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Environmental sustainability efforts made within European-based esports organizations

Multiple Case study

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ABSTRACT:

It is evident that esports contributes to the global warming and climate change. As the global esports industry continues to burgeon, concerns regarding its environmental sustainability impact have garnered attention. However, there is still an apparent lack of research on esports in the context of environmental sustainability. The primary aim of this study was to gain a better understanding of environmental sustainability efforts made within the European-based primary stakeholder of the esports industry, esports organizations, also known as the esports teams. Additionally, this study aimed to contribute to the academic field of esports and the environmental sustainability of how esports organizations can contribute to improving the climate with the conditions and limitations existing. Furthermore, the overall ambition of this study was to provide insights into applicable environmental sustainability strategies which can be utilized by esports organizations, or any other business entities to decrease their negative climate impact.

The study explored the environmental sustainability efforts made within European-based esports organizations through an interpretive lens, employing an abductive approach and an exploratory design grounded in qualitative methods with an archival and documentary research strategy within multiple case study strategy. The study's primary data was collected via a relevant review of the literature and two semi-structured one-to-one electronic interviews with two different case companies including open-ended questions derived from themes which were formed during the literature review. Additionally, secondary data was collected through the case company's websites and other data sources. Furthermore, the collected data was analysed utilizing thematic data analysis.

The results of this study show that European-based esports organizations are increasingly acknowledging their responsibilities to address environmental concerns, and are implementing environmental sustainability efforts in a variety of methods. One of the key findings of this study is the multifaceted nature of environmental sustainability efforts within European-based esports organizations. European-based esports organizations are not only focusing on reducing their carbon footprint through energy-efficient practices and technologies, and sustainable procurement processes, but also implementing environmentally sustainable practices across various aspects of their operations, including sustainable travelling practices, waste management and reduction strategies, and forming environmental partnerships. This comprehensive approach underscores the European-based esports organizations commitment to fostering environmental stewardship at various levels. Furthermore, results highlight the potential of esports organizations for promoting environmental awareness.

KEYWORDS: Electronic sports, Electronic sports organizations, Sustainability, Environmental sustainability, Sustainable development, Corporate sustainability, Corporate social responsibility, Environmental corporate social responsibility

VAASAN YLIOPISTO**Markkinoinnin ja viestinnän akateeminen yksikkö**

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TIIVISTELMÄ:

On selvää, että e-urheilu edistää ilmaston lämpenemistä ja ilmastonmuutosta. Maailmanlaajuisen e-urheilu alan kasvaessa edelleen, sen ympäristön kestävyttä koskevat huolet ovat herättäneet huomiota. E-urheilun ympäristön kestävyys kontekstissa on kuitenkin edelleen ilmeistä puutetta. Tämän tutkimuksen ensisijaisena tavoitteena oli saada parempi käsitys ympäristön kestävä kehityksen ponnisteluista, joita on tehty eurooppalaisessa e-urheilu alan ensisijaisessa sidosryhmässä, e-urheilu organisaatioissa, jotka tunnetaan myös nimellä e-urheilu joukkueet. Lisäksi tällä tutkimuksella pyrittiin edistämään e-urheilun akateemista kenttää ja ympäristön kestävyttä siitä, kuinka e-urheilu organisaatiot voivat edistää ilmaston parantamista olemassa olevin ehdoin ja rajoituksin. Sekä myös tämän tutkimuksen yleisenä tavoitteena oli antaa näkemyksiä sovellettavista ympäristön kestävyys strategioista, joita e-urheilu organisaatiot tai muut yritykset voivat hyödyntää kielteisten ilmastovaikutustensa vähentämiseksi.

Tutkimuksessa tarkasteltiin eurooppalaisissa e-urheilun organisaatioissa tehtyjä ympäristön kestävyysponnisteluja tulkitsevan linssin kautta käyttämällä abduktiivista lähestymistapaa ja tutkivaa suunnittelua, joka perustuu laadullisiin menetelmiin sekä arkistointi- ja dokumenttitutkimus strategiaan monitapaustutkimus strategian puitteissa. Tutkimuksen ensisijaiset tiedot kerättiin asiaankuuluvalla kirjallisuuskatsauksella ja kahdella puolistrukturoidulla henkilökohtaisella sähköisellä haastattelulla kahden eri tapausyrityksen kanssa sisältäen avoimia kysymyksiä kirjallisuuskatsauksen aikana muodostuneista teemoista. Toissijaiset tiedot kerättiin tapausyrityksien verkkosivujen ja muiden tietolähteiden kautta. Lisäksi kerätty tieto analysoitiin temaattisella tietoanalyysillä.

