainability analysis of the Viesgo organization is carried out following the previous indications, adding two more columns to the tool, to justify the score given to each impact and obtain the most objective analysis possible.

In the results obtained from the Viesgo sustainability analysis, 68 impacts were obtained from 45 subclasses, corresponding to 68 Previous scores and 68 Post / Final scores. This is because in several categories there was more than a single event or impact to be evaluated as shown in the second column of the table in ANNEX II: .

P5 Category	Pessimistic Case	Neutral Case	Optimistic Case
<b>2.1 Product Impacts</b>	<b>3</b>	<b>0</b>	<b>-3</b>
<b>2.2 Process (Project Management) Impacts</b>	<b>6</b>	<b>0</b>	<b>-6</b>
<b>3 People (Social) Impacts</b>	<b>54</b>	<b>0</b>	<b>-54</b>
3.1 Labour Practices and Decent Work	18	0	-18
3.2 Society and Customers	21	0	-21
3.3 Human Rights	6	0	-6
3.4 Ethical Behaviour	9	0	-9
<b>4 Planet (Environmental) Impacts</b>	<b>45</b>	<b>0</b>	<b>-45</b>
4.1 Transport	9	0	-9
4.2 Energy	12	0	-12
4.3 Land, Water, and Air	12	0	-12
4.4 Consumption	12	0	-12
<b>5 Prosperity (Economic) Impacts</b>	<b>30</b>	<b>0</b>	<b>-30</b>
5.1 Business Case Analysis	18	0	-18
5.2 Business Agility	6	0	-6
5.3 Economic Stimulation	6	0	-6
<b>Total Score</b>	<b>138</b>	<b>0</b>	<b>-138</b>

Chart 4: Pessimistic, Neutral and Optimistic Case of P5IA Standard of Viesgo.

To unify the Pre-results and Final results, they are averaged and approximated so that all results are integer and easy to work with. Then, a sum of all the scores by subcategory and categories is made. Knowing that there are three possible cases: the pessimist, the neutral and the optimist. These are





hypothetical cases in which the score for all subclasses is assumed to be +3 in the pessimistic case, 0 in the neutral case, and -3 in the optimistic case. The pessimistic case includes a total of +138 points, the neutral 0 points and the optimistic -138 points in total, as seen in Chart 4.

P5 Category	Previous score	Final score
<b>2.1 Product Impacts</b>	1	-1
<b>2.2 Process (Project Management) Impacts</b>	-1	-4
<b>3 People (Social) Impacts</b>	<b>-28</b>	<b>-47</b>
3.1 Labour Practices and Decent Work	-9	-16
3.2 Society and Customers	-12	-21
3.3 Human Rights	-1	-3
3.4 Ethical Behaviour	-5	-8
<b>4 Planet (Environmental) Impacts</b>	<b>-34</b>	<b>-35</b>
4.1 Transport	-6	-8
4.2 Energy	-7	-4
4.3 Land, Water, and Air	-10	-11
4.4 Consumption	-11	-12
<b>5 Prosperity (Economic) Impacts</b>	<b>-20</b>	<b>-30</b>
5.1 Business Case Analysis	-12	-18
5.2 Business Agility	-3	-6
5.3 Economic Stimulation	-5	-6
<b>Total Score</b>	<b>-82</b>	<b>-117</b>

Chart 5: Previous and Final Score of the Viesgo P5IA Standard

In the Viesgo analysis, the total sum of the previous points results in -82 points, as shown in Chart 5, which compared to the pessimistic case (+138 to +1), the neutral case (0) and the optimistic case (-1 to -138) falls within the range of the optimistic case, that is, Viesgo is an organization that positively impacts sustainability. Now, once alternative proposals and solutions are proposed, their total score is -117 points as shown in Chart 5, that is, it would increase 35 points in the P5 standard if the proposed solutions were executed to improve the impact of Viesgo in the sustainability.

It is logical to make a comparison of the current or previous state and the future or final of Viesgo with respect to the Optimistic Case because the indicator of this analysis at the end is sustainability, it is for this reason that from this point onwards what is contrasted are Results obtained from the Viesgo P5IA with the Optimistic Case of the impacts studied.

Similarly, their ratings are much closer to 100% of the Optimistic Case than the Neutral and Pessimistic Case. Therefore, it is correct to analyse how many points each category needs to obtain 100% sustainability, or in other words, how far or close the categories are to reach the level of their indicators.

For all the above, and according to the current results of Viesgo, the company is only 56 points away from being a completely sustainable organization right now, and only 21 points in the future if the



solutions are implemented. proposals in the ANNEX I: P5IA, to reach -138 points or 100% of the sustainability indicator of the events and impacts evaluated.

From the results obtained, it can be analysed that the company has good strategies in the Planet category, because the difference in points of Previews and the Optimistic Case of the subcategories is less than in the subcategories of the other categories, as in 4.4 Consumption that it is one point apart from being 100% sustainable at this point.

On the other hand, the category that is farthest from 100% sustainability is in 3. People (Social) Impacts, because it must improve its strategies in 3.1 Labour Practices and Decent Work and 3.2 Society and customers. However, once the proposed improvement alternatives have been applied, this category, together with 5. Prosperity (Economic) Impacts, would obtain the best score, as shown in Chart 5.

The Chart 6 summarizes the percentage relationship of the Previous and Final scores with the Optimistic Case. From which it can be deduced that in category 2.1 Product Impact, the organization is below the Optimistic Case percentage. This is because, belonging to a regulated market and because its product depends on the weather conditions, it is in constant uncertainty, so its sustainability strategies are narrowed at this point. However, it is seen that with the proposed alternatives the percentage is closer to that of the Optimistic Case, although not 100%.

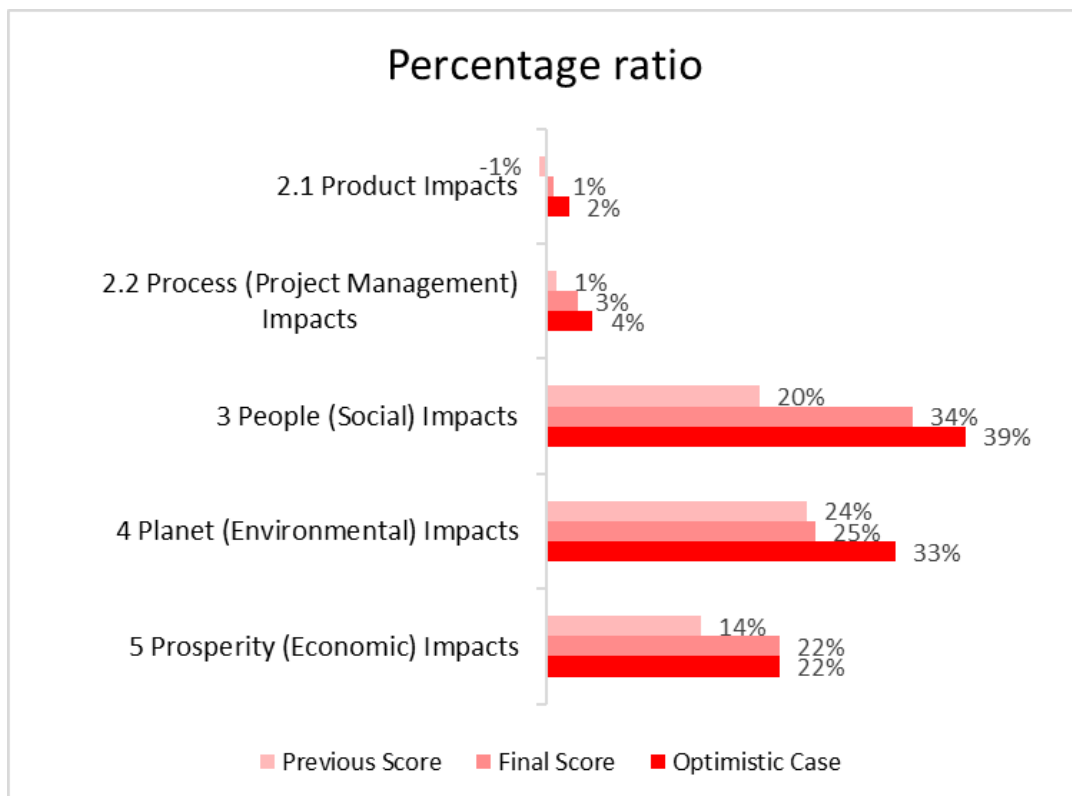


Chart 6: Percentage Relationship of the Previous and Final Scores of the Viesgo P5IA Standard



On the other hand, it stands out as in the category 3 People (Social) Impacts, it goes from 20% to 34% with the proposed alternatives, quite close to the 39% of the Optimistic Case. In addition, category 5 Property (Economic) Impacts that with the alternatives proposed to tire 22% of the Optimistic Case, which shows that Viesgo is a Sustainable organization but that with an effort in the implementation and execution of new alternatives, it would become in an organization with a very high level of sustainability.

