A Work Project, presented as part of the requirements for the Award of a Master's degree in Management from the Nova School of Business and Economics.

The Potential of Sustainability as a Strategy for Sport Lisboa e Benfica: A Comprehensive Analysis of SL Benfica's sustainability role within Portuguese sports

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23/01/2023

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Abstract

Sustainability has become one of the most pressing issues of the 21st century. The present project aims to understand how organisations, especially sports enterprises like SL Benfica, can benefit from sustainability. The starting point was comprehending how SLB stands amongst its direct Portuguese rivals regarding sustainable practices, comparing the results to fans' views. Then, the focus was to find official frameworks aligned with the UN's SDGs that could drive the club's sustainability strategy in the future and develop standalone initiatives that could pursue these goals and the frameworks' objectives, never disregarding profitability.

Acknowledgements

Our sincere appreciation goes to Professor Pedro Brinca for his exceptional guidance and unwavering support during the evolution of this thesis, which was pivotal in shaping our research trajectory. A special acknowledgement is also due to those who generously shared their perspectives through the survey, significantly enhancing our comprehension of the subject matter. Gratitude is also extended to Sport Lisboa e Benfica, particularly Afonso Maya Seco and Matteo Signoretto, for their collaborative contributions and essential inputs. Last but not least, thanks to our network of friends and family for motivating us throughout this journey.

Keywords: Sports Management; Sustainability; Strategy; Sport Lisboa e Benfica; United Nations

This work used infrastructure and resources funded by Fundação para a Ciência e a Tecnologia (UID/ECO/00124/2013, UID/ECO/00124/2019 and Social Sciences DataLab, Project 22209), POR Lisboa (LISBOA-01-0145-FEDER-007722 and Social Sciences DataLab, Project 22209) and POR Norte (Social Sciences DataLab, Project 222)

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Abbreviations

CO_2: Carbon Dioxide

ABAE: *Associação Bandeira Azul da Europa*

AELTC: All England Lawn Tennis & Croquet

BDC: Business Development Bank of Canada

BOA: Benfica Official App

BREEAM: Building Research Establishment Environmental Assessment Method

CEAN: Centro Educativo Alice Nabeiro

CEO: Chief Executive Officer

CL: Champions League

CO_2e: Carbon Dioxide Equivalent

CPO: Charging Point Operator

CSDD: Corporate Sustainability Due Diligence

CSR: Corporate Social Responsibility

DCF: Discounted Cash Flow

EDP: *Energias de Portugal*

EPAL: *Empresa Portuguesa das Águas Livres*

ESG: Environmental, Social and Governance

EU: European Union

EV: Electric Vehicle

F&B: Food and Beverage

F1: Formula 1

F4TG: Football for the Goals

FGR: Forest Green Rovers

FIA: Federation Internationale de L'automobile

FIFA: Federation Internationale de Football Association

FOA: *Fundação Oceano Azul*

FTE: Full-time Equivalent

GHG: Greenhouse Gas

ICT: Information and Communication Technologies

IRR: Internal Rate of Return

IRS: *Imposto sobre Rendimento*

IT: Information Technologies

IVA: *Imposto sobre o Valor Acrescentado*

LdP: *Laboratório da Paisagem*

LEED: Leadership in Energy and Environmental Design

ML: Machine Learning

MLS: Major League Soccer

NABERS: National Australian Built Environment Rating System

NBA: National Basketball Association

NFL: National Football League

NPV: Net Present Value

PA: Pennsylvania

PETA: People for the Ethical Treatment of Animals

QR: Quick Response

S4CA: Sports for Climate Action

SAD: *Sociedade Anónima Desportiva*

SDGs: Sustainable Development Goals

SLB: Sport Lisboa e Benfica

SPs: Sustainable practices

SUPs: Single Use Plastics

TMO: Television Match Official

UEFA: Union of European Football Associations

UN: United Nations

USA: United States of America

USGBC: United States Green Building Council

VAR: Video-Assisted Referee

WACC: Weighted Average Cost of Capital

WGBC: World Green Building Council

WOM: Word of Mouth

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1. Introduction

Since oil was discovered in Titusville, PA, in 1859, and the first gasoline-powered internal combustion engine was invented in 1861 by German engineer Nikolaus Otto, the boundaries of industrial possibility changed forever. Modern industrialism ideas came to be in a world far different from the one we know today, characterised by low demographics and abundant resources. Scarcity was not an issue; everything revolved around productivity, with little regard for waste management and social consequences. This was not a viable long-term strategy to conduct business, as waste started accumulating on the surface in the form of plastic and other harmful residues and the atmosphere with CO_2 emissions. Unsustainable business models can deplete resources, increase their respective prices, and spread harmful practices on a massive scale. Hence, the only way to decrease an entity's environmental footprint is by adequately managing resource consumption and investing in meaningful SPs (Simon 2023). Businesses also play a pivotal part as role models in society, given that a brand carries the power to influence society on a massive scale. With the capacity to cause an ever-lasting impact on citizens - the company's customers and driving force - it is in an enterprise's best interest to ensure its healthy environment. Because of this, businesses are responsible for connecting with the communities they serve, contributing to overall social welfare (Chladek 2019). That is where sustainability comes into play, emerging as a response to the growing global awareness of the environmental and social issues affecting our planet. Therefore, this study aims to comprehend how sustainability can positively impact SL Benfica's operations, helping the organisation build a more sustainable business model that includes today's concern of making the world a better place for current and future generations. This objective was pursued by understanding the benefits of introducing sustainability in a company, aligning closer to the reality of the UN's SDGs, and proposing actual implementations that may significantly impact the club's stakeholders.

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2. Methodology

The present project was realised with four guiding objectives, each adopting suitable methods to reach different conclusions. The first objective, to highlight the possible benefits organisations may gain by pursuing sustainability and apply this to SL Benfica's context, mostly resorted to a qualitative analysis of secondary data. To understand whether sustainability is valuable to organisations, the concept was first thoroughly defined from various perspectives. Furthermore, thorough analyses of the industry and club in question were performed, employing known frameworks sustained in the vast literature available.

The second objective was to understand where SL Benfica stands among its peers regarding sustainability initiatives and grasp sports fans' opinions on who the Portuguese sports organisation with the most SPs is and what factors may influence these opinions. For this, a mixture of qualitative and quantitative analysis of the main SPs of the three biggest Portuguese sports clubs was performed. In addition, to detect factors that may prove significant in shaping the probability that individuals believe SL Benfica is the Portuguese club with the most implemented SPs, a survey was conducted and later analysed through a logistic regression using IBM's SPSS Statistics.

Thirdly, this project's goal was also to provide an in-depth analysis of the UN's current initiatives and organisations regarding sports sustainability and highlight the benefits of adopting them for SL Benfica. This was performed through the qualitative study of secondary data.

The last objective was to provide sustainability initiatives that may fit SL Benfica's organisational boundaries. Of course, the initiatives' financial, environmental, and social viabilities were analysed through secondary data, and assumptions were made when no data was available. These assumptions were clearly stated and were avoided whenever possible.

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3. Literature review

3.1 Sustainability and its Benefits

"With great power comes great responsibility" (Daniel Traça 2018)

Sustainability has become a fundamental concern for organisations. According to a recent IBM study, 51% of respondents from the world's ten largest economies believe that environmental sustainability is more essential today than a year ago (IBM 2022). Not only that but as stated in the United Nations Global Compact-Accenture CEO Study on Sustainability, 77% CEOs polled in the developing world believed they should lead efforts and speak about global priority issues (Sweet 2023).

Hedstrom (2018) suggests that a sustainable firm aligns its governance, strategy, and innate necessity for profitability with two main concerns: environmental stewardship and social responsibility. On the other hand, Bateh et al. (2013) define sustainability as an organisation's capacity to uphold its fundamental goals and values across time while satisfying the demands of present and future generations. That being said, literature has only recently started to fully consider the broad impacts that actions perceived as sustainable may bear on the planet's ecosystems, and even though one might perceive them as being positive for the environment, they may spell unintended effects. For example, Crowther and Seifi (2020) state that even though hydroelectricity has been regarded as a source of sustainable and renewable energy for years, only recently has there been extensive research on the impact hydroelectric dams have on river deltas and the wildlife dependent on them. Of course, this does not mean hydroelectric dams should not be constructed; it just means the broader effects of their construction should be considered when choosing their future locations.

Another notion of sustainability is given by Aras and Crowther (2012), who emphasise it as a survival mechanism for any organisation. The authors remark that sustainability within the

corporate world must begin with the assumption that organisations are inserted within a broader social and economic environment. As such, this environment must be maintained if the organisation aims to become successful in the long term, and the risk management nature of sustainable measures makes them ideal for this purpose (Owen-Burge 2022). Addressing climate change, for instance, might reduce financial risks associated with catastrophic weather occurrences and resource scarcity while preparing companies for potential environmental hazards not considered initially. In simple terms, for a company to survive, the environment it is inserted in must also survive. This way, sustainability becomes business executives' way of protecting their organisations' financial prospects by ensuring the well-being of their social and environmental setting.

Besides survival, what does sustainability bring to the table? After all, it is not viable for corporations to purposely harm themselves in pursuit of sustainability. For some, the term is even considered a synonym for "compromise": an enterprise must compromise on performance to "care for the world". This idea could not be further from the truth. For corporations, sustainability should be a moral duty and a strategic necessity. Robert Sroufe (2018) explores whether pursuing sustainability goals proves to be a hindrance to business development and profitability. The author concludes that if implemented correctly, sustainability creates value for enterprises. It is implied that SPs are no longer optional, as sustainability opens a vast new competition spectrum for organisations that need to cut costs, discover new market prospects, improve operating efficiency, decrease waste, and streamline processes. According to Rangaswami, Nidumolu, and Prahalad (2014), sustainability is a critical driver in fostering an innovation environment in any sector, and if enterprises want to remain innovative and resilient in increasingly interconnected and demanding markets, they must adapt.

Sustainability performance also demands robust risk management metric systems, improving businesses' overall control over their operations and showing responsible investors that the

company is committed and transparent (Sroufe 2018). Investors desire partnerships with a viable long-term strategy, so companies with effective sustainability policies are more likely to attract consumers, investors, and business partners (Chron 2017). According to Sroufe (2018), stakeholder engagement, risk management, and overall regulatory compliance are all pillars of sustainability management in the UN's SDGs. Still, they can also be sources of competitive advantage for companies in matters unrelated to sustainability *per se*, enhancing the organisation's capacity to adhere to regulatory requirements, particularly those about carbon emissions. The Deutsche Bank non-financial report states that firms with strong ESG ratings beat the market in the medium (5 years) and long term (5-10 years). A 2021 Morningstar analysis also indicated that firms with the highest ESG scores returned 33.3% more revenue over one year, outperforming the overall United States market by more than 8% (Solberg 2022). Accenture's report also provides an update on these findings, noting that firms with high ESG ratings had average operating profits that were 3.7x greater than those with poor ESG ratings. Such firms outperformed inferior ESG performance by 2.6 times (Accenture 2022).

Research also shows how closely related central business ideas like internalisation, competitive advantage, public policy, organisational strategy, and leadership are to sustainability (Kolk and Pinkse 2008). The positive impact of sustainability on economic and market-driven performance outcomes is one of its most persuasive features. Notably, an organisation's financial and market success is significantly influenced by the synergistic effects of both social and environmental performance (Bateh et al. 2013). This acknowledgement extends beyond moral or strategic issues to include the substantial influence on a business's reputation and brand (Berns et al. 2009). According to the same authors, when a company demonstrates leadership in sustainability, it can indicate higher management quality. In addition, companies that practice environmental responsibility behaviours not only lessen their environmental

impact but also obtain a competitive edge, becoming more legitimate and securing long-term viability (Simmonds and Bhattacherjee 2012).

In this sense, Galpin, Whittington, and Bell (2015) emphasised that cultivating a culture focused on sustainability must be prioritised for organisations to succeed in their endeavours. This effort is necessary since sustainability measures help organisations reach long-term goals while reducing their environmental impact. On the other hand, reaching sustainable goals requires extensive collaboration. Per the findings of Lozano, Barreiro-Gen, and Zafar (2021), organisations can access more markets and information, maximise their financial and human capital, and streamline their operations, all by cooperating. A high enough degree of cooperation guarantees that advantages outweigh drawbacks. Finally, as Bartolacci, Caputo, and Soverchia (2019) stated, numerous studies have consistently demonstrated a positive link between companies' sustainable practices and financial performance. Indeed, firms may overcome obstacles and start a positive cycle of sustainability investment by monetising and making the most of the tangible and intangible benefits of sustainability efforts (Atz et al. 2020). This is crucial, as it is not worth it to be sustainable if the company is not maximising its benefits for doing so.

The picture is clear: sustainability generates corporate value and long-term success, mainly because a sustainable business is designed to last and is assembled around long-term initiatives that, in turn, lead to long-term results. Furthermore, internal systems and procedures become connected, resulting in an autonomous and resilient unit where the interdependence of the environmental, social, and economic systems surrounding the company is harnessed.

3.2 Sustainability Today

The UN's first significant attempts at pursuing a global sustainable change were known as the Millennium Development Goals, then aimed at ending poverty worldwide. These MDGs were first implemented in the year 2000. Even though they were not wholly achieved, they managed

bold accomplishments throughout their lifespan, lifting over 1 billion people out of extreme poverty and halving out-of-school children and child mortality rates worldwide (United Nations Development Programme 2023).

To continue this progress, the UN designed a set of 17 Sustainable Development Goals (Appendix 1) to be reached by 2030 at the United Nations Conference on Sustainable Development in Rio de Janeiro (2012) as "a shared blueprint for peace and prosperity for people and the planet, now and into the future" (United Nations 2023). Aimed at fighting climate change, poverty, and inequality on all fronts, these goals are intertwined, codependent, and span various societal problems, ultimately being agreed upon in September 2015. In December of the same year, global governments came together at COP21's Paris Climate Conference to establish new guidelines for development and growth worldwide and implement legally binding measures to fight climate change internationally and in all sectors of society. From this conference, the Paris Climate Agreement was born, and its main objective was to quicken efforts and investments in the direction of a low-carbon sustainable future, keeping the rise in global temperature to well under 2 degrees Celsius above pre-industrial levels (United Nations Climate Change 2018).

To better construct an efficient and valuable sustainable strategy, companies must understand the current state of the world's environmental and social challenges (Maryville University 2019). According to the UN's Global Sustainable Development Report 2023, at the halfway point to 2030, most of the progress has either been limited or non-existent. Additionally, in some cases, such as SDGs 2, 8, 12, 13, 14, and 15, relating to Hunger, Decent Work and Economic Growth, Responsible Consumption and Production, Climate Action, Life Below Water, and Life On Land, respectively, the progress shows downward trends (Miranda et al. 2023).

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Nonetheless, not all hope is lost. Deloitte launched its *CxO Sustainability 2022* study, designed to analyse C-level executives' sustainability initiatives in 21 countries around the world for the 2022 calendar year, and even if the overall progress towards reaching the UN's SDGs is not promising, many CEOs seem to be taking sustainability measures seriously. Regarding business-related changes, the study shows that 67% of companies have started using more sustainable materials, 49% are developing new climate-friendly products or services, and 37% are tying senior leaders' compensation to environmental sustainability performance. Furthermore, when it comes to more efficient ways of conducting business, the study also suggests that 66% are working to improve their energy efficiency, 57% have started using climate-friendly and energy-efficient machinery, technologies, and equipment, and 55% are making efforts to cut down on air travel. Finally, concerning companies' partners and contributors, it is also mentioned that 57% of surveyed enterprises are providing employee training on climate change and climate action, 46% have begun requiring business partners to meet specific sustainability criteria, and 40% of companies have started incorporating climate considerations into lobbying and political decisions (Deloitte 2022). Additionally, 30% of Europe's largest companies have committed to reaching net zero by 2050 (Accenture 2021), and 90% of companies on the S&P 500 index published a corporate social responsibility report in 2019 compared to 20% in 2011 (Stobierski 2021), and 22.8% of Fortune 500 corporations have engaged with the UN's SDG framework. However, only 0.2% of these have developed methods and tools to assess and evaluate the progress of their actions toward relevant SDGs (Song et al. 2022).

3.3 Sustainability Delay in Sports

The United Nations refers to Climate Change as "the defining crisis of our time" (United Nations 2020). While the focus of criticism may shine brighter on other industries, such as travel, quick fashion, or food, where does the sports industry fit in all this?