Tämän tutkimuksen tulokset osoittavat, että eurooppalaiset e-urheilun organisaatiot tunnustavat yhä enemmän vastuunsa ympäristönäkökohtien käsittelyssä ja toteuttavat ympäristön kestävyttä koskevia ponnisteluja monin eri menetelmin. Yksi tämän tutkimuksen keskeisistä havainnoista on eurooppalaisten e-urheilu organisaatioiden ympäristön kestävyysponnistelujen monimuotoisuus. Eurooppalaiset e-urheilun organisaatiot eivät keskity ainoastaan vähentämään hiilijalanjälkeään energiatehokkaiden käytäntöjen ja teknologioiden sekä kestävien hankintaprosessien avulla, vaan myös toteuttavat ympäristön kannalta kestäviä käytäntöjä toimintansa eri osa-alueilla, mukaan lukien kestävä matkustuskäytännöt, jätehuolto ja vähentämistrategiat, ja ympäristökumppanuuksien muodostaminen. Tämä kattava lähestymistapa korostaa eurooppalaisten e-urheilu organisaatioiden sitoutumista ympäristönsuojelun edistämiseen eri tasoilla. Lisäksi tulokset korostavat e-urheilu organisaatioiden potentiaalia ympäristötietoisuuden edistämässä.

AVAINSANAT: Elektroninen urheilu, Elektronisen urheilun organisaatiot, Kestävyys, Ympäristön kestävyys, Kestävä kehitys, Yrityksen kestävyys, Yrityksen yhteiskuntavastuu, Yrityksen ympäristön yhteiskuntavastuu

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Acronyms

BR	Battle Royale
CO2	Carbon dioxide
CS	Corporate Sustainability
CSR	Corporate Social Responsibility
DCCG	Digital Collectible Card Games
EBEO	European-based esports organizations
EC	European Commission
ECSR	Environmental Corporate Social Responsibility
EFG	ESL FACEIT Group
ES	Environmental sustainability
EP	European Parliament
ERN	Esports Research Network
Esports	Electronic sports
FPS	First-Person Shooter
GEF	The Global Esports Federation
IISD	International Institute for Sustainable Development
MOBA	Multiplayer Online Battle Arena
NIP	Ninjas in Pyjamas
P4TP	Playing for the Planet
RTS	Real-Time Strategy
SD	Sustainable Development
VGEE	Video Games Europe Esports
WCED	World Commission on Environment and Development

1 Introduction

In this chapter, an overview, and the reasoning behind the choice of the master thesis topic are introduced. Firstly, the background and justification of the study are presented. Secondly, the research question, aims, and objectives of the study are explained. Thirdly, the scope and delimitations of the study are considered. Fourthly, the key concepts used in the study are defined. Lastly, the structure of the thesis is described and presented in Figure 1.

1.1 Background of the study

According to the Intergovernmental Panel on Climate Change (IPCC), without a doubt, human activities primarily through the emissions of greenhouse gases have contributed to global warming. From 2010 to 2019, the world's greenhouse gas emissions increased, contributions coming from unsustainable energy use, land use, lifestyles and consumption, and production patterns. Numerous weather and climatic extremes are already being impacted by human-caused climate change in every continent. This has had broad negative effects on losses and damages to both nature and humans (2023, p. 42). The global greenhouse gas emissions are predicted to rise by around 14% over the current decade, based on current national commitments (UN, 2022, p. 3).

Electronic sports (esports) highlight one of the most significant problems of digitalization, environmental sustainability (ES) (Scholz and Nothelfer, 2022, p. 9). Climate change must be covered in part of the conversation on how esports affect the environment (Ross and Fisackerly, 2023, p. 4). Despite esports contributions to climate change having been disregarded and underestimated in the past, it nonetheless contributes to climate change (Ross and Fisackerly, 2023, p. 4). Esports uses resources from the environment such as rare elements, minerals, electricity, food, water, chemicals, and other natural resources (Ross and Fisackerly, 2023; Abraham, 2020). It also produces environmental waste such as emissions of carbon dioxide (CO₂), sulfur dioxide, and nitrogen oxides (Ross and Fisackerly, 2023; Abraham, 2020). Furthermore, it also creates trash and recyclables

(Ross and Fisackerly, 2023, p. 4). In the contemporary world, it is not possible to ignore the massive ecological crisis that the globe's entire population is experiencing (Besombes, 2022; Nyström et al., 2022). Esports stakeholders should not continue to ignore these problems, which calls into question the esports industry's seemingly endless expansion (Nyström et al., 2022, p. 13).