Now, with this case study in which the P5IA is implemented in the Viesgo organization to know its level of sustainability, it is not only done with this objective, but also serves to know in detail the P5 Standard and its P5IA tool, to analyse its efficiency, ease and reliability when used in a project, program, or organization.

To start filling out the P5IA tool, you must read the guide proposed by the Green Project Management organization found on its official website, which explains the objective of the standard and each of the categories, subcategories, and subclasses, with the to know what type of impacts are those that correspond to each of these. Then, it is essential to download the Word file that contains the P5IA tool, the instructions to complete it, a proposal for scoring the impacts and examples of various subcategories, which makes it easier for the reader to understand the indications, the scoring method, and the structure of herself.

Once the methodology to follow to fill out the tool is understood, it is important to remember that this analysis must be carried out by a manager with complete knowledge of the project, program or organization to achieve the objective of this standard, which is to define and prioritize the risks and opportunities of sustainability from the cradle to the grave of the project (CITAR Q5) and if a person who does not have such knowledge minimizes the level of efficiency of the standard.

On the other hand, the manager must make a list of each internal and external event to the analysis project to maximize the efficiency of the standard, however, the probability that some event is left out is high, therefore, to solve this situation the following alternatives are proposed; The first is that it is done in groups of various departments to ensure that no point of view is lost. Also, it is recommended that this tool does not run in a single day but takes several days of study. Another proposal is that the P5IA be reviewed with a certain frequency to add or remove events, causes, impacts, proposals or modify the ratings, in this way it would ensure that the effectiveness and efficiency of the standard would be met.

Now, the standard proposes several rating scales, which gives a range of possibilities to managers, however, the standard does not provide a detailed explanation of the variables that must be considered to carry out an objective evaluation of the impact, only It exposes the qualification methods since each qualification is equivalent. At this point, it would be correct for the GPM organization to develop a rating standard with the variables to be considered in each subcategory and subclass so that the rating would be more realistic and less subjective.

In addition, as a complement to the previous points, an internal and external auditing system of the standard should be proposed to rectify the objectivity of the impacts and their qualification. Only in this way would it be ensured that the standard is met objectively to obtain efficient and effective results that



facilitate decision-making that addresses the sustainability of the project from its inception. In this way, the project objectives would be aligned with those of the company and the Sustainable Development Goals.

However, it is important to mention that there would be no difficulties with the manager when trying to understand this tool because it is very simple and intuitive. In addition, this tool allows a subsequent numerical analysis to be carried out by implementing the variables that the evaluator prefers, that is, it favours a global and specific analysis according to the needs of the person evaluating it to obtain the desired results, conclusions that facilitate decision-making, as well as a qualitative and quantitative control to know the level of progress and improvement of the project.

As a general conclusion, it is verified that Viesgo is an organization committed to sustainability with the result of the sum of all the ratings of the evaluated impacts is in the range of -1 to -138, also in relation to the Optimistic Case that is equivalent to 59%, as shown in Chart 7. Once the alternatives to improve the sustainability level of the organization have been implemented, the equivalent of the Final total rating is 85%, with respect to the Optimistic Case, that is, with the proposed actions, level of sustainability of Viesgo would increase by 26%, bringing it closer to 100% sustainability with the impacts analysed.

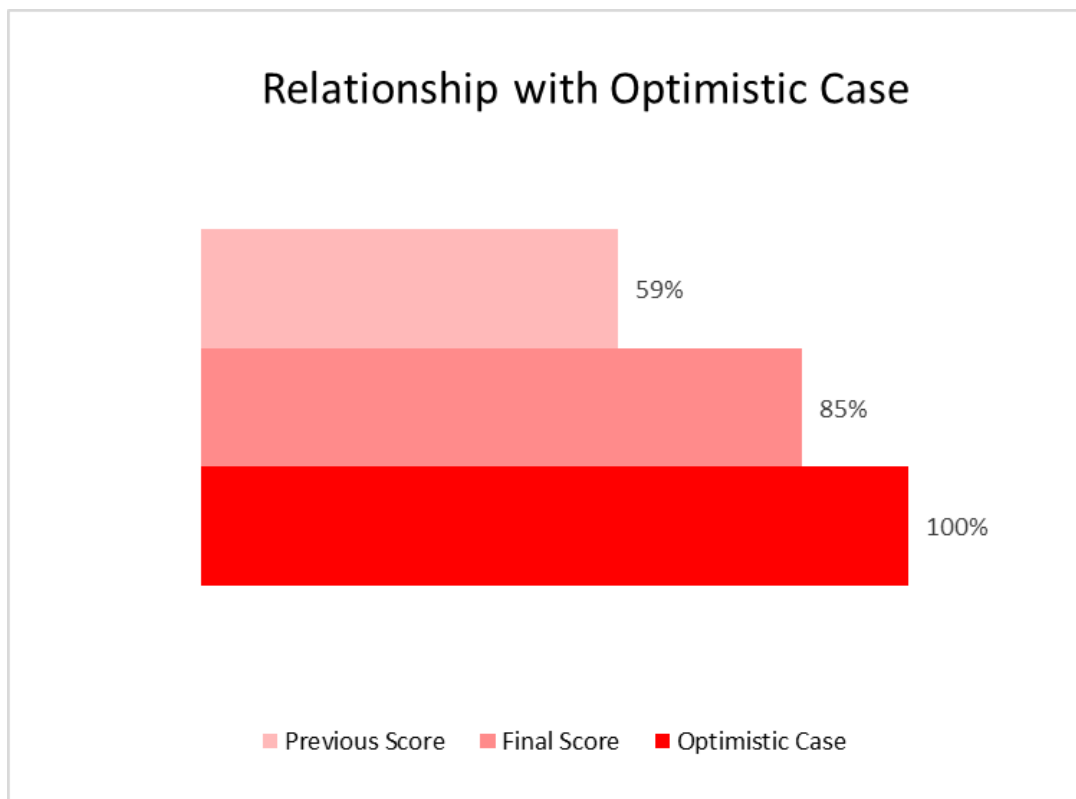


Chart 7: Relationship of the PSIA Scores of Viesgo with the Optimistic Case



## CONCLUSION

Due to the simplicity and the information offered by the GPM, it is possible to develop the analysis of the impact of projects, programs, or organizations, in this case the organization of Viesgo, that they have on sustainability, allowing to know the level of sustainability they have, as well as proposed solutions that improve the impact they have on people, the planet and their prosperity.

Viesgo is an organization committed to sustainability and not only because they say so in their Sustainability Report or in their Non-Financial Reports, but because it could be verified with the P5IA tool. The rating of the impacts on sustainability of the activities developed by Viesgo, equivalent to 59% of the Optimistic Case studied, which means that the impacts analysed are sustainably positive, however, when knowing the risks and opportunities that Viesgo has, it is They propose alternative actions that improve the rating level of the impacts, reaching 85% equivalent to the Optimistic Case.

With this Case Study, it was possible to know in detail the scope of the proposed P5 Standard and its P5IA tool, which facilitates its development thanks to its simplicity and correct indications to evaluate the impacts of projects, programs or organizations. However, it is essential that the managers are fully knowledgeable about the project to have a 360º vision regarding sustainability and the efficiency and effectiveness of the standard being achieved.

It should be noted that developing this analysis improves the knowledge of the projects, due to the necessary synergy of all departments and stakeholders in the project. As well as, knowing the risks and opportunities that facilitate proposing alternatives that improve the level of sustainability of the scope of the projects. However, the rating methodology is not objective enough, so it is proposed that the GPM develop a rating standard that details the variables to be considered for the evaluator to give an objective rating for impact.

In conclusion, the P5 Standard and its P5IA tool facilitate an approach to an objective evaluation of project sustainability, which also serves as a control and indicator of improving project sustainability, due to its simplicity and efficiency. The P5 standard is a relatively recent guide, therefore it needs further scrutiny to adjust and improve.