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The sports industry has a crucial role to play in sustainability as a whole, predominantly because of its global appeal and substantial carbon footprint. According to FIFA, 0.2% of global CO2 emissions are generated by the football industry alone (ZipDo 2023), and if the entire sports industry is considered, the environmental impact will rise considerably. Although quantifying sports' precise ecological impact can be challenging, it is generally accepted that sports significantly contribute to climate change through travel, energy use, and construction, among other factors. Regarding fan travel and housing, these are estimated to account for more than 85% of the emissions of significant sporting events (Henczel 2021). Furthermore, the British Premier League also reported an increase of 22% in CO_2 emissions from football teams' travel over the last five years (ZipDo 2023). With a much higher carbon footprint ascribed to spectators and participants, it is apparent that sports have a distinct halo effect regarding climate change, which can also be harnessed as a tremendous force for change (STX Group 2023).

According to Van Halm (2022), the 2022 edition of the FIFA World Cup in Qatar was the most damaging international sporting event in the last 13 years. This event produced a reported 3.6 million tons of CO_2, which exceeded the previous three editions of the tournament and the last five Olympic games, and it might not even be a correct depiction of the actual situation. In a BBC article, Mike Berners-Lee, an English carbon footprint researcher and professor at Lancaster University, states that the actual carbon dioxide emissions value might be at least three times the reported (Lockwood and Warwick 2022).

This lag is also mentioned in a Global Sustainable Sports study, which states that "it is a widely held belief that sport has been slow to address social and environmental issues" (Global Sustainable Sport 2023). This belief is backed by Donovan (2020), who adds that, in the case of football, most teams only have a basic statement of intent, such as FIFA's: "We believe we all have a responsibility to protect, cherish and limit our impact on the environment". Henry Staelens, CEO of Forest Green Rovers, also accentuates this pro forma stance of the industry

by saying: “In many cases, it still feels like a bit of a PR exercise when I see initiatives from various sports associations and teams – authenticity is the key to making sustainability work, both short and long term. It has to be followed up daily.” (Long 2022). The lack of commitment towards sustainability evident here is also corroborated in the study mentioned above by highlighting that only 0.1% of the sports industry participates in the UN’s *Sports for Climate Action* initiative. Additionally, less than 1% of the sector is active in at least one of Global Sustainable Sport’s “Sustainable Pillars” framework, showing how long sport must go. To combat climate change, the sports industry can lead by example and motivate sizeable audiences to act, thanks to the global appeal of this form of entertainment, which has billions of fans and extensive media coverage. It is not new that sports celebrities exert significant influence as trusted voices. Athletes such as Lewis Hamilton, Héctor Bellerin, Katy Rude, and Novak Djokovic have publicly declared themselves environmental advocates, spreading awareness on this topic. Norwegian professional footballer Morten Thorsby even created his own “We Play Green” initiative. This group emphasises that clubs and players are responsible for displaying green attitudes and practices as leaders of the football family’s 3.5 billion members. Recently, the UK’s national campaign, “The Green Football Weekend”, was created, which brought together millions of football fans, more than 80 of the country’s greatest football teams, charity partners, and sports broadcasters to harness the power of football to combat climate change.

3.4 Sports Fans’ Perception of Sustainability

For many years, sports were solely regarded as a means of entertainment. However, it is now a multi-billion-euro industry with an immense effect on society and its behaviour, as we can see from the recent adoption of informal skateboarding as a competitive activity (Varmus et al. 2022). As the public becomes aware of climate change problems, the major sporting leagues and associations also acknowledge their accountability towards society on environmental

impact, as Harrison, Vafeiadis, and Bober (2022) explained. Trendafilova et al. (2014) also stated that sustainability practices "have the potential to promote public commitment to environmental protection", implying that businesses can and should promote public responsibility for environmental wellness. It is vital to evaluate what sports enthusiasts think about sustainability programs within the sports industry and how such programs affect sports fans' perspectives and opinions.

As anticipated, fans' influence on the sustainability efforts of the sports industry is considerable. McCullough (2020) noted that fans are open to these initiatives to alleviate the environmental impact when they attend sporting events. Integrating targeted environmental sustainability campaigns within sporting events successfully educates participants and encourages eco-friendly behaviours. Furthermore, studies indicate that such communication could foster fan trust in sports organisations and positively reconstruct their perception of the organisation's global impact (Harrison, Vafeiadis, and Bober 2022). This is even more significant considering the drive for sports to move forward towards the United Nations' SDGs. Sustainability programs may also be integrated into sports events to help develop stronger links with certain fans, regardless of age or political inclinations (McCullough 2020). Such results underscore the universal nature of sport and the opportunity to tap into the collective identity of supporters to change their behaviour.

From a different angle of this juncture, the total environmental effect of sports events most often lies in the hands of those who take part as fans; thus, convincing them to behave sustainably requires effort (McCullough and Kellision 2016). However, organisations should try to achieve an equilibrium between the loyalty of fans and the potential support for sustainability efforts. For instance, behaviours like saving water and energy or using public transportation can be fomented. Since many fans have strong sympathy and allegiance to a particular team, these institutions can capitalise on the close relationship and persuade them to

act sustainably. Sports sponsorship could play a significant role in mobilising sustainability among fans, as it can support specific brands while encouraging corporate social responsibility. This kind of adoption will influence customers' purchasing decisions, as granted by Melović et al. (2019). As a result, organisations may obtain positive results by investing through this advertising channel as they strive for sustainable development. This shows its potential to have an effect beyond the sports world and contribute significantly towards building lasting social change. There is more evidence of football supporters' growing interest in climate action programs run by their favourite teams. For instance, Pusey (2022) stated that a BBC Sport poll revealed that 58% of supporters "strongly agreed" that they were concerned about the environmental impact of their football team. Similarly, 80% of fans in Italy and Sweden who participated in an EU-funded survey agreed that their club's environmental initiatives would make it easier for them to act greener. In addition, according to a 2008 survey conducted by Pro Green Sports, 3/4 of fans think that green products are worth the extra money, and 90% value the environmental efforts made by professional sports teams (Blankenbuehler and Kunz 2014). Moreover, a sizeable portion (60%) of the professional sports teams' sample now prioritises sustainability initiatives. At the same time, professional sports organisations are now focusing on progressively adopting environmental policies as they become more aware of the opportunity to benefit from supporters and the public. While strategic and financial performances are essential for managers, building a relationship with fans through sustainability initiatives can help create a more attractive club identity which is just as important. That being the case, such initiatives may result in a more significant customer/fan base. On the other hand, sports institutions can interact with fans through online communities and use their influence to shape green fan behaviour, taking advantage of how involved fans are in sports. Blankenbuehler and Kunz (2014) argue that sports sites could retain visitors for

longer, which shows the potential to reach consumers through online platforms, given that a sizeable portion of the population considers themselves sports fans.

3.5 Examples of Successful Sustainability Practices

In the 21st century, sustainability has become an essential aspect of business. In the face of social and environmental issues, the global community demands that companies be aware of their impact on the world and society. Numerous studies highlight why a business needs a sustainable strategy to thrive in any sector nowadays. However, it is essential to look at what companies are doing and shift from a theoretical view into a more empirical, hands-on approach, even when not in the sports industry.

A great example outside both the Portuguese and sports spectrum is Patagonia. The company is famous for using a marketing campaign slogan stating, "Don't buy too much from us." It seems surreal how this can be a successful marketing campaign, but it was, mainly due to the sustainable message it tried to convey. Patagonia's apparel line currently contains more than 70% recycled materials (The Brand Hooper 2023). However, the company is aware that the best approach to prevent waste is to avoid making unnecessary purchases in the first place, so since way back in 2011, Patagonia has sponsored advertisements urging people not to buy clothing they do not need, even its own: "We ask you to buy less and reflect before you spend a dime on this jacket or anything else", was one of the many commercials stated and additionally, offered a repair program that is frequently free and encourages repairing rather than purchasing when clothing starts to lose its lustre. They have managed to encourage customers to choose better items customised to the unique interests of end users because when the end user receives something they truly desire, they are more likely to retain it for a long time, preventing it from ending up in a landfill. All these actions managed to eliminate waste and boost favourable brand perception (McKinsey & Company 2023).

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From another point of view, after an assessment of corporate reputation based on ESG factors by Merco, Portugal's most responsible company in 2022 was Grupo Nabeiro, famous for its brand Delta Cafés (Gaboleiro 2023). Sonae, the multinational business group, closely followed it with a second position among the leading 100 companies. This key finding calls for a deeper investigation of these two national corporate major players beyond the sports realms and underscores their extraordinary achievements in the broader context of the country's business and societal growth. Grupo Nabeiro, with its flagship brand Delta Cafés, is committed to sustainability beyond the standard corporate responsibility. The business group reflects on the importance of sustainability in ensuring its long-term viability. As primary responsibilities, the group compromise is unveiled in sustaining profitability, minimising environmental damage, and maximising positive social impact (Delta Cafés 2018). Also, its holistic approach to sustainability embraces eco-efficient production, empowering employees for change and community development. The company's product development cycle is based on the principles of eco-efficiency and eco-design, which include sustainability as a critical part of minimising inefficiencies and waste generation. In economic terms, Dias (2023) revealed that Delta Cafés' strong emphasis on sustainability contributes significantly to its financial worth, adding up to 17.2% of Delta's financial value in Portugal, indicating how sustainable Delta Cafés' culture is. The CEO, Rui Miguel Nabeiro, has recently underscored the company's dynamic nature by referring to innovation as a crucial growth driver to focus on while still preserving its commitment to outreach a synergy between an economic growth model and a sustainability-oriented strategy (Macedo 2019) called *"Partilhamos o Futuro"* (We Share the Future) strategy. This framework is built on three pillars: community, people, and planet – in line with a sustainability policy regarding the UN SDGs (Grupo Nabeiro 2021b). Starting with the first pillar, the company focuses on conserving coffee culture origins, improving coffee-reliant populations' quality of life, and community involvement projects. Its association, *"Coração*

Delta", acts in this regard through educational projects such as CEAN. The company's proclivity for local and national suppliers and its active membership in the International Coffee Partners (Grupo Nabeiro 2021) demonstrates its commitment to propagating sustainability in coffee-productive areas. The second cornerstone is investing in talent, providing personal growth through training, and protecting employees' well-being. In this field, the *"Coração Delta"* association takes a key role, carrying out volunteer actions and socially oriented projects. Finally, Grupo Nabeiro (2021a) acknowledged the grave reliance upon the circular economy through operational environmental activities, including using biodegradable coffee capsules and green energy. For instance, the company has reduced its environmental footprint by installing photovoltaic solar panels and streamlining processes to prevent waste. Regarding Sonae, sustainability is a corporate goal and a collective responsibility that unifies its range of businesses. Sonae's chairman, Paulo Azevedo, ensured the group is focused on generating profit sustainably and responsibly (Sonae 2023a). The fact that Sonae's firms rely on natural capital backs the organisation's priority of following global ambitions to make a positive impact. Paralleling Grupo Nabeiro's approach, Sonae's chairman's message was also a testament to their commitment to the UN SDGs and Global Compact initiatives, stating the importance of inclusivity and stakeholder engagement to deliver long-term value creation. Sonae (2023a) noted various achievements in 2022, including a fulfilled target of using 80% reusable, recyclable, or composted plastics packaging material, 24% fewer greenhouse gases compared to 2018, about 39% women-owned leadership positions, the financing of over 88,545 trees for reforestation and a contribution worth 31 million euros towards supporting communities. On the other hand, Sonae has articulated five major attention points in its sustainability strategy (Sonae 2023): fight against climate change and carbon neutrality within the company's operations; foster protection and regeneration of biodiversity and water; support management decisions with ESG requirements; search for new production/consumption models

that may favour circularity actions; and focus at ensuring a diverse, inclusive environment as much as possible. Sonae also shows its commitment to human development by investing significantly in reskilling and upskilling its employees (Cardoso 2023). In fact, Sonae is a sponsor of programs that deal with requalification for future employment, like the European program R4E-Reskilling for Employment.

Inside the sports industry and outside of football, we can already see a lot of sustainable actions that have been successfully implemented. Formula 1 is a sport that, at first glance, might seem one of the most hazardous sports for the environment. However, the fact is that they have tackled this issue early on and have the ambitious goal of zero carbon emissions by 2030 in the F1 championship. The teams, the organisation, and the racetracks are all involved in this strategy, and the French racetrack has already achieved a high level of FIA environmental certification because it captures rainwater, uses solar panels and 100% of the waste generated by the races and public is recycled (Normand 2022). Since 2019, when Formula 1 started investing in sustainability, it has become the fastest-growing sport in the world (Pompliano 2023) and achieved significant sponsorship growth, a growing television audience, record attendance, and, most notably, revenues have been increasing ever since the industry bet on sustainability (Brown 2023).

In the United States, the most prominent sport is undoubtedly American football, and the biggest league of this sport, the NFL, has already started tackling sustainability issues. They have created the "NFL Green" program, which aims to reduce the overall environmental impact of the league by creating partnerships with sponsors, clubs, and local associations. The program has already gained some traction among franchises; for example, the San Francisco 49ers stadium has solar panels, and 99% of the waste produced in the Philadelphia Eagles games is recycled (International Council of Sport Science and Physical Education 2014).

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When analysing specifically the football industry and its trademark high carbon footprint, travelling, stadium operations, and garbage creation are the main contributors. In this industry, a particular football organisation is at the forefront of sustainability strategy: Forest Green Rovers Football Club. The club used a sustainability approach that set it apart from other football teams, providing an entirely plant-based meal to supporters, becoming the first vegan football team in the world, and minimising the environmental effects of meat production. Solar panels, rainwater collection, and an organic field are all sustainable features of the club's stadium, *The New Lawn* (Forest Green Rovers 2023). In addition, they have implemented recycling and waste reduction activities within the stadium. The club even urged supporters to carpool and take public transport on game days to cut carbon emissions. It has partnered with local businesses and groups to advance environmental projects and education and sponsored and collaborated with green and sustainability-minded companies. All these actions assisted the club in becoming a recognised international example of environmental leadership in sports, raising awareness of sustainability concerns in an industry where these concerns were not a priority. The local community has supported the club's environmental measures, which helped grow its fan base. The media attention that Forest Green Rovers FC sparked because of this helped the team become a more recognised brand and draw in sponsors. Contrary to fears, the club's sustainability efforts did not jeopardise its capacity to maintain a stable financial position and, in some circumstances, increased revenue through partnerships and item sales. In conclusion, Forest Green Rovers' innovative sustainability strategy, which was centred on becoming the greenest football club in the world, has had several positive effects, including environmental leadership, community support, and financial stability. It has also inspired other sports organisations to adopt more sustainable practices (FIFA 2022).

4. Context

Commented [AM1]: Não esquecer!! Falar dos numeros, usar . Ou , para os milhares?

4.1 Benfica – Organisation, Infrastructure, and Values

Originally founded in 1904, Sport Lisboa e Benfica is one of the top football clubs in Portugal, evidenced by being the club with the most significant number of trophies won, 114 (Sport Lisboa e Benfica 2023e), and by being voted 12th in the FIFA Club of the Century ranking. However, since its inception, Benfica has become more of a sports organisation than a football club. The club is involved in more than 30 other sports, including basketball, handball, futsal, volleyball, and athletics. This involvement is multi-dimensional as Benfica not only competes but also provides formation in most of these sports. The club also had to invest in its infrastructure to support this gradual growth. Currently, the infrastructure is mainly composed of multiple structures in the heart of Lisbon, Benfica: The stadium *"Estádio da Luz"* and its surrounding area, the indoor sports arenas, the club's museum, the official store, and a swimming pool complex (Sport Lisboa e Benfica 2023b). Another crucial infrastructure for the club is its football formation and training centre, Benfica Campus, with facilities capable of housing more than 80 resident players and ten different teams (Sport Lisboa e Benfica 2023f). In addition, there are also a variety of official stores (Sport Lisboa e Benfica 2023d) and sports formation and training centres spread across Portugal (Sport Lisboa e Benfica 2023c). Finally, the last of SLB's infrastructure is the multitude of branches and delegations, called *"Casas Benfica"*, present worldwide and which serve as youth and community engagement centres (Sport Lisboa e Benfica 2023a).