Climate change and ES are now recognized as a global crisis as well as a top priority (Hayday et al., 2022). However, there is a need to enlighten and increase the awareness of ES among esports stakeholders and communities to achieve higher engagement rates (Besombes, 2022, p. 21). As stated by the Global Esports Federation (GEF), the Sports for Climate Action initiative calls on sports and esports organizations to acknowledge the industry's contributions to climate change and the responsibility to strive for climate neutrality for a safer planet (2021). The European Parliament (EP) adopted a resolution on esports and video games in 2022 which highlights the importance of video games and esports dual role in the green transition, both as an industry that must endeavour to become more environmentally friendly and as a platform for promoting awareness of climate and environmental issues amongst video game players. Also, EP in the resolution on esports and video games calls for more efforts to enhance energy efficiency and reduce the environmental effects of esports services (2022). Understanding the varied nature of esports and how they intersect with important subjects like sustainability and environmentalism is critical if esports is to be an international and inclusive activity for everyone (Hedlund, 2022). Researchers should be actively involved in promoting these esports sustainability initiatives (Nyström et al., 2022, p. 14).

Sustainable development (SD) can be regarded as a normative societal concept (Steurer et al., 2005, p. 275), and it outlines desirable development paths of society (Hahn et al., 2015, p. 298). It provides a mechanism for society to interact with the environment without jeopardizing future resource availability (Mensah, 2019, p. 6). Esports is a diverse social phenomenon, but it is frequently viewed as a business or economic industry (Nyström et al., 2022, p. 3). Corporate sustainability (CS) is the business version of SD

(Behringer and Szegedi, 2016, p. 22). Business plays a key role in SD since they represent the economy's productive resources (Hahn et al., 2015, p. 298). SD implies that businesses need to implement business strategies and activities that fulfil the demands of the enterprise and its stakeholders now while conserving, sustaining, and enhancing the human and natural resources that will be required in the future (Steurer et al., 2005, p. 274). Hence, SD indicates that esports organizations need to utilize sustainable business models and integrate social and environmental elements into the ecosystem (Scholz and Nothelfer, 2022, p. 46). Moreover, according to Gerner (2019, p. 2), businesses are increasingly considering CS conditions through corporate social responsibility (CSR). Esports may be utilized as an integral instrument to shape the modern digital society and it can serve as a crucial component of a digital European identity (Scholz and Nothelfer (2022, p. 1). Esports provides numerous spillover possibilities that can help to develop a sustainable digital society (Scholz and Nothelfer (2022, p. 38). There is also a need to contend with the position of electronic gaming and esports in worldwide economic, political, and environmental processes (Hedlund, 2022).

Today, the sustainability of business operations and CS are regarded as critical concerns for any business (Florin-Samuelsson et al., 2022, p. 83). Sustainability is a general challenge in the modern age, and it is also true for esports (Scholz and Nothelfer, 2022, p. 9). Esports sheds light on the issue of sustainability in a digital society (Scholz and Nothelfer, 2022; Nyström et al., 2022). Sustainability is now expected of all organizations, and it is also largely regarded as an ethical manner to conduct business (Kaillinen-Kuisma and Auvinen, 2022, p. 48). Therefore, we can expect sustainable and responsible actions from esports businesses as well (Kaillinen-Kuisma and Auvinen, 2022, p. 48), like from the esports teams, which can also be regarded as an institution. However, these sustainability factors do not appear to be prioritized in the esports industry in the current rapid growth that the esports industry is experiencing according to Scholz and Nothelfer (2022, p. 46). The ability of esports to survive and thrive is largely determined by how well industry stakeholders address these concepts (Nyström et al., 2022, p. 12). The primary stakeholders play a crucial role in this since they possess an indispensable role in the

esports ecosystem, and hence, without the primary stakeholders, the esports industry would fail (Julkunen et al., 2021, p. 46). However, the esports ecosystem is still obscure and disorganized which involves a large amount and several types of businesses (Julkunen et al., 2021, p. 40), and it is constantly evolving (Wong and Meng-Lewis, 2023; Scholz and Nothelfer, 2022). Nonetheless, esports teams, according to Video Games Europe Esports (VGEE), also known as team organizations or esports organizations (2021, p. 27), can be classified as the primary stakeholders in the esports ecosystem (Scholz, 2020, p. 7). These esports organizations, like professional teams in traditional sports, attempt to recruit the best players obtainable and support them by providing coaches, training possibilities, and an environment where they can focus exclusively on improving and beating the competition (Scholz, 2019, pp. 62-63).