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**ANNEX I: PSIA**

P5 Category		Description (Cause)	Potential Impact	Impact Score		Proposed Response	Impact Score	
Subcategory	Element			Before	Justification		After	Justification
<b>2.1 Product Impacts</b>								
2.1.3	Servicing of product	Market strongly regulated by the requirements of the Administrations, Electric Network, Electric Market Operator and Competition [24].	The prices of the contracted energy rise and fall constantly, according to the auctions of the energy market, which is affected according to weather conditions [33].	+1	If customers get adjust their consumption to concentrate at times cheaper, that is, at least climatic conditions and demand there.	Audit the Management system to verify that each process is safe, environmentally, socially and economically sustainable and that it also contributes to product quality and customer satisfaction.[24].	-1	Viesgo continuously works to obtain the certifications that prove that its processes and products are of quality and sustainable, however, being regulated and affected by weather conditions and market fluctuations, it prevents its products from being 100% sustainable.
		Agility to fulfil the needs and compliance of the customer [24].	The control centres and the operators must deal with the conditions quickly and efficiently, which implies an extra expense of fuel, emissions and management of the unforeseen	+2	Management and continuous dialogue with stakeholders are relevant factors for business success [24].	In 2019 Viesgo implement operational plan called "Improvements in internal and external channels" [24].	-1	This plan improved the customer experience through analysis with a special emphasis on critical interactions for customers and allowed them to develop actions to optimize the experience [27].
		Relevant information is important and gives a feeling of closeness when is commenting directly.	Improve the relationship with stakeholders.	-1	Viesgo works with them to create shared value [24].	Implement the project "Design voice model + voice internal areas" [24].	-2	It is a plan that allowed him to continue improving his interaction with the client, however, as it was implemented until very recently, it is not a perfect plan and they must continue to improve, which is why his rating goes up one position.
<b>2.2 Process (Project Management) Impacts</b>								
2.2.1	Effectiveness of project processes	Market strongly regulated by the requirements of the Administrations, Electric Network, Electric Market Operator and Competition [24].	Project valuations increase or decrease according to the market and weather behaviour [33].	+2	Energy rates are fluctuating and it is impossible to know exactly at what price the customer pays for electricity and to contract powers greater than 10 kW [34]	Respond agilely to customers by having multiple customer service channels [24] and with innovation and digitization strategies that allow a swift response to conditions.	-1	A fundamental aspect of customer relations is communication and the agility with which it acts in the face of unforeseen events, which is why the rating of this proposal goes up three points.
		Technical and economic management of distribution assets during the project lifecycle; planning, processing, construction, commissioning, operation, maintenance, and replacement	Energy transition to improve processes and productivity	-1	Viesgo is committed to the communities in which it operates and works to transform the economy through the electrification of society, fostering development and supporting the dissemination of knowledge and research activities related to the energy transition [27].	Implement innovation projects. intelligent networks, efficient wind turbines, predictive maintenance, network automation, virtual security training [24].	-2	Innovation and digitalization in the energy sector are equivalent to supports to eliminate the losses caused in energy distribution, which is why the rating rises one point for the first impact but as it continues to be a sector dependent on market and climate uncertainty, the maximum does not apply qualification.

P5 Category		Description (Cause)	Potential Impact	Impact Score		Proposed Response	Impact Score	
Subcategory	Element			Before	Justification		After	Justification
			Strengthening competitiveness and efficiency.	-2	The mission of Viesgo is to generate and distribute energy with the highest levels of efficiency in the market to provide the highest return to our shareholders, developing innovative infrastructures and an excellent service [27].			
2.2.2	Efficiency of project processes	Products and services are purchased for the activities of the organization do not impact the environment [24].	Making decisions that can impact positively the environment, the nearby community and finances.	-1	Viesgo identifies the impacts, risks and opportunities of the business to control effects on its activities, since they produce benefits internally, such as reducing consumption and costs, and externally towards our Stakeholders [27].	Compliance with Corporate Purchasing Policy of Viesgo and Certification of Asset Management ISO 55001 [24].	-2	This policy allows the definition of functions, responsibilities and adequate and efficient performance, taking into account that the activities carried out by Viesgo have an impact on the environment [27]., so it seeks that the impacts are increasingly positive. That is why, the rating increases, since there is a regular control that allows the management to make sustainable decisions.
<b>3 People (Social) Impacts</b>								
<b>3.1 Labour Practices and Decent Work</b>								
3.1.1	Employment and staffing	Recruitment not based on stereotypes or assumptions associated with gender, race, age, disability, religion or ethnic group, religion, marital status, social status, political ideas, sexual orientation and linkage or kinship [24].	Discrimination and resentments, which minimize the productivity, efficiency, and motivation of stakeholders.	0	The Viesgo collective agreement, which regulates the remuneration of 79.9% of the workforce, establishes equity criteria for the non-distinction between men and women, the remuneration depending exclusively on seniority and professional category [27].	Viesgo created the reporting channel for employees, called "Whistleblower" related to all issues of non-compliance with the Code of Ethics of the organization [24].	-1	the opportunity to have a channel to report anonymously gives employees greater security and freedom to report abnormal activities. That is why the rating increases, because a community of equality and respect is created.
		Updating the collective agreement of the company, providing for wage increases and social benefits for employees [24].	Synergy of work and family life and quality life of employees.	-2	The possibility that Viesgo gives its employees to manage their work, family and leisure time, generates an impact on the quality of life of workers to keep them motivated and productive.	Create a measurement and control system that verifies the progress of these proposals and allows studying their improvements.	-3	Only what is measured can be improved, that is why with the implementation of this proposal it is possible to improve the rating of the positive impact that these measures have, because in this way the employees would be listened to and the bottlenecks would be known to optimize them.
		Viesgo offers benefits to reduce overtime [24].						
	Use of communication and video conferencing systems for meetings and field visits [24].							

P5 Category		Description (Cause)	Potential Impact	Impact Score		Proposed Response	Impact Score	
Subcategory	Element			Before	Justification		After	Justification
		Viesgo offers and plan of training hours during working hours [24].						
		Viesgo offer to its employees electricity supply [24].	Full-time employee motivation, undefined, partial, and temporary.	-1	The Viesgo agreement recognizes that organizational efficiency, improved competitiveness and productivity, social dialogue and respect for the rights and guarantees of all kinds of workers are essential principles in the definition, implementation and management of business policies and in the achievement of company objectives [27].	Create a measurement, control system and a suggestion box that verifies the progress of these proposals and allows studying their improvements.	-3	Only what is measured can be improved, that is why with the implementation of this proposal it is possible to improve the rating of the positive impact that these measures have, because in this way the employees would be listened to and the bottlenecks would be known to optimize them.
		Viesgo gives school aids to its employees with children [24].						
		Viesgo offers pension plans to its employees [24].						
		Viesgo offers credit funds anticipate and loans to its employees [24].						
3.1.2	Labour/management relations	Participation of staff in matters of labour interest through their representative bodies [27].	Resolution of labour disputes through permanent dialogue and negotiation between the management of the company and the representation of the staff [27].	-1	The policies of the organization directly affect employees and their suppliers, which is why the rating of this impact is a positive impact for employees	Audit the Management system to verify that each process is safe, environmentally, socially and economically sustainable and that it also contributes to product quality and customer satisfaction [24].	-2	Audits not only give security to customers but also to employees because it is verified that at the highest organizational levels the policies are also complied with
3.1.3	Project health and safety	Viesgo implemented certificates, Occupational Health and Safety management systems that establish the minimum requirements of the best practices in Occupational Health and Safety management[24].	The organization focuses on reducing and limiting the dangers and risks associated with its activities [24].	-2	As Viesgo says, "safety comes first," impacts safety on employees and other stakeholders in the organization.	Create awareness of the importance of the safety and health of all the employees of the organization, through fortnightly meetings that transmit accidents and possible accidents of the employees inside and outside the facility, within the working day.	-3	The impact of this proposal can be of great help to continue with your "safety comes first" strategy, because accidents are not only caused by those who are on site, but also by employees who drive every day to reach the sites. Viesgo facilities.
		The production processes are developed in wind farms, hydraulic dams, in the AT and MT distribution lines [23]	These processes affect public health, biodiversity, especially birdlife, territorial and socioeconomic activities [35].	+2	Most of the work carried out by the organization is in protected areas, rural and indirectly to ecosystems, however, due to the great regulation of these activities, it is ensured that the work carried out does not have a great impact on public health.	Update the Corporate Policy on Safety, Health and Environment, approved by the Board of Directors [27].	-1	Every year technological and protection advances are developed that minimize risks and their efficiency. The impact rating, once this proposal is implemented year after year, will improve the impact of this event.
						Occupational and personal health and safety awareness campaigns and programs [11].	-1	It is important to remember and talk about accidents or near misses that have occurred to raise awareness and minimize accidents and negative impacts on the environment. This proposal improves the rating of the impact of this cause.
					The management team makes face-to-face or virtual visits (by pandemic) to facilities of the company or collaborating companies, to know what happens in the workplace, to engage in dialogue with workers and to give suggestions for improvement, in matters of safety and health [11].	-2	Although this proposal does not provide a comprehensive solution to this cause, it is a good alternative to minimize the displacement of people interested in the projects, minimizing risks and CO2 emissions, which is why the impact rating once applied this proposal increases considerably.	