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To coordinate the club's activities, Sport Lisboa e Benfica's management is composed of a wide array of entities spread across different steps. The President, Rui Manuel César Costa, forms the upper step alongside the Board of Directors, the Legal Council, and the General Assembly. The lower steps are subdivided into different departments: football, modalities, finance, commercial, communication & media, IT, international, legal, maintenance, marketing, logistics, retail, human resources, health, Benfica Foundation, and safety & security. These entities ensure the organisation is run efficiently and according to its values of sporting ambition and total commitment to the Club, team, and colleagues. Promoting humility in actions and behaviours, solidarity for all, and a culture of respect, ethics, and fair play (Mil-Homens 2023).

With an integrated sustainability strategy named ECO Benfica, the club has invested time, effort, and capital into creating a foundation upon which it hopes to build its environmental initiatives, counting eight unique initiatives as of 2023, each with its area of effect. The project already has several ongoing initiatives to achieve this goal: washing stadium seats using rainwater, irrigating fields with groundwater, installation of thermo-photovoltaic panels, among other measures. As if that wasn't enough, ECO Benfica introduced a "reusable cups system" at *Estádio da Luz* and other infrastructures to actively include supporters in sustainable initiatives on match days (Sport Lisboa e Benfica 2019). The program also involves a specific implementation to transform used cooking oil into biodegradable detergent.

4.2 United Nations Initiatives

Climate change is a global issue that threatens our planet and future generations. The world of sports, as previously stated, also needs to be engaged in mitigating the same crisis. Some potential effects of climate change include extreme temperatures, prolonged droughts or floodings, rises in sea levels, coastal erosion, hefty rain, and heat waves (United Nations Climate Change 2018). These climate change effects may have significant financial,

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Commented [PM3R2]: É como preferirem para mim

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Commented [BL5R2]: Sim, ja alterei as minhas coisas para english mo boy

operational, and logistical repercussions for sports clubs, such as the destruction of infrastructures, consequent cancellations and postponements of sports-related activities, differential timing for some events, and player injuries, among many others.

In December 2018, the United Nations launched a new initiative called *Sports for Climate Action* (International Olympic Committee 2019), for which all sports organisations are invited to join. This movement aims to move the sports industry towards the Paris Agreement's goal of a net-zero carbon emission economy by 2050. In particular, it recognises and supports the International Olympic Committee's role in promoting critical climate change action programs. As such, all *Sports for Climate Action* stakeholders should acknowledge that goal-setting is central to spurring the sports industry to undertake concrete climate actions and develop ambitious climate targets to reduce GHG emissions. The main requirements are listed below:

Exhibit 1: Main S4CA targets

One mid-term target to reduce GHG emissions by 50% by 2030 at the latest. 2019 baseline is recommended but signatories should choose the latest year for which data is available.
One long-term target to reach net zero GHG emissions by 2040
Targets should be inclusive of scopes 1, 2 and 3 (categories which are material to total emissions and where data availability allows them to be measured sufficiently).
Organizations for which scope 3 represent 40% or more of total emissions generated by the organization to model Scope 3 emissions and set Scope 3 targets as well.
Process of Commit, Plan, Proceed and Report will enter into force effective December 2021.

Source: United Nations Climate Change 2018b.

Given the outlined objectives, it is evident that one of the essential parts of corporate members' sustainability efforts relates to the comprehension and control of GHG emissions, which are usually grouped into three scopes. Wade (2023) stated that Scope 1 emissions arise from a company's owned and managed resources, which include transportation, manufacturing processes, and refrigerants used in air conditioning. On the other hand, Scope 2 emissions refer

to the indirect emissions such as electricity used to generate purchased energy. For example, the grid electricity, consumed for such tasks as lighting and recharging electric vehicles, causes this type of emissions. Scope 3 emissions further widen the picture to include all other indirect emissions attributable to an organisation's processes, products, and services outside Scopes 1 and 2. This includes business travels, employee commute footprint, and emissions associated with a firm's purchases, goods, or services. According to the author, such scope 3 emissions correspond to 60% to 90% of total emissions and are often divided into upstream and downstream emissions to illustrate their impact before and after a company's direct management.

Sports for Climate Action - Guiding Ideas

The *Sports for Climate Action* initiative aims to give participants a structured approach to climate action where sustainability and climate change are integrated within their organisations' strategies, policies, and operations. These principles allow the companies to uphold their environmental obligations while promoting wider dissemination of climate action messages outside the sports industry.

Exhibit 2: Five guiding principles of S4CA

Principle 1: Promote greater environmental responsibility by making systematic efforts.	The business should adapt its operations or infrastructures to climate change beyond sporadic environmental actions. This is possible by instituting board-level sustainability responsibility and adopting efficient strategies for reducing environmental impact. According to the initiative criteria, GHG emissions (Scope 1, 2, and 3) must be measured within six months of joining the initiative.
Principle 2: Reduce the overall climate impact.	The United Nations requires all organisations, regardless of size, to take short-term measures, including developing a plan detailing their goals within a year of committing and submitting it. Additionally, participants should provide an annual update on their climate action progress.
Principle 3: Promote climate change education.	The third principle emphasises the importance of sharing know-how on climate change. The participants should diffuse expertise on climate matters to promote cleaner options.

Principle 4: Promote responsible and sustainable consumption.	Sports organisations are warned to embrace green practices and incentivise stakeholders to provide greener alternatives. For instance, promoting the adoption of eco-friendly modes of transport may help to reduce emissions associated with sporting events and activities.
Principle 5: Facilitating communication towards climate change response.	The last and fifth principle encourages using different communication means such as broadcasting, social networks, using athletes as ambassadors, or promoting environmental initiatives in the events. It should spur supporters, athletes, and the supply chain to act greener.

Source: United Nations Climate Change 2018.

By signing up for the *Sports for Climate Action* targets and principles, sports signatories also become part of the Race to Zero campaign - a global initiative towards low-carbon recovery that unlocks inclusive and sustainable growth (United Nations Climate Change 2018a). Every Race to Zero partner should aim to cut emissions by half by 2030 and reach net zero emissions as soon as possible.

Football for the Goals: Sustainable Development Through Football

United Nations also launched the project "*Football for the Goals*" on July 6, 2022, the opening day of UEFA Women's EURO 2022. Through this project, the international football community would be gathered to incite transformation towards the UN's SDGs to acknowledge and ensure that football is a sport designed for everyone (United Nations and UEFA 2022). Values like advocating for SDGs advancement, following human rights conventions, and combating inequality (including gender inequality) should be part of their conduct in every aspect of the football industry, such as on-field, media presence, and business collaborations. This clearly shows the impact of football globally. All communities, regardless of their culture or origin, should be able to play it on improvised fields or even schoolyards. One of the project's dedicated members is *Fundação Benfica* – SL Benfica's official foundation, established in 2009 and whose sole purpose is to serve as a social extension of the club, fostering inclusion, environmental awareness, and educational opportunities for those in need, particularly children and young individuals living in precarious social environments. Amina J. Mohammed, the United Nations Deputy Secretary-General, even highlighted: "All you need is a ball for people

to come together" (UEFA 2022), evidencing the power of football regarding inclusivity. As the founders of the *Football for the Goals* initiative, UEFA has acknowledged that change can happen in European soccer and sport in general. Furthermore, UEFA's President, Aleksander Čeferin, remarked that UEFA has a role in delivering sustainable ideas into the game of football (UEFA 2022).

5. Analysis

5.1 External Analysis

5.1.1 Porter's 5 Forces: Sustainability

To better understand the conditions in which SL Benfica will be competing, it is crucial to thoroughly analyse the industry in which the club is inserted. As Michael E. Porter put it himself in his work "*The Five Competitive Forces That Shape Strategy*", published in 2008: "Understanding the forces that shape industry competition is the starting point for developing strategy". As such, this five forces framework was chosen to better grasp how competitive the industry of Portuguese sports sustainability is.

Competition in the industry - High

Regarding sustainability in the Portuguese sports club industry, everything is still an open book. Much like the fan support, Portugal's sustainability efforts come mainly from the three most prominent clubs in the country – SL Benfica, Sporting CP, and FC Porto – who have made the most significant changes to their business models. Moreover, besides having the most significant fan support in the country, SL Benfica seems to be the only one with an already tangible strategic vision in this field, which could give the club a first-mover advantage. That being said, the competition between these three clubs has always been fierce. It remains as such, so even if SL Benfica is ahead of its competitors today, it does not mean the club should not consider their potential in the industry to be a severe threat. In this sense, the Portuguese sports sustainability industry can be categorised as a "monopolistic oligopoly", a mixture of an

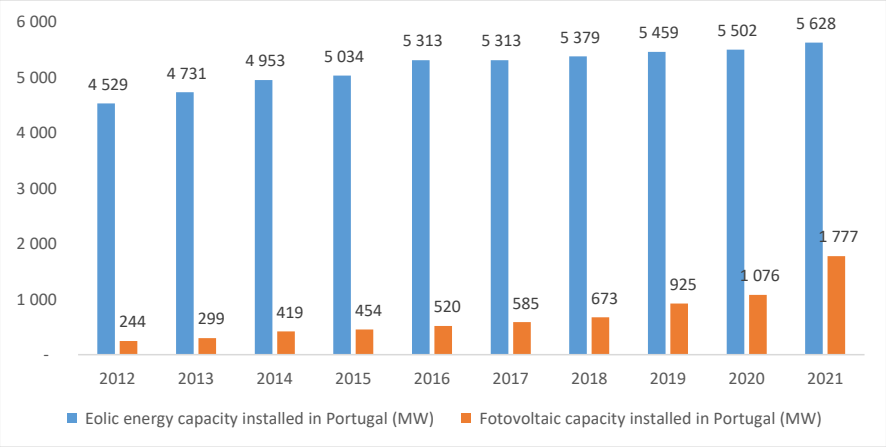
oligopoly, explained by the fact that there are few firms with real tangible impacts, and monopolistic competition, as the products/services these firms offer are but slightly differentiated.

Bargaining power of suppliers - High

Suppliers are very powerful when setting prices in the Portuguese sports sustainability industry. If, for example, a sports club wants to invest in renewable energy production, whatever the form, and sell the excess to Portuguese energy suppliers, they will be forced to sell it at a low price, as suppliers know the seller will prefer to sell the leftover energy for a low amount over letting it go to waste. Two significant upsides will likely change the paradigm in the coming years: first, as sustainability is becoming a legal imperative, the investment in sustainable practices in Portugal has been increasing throughout the years (See Exhibit 3), and as such, if demand steadily increases, so will the supply for such practices, as stated by Inoua, Sabiou, and Smith (2023), making prices more competitive and choices more abundant. Secondly, investing in sustainable practices can be considered a non-asset-specific investment, as the investment in energy production or subterranean water and rain recapture, for example, can have multiple profitable applications for the club in the long term. This shows that even though sustainability is a supplier-centric market now, supply will likely increase in the coming years, allowing companies to develop better solutions at lower prices.

Exhibit 3: Energy capacity installed in Portugal

Group Part



Source: Expresso (2022)

Threat of new entrants – Low

The sports industry is very capital and labour-intensive, requiring constant investment in tangible infrastructure and expensive human capital, such as players, scouting networks, or healthcare professionals. Furthermore, even though making sports clubs sustainable can increase their efficiency and brand value, as stated by Roseira Cayolla et al. (2023) and Sroufe (2018), it will take already established clubs much capital to achieve, as these are long-term investments that may require the complete overhaul of current processes used by the clubs. On one hand, this creates a significant entry barrier for smaller clubs that need to possess the necessary capital. On the other hand, the smaller the club, the easier it is to chase sustainability without redesigning and restructuring already-established processes, just like in the case of the Forest Green Rovers. Currently competing in the 4th tier of English football, the club has surprisingly been dubbed by FIFA the *"greenest football club in the world"* and, as such, has gained massive media coverage in recent years and piqued fans' interest from all over the world (Forest Green Rovers 2023). Licensing, for one, is a non-existent barrier in this sector, as clubs do not require specific licenses to pursue sustainability practices. On the contrary, clubs are

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Commented [GC7R6]: Decidir qual a citação que na parte dos parenteses que prevalece, ou esta "("Another Way" 2021)." ou esta "("Another way: The Forest Green Rovers Story | FIFA").".
A primeira parece-me melhor

Commented [BL8R6]: Como não se sobrepõe nada, é só corrigir a referência de cima (não sei de quem é) pois penso que a informação provem da mesma fonte

entitled to specific badges and marketing material if they want to adhere to internationally recognised sustainability frameworks, like UN initiatives S4CA or F4TG.

Nonetheless, capital and planning are the big "ifs" in this industry. Since the three leading clubs in the country are too well-established in the industry, SL Benfica does not have to worry about new entrants for now.

Bargaining power of buyers – Low

The sports industry's price elasticity of demand ratio is considered almost unanimously by literature to be inelastic ($0<E<1$), as stated by Krautmann and Berri (2007). This means that an increase in the prices of game tickets, for example, will not result in a proportional change in demand for said tickets, and buyers will endure price increases to some extent for the sake of attending the game. Furthermore, even though the club depends on its fans to survive (e.g., game ticket sales and merchandising), not only is the club the one who sets the prices and fees fans will have to pay, as it also holds a variety of other ways to make its existence financially viable, namely the sale of players or success in competitions. As such, buyer dependency in the sports industry is not as severe as in other sectors, which may depend solely on final consumers to achieve profitability and justify their existence. It is also worth noting that one incentive to become sustainable is to influence fans' perception of the club and, consequently, their economic involvement with the club (Roseira Cayolla et al. 2023). Because of this, it can be argued that this puts some power on the fans' side, although it all comes back to the measures the club itself is taking to change this perception, not necessarily to their bargaining power. Because of this, we consider the bargaining power of buyers to be low in the sports sustainability industry.

Threat of substitutes - Low

If we first look at fan support, SL Benfica does not have to worry about substitutes, at least for now. To put things into perspective, if we account only for Portuguese individuals, as of

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February 9th, 2022, 46% of Portuguese individuals support SL Benfica, while 24.7% and 23.8% support FC Porto and Sporting CP, respectively, leaving a mere 5.8% of Portuguese individuals distributed across the remaining Portuguese clubs (Observador 2019). This puts SL Benfica significantly ahead of its only possible substitutes in the Portuguese market. Furthermore, literature shows that fans and clubs possess a bond that goes much further than previously believed and that fan loyalty goes beyond the actual success of the club in the competitions it is inserted in or the club's current star players, as demonstrated by Maderer, Holtbruegge, and Woodland (2016). The authors suggest that fans' attitudinal loyalty is developed mainly because clubs give meaning to their lives, and although the club's success and its star players may undoubtedly add to that feeling of purpose, many other aspects, such as nostalgia, benefit associations, or even greener policies, can be just as crucial in doing so. The situation remains the same if we look at substitutes from a sustainability perspective. Out of the three most prominent clubs in Portugal, SL Benfica has the most sustainable initiatives in quantity and quality and is the only one following what seems to be an actual sustainability strategy or at least the beginning of one. FC Porto seems to have a few partnerships and small initiatives. However, they are neither large enough to be considered a part of a larger strategy nor properly disseminated amongst the club's channels. Sporting CP seems to be planning a strategy with concrete objectives, but they are still in an initial phase compared to SLB.

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5.1.2 PESTEL

Analysing the external environment surrounding the industry is vital; hence, a PESTEL analysis was conducted for this effect. First mentioned by Francis J. Aguilar in his book "*Scanning the Business Environment*", published in 1964, PESTEL's use was justified by the author by the proactive need businesses must have to understand the environment that surrounds them and continuously search for opportunities and anticipate threats.

Political

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Sustainability has been increasingly crucial within political institutions and governing bodies, and sports do not deviate from this trend. FIFA and UEFA have been developing numerous sustainability strategies, pledging themselves to global initiatives and working towards spreading awareness of this topic within the sports community. Additionally, not only football clubs but also Olympic committees, sporting federations, and foundations have recognised the issue and helped foster sustainability frameworks. Furthermore, the Portuguese government acknowledges the need for compatibility between financial development and environmental protection in both its constitution (Constituição da República Portuguesa 1976, Art. 66) and in law 98/2021, passed by the Portuguese parliament on the 31st of December 2021. Overall, it can be safely assumed that there is plenty of political awareness regarding sports sustainability, and it is only bound to increase throughout the years.