As stated by Scholz and Nothelfer (2022, p. 1), esports has evolved into an integral part of the digital society. It is still perceived as a young phenomenon (EP, 2022), and is hard to understand (Scholz, 2019, p. 8). Hamari and Sjöblom (2017, p.211) offer a more everyday explanation of esports as professional or amateurish competitive video gaming which is commonly organized by various leagues, ladders, and tournaments where players compete under teams or organizations that are sponsored by different businesses. Esports is one of the fastest-growing forms of digital entertainment (Murray et al., 2022; Cranmer et al., 2021), and according to Video Games Europe (VGE), one of the fastest-growing pillars of the video game industry (2023). Its popularity has grown rapidly (Murray et al., 2022; Cranmer et al., 2021), mainly because of technological advances such as the increased prevalence of online gaming (Cranmer et al., 2021; Hamari and Sjöblom, 2017), access to technology and access to elite competition (Cranmer et al., 2021; Jenny et al., 2017). The worldwide esports audience is predicted to reach 640 million in 2026 (Newzoo, 2022, p. 31). Major esports tournaments now routinely outperform traditional sports events in terms of viewership (Cranmer et al., 2021, p. 1). For instance, the 2017 Esports League of Legends World Championship drew 60 million viewers, whereas the National Basketball Association (NBA) drew 20.4 million viewers (Cranmer et al., 2021; Steinkuehler, 2020). Esports was projected to generate almost 1.38 billion dollars in

revenue by the end of 2022, up from 1.11 billion dollars in 2021 (Newzoo, 2022, p. 34). As claimed by the subject matter experts, video gaming could become the most popular form of modern entertainment in the future, and esports could surpass football in terms of the number of participants, spectators, and revenue generated (Flegr and Schmidt, 2022, p. 631).

1.2 Justification for the study

Esports has rapidly developed over the last few decades (Riatti and Thiel, 2022, p. 443), which scholars in various fields and applications of relevant knowledge have been fueling (Chiu et al., 2021, p. 14). Formosa et al. (2022, p. 2) also state that academic research on esports is expanding and developing with the observable growth and change in the esports industry. This indicates that esports has arisen as a unique research topic (Chiu et al., 2021, p. 14). While esports research continues to expand and develop, new insights on future possibilities and research topics relating to the industry emerge (Nyström, et al., 2022). However, there is still a lot to learn about the threats and weaknesses of the esports industry (Nyström et al., 2022; Freitas et al., 2021), which can be seen by the scattered body of research in which certain topics of the framework are only addressed scarcely or not at all (Riatti and Thiel, 2022, p. 443). Thus, this study fosters the current growth of developing esports research.

According to Chiu et al. (2021, p. 12), the current academic literature on esports research has mostly concentrated on esports games themselves, for example, League of Legends, competitive gaming, video gaming, and human-computer interaction. Therefore, the vital role played by other actors and factors linked to the esports industry is neglected (Julkunen et al., 2021, p. 40). Due to the brief history of academic research on esports, it has mostly concentrated on social, physiological, motivational, information, communication, media, cognitive science, law, sponsorship, and sociological approaches (Julkunen et al., 2021, p. 40). Therefore, esports research has primarily focused on social sustainability pillar (Nyström et al., 2022, p. 1). However, there is a thin shared understanding in the recent esports literature of the business approach involving the structure

of the esports business environment (Julkunen et al., 2021, p. 40). Esports is still a new and unexplored phenomenon from a business standpoint (Julkunen et al., 2021; Scholz, 2019). It can be concluded that there is a research gap in terms of esports in the business approach involving the structure of the esports environment.

DiFrancisco-Donoghue et al (2022, p. 1) also revealed that they received scant articles regarding esports from multiple academic disciplines regardless of a year of extensive solicitations to research institutions and this highlights the lack of data produced and published in the field of esports. Nevertheless, esports research is in its initial stages (Wong and Meng-Lewis, 2023; Kim et al., 2021; Reitman et al., 2020). Because esports research is still in its initial stages, fundamental issues regarding how the industry is developing remain according to Reitman et al. (2020, p. 43). Hence, it means that academics who participate in the early work, as well as those who introduce the space to other fields, have a chance to formulate its growth (Reitman et al., 2020, p. 43). This study responds to the need for producing and publishing data in the field of esports thus, it contributes to esports literature. Additionally, this study can influence the growth and development of the esports industry as an early work.

A current topical issue in the esports industry regards its sustainability (Nyström et al., 2022; Scholz, 2019), which has thus far received comparatively little attention in academics (Nyström et al., 2022, p. 3). Research on sustainability in esports has focused on the progression of the industry and its communities and how esports should develop if the industry wants to expand and remain competitive Nyström et al. (2022, p. 3) states. Thus, it is essential to examine sustainability in esports from new perspectives, such as economic, environmental, and social sustainability according to Nyström et al. (2022, p. 3). If esports is to become sustainable, both practitioners and researchers must put effort into addressing these mentioned perspectives (Nyström et al., 2022, p. 2). Because sustainability is perceived as a topical issue in the esports industry, it is relevant to examine it. Also, there is a call to researchers that they must put in the effort to address these mentioned sustainability perspectives to esports become sustainable, to which

this study responds. Nyström et al. (2022, p. 13) note that there were no evident themes identified in terms of data that were connected to ES in esports. This is also highlighted by Flegr and Schmidt (2022, p. 649) who state that there is an apparent lack of research on ES themes regarding esports. Because of the global climate crisis, research focusing on impactful environmental-related efforts must receive support at this point (ERN, 2022). Therefore, it can be concluded that there is a research gap in terms of esports from the perspective of ES. This study responds to the need and seeks to bridge the gap.