P5 Category		Description (Cause)	Potential Impact	Impact Score		Proposed Response	Impact Score	
Subcategory	Element			Before	Justification		After	Justification
3.1.4	Training and education	Viesgo is committed to innovation and digitization, to lead and promote the energy transition as the main challenge for the sector [27].	Viesgo created programs for the detection of young talent, for the development of digital skills of employees, technical training programs and managerial development, in order to develop the professional skills necessary for each employee [27].	-2	The percentage of hours for the types of training carried out in 2018 were distributed in a balanced way [27], allowing workers not only to advance in technical skills but also in other skills. However, the average hours per employee were very few.	Create alliances with institutes with high levels of quality and teaching to update and increase the number of hours of courses taught at Viesgo, both technical and focused on social skills.	-3	In this way, high levels of skills, knowledge and capabilities of employees can be reached, positively affecting the organization, because if they grow the company grows.
			Viesgo participate in conferences on research in the sector and collaborate with community universities to share information and experience in electric power courses [27].	-3	Viesgo continually seeks to enter all possible educational environments, both conferences and training sessions in various centres, to bring its experience to people who are learning to create a better future.	Find more institutes, events, commissions, groups, among others that allow them to continue teaching their experience with two objectives, the first is to bring more knowledge to improve in this sector and second to make the organization known and its good work and commitment to the innovation, digitization and sustainability.	-3	The impact rating cannot be improved, however it is clear that this proposal seeks to continue in the same line but improving and advancing.
3.1.5	Organizational learning	Viesgo aims to train the Executive staff of the Company in relevant aspects such as the geopolitical environment, change management, management of high-performance teams and the customer experience [27].	Viesgo launches the Executive Development Program collaborating with the Spanish Confederation of Business Organizations and the Higher School of Business Administration and Management [27].	-2	Knowing how to manage changes and risks improve the effectiveness and efficiency of the corporate management process [11].	Create programs related to the management of change and corporate and sector risks, for all levels of the organization, to create awareness and uniformity	-3	This will create awareness at all levels of the corporation, facilitating flexibility and agility to deal with changes.
			Viesgo provides training to develop employees' digital, personal and technical skills, in addition to training activities to develop Time Management and Planning skills, Leadership, Team Management, among others [27].	-2	Promoting not only technical but social skills creates awareness and therefore a better social and work environment, improving the performance of workers.	Increase the number of training hours and continuously update the informative material, to make the training a pleasant and motivational space.	-3	Continuing to advance along the path of educating personnel in all fields will make Viesgo a strong and leading organization.
3.1.6	Diversity and equal opportunity	In Viesgo they have organized a training cycle in all work centres with a triple objective; create awareness of the impact of unconscious biases in decision-making, break labels and teach us to look at the world with different eyes, the importance of a conscious inclusive leadership [36].	Improving the quality of life of employees, which contributes to increasing productivity and attracting, retaining and motivating the components of the workforce, consequently increasing their satisfaction with the company [27].	-2	Diversity and inclusion generate productivity and enrichment of ideas, conditioning the organization to higher levels of innovation and creativity.	Create mentoring programs to combat age discrimination in the workplace	-3	This is a proposal that Viesgo does not carry out and with all the talent they have and that over time they get older they could reuse it and avoid discrimination.
			Viesgo sponsors the "Fundación Mujer y Talento de Cantabria", which encourages the development of young female talent and encourages the vocation of women for technical studies [36].	-3	Viesgo shows its commitment to social and labour equality in a sector where the majority are men, with various plans and strategies for inclusion.	Provide job training that includes women	-3	I have discussed the issue of the inclusion of women in the organization very well, for this reason to continue working on this path to continue to understand the importance of equality in the company and the sector.

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Subcategory	Element			Before	Justification		After	Justification
		Viesgo allows the reduction of working hours, teleworking, paid permits and leave, pregnancy and breastfeeding and leave for family care [36].	The quality of work and life of employees allows them to achieve their professional and family aspirations, that is, a balance [36].	-3	Companies that are flexible and committed to the quality of life of their employees, improve the response of workers towards the company and increase their productivity.	Continue promoting the flexibility that characterizes Viesgo.	-3	The flexibility that exists in the company must be maintained and improved to maintain an organization with a suitable work and social environment to increase efficiency and effectiveness.
<b>3.2 Society and Customers</b>								
3.2.1	Community support	The organization considers it feasible to make framework contracts for a wide range of products and services. However, not all products and services enter these contracts [24].	With the framework contracts, they ensure the work for a period to many companies in the community, in addition to giving other companies the opportunity to tender those other materials that are not in the framework contract, in this way more companies are made known for future Contracts.	-2	It is a way of creating direct and indirect jobs for many companies in the community, creating better relationships in the community with the organization. However, strategies could be created to improve these relationships and the quality of products they offer.	Buy from domestic suppliers after doing technical and sustainability analyses of these, according to criteria the Corporate Purchasing Policy of Viesgo [16].	-3	To create work in the community is to move forward together, which allows the community to develop in many areas and this impact will be even more lasting when sustainability awareness is created.
			Creating alliances within national companies implies creating national development.	-2	When a group works together and advances together, the results will be more enriching and sustainable over time, however, these alliance processes need monitoring and control processes to continuously improve, that is why the rating is not the highest.			
3.2.1	Community support	Viesgo collaborate with the Women and Talent program to promote the selection of science career students, mentoring work [24].	The index of women who work in Viesgo has increased in recent years, in professional categories such as Management, Graduates, Middle Graduates and Operators [27].	-3	Increasing the presence of women at all organizational levels transmits confidence and security for many women in the community who aspire to occupy such positions.	Create more than development programs for women.	-3	Continuing along the same lines of motivating equality and professional development for women in this sector empowers women in the community to feel that they have equal conditions and knowledge as men. The rating cannot be increased any further.
		100% solidarity night races organized by Viesgo since 2013 [24].	Promoting sport and healthy lifestyle habits and spreading the values of teamwork [24]	-2	Fostering life without discrimination creates strong ties based on the culture and environment of the community in which the company operates, however it can always be improved, which is why the rating of this impact of Viesgo on society as a positive medium.	Involve the creation of energy within these sports or games, which allow creating awareness about how valuable energy is. As for example stationary bike racing that generates energy with the movement of the pedals.	-3	Alternatives like these that create social awareness about the impact of energy on the community, the environment and the economy, create lasting changes, which is why the rating of this impact increases.
		Viesgo collaborate and promotion of sport for people with disabilities [24].						
		Viesgo collaborate with sponsorship of concerts in the areas of performance of Viesgo [24].	Support and promote the artistic and cultural manifestations of the communities in which Viesgo operates [24].	-2	There are several proposals that Viesgo makes that positively impact society and the development of art and culture, however many of these are developed in the city where main headquarters is, Viesgo main headquarters is, knowing that the company has great coverage of the North of the peninsula. This is the reason why the rating does not reach 100%.	Create the same or similar cultural, artistic and social events in all the communities where activity arrives of Viesgo.	-3	This action impacts all the communities where the company operates, which makes everyone involved and interested in its activity feel closer to the company.
		Viesgo collaborate with the Santander International Festival for the promotion of music [24].						
Viesgo collaborate with Botín Centre for the promotion of culture [24].								



P5 Category		Description (Cause)	Potential Impact	Impact Score		Proposed Response	Impact Score	
Subcategory	Element			Before	Justification		After	Justification
		Take inclusive action to help vulnerable groups in collaboration with ONGs and institutions [24].	Creating social and solidarity awareness	-2	Being involved in vulnerable communities or groups of people, in addition to exercising a publicity value, also creates the value of belonging to society, since it not only supports the community in which it operates but also transcends its borders for a better world. That is why the rating is high.	In addition to making financial donations, giving volunteer contributions from the workers themselves.	-3	Personal relationships are stronger when they are physical, that is, taking company personnel to the communities that are helping each other to provide a service not only monetary but collaborative, closer and more trustworthy to society, that is why with this proposal the impact rating would increase.
		Scholarship program and talent attraction "First Experience. It is also a scholarship program that allows the identification and attraction of young talent in Viesgo [27].	Strengthening sense of belonging and social ties to promote economic and social growth. Support the dissemination of knowledge and research activities, especially those related to the energy transition [24].	-3	Viesgo has a range of opportunities to offer the community to develop talent and promote science in the community and with actions like these the impact it creates in the community is seen in many places, that is why the rating is the highest, because according to its indicators [27], since before 2018, actions like these have been created and improving.	Bet on the continuous improvement of its social actions of professional development with measurement, control and execution processes.	-3	Continuous improvement is the best way to make changes last and to make the impacts on society, the environment and the economy increasingly more sustainable.
		Sponsoring research conferences and involving scientists and students [24].						
		Collaboration with training centres, associations and the media through conferences and courses on the energy sector [24].						
3.2.2	Public policy compliance	Market strongly regulated by the requirements of the Administrations, Electric Network, Electric Market Operator and Competition [24].	The Code of Ethics of Viesgo sets out strict compliance with the Law and the prevention of bad practices such as bribery or corruption [24].	-3	The values and commitments that the company has with society, the environment and economic development are reflected in its good practices and compliance with the internal and external policies of the company.	Create a measurement and control system that verifies the progress of these proposals and allows studying their improvements.	-3	Only what is measured can be improved, that is why with the implementation of this proposal it is possible to improve the rating of the positive impact that these measures have, because in this way the employees would be listened to and the bottlenecks would be known to optimize them.
3.2.4	Customer health and safety	Creation of a unit of measure that indicates the minutes of supply interruption on an annual basis TIEPI [24].	Quality and safe service for customers and stakeholders Commitment to society is demonstrated through the quality of supply [24].	-2	According to the 2019 Risk Sustainability Report, the motto of the company is "Safety comes first", expressing its commitment to the safety and health of people and their environment in all company activities. The rating is not the highest because they are not yet perfect solutions or actions to improve this situation can still be created.	Conferences and events in the community that convey the value that the company gives to the safety and health of people and their environment, in generation and distribution activities	-3	This solution will create awareness in the community about energy and the activities that its generation and distribution entails, strengthening the bonds of trust between the community and the organization.
		Constant investment in new infrastructures in network maintenance [24].						
		Investment in digitization and network automation [24].						
		Increase network control, with a new control centre and implementation of the ADMS (Automatic Data Master Server) with control system [24].						