Economical

Economically speaking, it is worth noting that the global green technology and sustainability market is valued at $16.5 billion as of 2023 and is forecasted to more than triple in value by 2030, implying a compound annual growth rate of 20.8% (Statista 2023b). This, along with the $600 billion estimated worth of the global sports industry (Sharma 2023) and the €29.5 billion European football market size estimation for the 2021/22 season (Deloitte's Sports Business Group 2023), is evidence that there is indeed a significant financial investment in sustainability within European football and more to come. In addition, it is well known that the most apparent path to tap into the European economic potential within the sports sector is participating in European competitions, like the UEFA Champions League or the UEFA Futsal League, and as such, for most sports clubs, investing in their squads becomes a priority when compared to similar investments in infrastructure. On the other hand, overinvestment in the squad can have adverse effects and hurt a club's sporting performance, and clubs must find the right balance year after year (Dantas, Borges, and Hounsell 2020). For Portuguese clubs like SL Benfica,

however, one of the most prominent ways of realising financial gains is to sell their high-potential football players, as shown by the staggering €1 billion in player sales the club has made since the turn of the century (Muralidharan 2023), even though the club has also made at least €72 million from UEFA CL participation and prize money during their 22/23 campaign alone (SIC Notícias and Lusa 2023). Even though SL Benfica is not only a football club, as it encompasses many sports modalities, football is clearly where the most capital is invested. This is evident in the club's investment in their current football squad, which amounts to about 188 million euros (Lusa and Diário De Notícias 2023), as opposed to the mere 31 million Euro proposed expenses in all other modalities combined for the 2023/24 season (Sport Lisboa e Benfica 2023h).

Social

Sports organisations can also catalyse social change, especially in Portugal. In Benfica's case, social change usually comes through the Benfica Foundation, which was established to promote social initiatives and give back to the community. Although SL Benfica is not the only club in Portugal with such a foundation, they have been able to somewhat "level the playing field" with initiatives such as humanitarian campaigns for Ukraine (Sport Lisboa e Benfica 2023) and the *"Para Ti Se Não Faltares"* campaign, that has managed to successfully prevent more than 3,000 children from dropping out of school in 2018 by using the concept of "inclusive sports". All the initiatives for the year 2018 involved over 30,000 beneficiaries from various nationalities and international backgrounds (Sport Lisboa e Benfica 2018a). This number is forecasted to grow as the UN's SDGs emphasise the need to focus on social change.

Technology

The world of sports has become increasingly prone to the use of technology, not only for the pursuit of sporting accuracy but also for efficiency and sustainability. For example, TMO has been used in rugby since 2001 (Sheridan 2023). In contrast, football's counterpart, VAR, has

only been introduced in European leagues during the 2017/18 season (Farrell 2019), while goal-line technology was used for some time before that. Football can also make use of ML algorithms to create processes that go in line with the UN's SDGs, making use of predictive analytics to optimise supply chains and improve efficiency, employing extended reality for education purposes within their communities, or even making use of groundbreaking renewable energy technology to achieve self-sufficiency, as pointed out by Dr. Dan Păun (2023). Nonetheless, we can find evidence that most participants in the ecosystem highly advocate for further use of technology in the game when used to improve efficiency in proc350 Messes related to organisation efficiency but not as much for aspects that affect the core rules and values of the modalities themselves (Beiderbeck et al. 2023).

Environmental

Concerning environmental factors, it is understood that environmental practices and precautions are being implemented by big European enterprises as well as medium and small ones (Eurobarometer 2022). The estimated carbon footprint for the global sports industry is 350 million tons of CO_2 (Sharma 2023); as such, much progress is still being made to achieve carbon neutrality. Nevertheless, in the Portuguese landscape, SL Benfica is the club leading the environmental sports revolution and the national reference in terms of sports sustainability, evident by the fact that they seem to be the only club with a clear development of sustainable initiatives already promoted in their official website (Sport Lisboa e Benfica 2023i), an opportunity the club needs to explore and continue to foster.

Legal

From a legal perspective, it is evident that environmental and social rules are being reinforced by governments worldwide, and companies that fail to follow these regulations may risk legal implications, fines, and reputational harm (Joyner 2017). On the 23rd of February 2022, the European Commission proposed a directive for corporate sustainability due diligence, the

Group Part

CSDD Directive, which would see all EU companies identify, prevent, and account for environmental human rights impacts mandatorily. This comes as no surprise, as voluntary climate action has yet to yield the results that were hoped for, and the situation is only likely to change when there are profound legal implications for European firms that do not comply with EU climate regulations. In this sense, this can also be seen as an opportunity for companies willing to modernise and improve their value chains to more sustainable models of their own accord and not do so in a rush later or in fear of legal repercussions. Furthermore, it is also worth noting that more and more financial fair-play regulations have been implemented in European sports, especially football, designed to monitor the breakeven requirements specified by UEFA for European clubs and to ensure clubs do not incur excessive overdue payables. Despite the controversy, these financial fair-play regulations have been met by wealthy European clubs, who naturally oppose more regulation on their financial expenditures; research has mostly concluded that they are necessary for guaranteeing minimal sporting fairness (Muller, Lammert, and Hovemann 2012).

5.2 Internal Analysis

5.2.1 VRIO Framework

As stated by Barney (2000), the VRIO analysis, as a part of the resource-based view of sustained competitive advantage, aids in assessing the contribution of an organisation's resources to its position in the market. Companies must nurture and fully utilise their highly valuable, rare, inimitable, and Organised resources, as they will severely impact their ability to compete in the market (Mind Tools Content Team 2023). As such, a simple VRIO analysis was undertaken to understand Benfica's most prominent resources.

Benfica's most prominent resources in 2023 were actually the UEFA awards, representing 37.9% of revenue by business unit; the sale of audiovisual (television) rights, accounting for 26% of revenue by business unit; sponsorships, depicting 12.2% of revenue by business unit;

and the ticketing or game revenues expressing 12.2% of revenue by business unit (MarketScreener 2023). However, the previously stated resources are not sources of competitive advantage since they are resources almost every other football club has access to, although on different scales. Where Benfica can distinguish itself from the other football clubs at a national and international level is in the development of young athletes and the revenues from their respective sales (Sprung 2019). As previously stated, over the last decade, Benfica has made more than one billion euros in player sales (Hughes 2023). In fact, by 2017, as stated in Wired UK (Nast 2017), Benfica achieved £270 million – approximately €313 million – in revenues for player sales only in 6 years, reinforcing their long-term strategy (Ransom 2023) of increasing revenue in the rubric of its balance sheet named *"Rendimentos com transações de direitos de atletas"* shown in its annual 2023 report (Sport Lisboa e Benfica 2023c). This long-term value creation strategy has been bearing fruit, placing Benfica as the European club with the highest revenues from the transfer market in the last ten years, and as the only club that has reached the mark of one billion euros in transfers in the same timespan (Fish 2023).

This being said, it is evident that unlike most other teams aiming to make money overseas, SLB is taking a different route. While other clubs participate in commercial relationships with companies worldwide, the Portuguese club has put its chips on this specific strategy. In the pursuit of competing with European football powerhouses and with the increasing costs of acquiring new players, the strategy of developing young talent has definitely been SL Benfica's main focus (ThierryHenry14 2018). As soon as the club recognises young players with potential, it sets out to develop them in three prominent ways: providing them with world-class coaches for training, a strong and solid developmental methodology, and technology that monitors factors like injuries, sun exposure, nutrition, and a variety of other variables (Sprung 2019).

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In this sense, the club has created an alternative model that no European club provides, known as "Business 2 Football" (B2F). The model is centred around Benfica's long-term player development technique and is delivered directly from the club's campus. Some programs include coach development, team training camps, player development, technical collaborations, and specialised projects with federations and associations worldwide (Kronenberg 2023).

Bernardo Faria de Carvalho, global expansion officer at the club, said to football business intelligence newsletter *Off the Pitch* in 2023: "Talent development is the core of this club, and we need to make sure that our talent pool is big enough. Fewer and fewer kids play football in Portugal, and we have adjusted our strategy to that". Due to the scarcity of children playing football in Portugal and with fewer football players overall, despite having 50 football schools spread out over the country, Bernardo Faria de Carvalho also claims that they are currently working on creating a worldwide set of academies in places where potential may be discovered at a very young age, such as South America, Africa, and the USA. (Kronenberg 2023).

Developing young talent has given the club solid performances on the pitch and high revenues once the players are sold, generating value on both fronts. The talent itself is hard to find, which is one of the reasons Benfica is expanding its influence all over the world. In addition, unlocking the potential of young players the way SL Benfica has done is inimitable, seeing that it takes time and commitment. Besides, only Benfica's three-factor development plan has yielded inimitable revenues in the Portuguese football market, as its direct rivals, who pursue similar talent-developing strategies, seem to fall short in both sporting and financial performances.

In this sense, Benfica has already structured its organisational processes around this critical resource, and by using the VRIO framework as an analysis tool, SL Benfica's strategic development of young players seems to bring the club a sustained competitive advantage in the long run, as other clubs do not seem to harness it quite the same way.

5.2.2 SWOT Analysis

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Commented [GJ11R10]: Concordo @Andrés Morais Do Amaral Boigues assim fica mais claro, acrescentado.

Commented [AMDAB12]: Bro muito boa ideia teres usado uma deixa, mas conseguias só pôr onde é que ele disse isto please?

Commented [GC13R12]: Concordo, melhor assim? : "Bernardo Faria de Carvalho, Global Expansion Officer at the club, said to football business intelligence Off the Pitch: "

Commented [PM14R12]: Acho que agora so falta dizer o que é o off the pitch. É football business intelligence company, podcast, journal, …?

Commented [GC15R12]: É uma newsletter, acabei de ver no linkedin.
Já adicionar isso, obrigado!

Commented [BL16R12]: Este statement foi em inglês? É que só tendo sido é que podemos citar assim suponho

Commented [GB17R12]: Sim estava lá no Off the Pitch em Inglês

Commented [AM18R12]: Mas pelo menos o ano bro

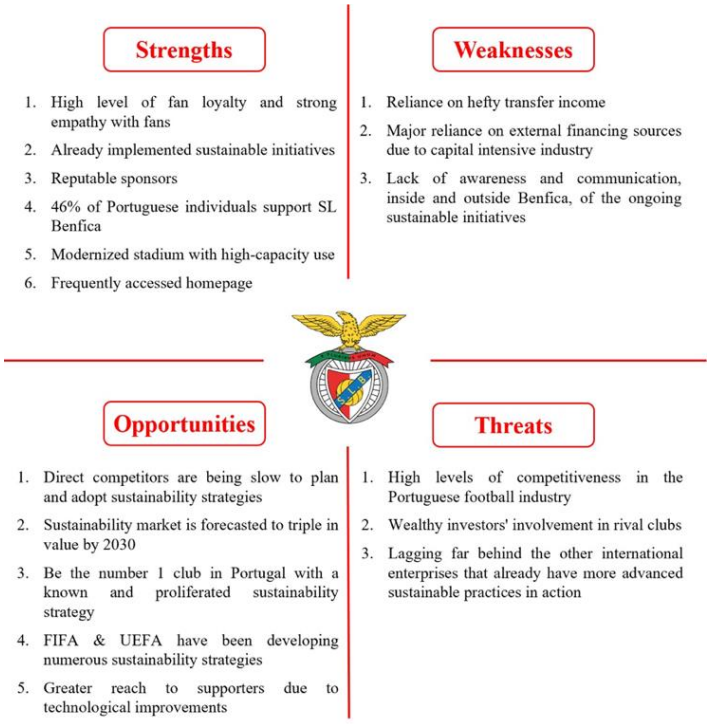
Group Part

A SWOT analysis was also performed to complement SL Benfica's internal structure analysis and further solidify the overall landscape for the project's strategic planning process. This analysis is regarded by literature as one of the best ways to understand how a specific organisation functions around its resources and faces major threats or weaknesses it may have (Bertelsen 2012). The study has proven to be the foundation for developing successful strategies and doing in-depth research on a firm and its market environment. SWOT stands for Strengths, Weaknesses, Opportunities, and Threats (Leigh 2010). The first pair of words describes a corporate internal examination, whereas the second focuses on an external assessment.

The SWOT analysis provides new perspectives on where a company is right now and assists in creating the ideal plan for any circumstance. One could be fully aware of an organisation's strengths but only know how dependable they are once listed alongside weaknesses and threats. Similarly, after thoroughly examining a company's vulnerabilities, these may show previously unnoticed potential (Mind Tools Content Team 2023). Therefore, performing a SWOT analysis assists in exposing unsafe assumptions and performance blind spots inside a company (Gürel and Tat 2017).

Exhibit 4: SWOT Diagram for SL Benfica

Group Part



Source: Own elaboration

The matrix presented in Exhibit 4, with the four previously described components, was created for strategic evaluation and represents SL Benfica's strengths, weaknesses, opportunities, and

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threats. The elements of SL Benfica's SWOT analysis were combined and used to create four different types of strategies:

S/O – Strategies optimally combining internal strengths with external potential opportunities.

W/O – Strategies aimed at mitigating internal areas of weakness by seizing opportunities from outside forces.

S/T – Strategies rendering the use of internal resources to combat threats.

W/T – Strategies strengthening internal weaknesses to counter threats.

The following SWOT analysis for Benfica was developed using the club's competencies, resources, and additional data on opportunities and threats, which led to factual, logical, and tactical combination choices:

S1/O5: The high level of emotional loyalty and empathy with fans, together with the increasing interest in football and the high number of members, can be improved through the development of technology, being able to connect with all fans spread across the entire globe.

S2/O2/W3/T3: With the sustainability market expected to more than triple in value by 2030, the club can explore and improve already implemented sustainability initiatives. It could be an essential factor that would help combat the need for more awareness of the club's ongoing sustainable initiatives and enhance its identity as a company at the forefront of this specific market. This could substantially narrow the brand identity gap between Benfica and other international sports organisations with more financial capabilities, making it easier for the club to navigate changing times and global priorities while also being a renowned organisation for sporting greatness.

W2/S3/O3: Given the heavy reliance on external funding sources due to the capital-intensive nature of the sports industry, reputable sponsors are critical partners for all sports clubs. By being the number one club in Portugal with a well-known and proliferative sustainability strategy, Benfica would solidify its position in the Portuguese market and attract more sponsors

willing to create partnerships with a club that shares its values of growth and prosperity. These sponsors would then mean either more revenue or less costs for the club, which would help it grow faster and allow it to reach new heights in the international sphere.

W3/O5: The internal and external need for more awareness and communication about ongoing sustainable initiatives can be addressed and improved by technology, modernising Benfica's website and application. This way, Benfica would increase its reach and add value to its widespread supporters.

T1/O4/S2/O1: Despite the competitiveness in the Portuguese football industry and even with FIFA and UEFA developing numerous sustainability strategies, Benfica's direct competitors, Sporting CP and FC Porto, have shown a lag in planning and adopting sustainability strategies when compared to what Benfica has already implemented. There is an opportunity to widen the sustainability gap and capitalise on being the number one club in Portugal in terms of SPs.

S6/O5: The club's widespread website and social media pages serve as a springboard for adding further features that would promote digital sales.