1.3 Research question

Based on the background and justification of the study, the research question of this study is formulated as follows:

“What kind of environmental sustainability efforts are made within European-based esports organizations?”

1.4 Aims and objectives of the study

This study’s primary aim is to gain a better understanding of ES efforts made among European-based esports organizations (EBEOs) within the themes identified in the theoretical background through a literature review. Additionally, this study aims to contribute to the academic field of esports and the ES of how esports organizations can contribute to improving the climate with the conditions and limitations existing. Furthermore, the study aims to increase awareness of ES in esports within academia and the esports industry’s stakeholders and communities. The overall ambition is to conduct a study that generates insights into relevant and applicable ES strategies applied by EBEOs which can be utilized by other esports organizations, business entities participating in the esports ecosystem, and any other interested business organizations from different industries to decrease their negative climate impact. The purpose of the study is to find an answer to the research question, achieve the aims, and fulfil the ambition. In order to accomplish these stated intentions, the study seeks to reach the following four desired objectives

related to the subject of matter. These objectives will guide, provide clarity, and create a better understanding of this study for the reader. These objectives are:

- 1. To clarify what esports is, and its ecosystem;**
- 2. To study the concepts of institutional theory, and sustainable development and concepts linked to it as well as discover their connection to esports;**
- 3. To explore environmental sustainability in esports, and its role in it; and**
- 4. To examine esports impact on the environment.**

1.5 Scope and delimitations of the study

The scope of the study will focus on the ES efforts made by one of the primary stakeholders in the esports ecosystem, the esports organizations, which refers to esports teams or clubs that employ esports players to participate in esports competition events on their behalf. The study will specifically examine the ES efforts made among EBEOs within themes which are green facilities and operations, equipment and gear choices, travel and transportation practices, waste reduction and recycling, partnerships and collaborations, projects and initiatives, and communication and reporting. Since the primary stakeholders such as esports organizations, play an essential role in the esports ecosystem, the scope regarding the stakeholder selection can be considered justifiable. Due to the author's location in Finland, only the EBEOs are included in the selection of the case companies and therefore, esports organizations beyond Europe lay outside of the case company scope of the study. Because of the topic and the primary aim to gain a better understanding of the ES efforts made by EBEOs, the scope of the studied companies is companies that have already made ES efforts. The qualitative research method was chosen for this study as it helps to gain a deeper understanding of the research topic. Individual semi-structured interviews were chosen as a qualitative data collection method because the discussion may provide more details of the topic that can be vital in comprehending the topic and it prevents others from disturbing or interfering with the conversation. The qualitative data were analysed utilizing thematic data analysis to gain a more in-depth understanding of the data.

1.6 Definitions of key concepts

Corporate social responsibility: “The responsibility of enterprises for their impact on society.” (EC, 2011, p. 1).

Corporate sustainability: “For the business enterprise, sustainable development means adopting business strategies and activities that meet the needs of enterprise and its stakeholders today while protecting, sustaining and enhancing the human and natural resources that will be needed in the future.” (IISD et al., 1992, p. 1)

Electronic sports: “Esports is an encompassing term for the entities of the competitive video gaming environment including game publishers, athletes, competitive organizations, and third-party vendors who participate in the systems of spectated tournaments, leagues, and events played on personal computer, game consoles, or mobile phones.” (Ross and Fisackerly, 2023, p. 2).

Electronic sports ecosystem: “Human networks that generate productive output on a sustainable basis, and as business ecosystems consisting of interdependent firms that form symbiotic relationships to create and deliver products and services.” (Julkunen et al., 2021, p. 43).

Electronic sports organization: “Similar to professional teams in traditional sports, these esports teams try to get the best players possible and support them with coaches, training possibilities, and an environment in which they can focus solely on becoming better and beating the competition.” (Scholz, 2019, pp. 62-63).

Environmental Corporate Social Responsibility: “The duty to cover the environmental implications of the company’s operations, products, and facilities; eliminate waste and emissions; maximize the efficiency and productivity of its resources; and minimize practices that might adversely affect the enjoyment of the country’s resources by future generations.” (Mazurkiewicz, 2004, p. 7).