P5 Category		Description (Cause)	Potential Impact	Impact Score		Proposed Response	Impact Score	
Subcategory	Element			Before	Justification		After	Justification
3.2.5	Product and service labelling	Viesgo creates campaigns and products hand in hand with digitization and innovation to have control of your consumption and savings on the bill [37].	To sensitize customers about energy consumption and their conditions in the household economy.	-1	These proposals to minimize consumption are necessary for all households, yet they only show the economic part, without highlighting the social and environmental part.	Develop applications that teach energy consumption, emissions kg of CO2 eq throughout the process of generation, distribution and energy consumption.	-3	This proposal will create an impact by graphically seeing poor consumption and what it means in the home economy and the environment.
3.2.6	Market communications and advertising	Effective management is the integral security in the operations of the company and procedures [24].	The community and other stakeholders become aware of the need for responsible energy consumption	-1	Awareness practices are important so that the change in the sustainability of the sector is created, however it must be continuous so that the community does not forget it and maintain it as a habit of life.	Create intelligent advertising campaigns with the environment to remember good practices, advice and keep users informed of the process in the social, environmental and economic spheres.	-3	Transmitting information and knowledge to the community and stakeholders becomes a necessity, because it is the way to measure the progress of the company in sustainable terms.
		Viesgo create multimedia and advertising material that explain, teach and give examples of good energy consumption practices [37].						
3.2.7	Customer privacy	Acquisition of software of data protection with requirements above the level and RGD requirement [24].	Effective cybersecurity management that allows evaluating threats and weaknesses to take security measures in the organization, protect data and take care of privacy [27].	-1	Viesgo is categorized with a critical infrastructure and essential service, therefore controlling and managing the cybersecurity of assets as the control centre, has an impact on society, the economy and the environment. For this reason, it is necessary to improve each time in this area.	Create measurement and control programs for the systems used to protect against cyberattacks.	-3	The continuous control and correction of bottlenecks, defects, failures, weaknesses are the only way to ensure the reliability of the service and the security of cyberattacks.
		Continuous hacking tests and network team exercises and developing Full disaster recovery plans [24].						
		Certification in ISO 27001 information security, ISO 22301 business continuity, ISO 55001 asset management and EFQM [24].						
<b>3.3 Human Rights</b>								
3.3.1	Non-discrimination	Guarantee equal conditions for access to all positions regardless of gender, race, age, social conditions, religion, marital status, sexual orientation, but based on objective selections.[24].	Increased productivity, motivation and retention of talent, increasing the sense of belonging of workers with the company.	0	Promotes and makes employees, society and stakeholders aware of the importance of integrating the perspective of a human being, capable of proposing solutions and performing their work properly, in the organization. However, immediate and long-lasting actions must be proposed for the changes to last.	Guided tutorials by older people from the company to younger people to transmit experience and reduce discrimination due to age.	-1	Creating actions that have a double function or double benefit have a positive impact for the company because in this way the staff receives training and the elderly do not feel discriminated against.
		Promote women in positions of responsibility and in which they are not underrepresented [24].						
3.3.2	Age-appropriate labor	The average age of the staff is 48 years old and they have been in the company for 19 years. 99% of permanent workers and 20% equivalent to the proportion of women in the company [27].	The Ethical and Diversity Code bases its content and scope on managing diversity, talent and equal opportunities.	-1	According to the 2019 Non-Financial Report of Viesgo, the age range is very varied, as well as the years of seniority, which shows that Viesgo is a flexible organization, that is, the impact on its work and social environment is direct.	Continue along the same line of action updating the selection plans and creating new jobs, so that more talent and diversity become part of Viesgo.	-2	Measuring, controlling and correcting are the necessary measures to improve and move forward on the right track.
<b>3.4 Ethical Behaviour</b>								



PS Category		Description (Cause)	Potential Impact	Impact Score		Proposed Response	Impact Score	
Subcategory	Element			Before	Justification		After	Justification
3.4.1	Procurement practices	In 2019, supply chain of Viesgo has 413 suppliers, Buying 32.3 million euros [24].	98% of purchases came from national suppliers, which indirectly creates opportunities for employment and national development [24].	-2	With these strategies, there is greater control and management of possible environmental, social and financial impacts due to raw materials, construction works, and environmental and financial viability.	Implemented a supplier prequalification model based on their sustainability, including financial, transparency, compliance with laws, prevention, environment and corporate social responsibility aspects.	-3	Creating a strategy of linearity with suppliers minimizes negative impacts on the environment, society and the economy, since there would be a double review and double management.
			Viesgo performs technical compliance analysis including standard requirements related to environment, health and safety [24].					
3.4.2	Anti-corruption	Viesgo implemented a tool called GlobalSuite, to monitor the Crime Prevention and Detection Model. This tool allows to know the impacts, the probability of occurrence and proposes control and minimization mechanisms [24].	Good governance of the internal policies and societies is guaranteed of the organization [24].	-2	Ensuring that organizations have good governance favours relationships between stakeholders and the organization, in addition to strengthening trust in the community. For this reason, the rating is very positive, since the social, economic and environmental impact are positively affected by good governance.	Promote regular courses to teach and strengthen knowledge about the Crime Prevention Model and the fight against corruption and bribery.	-3	With this proposal, it would be ensured that each member of the organization has clear knowledge and good governance will be maintained as part of the culture.
3.4.3	Fair competition	Market strongly regulated by the requirements of the Administrations, Electric Network, Electric Market Operator and Competition [24].	Viesgo has a mechanism to control compliance with legal requirements, as well as tools, procedures and risk management models to ensure reasonable management and adequate decision-making [24].	-2	Anticompetitive practices impede the strengthening of the sector and weaken trust towards those interested in it, which is why with the alternatives that Viesgo uses to control risk management and bad practices, it minimizes the negative impacts on sustainability.	Development of an evaluation method for anti-competition policies annually	-3	Ensuring that annually the policies are adjusted to the changes that the market, the sector, the community and the stakeholders are having, creates a culture of sustainability in the organization, which is why the impact classification would increase due to this proposal.
		Market risks range from volatility in the prices of raw materials to developments and advances in technology and efficiency in the services offered [24].	Implement innovation projects; Smart networks, efficient wind turbines, predictive maintenance, network automation, virtual security training [24].	0	The impact on sustainability of this point is neither totally negative nor totally positive, because the competition allows the organization to strive to create better products and services using innovation and new efficient and environmentally friendly technologies, however, As there is an uncertainty gap, it prevents the organization from having all the points of sustainability covered.	Create or join a cluster of companies in the sector to share knowledge and experience of all companies in the group	-2	This alternative allows creating synergy with the competition so that everyone can advance together around the sustainability of the sector
		<b>4 Planet (Environmental) Impacts</b>						
		<b>4.1 Transport</b>						
4.1.1	Local procurement	The supply chain of Viesgo consisted of 439 suppliers in 2019 [24].	The 98% of purchases this year came from national suppliers, which had a positive impact on the creation of indirect jobs and the development of the country.	-2	The rating of the social impact of creating direct and indirect employment within the country is very positive, however it is not the highest because it is necessary to continue working so that the suppliers of the entire supply chain are sustainable and create economic development.	Develop agile evaluation methods that allow knowing the level of sustainability of suppliers and their products.	-3	Measuring and knowing the sustainability of suppliers creates awareness in suppliers to compete to improve and make their products and companies more sustainable, therefore, it will create more work in society and improve the level of sustainability of the country
4.1.2	Digital communication	The objectives for 2024 are to reduce the TIEPI to 33 min and develop a plan for digitization and predictive maintenance and cybersecurity of assets [24].	Pilots implementation of remote assistance technologies through video and voice for manoeuvres on the network and in substations [24].	-2	Using new technologies to increase the safety of assets and reduce their environmental impact, deserves a high rating	Implement new technologies to make visits by videoconference, to work locations.	-3	Minimize the risks on the roads and CO2 emissions to the environment, generate a positive impact for the planet, stakeholders and the optimization of resources