5.3 A Comprehensive Analysis of SL Benfica's sustainability role within Portuguese sports

Context

The first step in this analysis is to define who SL Benfica is competing against regarding sustainable practices in Portuguese national sports. This is particularly important to distinguish in this case, as there are significant discrepancies between the financial and competitive capabilities of sports teams in Portugal. For example, in Deloitte's 2023 annual profile for revenues in the football world, SL Benfica was the only Portuguese organisation within the top 30 highest revenue-generating clubs for the 2021/22 season (Bridge et al. 2023). Furthermore, only SL Benfica and FC Porto feature within the top 50 of football's most valuable brands, occupying the 41st and 48th positions, respectively (Peralta 2023). Suppose, in turn, the Portuguese league's sporting results since the inception of its current format in 1934 are considered. In that case, Boavista FC is the only club that has won the league apart from the so-called *Big Three* (SL Benfica, FC Porto, and Sporting CP), and has done it only once, during their 2000/2001 campaign (Perform Group 2023). Because the *Big Three* are on a different level regarding their overall capabilities, it would be unfair to compare them with smaller Portuguese clubs, especially regarding their capacity to fund meaningful, sustainable projects. *Liga Portugal*, for example, monthly distinguishes clubs on their website for their sustainable practices within Portuguese football with their Social Responsibility Award, aimed at monthly distinguishing clubs that perform extraordinary work within their social areas of influence. The team that took August 2022's prize was *Estoril Praia*, with their innovative kit designs using recycled material. In contrast, in May 2023, it was *SC Farense*'s turn to be recognised with the award, thanks to their "*Uma Conferência Muito Especial!*", aimed at giving high school students the chance to interview the team's players. Although such initiatives are essential for sports sustainability in Portugal moving forward, as they could spark bigger clubs to do the same on a bigger scale, comparing Estoril Praia, who averaged 2,524 spectators in their

2022/23 campaign of Portuguese first division football, with SL Benfica, who amassed 57,108 average spectators for the same season (Liga Portugal 2023b), would not yield a fair result, as the potential market to be considered by the clubs when implementing sustainability measures is entirely different and demands different considerations. It can also be argued that clubs with Benfica's exposure are subjected to more pressure and scrutiny than other Portuguese sports clubs; combined, the *Big Three* represent 94.2% of Portuguese fans (Expresso 2022). As such, the focus should be on clubs comparable to SL Benfica to some degree, and in Portugal, it comes down to two: FC Porto and Sporting CP.

Finally, it is also worth noting that the term "Sustainability," as defined by Hedstrom (2018), refers to the "management of risks related to the company's environmental and social impacts." As such, both social and environmental dimensions of clubs' sustainability efforts were considered in the analysis.

Methodology

The first part of this analysis qualitatively explored the primary sustainable practices of the three leading Portuguese clubs in Portugal to determine who Portugal's leading SP developer is. For this decision, clubs' social practices will be qualitatively considered, and environmental practices regarding CO_2 emission savings will be quantified whenever possible and qualitatively considered otherwise. The second part of this analysis will pose the question: Would Portuguese sports fans choose SL Benfica as the leader in Portuguese SPs? What factors drive these views? To tackle these research questions, a survey was conducted. Because the primary goal is to understand individuals' views on SL Benfica's SPs and if the club is seen as the national leader in this effect, our Dependent variable was classified as a dummy variable with the question: "Do you believe SL Benfica is the leader in sports sustainability practices in Portugal?" with two possible answers: "Yes" and "No/Do not Know." The secondary goal was understanding which socio-economical and opinionative factors may influence these views. As

such, 11 independent variables were considered during this survey's design: six related to individuals' socio-economical background ("Age", "Years of Education", "Nationality", "Residence", "Situation regarding employment", and "Gender") and five related to individuals' opinions regarding sustainability, and sports ("Opinion regarding promotion of SPs by sports clubs", "How much SPs influence club loyalty", "Is sustainability as a whole important", "Are SPs practised at home", and "Portuguese sports club supported"). As noted Nagel et al. (2020), sports clubs are voluntary associations, and Individuals share a special bond with them, hence it is worth noting that the variable "Portuguese sports club supported" will also serve as a control variable in our study, as it is the only factor that undoubtedly possesses a noticeable effect in shaping sports fans' views on anything related to their clubs. That being said, to understand if the Dependent Variable was independent of the factors mentioned above, a Binary Logistic Regression was performed using IBM SPSS statistics. The choice to use Binary Logistic Regression was made due to the nature of the Dependent Variable, a dummy variable. Because of this, the independent variables needed to be coded as either Quantitative Variables or variables that could be treated as such (e.g., Dummy or Categorical). For example, instead of using a scale for the education level of respondents, the number of years studied was employed (1st grade was considered year one). In fact, every variable apart from "Age", "Years of Education", "Opinion regarding promotion of SPs by sports clubs", and "How much SPs influence club loyalty" were characterised as dummy variables, as can be seen in Appendix 13. Field (2013, 761) states that this type of Regression is the best option to predict which of the two categories in a dummy variable an individual is more likely to belong to. Finally, Field (2013, 313) also states that one should aim to have between 10 and 15 cases per predictor in the model for it to be minimally adequate, something fulfilled in this study since 179 respondents were inquired.

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SL Benfica

Starting with the social level, SL Benfica possesses a variety of initiatives, developed and promoted mainly through the club's foundation, the Benfica Foundation. Since its inception in 2009, the foundation has amassed over 110,000 beneficiaries (European Football for Development Network 2019), and even though it is based in Portugal, it also operates in over eight countries. The foundation gets funding from SL Benfica directly, as it is an official organisation linked to the club. However, it also receives donations from benefactors through income tax consignments, much like Sporting CP's foundation. In 2022 alone, the foundation helped over 52,000 individuals by implementing 14 projects across four areas: education, inclusive sports, environmental education, and humanitarian assistance (Sport Lisboa e Benfica 2023). Some projects even won *Liga Portugal's* Social Responsibility Award, including: "Juntos pela Ucrânia," aimed at developing actions to support Ukrainians lacking essential goods, won the award in March 2022; *"Liga de futebol adaptado"*, a project designed to foster competitive sports within special education schools, won the award in June 2023 (Liga Portugal 2023a); *"Fábrica de sorrisos"*, focused on the donation of toys, food, and clothing to 17 institutions, and food baskets to 50 families, won the award in December 2021 (Sport Lisboa e Benfica 2022b). Not only that, but the foundation occasionally helps specific causes not on its original roster of projects, like the borrowing of 150 *kits* for the AMINGA project in 2021 and 2022, aimed at providing Cape-Verdean Children in São Vicente Island the opportunity to experience a variety of sports for ten consecutive days (Sport Lisboa e Benfica 2022a).

With this, SL Benfica also spreads its influence beyond Portuguese borders and consolidates itself as the world's second-biggest club with 256,000 official members, only behind Bayern Munich (Jung 2022). Considering all this information, it can be estimated that SL Benfica's foundation has influenced the lives of at least 162,000 individuals since its implementation, which is a remarkable achievement. Despite the club's social focus, environmental initiatives

are where SL Benfica has shined for the past few years in the form of ECO Benfica's set of initiatives.

The first initiative comes through the installation of photovoltaic and thermic solar panels. Regarding the club's photovoltaic energy usage, it is stated on ECO Benfica's webpage that since the solar park's inauguration in 2019, the CO_2 emission savings have been the equivalent of planting 9175 trees. The U.S. Department of Agriculture reported that one tree could absorb at least 48 pounds (21.8 Kg) of CO_2 per year (Stancil 2015). As such, this would mean that SL Benfica's solar park has saved approximately 200 tonnes in CO_2 emissions since its implementation. Furthermore, thermal solar panels heat the facilities' pools and water for human consumption, allowing SL Benfica to use boilers only when strictly necessary. As will be the case with other initiatives, this initiative can only be qualitatively considered, as SL Benfica has no numbers regarding the measure's impact on its CO_2 emissions.

The second initiative, the *Ecocentro*, is comprised of three waste compactors (paper, plastic, and undifferentiated waste) and was born from a partnership with the Lisbon city council, allowing the recycling of waste produced in the club. As of 2023, this initiative has fostered the recycling of about 1200 tonnes of residue, and according to Marion Unegg et al. (2023), approximately 1,36 tonnes of CO_2 is saved per ton of waste for material recycling, giving us a total of about 1632 tonnes of CO_2 emissions saved by the *Ecocentro* since its introduction.

The third and fourth Initiatives relate to water management and focus on using rainwater and three artesian wells for various water-related purposes, sustainably making the most out of this valuable resource instead of exclusively relying on water providers. The issue is that, as stated by Koushki, Warren, and Krzmarzick (2023), the impact of measures relating to water depends mainly on the origin of the energy used to pump the water itself, and as such, quantifying its impact becomes troublesome, which is probably why ECOBENFICA also has no numbers

regarding these initiatives' environmental impact. The same can be said about the club's fourth initiative, Lisbon's first-ever electric mobility Hub, inaugurated in February 2022 through a partnership with EDP. Composed of seven power sockets, one of them being the first-ever ultrafast charger in the Lisbon area (160 kW), this hub allows any citizen to charge their electric vehicles. The issue is that although the energy provided in the hubs is said to be 100% renewable, it is hard to quantify how this measure directly correlates to savings in CO_2 emissions overall, as people who do not use the hub will most likely charge their vehicles at home.

Finally, we have F&B initiatives undertaken by ECOBENFICA, which are composed of using reusable cups with a deposit and transforming used cooking oil into bio-detergent through a partnership with award-winning Portuguese start-up *EcoX*. Although effective, these initiatives are challenging to quantify regarding emissions. 1 litre of cooking oil, for example, is said to contaminate a million litres of fresh water, according to Singh-Ackbarali et al. (2017), making the reuse of cooking oil a great way to fight water pollution, save money on cleaning products, and foster a more circular approach within the club, all at the same time. Moreover, the literature is consensual on the fact that SUPs are one of the biggest threats to the environment, as they are thrown away after the first use and possess a recyclability rate of only around 12% (Shams, Alam, and Mahbub 2021). Nonetheless, no figures for the impact of these measures are provided anywhere by SL Benfica, and as such, they will only be qualitatively considered in this analysis.

FC Porto

Liga Portugal also distinguished FC Porto's social sustainability efforts by awarding the club with August 2023's Social Responsibility Award for its "Resumo inclusivo" initiative, aimed at increasing sports inclusivity for those unable to see or hear by thoroughly describing game events and using sign language, allowing these individuals to understand games much more

vividly (Liga Portugal 2023). The club also took home that same award in December 2021, alongside SL Benfica and SC Braga, and in February 2021, this time winning it alone. In December, for their "Juntos venceremos" initiative, which managed to fill São João's pediatric wing with decorations, entertainment, and stadium environment props to include young children in the club's festivities, and in February for their "Fome Zero" project, aimed at raising food and redistributing it through two charitable institutions: *Legião da Boa Vontade* and *Coração da Cidade* (Record 2023). FC Porto also invested heavily in their *Dragonforce* project since it first began in 2008, providing children aged four and above the opportunity to play, study, and learn about football and environmental practices with the club, all while being closely followed by health specialists and psychologists. Although this project can significantly impact children's growth and health, the main focus is finding young talent, not solidarity.

Regarding environmental initiatives, according to Porto City Council's official website (Porto.pt), the club aims to invest heavily in renewable energy, being one of 300 subscribers to the *Pacto do Porto para o Clima* initiative. Also, as reported by *Greenvolt's* April 2023 announcement, the objective is to build a 2000-strong solar park capable of generating 1,500MWh, saving about 420 tonnes in CO_2 emissions (Greenvolt 2023), even though neither source ever mentions a forecast for the project's completion. Furthermore, a 22-socket electric mobility hub will also be made available in *Estádio do dragão*, FC Porto's stadium, although it is not mentioned if the energy provided will come exclusively from renewable sources. The stadium itself was built with sustainability in mind, as not only was it the first European stadium to abide by ISO 9001 and ISO 14001 certification, related to quality and environmental sustainability standards, but also had all its lights changed to LED bulbs in 2017, saving on power consumption (Futebol Clube do Porto 2017).

The use of reusable cups comprises the entirety of the clubs' measures taken in the F&B sector, apart from implementing recycling bins in its facilities. After a pilot test using only a tiny part

of the stadium on the last 2 two games of their 2021/22 campaign, the club finally implemented reusable cups in most establishments from the 2022/23 season onwards.

FC Porto also consumes 40% of its water intake from an artesian well, although it only possesses one, as opposed to SL Benfica's 3 (Green Savers 2013). Finally, the club states that it is keen on recycling, but information on how much effort there is in this field is hard to find, except that in 2019, the club partnered with TACKLE. This organisation, co-founded by UEFA and co-funded by the European Commission through their Life Environment program, stands for "Teaming up for a conscious kick for the Legacy of Environment," and it aims to augment European football games' environmental management and awareness (Futebol Clube do Porto 2019).

In conclusion, FC Porto's current social and environmental initiatives mainly revolve around forming partnerships with environmentally conscious organisations. Furthermore, the diffusion of said initiatives appears scattered across the club's communication channels, and a clear and congruent sustainability strategy does not seem to be in place yet. Finally, even though the foundations for a sustainable future seem to be laid out, measures with quantifiable impacts are still in the planning phase, making it hard to understand the impact the club's initiatives genuinely have on the environment and broader society. Nonetheless, the club seems to be invested in devising significant sustainable initiatives soon.

Sporting CP

Even though in recent years, FC Porto and SL Benfica have shared the spoils when it comes to football league titles, as is evident by the 19 league titles the two clubs have shared between them in the last 20 years, Sporting CP remains SL Benfica's long-standing rival, as both teams are from the city of Lisbon and have a great history of sporting greatness against one another. Furthermore, Sporting CP is a very competitive club if all sports modalities are included, with

over 600 titles in various sports, including handball, indoor football, athletics, basketball, women's football, roller hockey, and judo (Sporting Clube de Portugal 2023a). The question remains: is Sporting CP as much of a rival to SL Benfica in matters of Sustainability as it is in sports?

Although the club has not won any of the monthly Social Responsibility awards, its social achievements are impressive in their own right. Sporting CP has had over 50 small but effective solidarity actions in the last ten years, ranging from solidarity meal offerings to free kit distributions overseas (Sporting Clube de Portugal 2023). Most of these actions are taken care of by *"Fundação Sporting"*, the club's official social foundation. Much like SL Benfica's, this foundation's purpose is to serve as the club's helping hand to those in need and take care of most, if not all, of the club's social practices.

Regarding environmental sustainability, Sporting CP had a sustainability report made in 2018 (The first Portuguese club to do so) when it was still under the guidance of former President Bruno De Carvalho. The report focuses more on stakeholder engagement practices and reports how the club has tried to foment them over the years, leaving little room for environmental and social practices.

A more recent sustainability report was also published in 2023, relative to the 2021/22 season. This report highlights the club's performance regarding energy consumption, CO_2 emissions and their respective origin, water recapture efforts, and residues generated (see Appendix 11 and appendix 12). There is also a thorough analysis of the club's carbon footprint, particularly regarding scopes one, two (Market-based), and three emissions, stating that this last scope of emissions represents 89% (32.988 tCO_2e) of the club's total carbon footprint. This report is a big step forward in Environmental transparency, even though it does not state that Sporting CP

is actively performing sustainability initiatives with a meaningful impact on their CO_2 emissions.

The club has also announced that it is keen on making significant changes to achieve carbon neutrality and energy self-sufficiency by 2050. First, the club aims to make the most out of the large surface area in its football stadium and multi-sports pavilion to install Solar panels, allowing them to become self-consumption production units, creating what the club calls a "Renewable energy community", even though the club does not clearly define the concept. Another sustainable practice the club wants to implement is to replace all its light vehicle fleet with electric counterparts. This measure has already started to be implemented, and according to Sporting's official website, it should be completed by the end of the 2026/2027 season. Since the club provides no numbers on how many cars this fleet represents and how many are already electric-powered vehicles, this will only be considered a potential measure, not a definitive one. The most significant change the club plans to make is the transition to 100% renewable energy consumption in all its facilities. This would mean ensuring that energy providers rely exclusively on renewable sources when generating electricity and, according to the club, would salvage a staggering 1,140 tonnes of CO_2 emissions (Sporting Clube de Portugal 2022). Although this number seems far-fetched, mainly since SL Benfica and FC Porto's forecasts include the construction of renewable energy platforms for internal consumption and still do not reach half these estimates, seeing the project through would seriously impact Sporting CP's CO_2 output. Finally, the club also aims to install 650 solar panels in their *Cristiano Ronaldo Academy,* a measure designed to turn the facilities into self-sufficient units, avoiding 213 tonnes of CO_2 emissions per year.

Partnerships with major organisations in the sports sustainability sector are also a significant target for Sporting CP. The club aims to adhere to three sports organisations soon: *UN's Sports*

for Climate Action, an official organisation promoted by the UN which will push for sports organisations to implement measures that will facilitate them to reduce their carbon footprint and contribute to the UN's SDGs; *GRACE*, a set of environmentally conscious enterprises that wish to disseminate good practices regarding ESG; and *Smart Open Lisboa (SOL)*, a program created in collaboration with Lisbon city council focused on making Lisbon a carbon neutral city by the end of 2030.