Institutional theory: “The institutional theory of organizations puts institutions at the core of the analysis of organizations’ design and conduct. From this point of view, organizations are local instantiations of wider institutions. Institutions, understood as taken-for-granted beliefs, rules, and norms, shape the creation and spreading of organizational forms, design features, and practices. Complying with institutionalized prescriptions is considered a means for gaining legitimacy, decreases uncertainty, and increases intelligibility of organization’s actions and activities.” (Berthod, 2018, p. 1).

Sustainable development: “Development that meets the needs of the present without compromising the ability of future generations to meet their needs.” (WCED, 1987, para. 27).

Traditional sports: “Such as football.” (Scholz and Nothelfer, 2022, p. 20)

1.7 Structure of the study

This study is organized into six chapters. The first chapter’s introduction consists of seven subchapters which consist of the study’s background and justification, the research question, the aims and objectives, scopes and delimitations of the study, definitions of the key concepts, and lastly, the structure of the study. The second chapter is the theoretical background of the study which consists of seven subchapters that explore the concepts of esports, institutional theory, SD, CS, CSR, ES, and esports, and ends with the conceptual framework of the study. The third chapter is the introduction of the methodology of the study which consists of eight subchapters that are the research philosophy, approach, method, strategy, the method of data collection and analysis, reliability, and validity, and finally, the introduction of case companies. The fourth chapter introduces the collected data and the findings made through interviews which is divided into seven subchapters. The fifth chapter is divided into three subchapters consisting of a discussion of the findings, limitations of the study, and future research proposals. The sixth and the last chapter conclude the study. The structure of the study is illustrated in Figure 1.

Chapter 1	1 Introduction 1.1 Background of the study 1.2 Justification for the study 1.3 Research question 1.4 Aims and objectives of the study 1.5 Scope and delimitations of the study 1.6 Definitions of key concepts 1.7 Structure of the study
Chapter 2	2 Theoretical background 2.1 Esports 2.1.1 Definition of esports 2.1.2 Description of esports 2.1.3 Esports ecosystem 2.1.4 Esports market overview 2.2 Institutional theory 2.3 Sustainable development 2.4 Corporate sustainability 2.4.1 Sustainability in esports 2.5 Corporate social responsibility 2.5.1 Corporate social responsibility in esports 2.6 Environmental sustainability and esports 2.6.1 Role of esports in environmental sustainability 2.6.2 Esports impact on the environment 2.7 Conceptual framework of the study
Chapter 3	3 Research methodology 3.1 Research philosophy 3.2 Research approach 3.3 Research method 3.4 Research strategy 3.5 Data collection method 3.6 Data analysis method 3.7 Reliability and validity 3.8 Case companies 3.8.1 HAVU 3.8.2 Ninjas in Pyjamas
Chapter 4	4 Findings 4.1 Green facilities and operations 4.2 Equipment and gear choices 4.3 Travel and transportation practices 4.4 Waste reduction and recycling 4.5 Partnerships and collaborations 4.6 Projects and initiatives 4.7 Communication and reporting
Chapter 5	5 Discussion 5.1 Discussion of the findings 5.2 Limitations 5.3 Future research
Chapter 6	6 Conclusions

Figure 1. Structure of the study (Author's own, 2024).

2 Theoretical background

This chapter provides the relevant theoretical background which then will be utilized in the empirical part of the study. The chapter focuses on presenting the five main topics which are esports, institutional theory, SD, CS, CSR, and ES within esports. Finally, the conceptual framework of the study is described and presented in Figure 8.

2.1 Esports

Esports is still a young phenomenon (EP, 2022; Bosquet and Ertz, 2021, p. 2). Nevertheless, it has been around for a while (Zagala and Strzelecki, 2019, p. 55), about a half-century, with the first video game released in 1967 (Bosquet and Ertz, 2021, p. 2). However, esports has now begun to gain attention (Zagala and Strzelecki (2019, p. 55). As stated by Scholz and Nothelfer (2022), it should be noted that esports is characterized by a high level of heterogeneity and complexity. Even the questions of what esports is or how it is spelt are much-debated topics (p. 10). In terms of spelling esports, Formosa et al. (2022) state that the Associated Press in their style guide in 2017 declared the correct spelling to be “esports” but it has not been automatically adopted globally. For example, the spelling “eSports” has gained widespread use. Nevertheless, “esports” is the most used spelling across various academic disciplines (p. 19). Additionally, according to Scholz and Nothelfer (2022), regarding the heterogeneity, the relatively young esports industry’s rapid development, which is characterized by a lack of industry norms, should be mentioned. This means that these insights may become obsolete in a few years, at least to some extent. Continuous research of the phenomenon in detail is essential for a suitable strategy to promote the healthy development of esports (p. 10).