PS Category		Description (Cause)	Impact Score		Proposed Response	Impact Score		
Subcategory	Element		Potential Impact	Before	Justification	After	Justification	
4.1.3	Traveling and commuting	To improve the quality of life of employees, Viesgo is committed to reconciling personal, family and work life, thus facilitating disconnection from work [27].	Viesgo promotes actions aimed at using videoconference communication and meeting systems in order to facilitate better work-life balance and reduce travel and business trips as far as possible [27].	-1	Implementing videoconferencing systems has a triple positive impact on sustainability because it ensures that the resources provided for travel cause the least possible impact on the environment, minimize occupational risks and reduce costs.	Implement video cameras and virtual visits to substations and projected areas, to minimize displacements.	-2	With this solution, environmental impacts are minimized and health and safety are increased, however, it is necessary to invest in video transmission systems that speed up meetings and virtual visits.
<b>4.2 Energy</b>								
4.2.1	Energy consumption	The biggest energy consumption in the business is the energy losses, inherent in the activity, that occur throughout the distribution network, which translate into greenhouse gas emissions [24].	The distribution business has obtained the ISO 50001 Energy Management System certification, ensuring the efficiency and continuous improvement of the use of energy in the facilities [27].	+1	According to the 2019 non-financial report [27], the emissions are not significant with respect to those produced in the thermal generation business. That is why its impact is not so negative, however with the implementation of the Energy Management Systems standard, it is ensured that the impacts will be less and less.	Implement an Energy Management System in the power generation business to ensure that the entire organization is aligned with sustainability.	-1	Certifying all the activity of the organization with continuous improvement and good practices to offer a sustainable service significantly improves the rating of the negative impact that CO2 emissions have on the environment due to energy losses.
		Energy consumption in office buildings is mainly for air conditioning, lighting, domestic hot water generation, computer equipment and others [27].	The company calculates the carbon footprint to understand the key points related to energy consumption and carbon emissions to create objectives and strategies that reduce the impact on the environment and energy consumption [27].	-1	Knowing the critical points of the activities facilitates of the company the minimization of CO2 emissions, so the impact rating is positive, however, good correction strategies must be created.	Install in buildings, underfloor heating systems, aerothermal, thermal and sound insulation, among some alternatives to ensure that these facilities are energy efficient.	-3	Modifying the facilities to make them more efficient is equivalent to an economic investment but that over time pays off and has a positive impact on the environment.
4.2.2	CO2 emissions	The carbon footprint in 2018 is 20% higher than in 2017, only in the distribution business, taking into account displacement in vehicles, refrigeration and air conditioning in buildings and the release of sulphur hexafluoride (SF6) in substations [24].	Viesgo Distribution has set itself the objective of reducing the tCO2 of the fleet by 19% by replacing vehicles with internal combustion engines in electric and hybrid vehicles and promoting their use by prioritizing their performance [27].	-1	With this initiative, the reduction of tCO2 emitted has a positive impact on the environment, although strategies must be created to amortize the disbursement of the vehicle fleet and further reduce CO2 levels.	Give training and continuous reminders of the importance of reducing unnecessary energy consumption.	-2	Create awareness among the users of the facilities and vehicles, strengthens the sustainable culture inside and outside the company, that is why the rating of the positive impact that this initiative would have would increase.
		The carbon footprint in 2019 was reduced by 30% compared to 2018, taking into account electricity consumption in offices and substations, losses due to transport and distribution of electricity [24].	The distribution business has obtained the ISO 50001 Energy Management System certification, ensuring the efficiency and continuous improvement of the use of energy in the facilities [27]. Closure of the thermal power plant and becomes the first integrated company in Spain to completely decarbonize [32]	-1	The impact of reducing the tCO2 emitted to the environment and closing the thermal plants show the commitment of the organization to sustainability.	Develop plans to modify buildings making them more energy efficient.	-2	Work so that all the infrastructure and facilities are more efficient, improves the impact on the environment, community and the economy of the company.

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Subcategory	Element			Before	Justification		After	Justification
4.2.3	Clean energy return	Viesgo has an efficient power generation park, with approximately 506.65 MW of installed power from wind farms and hydroelectric plants located throughout the Iberian Peninsula [24].	Viesgo has begun to focus on regulated businesses, to work for the energy transition to increase the electrification of the economy [27].	-3	Viesgo shows commitment to the environment by closing the power plants, positively impacting the sustainability of the company, in addition to entering the regulated market, to promote the development of the country.	Invest in renewable generation research.	-3	Viesgo does a good job in green energy generation, so its impact is positive and with this proposal all it does is continue to strengthen this part of the business.
		Closure of the thermal power plant and becomes the first integrated company in Spain to completely decarbonize [32]	Continue expanding the power generated per year with new technologies / acquiring new wind farms / hydroelectric plants					
4.2.4	Renewable energy	Viesgo is committed to investing in renewable energies both at the user level and in energy generation, distribution and commercialization activities [24].	Throughout the entire Peninsula Viesgo has 24 wind farms and 2 mini-hydroelectric plants that generate 506.65 MW of installed power [24].	-3	Betting on clean energy has a positive impact on society, prosperous development and the environment.	Invest in renewable generation research.	-3	To improve the positive impact of renewable energies, it is necessary to invest to advance knowledge and the development of a sustainable infrastructure.
		Decarbonize the environment by closing thermal power plants that use non-renewable resources, such as Los Barrios [27].	Implement innovation projects; Smart networks, efficient wind turbines, predictive maintenance, network automation, virtual security training [24].	-3	Implement new strategies to be a decarbonized company, shows the commitment of Viesgo to the community and the environment			
<b>4.3 Land, Water, and Air</b>								
4.3.1	Biological diversity	Risk of collision and electrification of birds and other animals around the assets and the removal of nests [27].	Viesgo collaborates with SEO Birdlife with the protection of birds, placing anti-collision and anti-electrocution systems, as well as, supporting projects to raise awareness about the knowledge and protection of species [27].	-1	The activity of Viesgo has a direct impact on the environment, which is why implementing bird protection systems reduces the negative impact that its activity causes on the environment.	In the design and projection phases of lines, substations or wind farms, avoid protection zones to minimize extra costs and protect birds and other species.	-2	If protected areas are avoided in the projection phase, impacts and electrocution will be reduced, not only from birds but from other species. That is why the positive impact on the environment would improve.
4.3.2	Water and air quality	Water is consumed in fire-fighting services, and production of demineralized water, however, it is not an excessive consumption as well as regulated by public administrations [27].	The water that Viesgo captures comes from the sea like swamps, so the sources are not affected by extraction. In addition, the wastewater discharges is treated by a purification process to comply with the parameters established by the Administration [27].	-3	As the highest water consumption was in the thermal power plants but they are already closed and the water they collect does not affect the environment since they are not large quantities and the water that remains is cleaned to return it to the environment, it directly impacts the environment. However, Viesgo creates corrective actions that almost completely reduce your condition in the environment.	Make water cleaning systems more efficient, effective and optimal, with more rigorous standards, to ensure that its effect on the environment will be drastically reduced.	-3	The best way to stay aligned with sustainability goals is to measure, correct and execute. It is for this reason that the impact would continue to be very positive for the environment and nearby communities.
4.3.3	Water consumption							
4.3.4	Sanitary water displacement							
<b>4.4 Consumption</b>								