Analysing Fans' perception of SPs in Portugal

The sample used to tackle this query was created from a survey released on the 9th of October and closed on the 9th of November. As shown in Appendix 2, the sample comprised 179 respondents, 101 (56%) Female and 78 (44%) Male. The average age of respondents was 29 years old; on average, individuals had completed 11 years of education, corresponding with high school education. 136 individuals (76%) were employed at the time of the survey, while 43 (24%) were not, and while 160 (89%) were resident in Portugal, 136 (85%) of those were Portuguese, and of the bare 19 (11%) who did not live in Portugal, only 12 (63%) were non-Portuguese, making it evident that the sample lacked individuals who did not live in Portugal. Of the 179 respondents, 70 (39%) declared themselves SL Benfica supporters, leaving 109 (61%) to support other clubs in Portugal. However, if only the 143 Portuguese individuals are considered, 51 (36%) said they supported SL Benfica, a somewhat inferior figure to the expected 46% of adult Portuguese SL Benfica supporters reported by Observador (2019).

Regarding sustainability, our sample includes only 3 (2%) individuals who do not find Sustainability important, and only 16 (9%) who do not engage in SPs at home. In addition, 40 (22%) respondents believe SL Benfica to be the national SP leader, while 139 (78%) either say it is another club or do not know how to respond; this is particularly interesting to analyse, seeing that as can be seen in Appendix 3 out of those 40 who believe SL Benfica to be the national sports SP leader, 29 (72%) were SL Benfica fans, meaning that they may just be saying

SL Benfica is the national sports SP leader because they would prefer to choose their club over any other, and not necessarily because they are informed about Portuguese sports clubs' SPs. What is more, one would expect most SL Benfica fans to attribute this feat to their supported club. However, out of the 70 SL Benfica fans surveyed, 41 (59%) individuals do not believe their club is the national sports SP leader. In Appendix 4, it can be seen that out of the 176 in the sample who believe SPs to be important, 139 (79%) either did not believe SL Benfica to be the national sports SP leader or did not know how to answer, and all individuals who did not find SPs important were SL Benfica fans. Furthermore, as per Appendix 5 out of the 163 respondents who engage in SPs at home, only 40 (25%) believe SL Benfica is the national sports SP leader. This means that neither a majority of those who find the SPs important nor those who perform SPs at home believe SL Benfica to be the national sports SP leader. Even if this is attributed to the club these individuals support, it should be noted that even within SL Benfica fans, this is the majority's opinion. Appendix 6 shows us the influence of Gender in our Dependent Variable: out of the 101 female respondents, only 22 (22%) believe SL Benfica to be the national sports SP leader, a similar figure to the 78 males' 18 (23%) who believed the same, which would indicate that, at first glance, gender may not have a significant effect in our Dependent Variable. However, one way to be sure is to run a Binary Logistic regression.

This statistical test tells us if the predictors chosen are significant in explaining the probability that an individual believes that SL Benfica is the national sports SP leader or not, and if so, what the probability is. Before we get to these results, it is worth mentioning that two prior Chi-Square tests were conducted to estimate the quality of the model: Hosmer & Lemeshow's and Omnibus' Test of model coefficients, seen in Appendixes 14 and 16, respectively. The Null hypothesis for the first test was defined as "The model fits the data." In contrast, the Null hypothesis for the second test was defined as "The adjustment made by the model with predictors is the same as the adjustment made without predictors (Model is not significative)."

In both instances, the tests verify that the model's quality, even with a non-quality sample, is enough to proceed with the test, as we do not reject the null hypothesis for the first test and reject it for the second one. Furthermore, as can be seen by Appendix 15, "Model overview," even though the -2 LL statistic is not as low as it could be, it still points towards a good enough model, just like Cox & Snell's R^2 and Nagelkerke's R^2, which could be higher if this was a better quality model, but are not worryingly low. Lastly, Appendix 17's Classification table also hints at the model's quality, showing that even though its specificity is relatively high, its sensitivity is very low. As such, the model's overall success capacity is only 74.5%, not above the 80% many authors deem the bare minimum.

Appendix 18 shows us the results of the Binary Logistic Regression, which were considered with an $\alpha = 0.05$. As can be seen, the only predictor that seems to be significant in shaping the probability of an individual thinking SL Benfica is the national sports SP leader is whether the individual supports SL Benfica or not, our control variable. With this, it can be inferred that individuals who support SL Benfica are 6.859 times more likely to think SL Benfica is the national sports SP leader than those who do not. This comes as no surprise, as it is normal for fans to support their club, even in matters they may not be familiar with. After that, the only predictor that shows close significance levels to the α used is Gender. In fact, if an $\alpha = 0.1$ had been considered, the test would suggest that males are 1.999 times more likely to think SL Benfica is the national sports SP leader.

Conclusions

After analysing the "Big Three's" SPs, it is imperative to determine which club can be deemed the SP leader of Portuguese sports. To achieve this, a comparison will be made according to three aspects, in line with the previously performed analysis: CO_2 emission savings, Social Impact, and Overall Strategy Organisation.

The social practices carried out by the three clubs seem to go hand in hand. SL Benfica and FC Porto take on a bit of an edge compared to Sporting CP, given that both clubs have been recognised by Liga Portugal more than once for their social initiatives. Nonetheless, as referenced by Ekholm and Dahlstedt (2023), it is not uncommon for European Sports clubs to focus on social awareness and solidarity. As such, it is no surprise that the three clubs are immensely active regarding social advocation practices.

SL Benfica is the club where current sustainable practices bear the most influential environmental impact today. SL Benfica's environmentally focused practices have translated to savings of approximately 1,832 tonnes of CO_2 since their implementation, even if harder-to-quantify initiatives the club is currently implementing are not considered. It is important to note that FC Porto's and Sporting CP's plans to tackle CO_2 emissions in future projects are bold. If the projects laid out by SL Benfica's rivals work out as expected, they may surpass the *Encarnados'* current practices. This is especially true if we consider Sporting CP's efforts, which would amount to about 1,400 tonnes of CO_2 emission savings per year, almost that of SL Benfica has saved since it began to implement sustainability measures. However, as of today, ECOBENFICA remains the leader in environmental action within Portuguese sports.

This leads us to the last aspect of this comparison, the overall strategy organisation the three clubs present to tackle sustainability issues, and truth be told, SL Benfica also appears to be the club with a more structured approach towards sustainability, even though Sporting CP takes the lead when it comes to transparency. ECOBENFICA is far from perfect: it often fails to present specific data about SPs' impacts; there is a general lack of specificity about implementation processes; social initiatives carried out by Benfica Foundation should have a more preponderant position within the club's website; and the design, although simple, can lead individuals to think there is not much effort towards its diffusion, and maybe they would be right. Nonetheless, there is a guiding structure. With further investment, it could be a valuable tool to show fans

and non-fans alike that SL Benfica is a modern enterprise focused on driving the future. Something to consider is that Sporting CP is catching on in this regard, having two sustainability reports already published when writing this analysis, compared to SL Benfica's zero.

With this, SL Benfica can be considered the club where SPs have the most impact among its rivals, but do the fans know this? From what we gathered within our sample, no. For those who see Sustainability as a pressing issue and those who engage in sustainability at home, SL Benfica is far from the consensual SP leader in Portuguese sports. Moreover, most SL Benfica fans would not point to SL Benfica as being Portuguese sports' SP leader. This tells us that there is a lack of awareness towards the many SPs ECOBENFICA focuses on, and this is an issue the club should tackle as soon as possible, given that both rival clubs will be investing in environmental sustainability practices in the future, as previously stated.

Limitations

Any analysis is bound to have limitations; this case is no exception. First, even though the SPs of the three clubs were accounted for, their overall carbon footprint was not estimated. Although SL Benfica is considered the Portuguese SP leader by our analysis standards, it could still be the club with the highest overall carbon footprint of the three, which would mostly invalidate its SPs. Second, the amount of data regarding SL Benfica, FC Porto, and Sporting CP's sustainable practices is scarce. At times, the only source of information available was the clubs' official websites, and even though these are official sources, they can be subject to bias and lack of scrutiny. Secondly, it is also clear that the sample could be improved, not only because the number of individuals could be much more substantial but also because it is not a representative sample of the population. Even though various efforts were made to diversify the sample and make it as random as possible, the limited budget and time made it virtually impossible. However, this research's findings clearly outline some clues as to the questions that should be posed in future research.

Group Part

6. Discussion

The present project resulted from Sport Lisboa e Benfica's desire to develop and apply a sustainability strategy that could be used in the coming years, pushing players, staff members, and fans alike to mirror the club's actions and contribute towards sustainable goals. This way, the club can hope to become a leading player in the sports sustainability sector worldwide and possibly take advantage of previously unexplored opportunities and synergies. Scientific evidence was crucial for justifying the strategy's development, asserting that it is possible to be both profitable and sustainable. At the same time, approaching examples of some of the most predominant practices from contemporary sports was also crucial, providing an example of how much success, or lack thereof, to expect from SPs in this sector.

That being said, there was no better way to reap the rewards from sustainability than directing our gaze into the organisation that gave birth to the SDGs themselves and, since its inception, has promoted international cooperation focused on economic, social, and environmental progress: the United Nations. The key was to find a correspondence between the values SL Benfica aspired to achieve and the practices the UN and its SDGs incentivised. This was accomplished by developing tailored practical implementations congruent with the UN's SDGs, which could also serve as the core of SL Benfica's sustainability strategy. Furthermore, after uncovering that the UN had already come up with initiatives such as the *Sports for Climate Action* and *Football for the Goals* frameworks, primarily intended for sports institutions such as SL Benfica, it was now imperative to understand how the proposed implementations could help the club integrate these initiatives, and what requirements and benefits to expect from them.

In a nutshell, this research revolved around the SDGs established by the United Nations, which in turn created official frameworks that could help sports organisations pursue them. Such frameworks are the S4CA and F4TG, representing a unique opportunity for SL Benfica to be

at the forefront of sustainable sports. This can open the door for a future where sustainability can drive future company prosperity, and SL Benfica can be more deeply connected with officially recognised institutions that can sustainably add value to its operations. It is also worth noting that based on the premise that the Benfica Foundation had already become an F4TG member, the research's main query became more centred around analysing S4CA's goals and benefits, where SL Benfica is not present.

The issue now revolved around the proposal to integrate SL Benfica into these programs, which stated that clubs should pursue a more explicit strategy based on transparently measuring and estimating future outcomes of its social and environmental practices, all elements of the previously proposed implementations. However, before these implementations could be made, a thorough analysis of SL Benfica's place within Portuguese sports' SP efforts was conducted, concluding that even though the club can be considered the Portuguese sports club with the most influential SPs, three problems remained: lack of transparency, lack of awareness, and rivals catching up. Even though ECO Benfica is well organised, there seems to be a lack of transparency about SPs, namely the lack of sustainability reports available to the broader public and the lack of specificity about the SPs' impacts on the club's overall carbon footprint. Furthermore, fans overall do not seem to know that SL Benfica is the Portuguese club with the most environmentally focused SPs in place today, something that can be attributed to the lack of marketing by SL Benfica itself. Finally, even though Sporting CP and FC Porto are not yet at SL Benfica's level regarding their SPs, they seem to have very structured plans to tackle these issues soon, leaving SL Benfica behind if no further actions are taken. This is where this project's proposed implementations could come in handy. These implementations have undergone cost/benefit analysis, enabling the club's SPs to face the recent needs associated with climate action and society's well-being and financially benefit from them nonetheless.

Group Part

For a club like SL Benfica to be associated with such a recognised brand as the S4CA, three well-established requirements must be respected. Firstly, Benfica needs to have one mid-term target to reduce GHG emissions by 50% by 2030. Secondly, Benfica needs to have one long-term target to reach net zero GHG emissions by 2040, considering scope emissions one to three. Benfica must also have established committing, planning, proceeding, and reporting processes. Even though these are the main requirements to enter, they are not the only ones. If SL Benfica is serious about joining the organisation, it must also abide by S4CA's principles: promoting greater environmental responsibility, reducing overall climate impact, advertising climate change education, promoting responsible and sustainable consumption, and facilitating communication towards climate change responses.

In this context, one way to achieve a competitive advantage with sustainable commitment is to bet on the digital segment within the club. The previously proposed "Sustainability League" fits perfectly as a potential medium to short-term strategic move that can benefit the club at all levels, sustainability included. This initiative allows Sport Lisboa e Benfica to have a more thorough overview of its environmental/social contributions, quantifying or qualifying them practically and effectively. In addition, since fans are inevitably responsible for a large part of the Scope 3 emissions of sports organisations, the objective of evaluating and minimising this type of emissions, encouraged by the S4CA framework, would also be achieved. As proven, SL Benfica should seek to adapt to the current digital transformation era, capitalising on the influence that gamification can have along with the current diverse consumer culture of fantasy leagues; thus, betting on introducing the "Sustainability League" brings all these worlds together. By acting as an incentive for supporters to carry out proposed activities by the club, it would be a decision that would not only have a positive impact internally but also be beneficial to all stakeholders, whether these are the partners who help make the initiative a reality or the fans themselves. The league, an additional feature in the Benfica Official App, would

complement all the ongoing sustainable contributions of the ECO Benfica program or the social actions promoted by the Benfica Foundation. Additionally, the several fan-focused participatory actions carried out by league participants to earn points would primarily translate into financial, social, and environmental returns for the club, as evidenced before (See "Sustainability League" Impact Assessment). These impacts will be particularly relevant and will certainly make a significant contribution in the context of the United Nations Sustainable Development Goals, primarily SDGs 2, 3, 7, 11, 12, 13, 15, and 17, above and beyond all the others reported.

The opportunity for Benfica to have its stadium certified as a green building is also connected with mobility strategies and could prove to be another effective medium-term strategy to achieve S4CA requirements. A green building certification would require the club to review the stadium's operations in various areas, such as energy and water consumption, waste management, transportation of building occupants, and many more. Essentially, it would impart to the organisation a holistic understanding of the venue's functioning and allow a more informed approach to then implement sustainable initiatives that would optimise the operations. This operational optimisation approach of a green building certification brings various returns: savings in operational and maintenance costs, mainly connected to energy and water savings; health benefits such as reduced signs of "sick building syndrome" symptoms and lower levels of stress and depression; increased performance of building users; and better employee retention, due to increased job satisfaction. For SL Benfica, the most adequate certification to follow would be LEED, provided by the USGBC, since it is the most recognised in the world. This certification would transfer this recognition towards the club, hence taking the most out of other advantages of green building certifications, which enhance an organisation's green brand image and serve as a signal of a well-managed company to the corporate world.

Group Part

Achieving a LEED certification would allow Benfica to standout not only in Portugal as the first sports venue with a green building certification but also as one of the first in European football, and possibly the first stadium in Europe with such an award, if LEED Gold or Platinum levels are achieved. Additionally, this opens up the opportunity to market the stadium as the greenest football stadium in Portugal, which could be the building block of a strategy to assert Benfica as the greenest football club in the country. The image benefits from such endeavours would only be highlighted with the 2030 FIFA World Cup, requiring all stadiums to have some green building certification approved by FIFA.

The financial valuation performed for this project corroborates the findings around the value-adding characteristics of green building certifications. Although it is a rough estimate, based on many assumptions, a project that can generate millions in savings ought not to be overlooked by any organisation, especially when you add the capabilities of serving as a blueprint to build a concise corporate sustainability strategy and as a brand image enhancer.

Another way of achieving sustainability on a massive scale is through mobility strategies on matchdays, which offers the club and its stakeholders a more efficient perspective on mobility. Although a more long-term approach, this practical implementation could also prove useful if the club was to pursue S4CA entrance. This research emphasised three interconnected objectives: mitigating carbon emissions, promoting fan engagement, and strengthening the club's brand and financial position. This directly corresponds to SDGs 13, 11, and 17. The primary objective of this particular implementation was to assess the possible reductions in carbon emissions that may be achieved by adopting environmentally friendly transportation options. Concurrently, the study also assessed the qualitative dimensions of sustainable mobility, examining its impact on fan satisfaction and loyalty. In order to establish a thorough and practical comprehension of the corresponding costs and benefits, this research also resorted to professional assumptions when necessary due to a lack of data. The analysis examines the

temporal dynamics associated with adopting sustainable mobility methods, considering short-term, medium-term, and long-term perspectives.