2.1.1 Definition of esports

There are numerous definitions of esports, as it is discussed and defined not only by academics but also by market analysts and esports associations (Werder, 2022, p. 394). Also, given that a definition fulfils a utility function, esports can be defined in a way that

is most useful for the specific field of study and as a result, it is not unexpected that there are different definitions (Jeong and Youk, 2023, p. 2). Scholz and Nothelfer (2022, p. 12) amplify that even though the definition of esports differs, the three characteristics which are human, digital, and competitive are always essential although they may be termed differently. Even though, there are numerous definitions of the term esports, many of them are still vague mentions Pedraza-Ramirez et al. (2020, p. 322). As stated by Ross and Fisackerly (2023, p. 5), there is an issue in defining what is meant by the term esports. According to Scholz and Nothelfer (2022), forming a definition is exceedingly difficult because modern esports is evolving quickly and highly heterogeneous in many ways, such as the content and gameplay of the video game or the ecosystem of the specific esports title. There is rarely a single, universally valid definition of an esports phenomenon (p. 11). Thus, there is no official and universally acknowledged definition of esports (Block and Haack, 2021, p. 2). Nonetheless, identifying common components among the many definitions aids in understanding the core characteristics of esports as well as the aspects that are unique to a discipline (Jeong and Youk, 2023, p. 2). Also, as stated by Cranmer et al. (2021), it demonstrates the wide range of academic disciplines from where esports research emerges. Furthermore, it highlights how esports definitions have changed throughout time (p. 4). Definitions of esports are listed in Table 1.

Table 1. Definitions of esports (Author’s own, 2023).

Author/s	Definition
Wagner (2006)	“An area of sport activities in which people develop and train mental or physical abilities in the use of information and communication technologies.” (Wagner, 2006).
Seo (2013)	“Competitive computer gaming.” (Seo, 2013, p. 1542).
Jenny, Manning, Keiper, and Olrich (2017)	“Organized video game competitions.” (Jenny et al., 2017, p. 4).
Hamari and Sjöblom (2017)	“A form of sports where the primary aspects of the sports are facilitated by electronic systems; the input of players and teams as well as the output of the esports systems are mediated by human-computer interfaces.” (Hamari and Sjöblom, 2017, p. 213).
Pedraza-Ramirez, Musculus, Raab, and Laborde (2020)	“Esports is the casual or organized competitive activity of playing specific video games that provide professional and/or personal development to the player. This practice is facilitated by electronic systems, either computers, consoles, tablets, or mobile phones, on which teams and individual players practice and compete online

	and/or in local-area-network tournaments at the professional or amateur level. The games are established by ranking systems and competitions and are regulated by official leagues. This structure provides players a sense of being part of a community and facilitates mastering expertise in fine-motor coordination and perceptual-cognitive skills, particularly but not exclusively, at higher levels of performance." (Pedraza-Ramirez et al., 2020, p. 322).
Cranmer, Han, van Gisbergen, and Marnix (2021)	"Involves competitive, organised or technologically enabled activities encompassing varying degrees of physicality, virtuality, and technological immersion." (Cranmer et al., 2021, p. 2).
Ross and Fisackerly (2023)	"Esports is an encompassing term for the entities of the competitive video gaming environment including game publishers, athletes, competitive organizations, and third-party vendors who participate in the systems of spectated tournaments, leagues, and events played on personal computer, game consoles, or mobile phones." (Ross and Fisackerly, 2023, p. 2).

2.1.2 Description of esports

According to the VGEE, esports are leagues, competitive circuits, tournaments, or similar activities in which individuals or teams play video games for amusement, rewards, or money for spectators, either in-person or online. Esports is a part of the video game industry and is occasionally alluded to as competitive gaming, organized play, egaming, or pro gaming (2021, p. 8). The main objective of esports games, like other traditional sports, is to defeat one's opponent to claim victory (Chiu et al., 2021; Chikish et al., 2019). Esports activities are structured and hence, competitions are established by an organizer for a particular game, have specified tournament format and rules, and are participated in by teams or players based on a selection or registration method (VGEE, 2021, p. 8). Esports competitions are frequently organized in leagues and tournaments (Werder, 2022, p. 394; Ludwig et al., 2020) because it makes both individual and team competition easier (Werder, 2022, p. 394; Parshakov et al., 2020). Hence, the above-presented structure distinguishes esports from common video gaming, which may be enjoyed simply as a recreational activity or pleasure (VGEE, 2021, p. 8).