P5 Category		Description (Cause)	Potential Impact	Impact Score		Proposed Response	Impact Score	
Subcategory	Element			Before	Justification		After	Justification
4.4.1	Recycling and reuse	Viesgo is committed to making Stakeholders aware of using ecological, efficient and recycled products [27].	At Viesgo it is committed to the 3Rs (Reduce, Recycle, Reuse-Repair) and a 4R, Responsibility, for this reason, in its sustainability and development projects, it sets objectives such as recycling meters or a little simpler such as reusing paper and reducing packaging [10].	-2	Taking 3R alternatives in distribution projects would make the business more efficient, because environmental impacts and associated costs are reduced, in addition, the impacts are also positive within the offices because they create a 3R culture, which is a way of counting the community from within.	Find national companies with innovative projects regarding recycling, to replace plastic and biodegradable containers with ones that can be sown or reused.	-3	This solution would have a double positive impact on the sustainability of the organization, because it would support the economic and environmental development of the community.
		Viesgo, committed to the circular economy, sets objectives to minimize the amount of waste produced and maximize the values of waste [24].	The 97% of waste of the company is recoverable and for the other 3% of waste, alternatives are being sought to minimize it [24].	-2	The impact of the circular economy on the sustainability of companies is very positive, because in addition to generating economic value, it also adds value to the environment by reducing waste.	Implement a management system to evaluate fair, quality and community-committed valuation procedures.	-3	Measure, correct and execute are the best weapons to have higher levels of efficiency in any project, this is the reason why with this proposal, the positive impact would increase.
4.4.2	Disposal	The three main residues from Viesgo are ash, slag and gypsum, with a total of 250 kton, 46 kton and 107 kton, respectively [27].	Viesgo has an environmental management system, which contains the treatments that must be given to each of them to minimize their environmental impacts. This management system is audited periodically to ensure their quality [27].	-3	Management systems are the most reliable processes to obtain the desired result because with experience the gaps that exist in the processes are corrected. It is for this reason that the impact of the final waste management is very positive.	Give training to interest groups on the importance and need for proper waste management.	-3	Teaching people is to gain responsibility and therefore gain positive impacts for the environment, the community and the prosperity of the business.
4.4.3	Contamination and pollution	In the thermal power plants that belonged to Viesgo, up to 1.7 tons of coal were used per year for their operation, which is the highest consumption of all the raw material that Viesgo uses in the rest of its operations [27].	Viesgo closes the power plants to become the first decarbonized company in the Peninsula [32].	-3	This solution executed by Viesgo shows its commitment to sustainability, which is why the rating for this impact is the highest, because it is highly positive.	Train the community, employees and other interest groups, the importance of creating decarbonized processes to stay aligned with the Sustainable Development Goals proposed by the ONU.	-3	Transmitting knowledge acquired through experience gives interest groups greater confidence, therefore it will be easier to reach them to sensitize them and create awareness about sustainability, therefore, better results will be obtained.
4.4.4	Waste generation	Viesgo, committed to the circular economy, sets objectives to minimize the amount of waste produced and maximize the values of waste [24].	The 97% of waste of the company is recoverable and for the other 3% of waste, alternatives are being sought to minimize it [24].	-2	The impact of the circular economy on the sustainability of companies is very positive, because in addition to generating economic value, it also adds value to the environment by reducing waste.	Create indicators in the design and construction phases to measure the variables that affect whether there is waste, to take measures that serve for the following projects and reduce waste values.	-3	Measuring the variables of the processes is an objective way of attacking the negative impacts and enhancing the positive ones in the face of sustainability.
		The three main residues from Viesgo are ash, slag and gypsum, with a total of 250 kton, 46 kton and 107 kton, respectively [27].	Viesgo create strategies guided by environmental management systems and audits, which facilitate the collection and treatment of waste [27].	-3	Management systems are the most reliable processes to obtain the desired result because with experience the gaps that exist in the processes are corrected. It is for this reason that the impact of the final waste management is very positive.	Give training to interest groups on the importance and need for proper waste management.		Teaching people is to gain responsibility and therefore gain positive impacts for the environment, the community and the prosperity of the business.
		Viesgo voluntarily decides to eliminate equipment containing polychlorinated biphenyls (PCBs) due to its high danger to the environment [24].	Elimination of hazardous waste affecting the environment such as polychlorinatedobiphenyls (PCBs) [24].	-3	This solution executed by Viesgo shows its commitment to sustainability, which is why the rating for this impact is the highest, because it is highly positive.	Find national companies with innovative projects regarding recycling, to replace plastic and biodegradable containers with ones that can be sown or reused.		This solution would have a double positive impact on the sustainability of the organization, because it would support the economic and environmental development of the community.
<b>5 Prosperity (Economic) Impacts</b>								



P5 Category		Description (Cause)	Impact Score		Proposed Response	Impact Score		
Subcategory	Element	Potential Impact	Before	Justification		After	Justification	
<b>5.1 Business Case Analysis</b>								
5.1.1	Modelling and simulation	Market strongly regulated by the requirements of the Administrations, Electric Network, Electric Market Operator and Competition [24].	Being a regulated organization, Viesgo is governed by Royal Decree 1048/2013, which establishes the methodology to calculate the amount of retribution that the company can receive for each project and according to each type of asset [38].	-2	The fact that Viesgo is an organization whose activity is regulated by the Administration and that it offers a methodology that facilitates the simulation of costs and remuneration for each project, positively affects the business property since it ensures that it complies with the levels quality of service provided to the community, attracting more customers.	Implement an automated system to streamline the calculation and analysis of projects to ensure that projects are optimal and profitable.	-3	Streamlining the project analysis system would make the processes of the organization more efficient and optimal, obtaining better results and rewards.
5.1.2	Present value	Market strongly regulated by the requirements of the Administrations, Electric Network, Electric Market Operator and Competition [24].	To ensure that an energy supply service is offered in quality conditions, the Administration establishes the reimbursement of the projects according to the investment, operation and maintenance and management costs of the networks, thus calculating the Present Value of the projects [38].	-2	The prosperity of the organization is positively and negatively affected by the regulations of the Administration and the variations of energy prices in the market, but it is nevertheless a way to ensure that it is a business without corruption and that it complies with the standards. required, it is for this reason that the rating of this impact is positive.	Implement an automated system to streamline the calculation and analysis of projects to ensure that projects are optimal and profitable.	-3	The way to improve is to measure, therefore creating an automated system that streamlines management and allows evaluating the best alternatives in terms of sustainability, positively impacts the success of the business.
5.1.3	Direct financial benefits	Market strongly regulated by the requirements of the Administrations, Electric Network, Electric Market Operator and Competition [24].	In order to obtain efficient management from the distribution companies and offer the end user the minimum energy cost and with the appropriate quality, Royal Decree 222/2008 establishes a remuneration methodology [38].	-2	The regularization of the energy generation and distribution business positively affects the sustainability of the projects, in addition, the Administrations give incentives to the companies to continue improving in sustainability, which means a better impact.	Create a system or implement methodologies that allow an analysis of the project alternatives with greater precision in order to make the projects as efficient and optimal as possible.	-3	Analyzing the alternatives of the projects through automated systems streamlines and optimizes the work to make decisions that affect the prosperity of the business, people and the environment.
5.1.4	Return on investment	Market strongly regulated by the requirements of the Administrations, Electric Network, Electric Market Operator and Competition [24].	Royal Decree-Law 9/2013 and Law 24/2013 establish incentives to improve service quality objectives and network losses [38].	-2	Viesgo, being a regulated business and receiving incentives to improve the quality of its services, creates work awareness for alternatives that allow obtaining higher remuneration, positively affecting the prosperity of the business.	In addition to implementing sensitivity analysis systems to make projects more optimal, it is also necessary to seek better alliances with suppliers, ensuring that their products and companies are sustainable.	-3	The best way to improve and make better decisions for sustainability is through systems that allow us to measure the alternatives for projects.
5.1.5	Benefit-cost ratio	The total taxes to be collected and borne by Viesgo, amounts to 83.5 million euros, including the "Value Added Tax", with 18.3 million euros, according to the 2019 Non-Financial Report.	Parameters are introduced in Royal Decree-Law 9/2013 and in Law 24/2013 that increase efficiency in the construction of infrastructures and in the operation and maintenance of networks [38].	-2	The methodologies to calculate the benefits obtained by regulated companies positively affect sustainability since it ensures that the services provided are not corrupt and with high quality levels, attracting more clients.	Minimize the costs of construction and work and maintenance of the projects, with alternatives in the raw material and / or processes for their execution.	-3	The success of the business is affected by the methods to calculate the return on investments made by the company, for this reason, to improve the levels of the return is to seek better economic and environmental alternatives, to improve the impact on the sustainability of the business
5.1.6	Internal rate of return	Market strongly regulated by the requirements of the Administrations, Electric Network, Electric Market Operator and Competition [24].	Being a regulated organization, Viesgo is governed by Royal Decree 1048/2013, which establishes the methodology to calculate the amount of retribution that the company can receive for each project and according to each type of asset [25].	-2	Ensuring that the projects are profitable has a positive impact on the economy of the organization and even more so when these calculations are guided and established by regulatory entities.	Implement an automated system to streamline the calculation and analysis of projects to ensure that projects are optimal and profitable.	-3	Positively impacting the prosperity of the organization implies creating value for stakeholders and the way to improve the efficiency and profitability of projects is to minimize investment costs and maximize the added value that is offered to obtain higher returns.
<b>5.2 Business Agility</b>								