The scope of the research is broadened to investigate potential opportunities for external collaboration and financial assistance. Tackling SDG 17, the discussion is around the potential for securing sponsorships from environmentally aware companies, forming alliances with environmental groups to enhance the effectiveness of sustainability projects, and attracting investors who share a dedication to eco-friendly methods. This research endeavours to comprehensively analyse the financial environment, offering Benfica practical and applicable knowledge that goes beyond short-term benefits, promoting long-term viability and adaptability.

In the context of the appliance for the S4CA and F4TG, and jointly with the pursue of a LEED certification, digital innovation, and mobility modernization, Benfica can also indulge in some type of waste management initiatives. There are two specific initiatives that were selected as critical ones for Benfica's future focus: recycled stadium seating and reusable cups strategies. Both these strategies target specifically the reduction in plastic consumption and consequently the amount of plastic being wasted. By implementing these strategies Benfica will not just become a more sustainable enterprise but will also become more financially viable club since these projects are expected to have a positive net present value. Both these strategies are aligned with the UN SDGs 9 and 12, specifically the targets 9.4, 12.2, 12.4, 12.5 and 12.6. This strengthens the connection between these strategies and the two UN initiatives S4CA and F4TG.

Benfica needs to make sustainable progress, and the best way to do it is through partnerships, here we suggested that Benfica expands the existing relationship with Adidas and creates new partnerships, and Patagonia emerged as the new partnership with most potential value for the club. Adidas is perceived as the fourth most sustainable brand in the world and Patagonia is

perceived as the number one, so these would be valuable brands that would push the Benfica brand up in the sustainability world. The perception is as important as the actions, and one could even argue what's the point of implementing all the suggested strategies if the perception remains unchanged, as seen by the fact that most people don't even know SL Benfica is the SP leader in Portuguese sports today.

Implementing a variety of strategies in so many different fronts will not be an easy task, and might be very challenging to manage, measure and keep all suggestions aligned, this is why it is crucial for enterprises to have management tools and specifically for this field, an ESG management tool. Both tools suggested, Aplanet and GreenPlat, are ESG management tools that not only help with the management and measuring of the strategies and the club but also use an Artificial Intelligence algorithm to suggest next steps for specific targets. This would help Benfica immensely in managing existing initiatives and strategizing what steps to take next.

Football for the Goals is another initiative launched by the UN, but this one is focused on the football industry, as opposed to S4CA, which focuses on the whole sports industry. The requirements to enter F4TG compared to the requirements to enter S4CA are much more subjective and not well established. Essentially, SL Benfica must have sustainability practices in line with the United Nations' SDGs, support human rights and equality, and climate change mitigation measures, all of which are present in the implementations this project suggests. The Benfica Foundation is already a member of the F4TG initiative, working mainly on supporting human rights and equality. That being said, it would only prove beneficial for the club itself to join the initiative as well, something that can easily be achieved given the club's standing as the Portuguese leader in SPs, and even more so if the particular implementations here suggested are considered.

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With this in mind, joining the S4CA and F4TG initiatives enables players within the sports industry to exercise real-world impacts and demonstrate that they are doing their part in addressing global climate change. Principally, the initiatives steer sports organisations towards minimising their massive carbon emissions, something present in any of today's industries. In this respect, the reduction that the UN has tried to accomplish should consist of pragmatic steps and quantifiable achievements by the clubs participating in these initiatives. Perhaps the most obvious of these advantages comes in the form of the club's demonstration of environmental responsibility and sustainability concerns to the broader public. It is evident that by adhering to official UN sustainability frameworks, SL Benfica can showcase its dedication to environmental preservation, augmenting the club's public perception and building the image of an institution committed to social responsibility. It is also worth noting that, as previously stated, sports fans share a special bond with their respective sports teams (Maderer, Holtbruegge, and Woodland 2016), and if their club engages in SPs, it will not take long for them to adopt this mindset as well. For example, the NBA, one of the first signers of the UN's S4CA initiative, noted that introducing supporters in sustainable operations proved highly beneficial. In fact, the organisation developed "NBA Green", a platform dedicated to influencing fans to adopt eco-friendly practices (NBA 2023). The NBA ensured that its "NBA Green" campaign and community outreach were mainly oriented towards effective recycling and conserving energy (Colon 2023).

Adopting energy-efficient and sustainable practices also has the potential to result in financial benefits for the club. Implementing strategies such as energy saving, waste reduction, and sustainable procurement can yield long-term cost reductions in operational activities. Subsequently, Arsenal Football Club has been a trailblazer in environmental activities, starting with the fact that it was the first Premier League club to sign up for the UN's *Sports for Climate Action*. The club added water dispensers to all facilities as part of the strategic moves, saving

nearly 150,000 single-use bottles annually (United Nations 2021). Furthermore, Arsenal FC installed automated LED lighting to cut operational costs, thus enhancing financial viability. One other benefit of implementing sustainable initiatives is the potential to attract dedicated and environmentally concerned supporters and garner support from sponsors and partners that value and endorse such practices. Consequently, these efforts contribute to enhancing the club's brand overall. For example, AELTC, the organiser of the Wimbledon Championship, also joined the *Sports for Climate Action* Initiative in 2019 (Wimbledon 2019) and agreed on a long-term partnership with Evian to make Wimbledon environment-friendly by 2030 (Carp 2023). An on-court refillable system with reusable bottles for players is already in place. Also, underpinning publicly its culture of consciousness and caring for the environment, Evian launched a recycle-at-Wimbledon program in 2022 and even a year earlier introduced recycling bins into the town centre, demonstrating its intention to be a circular brand by 2025. As proven, through the implementation of sustainable practices, a sports organisation has the potential to positively impact the overall welfare of communities and engage with fans towards climate change while also serving as a role model for supporters and other neighbouring corporations. La Liga side Atlético de Madrid, through the Atlético de Madrid Foundation, sets the standard of how a club's sustainable initiatives can have this effect on surrounding communities. In 2022, its campaign *"Limpieza de Mares Interiores"*, in partnership with WhaleFin, began with the objective of removing and classifying all human-generated waste from rivers, streams, and swamps from Madrid municipalities (Atlético de Madrid 2022). Since its inception, this project has outgrown the initial target area of Madrid, and its focus has spread into "inland seas" all over Spain, raising awareness about the importance of preserving these ecosystems (Atlético de Madrid 2023a). Additionally, from the start of the 2023/24 season, the reach increased again to the waters of the Spanish coast due to an alliance with Coca-Cola and its campaign *"Mares Circulares".* The initiative counts on the collaboration of first-team and academy players, club

workers and members, as well as students and residents from affected areas. As a joint project with Coca-Cola, the first expedition removed up to 96 kilograms of waste from water ecosystems (Atlético de Madrid 2023b). Another example, previously mentioned, is the non-profit division of Forest Green Rovers FC, which is called FGR Community. This division collaborates with the registered charitable organisation *Green Britain Foundation*, educational institutions, community organisations, and sports teams in the Gloucestershire region and surrounding areas (Forest Green Rovers 2023a). Their primary objective is to impart knowledge, provide assistance, and foster engagement among individuals via football. At the FGR Community, activities are delivered around the primary subject of sustainability. The firm operates in an environmentally conscious manner and conveys knowledge on sustainability to individuals within the surrounding region. As an effect, the FGR Community is actively addressing the climate crisis by implementing an education program that serves as a valuable tool in mitigating environmental challenges. According to the same source, the group also engages in knowledge-sharing activities such as green energy and the preparation of vegetarian cuisine. S4CA and F4TG could also pave the way for the club to exhibit its leadership capabilities internationally. This means having the potential to get noticed and garner respect from fans, stakeholders, and other sports organisations on a global scale. Recently, Southampton Football Club – the latest Premier League club to join UN's *Sports for Climate Action* Framework – announced its "The Halo Effect" sustainability strategy. Chief Legal and Risk Officer Tim Greenwell underscored the importance of leveraging the club's platform to propel positive change toward a more sustainable future (Southampton Football Club 2021). The institution's commitment is evident in a holistic strategy that envisions offsetting up to 3,000 tonnes of CO_2 emissions in the next four years (Edgley 2021). Additionally, the club has promised to plant 250 trees for each first-team debutant from the academy, representing its sustainable development on and off the pitch. S4CA also serves as a reputational driver that

resonates with stakeholders and eventually draws like-minded sponsors and partners. Hence, by its engagement in these United Nations initiatives, Benfica not only addresses the SDGs but also stands to gain economic benefits and embrace wider aspects of brand development, community engagement, and financial sustainability.

In conclusion, as a starting point for this project, theoretical evidence was provided to sustain the hypothesis that sustainability can significantly benefit organisations in general, especially for sports enterprises such as SL Benfica. That being said, countless practical examples of sports organisations where sustainability had a positive impact were also provided, especially of those who joined the two sports-related official UN frameworks mentioned previously.

Group Part

7. Conclusions and Recommendations

As evidenced throughout this work project, sustainability is one of the most important concepts to implement if human beings are to continue their "business as usual" for the foreseeable future: its environmental, social, and economic implications are far too impactful not to be addressed. The UN's Sustainable Development Goals mark the forefront of sustainability, but although this blueprint has been a critical introduction in the push for worldwide cooperation, the UN has reported the progress towards their achievement as very underwhelming. The ever more pressing issue requires everyone's cooperation and all-around contribution, including businesses, who should look at sustainability and see more than just bureaucratic obligations to meet, realising its massive potential. The literature review shows empirical evidence of the countless benefits organisations can reap if sustainability is pursued. From aligning and correlating organisational strategy with higher management quality to reducing financial risk and improving operational efficiency, one thing is clear: sustainability creates corporate value and long-term success.

Within sports, the studied impact of the industry has been proven to be substantial, especially when it comes to the environmental impact of large sports events, which are responsible for moving large masses of people. Moreover, literature has also shown that progress has been lacklustre and that sports organisations, particularly in football, are missing out on using the power of fans to promote sustainable behaviours and create a more attractive identity. For SL Benfica, this represents an opportunity to develop a strategy that reinforces its leading position against its rivals in sustainability initiatives and fan base. This position is backed by the study performed regarding the role of the club within sustainability, which demonstrates that the ECO Benfica strategy has managed to keep it ahead of its rivals. However, as shown, ECO Benfica's advantage over rivals' strategies is slim and lacks transparency and communication to the public, which must be improved. Primarily, the strategy should use the club's sizeable and loyal

fan base and access to sponsors to take advantage of the rival's slow pace of action in this field and the growth of the sustainability market. A successful implementation could see SL Benfica rise as one of the leading Portuguese organisations in sustainability regardless of the industry. To structure its strategy, SL Benfica should join the UN's initiatives *Sports for Climate Action* and *Football for the Goals* (and not only the Benfica Foundation), as they were developed to guide sports organisations towards set sustainability targets, are aligned with the SDGs, and require the club to outline a cohesive plan of action.

To achieve these goals, it is recommended that SL Benfica use the "Sustainability League" initiative to qualify and quantify its social and environmental impact, leveraging its large mass of fans to minimise the significant scope 3 emissions of the club while simultaneously bringing in financial returns. In addition, to reinforce the promotion of fan engagement, the strengthening of the club's brand, and mitigating carbon emissions, with emphasis on scope 3, SL Benfica should look to implement sustainable mobility strategies for matchdays that offer alternative transportation solutions associated with different temporal dynamics. These solutions open the door to new sponsorship and partnership opportunities and bring financial improvements to the club's operations. From another angle, SL Benfica should consider retrofitting the stadium to meet the LEED rating system's requirements. Simultaneously, it improves the club's image by certifying its main building as a green building, thus providing an opportunity to market it as the greenest football stadium in Portugal, and the club's financial situation since the operational and maintenance savings are very significant. Even if the club does not obtain the LEED certification, the club can use the rating system as an operational efficiency optimisation framework.

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APPENDIX

Appendix 1: United Nations Sustainable Development Goals

Goal	Description	Related Topics
	End poverty in all its forms everywhere	Poverty Eradication
	End hunger, achieve food security and improved nutrition and promote sustainable agriculture	Rural Development; Food Security and Nutrition and Sustainable Agriculture
	Ensure healthy lives and promote well-being for all at all ages	Health and population; Sustainable Transport; National Strategies and SDG integration
	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	Education
	Achieve gender equality and empower all women and girls	Gender Equality and Women's Empowerment
	Ensure availability and sustainable management of water and sanitation for all	Water and Sanitation
	Ensure access to affordable, reliable, sustainable and modern energy for all	Energy
	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	Green Economy; Sustainable Tourism; Employment, decent work for all and social protection
	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	Industry; Sustainable Transport
	Reduce inequality within and among countries	Africa

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	Make cities and human settlements inclusive, safe, resilient and sustainable	Disaster Risk Reduction; Sustainable Transport; Sustainable Cities and Human Settlements; National Strategies and SDG integration
	Ensure sustainable consumption and production patterns	Chemicals and Waste; Sustainable Consumption and Production; Sustainable Tourism
	Take urgent action to combat climate change and its impacts	Atmosphere; Climate Actions and Synergies; Small Island Development States; National Strategies and SDG integration
	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	Oceans and Seas; Small Island Development States; Sustainable Tourism
	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	Biodiversity and Ecosystems; Forests; Mountains; National Strategies and SDG integration; Desertification, Land Degradation and Drought
	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	Information for integrated Decision-Making and Participation; Institutional Frameworks and international cooperation for Sustainable Development; Violence Against Children; National Strategies and SDG integration
	Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development	Capacity Development; Finance; Financial Inclusion; Multi-stakeholder Partnerships; Science; Technology; Trade; National Strategies and SDG integration

Source: (United Nations 2023)

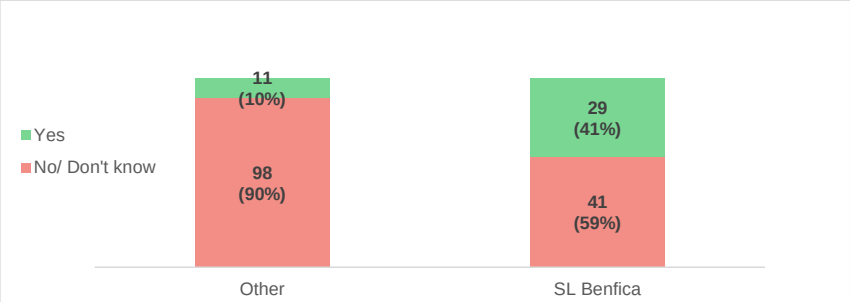
Appendix 2: Descriptive analysis of survey

Group Part

Variable	Categories	N	%	Opinion on promotion of SP (0-10)			How much SP influence club loyalty (0-10)			Age			Years of education		
				Min-Max	Stdev	Average	Min-Max	Stdev	Average	Min-max	Stdev	Average	Min-max	Stdev	Average
Is SLB national leader in SP	No/ Don't know	139	78	2-10	1,16	8,1	1-10	1,51	4,6	20-63	9,24	29,0	1-30	6,52	11,1
	Yes	40	22	3-10	1,32	8,2	1-10	1,74	4,6	21-62	8,43	28,7	1-25	6,63	11,0
Gender	Female	101	56	4-10	1,11	8,1	2-10	1,61	4,9	20-63	8,80	28,8	1-26	6,44	10,9
	Male	78	44	2-10	1,31	8,0	1-10	1,42	4,2	20-62	9,40	29,1	1-30	6,68	11,3
Portuguese Sports Club	Other	109	61	2-10	1,29	8,0	1-10	1,63	4,6	20-62	9,18	29,0	1-30	6,62	11,2
	SL Benfica	70	39	7-10	1,02	8,3	1-10	1,46	4,6	20-63	8,89	28,9	1-25	6,42	10,9
Nationality (Portuguese)	No	36	20	7-10	1,00	8,2	2-10	1,63	4,8	21-44	5,31	27,5	1-22	6,51	11,3
	Yes	143	80	2-10	1,25	8,1	1-10	1,54	4,5	20-63	9,74	29,3	1-30	6,55	11,0
Residence (Portugal)	No	19	11	4-10	1,33	8,0	2-10	1,83	4,8	21-32	3,73	26,4	2-21	6,72	11,4
	Yes	160	89	2-10	1,19	8,1	1-10	1,53	4,6	20-63	9,44	29,3	1-30	6,52	11,1
Currently Employed	No	43	24	2-10	1,34	8,1	1-9	1,41	4,3	21-44	5,12	26,8	1-30	6,82	11,4
	Yes	136	76	3-10	1,16	8,1	1-10	1,60	4,7	20-63	9,88	29,6	1-26	6,46	11,0
Is sustainability important?	No/ Don't know	3	2	7-9	0,76	8,2	4-9	2,68	5,9	24-62	20,55	38,4	5-18	6,43	11,5
	Yes	176	98	2-10	1,21	8,1	1-10	1,54	4,6	20-63	8,76	28,8	1-30	6,54	11,1
Engage in sustainability practices?	No/ Don't know	16	9	2-10	1,79	7,5	1-5	1,11	3,9	22-62	10,03	29,3	3-30	7,04	12,1
	Yes	163	91	3-10	1,12	8,1	1-10	1,58	4,7	20-63	8,97	28,9	1-26	6,49	11,0
Sample Total		**179**	**100**	**2-10**	**1,20**	**8,09**	**1-10**	**1,56**	**4,59**	**20-63**	**9,04**	**29,0**	**1-30**	**6,52**	**11,09**