P5 Category		Description (Cause)	Potential Impact	Impact Score		Proposed Response	Impact Score	
Subcategory	Element			Before	Justification		After	Justification
5.2.1	Flexibility /optionality	Viesgo is faced with the transition to the industry 4.0 development model to achieve efficient, collaborative and adaptive asset management [39].	Viesgo structures pilots and initiatives for the implementation of the BIM (Building Information Modelling) methodology to develop assets based on different analysis vectors, which will speed up the analysis of their life cycle. This methodology is divided into seven dimensions, of which the sixth dimension is the determination of the sustainability of the asset [39].	-1	This alternative has a positive impact on the sustainability of the organization because it would allow a more efficient and sustainable evaluation of the changes that the projects of the organization are facing.	Implement the BIM methodology in all the projects of the organization to promote flexibility to the changes to which the organization is exposed.	-3	It is necessary to implement this methodology to make sustainability effective in all the projects of the organization, so that the company is more flexible before changes and risks.
5.2.2	Business flexibility	Viesgo is committed to continuous improvement and innovation to respond to changes with flexibility and agility [27].	Viesgo develops DYNELEC a project in collaboration with the University of Cantabria to increase the integration of renewable energy in the distribution network, providing users with a better supply [22].	-2	To develop projects that allow to improve the distribution network that in the end will improve the quality of supply of the clients, increase the satisfaction of the clients, interest groups, the prosperity of the business and the correct management of the environment.	Create an indicator that measures progress in flexibility and change management.	-3	Only by measuring the progress and identifying the variables that affect the management of the changes, it is possible to control, correct and execute the improvements throughout the organization, that is why with this proposal the impact would be more positive on the sustainability of the prosperity of the organization.
<b>5.3 Economic Stimulation</b>								
5.3.1	Local economic impact	In 2019, the supply chain of Viesgo had 413 suppliers and a purchase volume of 32.3 million euros [27].	Creation of methods of analysis of the technical compliance and sustainability of suppliers, which also serves as a guide for them [24].	-2	By choosing to work with companies in the country, you help the economic development of the country evolve, positively impacting the prosperity of the company and community.	Implement an automated system that analyses the level of sustainability of suppliers and their products, in such a way that the process of selecting and purchasing optimal materials would be streamlined.	-3	Implement an automated system that analyses the level of sustainability of suppliers and their products, in such a way that the process of selecting and purchasing optimal materials would be streamlined.
5.3.2	Indirect benefits	Viesgo aims to minimize waste from its activities and take preventive measures [27].	Maximize waste valorisation and search for non-valuable waste alternatives, Circular economy [24].	-3	Including the circular economy in projects to create a triple benefit has a positive impact on the sustainability of the projects of the organization, because it improves the environmental impact, on business prosperity and on people.	Implement indicators that measure the progress made in the recovery of waste and its minimization	-3	Knowing the variables that affect or potentiate the maximization of the value of waste that can be reused by other companies, facilitates sustainable decision making.

## ANNEX II: Viesgo P5IA results

P5 Category	Previous Score		Final Score	Pessimistic Case	Neutral Case	Optimistic Case	
<b>2.1 Product Impacts</b>			<b>1</b>	<b>-1</b>	<b>3</b>	<b>0</b>	<b>-3</b>
2.1.3 Servicing of product	+1, +2, -1	0,67	1	-1	3	0	-3
<b>2.2 Process (Project Management) Impacts</b>			<b>-1</b>	<b>-4</b>	<b>6</b>	<b>0</b>	<b>-6</b>
2.2.1 Effectiveness of project processes	+2, -1, -2	-0,33	0	-2	3	0	-3
2.2.2 Efficiency of project processes	-1	-1,00	-1	-2	3	0	-3
<b>3 People (Social) Impacts</b>			<b>-28</b>	<b>-47</b>	<b>54</b>	<b>0</b>	<b>-54</b>
<b>3.1 Labor Practices and Decent Work</b>			<b>-9</b>	<b>-16</b>	<b>18</b>	<b>0</b>	<b>-18</b>
3.1.1 Employment and staffing	0, -2, -1	-1,00	-1	-2	3	0	-3
3.1.2 Labor/management relations	-1	-1,00	-1	-2	3	0	-3
3.1.3 Project health and safety	-2, +2	0,00	0	-3	3	0	-3
3.1.4 Training and education	-2, -3	-2,50	-3	-3	3	0	-3
3.1.5 Organizational learning	-2, -2	-2,00	-2	-3	3	0	-3
3.1.6 Diversity and equal opportunity	-2, -3, -3	-2,67	-3	-3	3	0	-3
<b>3.2 Society and Customers</b>			<b>-12</b>	<b>-21</b>	<b>21</b>	<b>0</b>	<b>-21</b>
3.2.1 Community support	-2, -2	-2,00	-2	-3	3	0	-3
3.2.1 Community support	-3, -2, -2 -2, -3	-2,40	-2	-3	3	0	-3
3.2.2 Public policy compliance	-3	-3,00	-3	-3	3	0	-3
3.2.4 Customer health and safety	-2	-2,00	-2	-3	3	0	-3
3.2.5 Product and service labeling	-1	-1,00	-1	-3	3	0	-3



P5 Category	Previous Score			Final Score	Pessimistic Case	Neutral Case	Optimistic Case
3.2.6 Market communications and advertising	-1	-1,00	-1	-3	3	0	-3
3.2.7 Customer privacy	-1	-1,00	-1	-3	3	0	-3
<b>3.3 Human Rights</b>			<b>-1</b>	<b>-3</b>	<b>6</b>	<b>0</b>	<b>-6</b>
3.3.1 Non-discrimination	0	0,00	0	-1	3	0	-3
3.3.2 Age-appropriate labour	-1	-1,00	-1	-2	3	0	-3
<b>3.4 Ethical Behaviour</b>			<b>-5</b>	<b>-8</b>	<b>9</b>	<b>0</b>	<b>-9</b>
3.4.1 Procurement practices	-2	-2,00	-2	-2	3	0	-3
3.4.2 Anti-corruption	-2	-2,00	-2	-3	3	0	-3
3.4.3 Fair competition	-2, 0	-1,00	-1	-3	3	0	-3
<b>4 Planet (Environmental) Impacts</b>			<b>-34</b>	<b>-35</b>	<b>45</b>	<b>0</b>	<b>-45</b>
<b>4.1 Transport</b>			<b>-6</b>	<b>-8</b>	<b>9</b>	<b>0</b>	<b>-9</b>
4.1.1 Local procurement	-2	-2,00	-2	-3	3	0	-3
4.1.2 Digital communication	-2	-2,00	-2	-3	3	0	-3
4.1.3 Traveling and commuting	-1	-2,00	-2	-2	3	0	-3
<b>4.2 Energy</b>			<b>-7</b>	<b>-4</b>	<b>12</b>	<b>0</b>	<b>-12</b>
4.2.1 Energy consumption	+1, -1	0,00	0	-2	3	0	-3
4.2.2 CO2 emissions	-1, -1	-1,00	-1	-2	3	0	-3
4.2.3 Clean energy return	-3	-3,00	-3	3	3	0	-3
4.2.4 Renewable energy	-3	-3,00	-3	-3	3	0	-3
<b>4.3 Land, Water, and Air</b>			<b>-10</b>	<b>-11</b>	<b>12</b>	<b>0</b>	<b>-12</b>





P5 Category	Previous Score			Final Score	Pessimistic Case	Neutral Case	Optimistic Case
4.3.1 Biological diversity	-1	-1,00	-1	-2	3	0	-3
4.3.2 Water and air quality	-3	-3,00	-3	-3	3	0	-3
4.3.3 Water consumption	-3	-3,00	-3	-3	3	0	-3
4.3.4 Sanitary water displacement	-3	-3,00	-3	-3	3	0	-3
<b>4.4 Consumption</b>			<b>-11</b>	<b>-12</b>	<b>12</b>	<b>0</b>	<b>-12</b>
4.4.1 Recycling and reuse	-2, -2	-2,00	-2	-3	3	0	-3
4.4.2 Disposal	-3	-3,00	-3	-3	3	0	-3
4.4.3 Contamination and pollution	-3	-3,00	-3	-3	3	0	-3
4.4.4 Waste generation	-2, -3, -3	-2,67	-3	-3	3	0	-3
<b>5 Prosperity (Economic) Impacts</b>			<b>-20</b>	<b>-30</b>	<b>30</b>	<b>0</b>	<b>-30</b>
<b>5.1 Business Case Analysis</b>			<b>-12</b>	<b>-18</b>	<b>18</b>	<b>0</b>	<b>-18</b>
5.1.1 Modelling and simulation	-2	-2,00	-2	-3	3	0	-3
5.1.2 Present value	-2	-2,00	-2	-3	3	0	-3
5.1.3 Direct financial benefits	-2	-2,00	-2	-3	3	0	-3
5.1.4 Return on investment	-2	-2,00	-2	-3	3	0	-3
5.1.5 Benefit-cost ratio	-2	-2,00	-2	-3	3	0	-3
5.1.6 Internal rate of return	-2	-2,00	-2	-3	3	0	-3
<b>5.2 Business Agility</b>			<b>-3</b>	<b>-6</b>	<b>6</b>	<b>0</b>	<b>-6</b>
5.2.1 Flexibility/optionality	-1	-1,00	-1	-3	3	0	-3
5.2.2 Business flexibility	-2	-2,00	-2	-3	3	0	-3



<b>P5 Category</b>	<b>Previous Score</b>			<b>Final Score</b>	<b>Pessimistic Case</b>	<b>Neutral Case</b>	<b>Optimistic Case</b>
<b>5.3 Economic Stimulation</b>	<b>-5</b>			<b>-6</b>	<b>6</b>	<b>0</b>	<b>-6</b>
5.3.1 Local economic impact	-2	-2,00	-2	-3	3	0	-3
5.3.2 Indirect benefits	-3	-3,00	-3	-3	3	0	-3
<b>Total Score</b>	<b>-82</b>			<b>-117</b>	<b>138</b>	<b>0</b>	<b>-138</b>