Source: Own elaboration

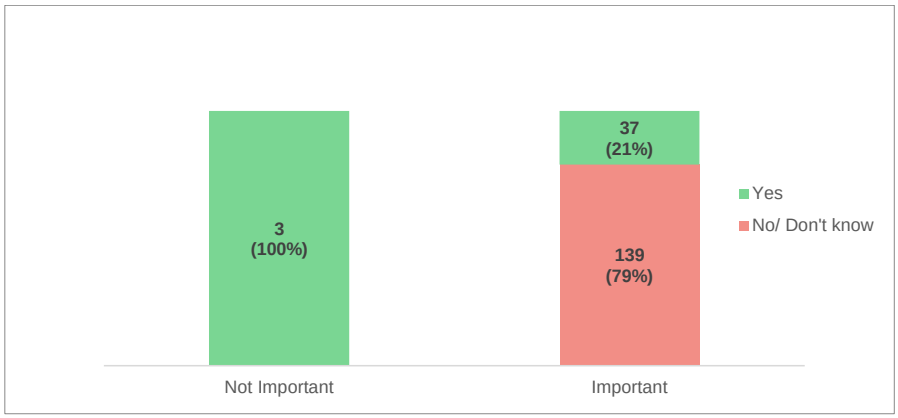
Appendix 3: Is SL Benfica the portuguese SP leader based on club affiliation



Source: Own elaboration

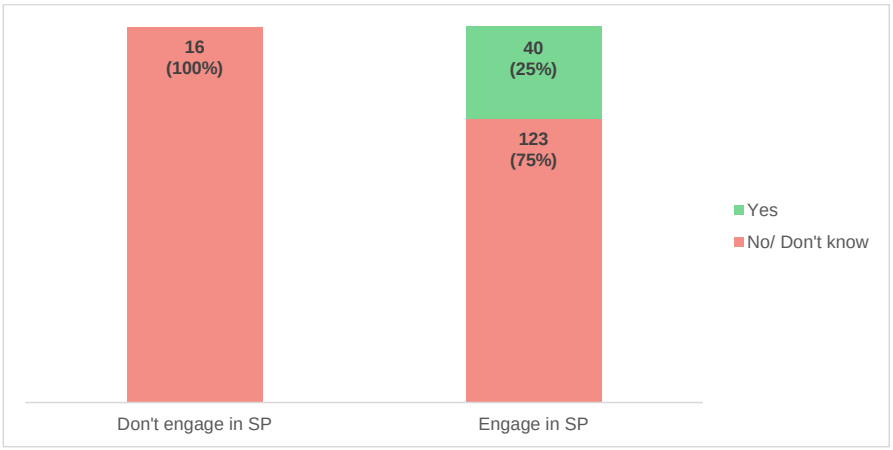
Group Part

Appendix 4: Is SL Benfica the Portuguese SP leader based on SP importance



Source: Own elaboration

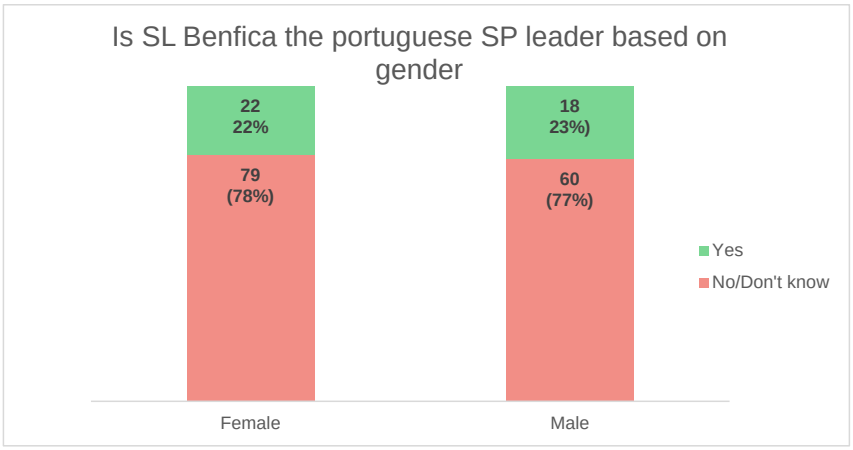
Appendix 5: Is SL Benfica the Portuguese SP leader based on individual SPs



Source: Own elaboration

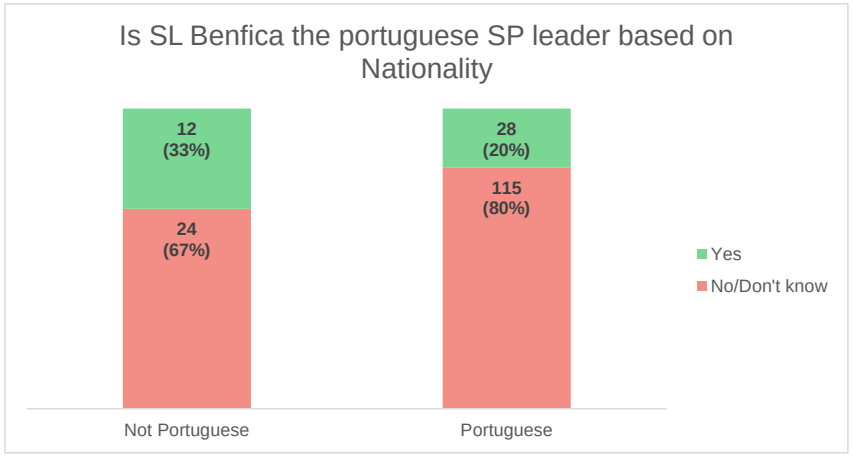
Group Part

Appendix 6: Is SL Benfica the Portuguese SP leader based on Gender



Source: Own elaboration

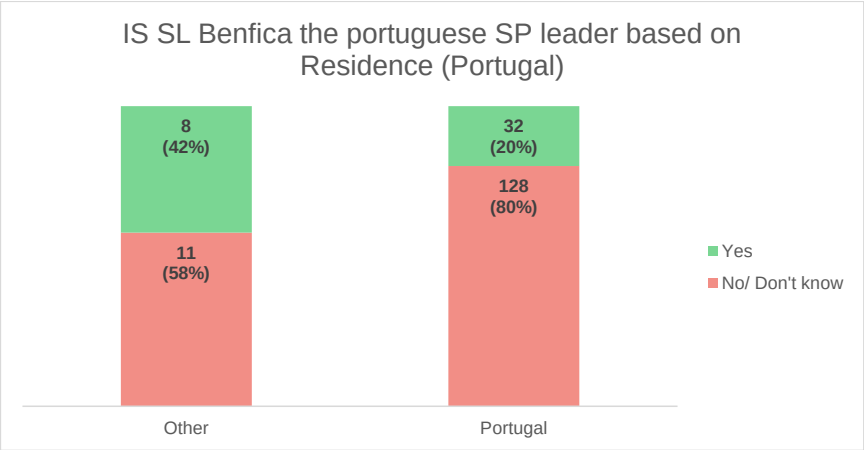
Appendix 7: Is SL Benfica the Portuguese SP leader based on Nationality



Source: Own elaboration

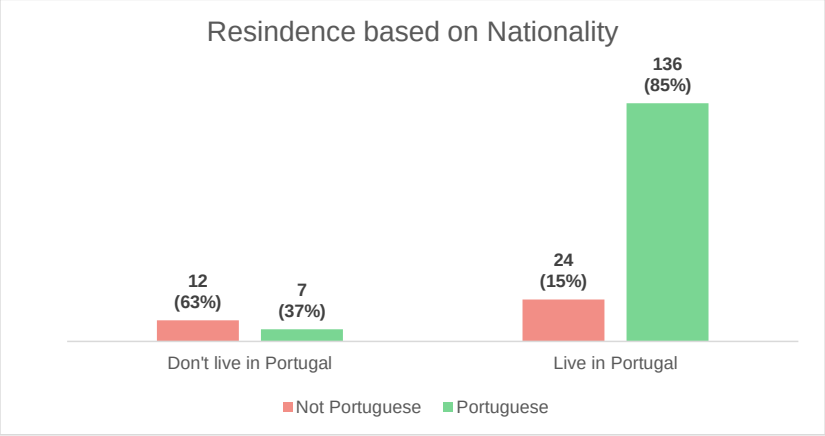
Group Part

Appendix 8: Is SL Benfica the Portuguese SP leader based on Residence



Source: Own elaboration

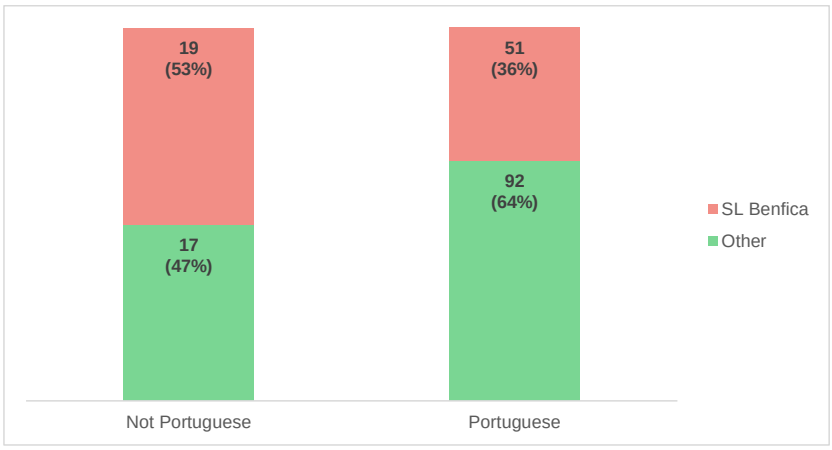
Appendix 9: Sample Residence based on Nationality



Source: Own elaboration

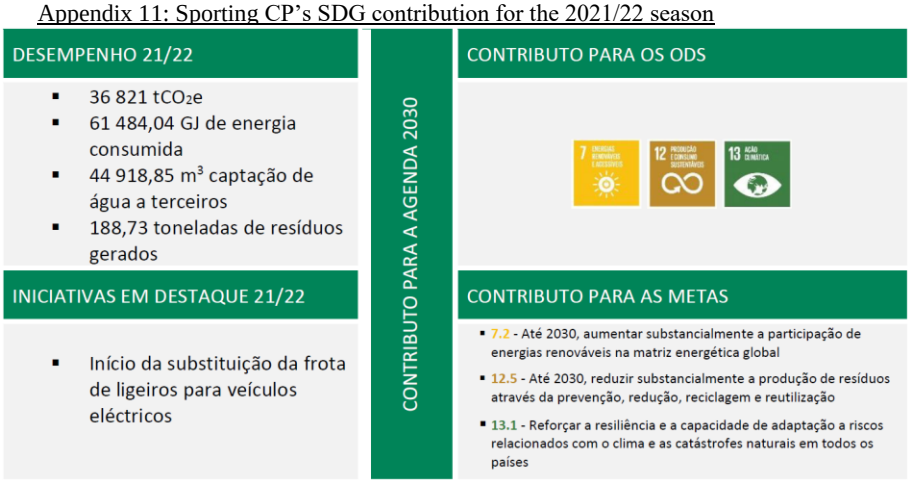
Group Part

Appendix 10: Sample SL Benfica supporters based on Nationality



Source: Own elaboration

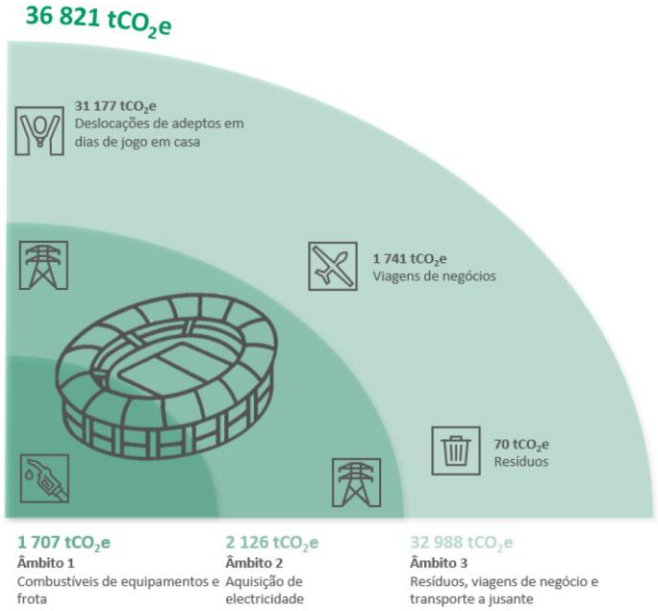
Appendix 11: Sporting CP's SDG contribution for the 2021/22 season



Source: Sporting CP's 2021/22 Sustainability report

Group Part

Appendix 12: Sporting CP's CO2 footprint



Source: Sporting CP's 2021/22 Sustainability report

Group Part

Appendix 13: Binary Logistic Regression Categorical Variable Codification

Categorical variable codification			
		N	Codification
Engage in any sustainable practices	No	23	0
	Yes	156	1
Currently live in Portugal	No	21	0
	Yes	158	1
Currently employed	No	75	0
	Yes	104	1
Gender	Female	99	0
	Male	80	1
Portuguese sports club	Other	99	0
	SL Benfica	80	1
Sustainability is important?	No	4	0
	Yes	175	1
Portuguese?	No	28	0
	Yes	151	1

Source: Own elaboration

Appendix 14: Chi Square test for Model suitability

Omnibus tests of Model Coefficients

Group Part

		Qui-square	df	Sig.
Step 1	Step	38,589	11	<,001
	Block	38,589	11	<,001
	Model	38,589	11	<,001

Source: Own elaboration

Appendix 15: Model Summary R Squared

Model Overview			
Step	2 LL	R2 Cox & Snell	R2 Nagelkerke
1	180,606	0,194	0,275

Source: Own elaboration

Appendix 16: Hosmer & Lemeshow's R squared

Hosmer e Lemeshow Test			
Step	Qui-square	df	Sig.
1	3,882	8	0,868

Source: Own elaboration

Appendix 17: Classification Table (Specificity in Yellow; Sensitivity in Green)

Classification table					
Observed			Predicted		
			SL Benfica is the leader in sports sustainability practices in Portugal.		% Correct
			No	Yes	
		No	114	11	91,2

Group Part

Step 1	SL Benfica is the leader in sports sustainability practices in Portugal.	Yes	34	20	37,0
	Overall Correct				74,9

Source: Own elaboration

Appendix 18: Binary Logistic Regression results

Binary Logistic Regression						
Variables in the equation	B	S.E.	Wald	df	Sig.	Exp(B)
Age	0,007	0,016	0,193	1	0,66	1,007
Years of education	-0,054	0,053	1,01	1	0,315	0,948
Portuguese? (1)	0,025	0,583	0,002	1	0,965	1,026
Currently live in Portugal (1)	-1,003	0,627	2,553	1	0,11	0,367
Currently employed (1)	-0,182	0,44	0,172	1	0,679	0,833
Gender (1)	0,693	0,392	3,116	1	0,078	1,999
Portuguese sports club (1)	1,926	0,4	23,183	1	<,001	6,859
Sustainability is important? (1)	-2,193	1,461	2,254	1	0,133	0,112
Engage in any sustainable practices(1)	1,123	0,709	2,505	1	0,113	3,073
Clubs should promote sustainable practices?	-0,136	0,113	1,45	1	0,229	0,873
Sustainability practices influence loyalty as a fan?	0,082	0,076	1,167	1	0,28	1,086
Constante	1,315	1,815	0,525	1	0,469	3,726

Source: Own elaboration