As stated by Ross and Fisackerly (2023), in-person events offer competitive advantages in the form of ping. The delay between a user's input and the server's response is referred to as ping. Though a 50-millisecond ping may seem insignificant to the average

person, it can represent the difference between win and defeat in the professional world. In-person events enable game developers and tournament organizers to provide participants with 0 pings by employing on-site servers or offline LAN lobbies and are frequently regarded as the optimal competition environment. Additionally, all the biggest esports titles operate in-person events. Esports title League of Legends has franchised regional leagues across continents that compete in the studio and regular season championships in regional venues. Also, esports titles such as Counter-Strike: Global Offensive, DotA 2, and many more organize in-person events (p. 3). Picture 1 visualizes what esports looks like in a structured competitive in-person event.



Picture 1. Esports in structured competitive in-person event (Leroux-Parra, 2020).

However, the structured competitive in-person events do not paint the whole picture of esports. As stated by VGEE (2021), competitions can be international or local competitions, in-person at a venue or studio, or entirely online from home or any place with an internet connection. These classifications are not mutually exclusive since certain esports competitions allow both professional and amateur players and also, be able to attract both a local and international audience, as well as blend online and in-person contests (p. 8). Nearly all prestigious esports titles, including Rocket League, Rainbow Six Siege, and many more, use this concept of in-person tournaments supported by online qualifications (Ross and Fisackerly, 2023, p. 3). Moreover, as stated by Scholz and

Nothelfer (2022), esports can be played at hobbyist, amateur, semi-professional, and professional levels. Transitions between the professionalization levels are fluid (p. 26).

Additionally, VGEE (2021) state that in most cases, esports include the production and dissemination of video content, typically via live streaming or broadcast. This video content can be created by the players themselves from their homes or the video content can be part of a high-production multicast comparable with any prestigious entertainment event or it could include everything in between (p. 8). For example, according to Scholz and Nothelfer (2022), amateur and semi-professional players are frequently not only athletes, but also content creators, with contractual obligations that include marketing, public relations, and advertising services. These can but do not have to be tied to playing the specific esports title in which the players compete (p. 26).

Furthermore, to completely employ the functions of the mouse and keyboard, esports games necessitate the control of small muscle groups (Chiu et al., 2021; Chikish et al., 2019). Especially, Scholz and Nothelfer (2022) state that when using a computer mouse, joints, such as the shoulder, elbow, wrist, and fingers can be used. Then again, traditional console controllers rely heavily on finger joints (p. 13). Esports games also necessitate strong and consistent cognitive responses during decision-making and strategic planning (Chiu et al., 2021; Cranmer et al., 2021; Chikish et al., 2019; Hamari and Sjöblom, 2017). As a result, esports players must train to improve their performance according to Chiu et al. (2021, p. 1). To prepare for esports competitions, players participate in highly regimented training activities like as boot camps or frequent training matches known as scrimms (Werder, 2022; Crawford and Gosling, 2009).

Therefore, as stated by Scholz and Nothelfer (2022), essential elements of esports are humans that is the players, digital that is the video game which can be divided into hardware and software elements, and the competitive element. The requirement of human players distinguishes esports from a contest between machines and/or artificial intelligence. Esports necessitates at least two human players to compete against each other.

The second element is the digital element, which relates to video games, and it can be divided into hardware and software (pp. 12-17). Both competing and training activities are mediated by digital technology hardware (Werder, 2022, p. 394). Players can, for example, utilize a computer, a console (Werder, 2022, p. 394), or any other type of electronic system (Werder, 2022; Parshakov et al., 2020), which includes digital platforms (Werder, 2022, p. 394) and head-mounted equipment for augmented or virtual worlds (Werder, 2022; Altimira et al., 2016). On the other hand, Scholz and Nothelfer (2022) state that the software element relates to the actual use of the video game and its creation. The third competitive element, the requirement of “competition” distinguishes esports from non-competitive gaming. The term competition refers to the comparison of performance (pp. 14-16).

Although all esports are video games, not all video games are esports in the same way that anybody can pick up a ball and play a game does not indicate that they have participated in structured competitive sports (Ross and Fisackerly, 2023; Funk et al., 2018). According to VGEE (2021), esports does not have a common nature, each video game is essentially its own specialization, much like individuals are not competing in traditional sports but instead in tennis, football, or athletics. Hence, esports, like traditional sports, have differing levels of professionalism and multiple types of contests, with video game players competing in numerous forms of video games such as the Overwatch League, the League of Legends European Championship, and many other professional or amateur tournaments conducted around the globe (p. 8). However, despite the industry growth and rising academic interest, there is still dispute about what esports genuinely entails according to Formosa et al. (2022, p. 2).

As stated by VGEE (2021), among those who are unfamiliar with the esports industry, the term esports is associated with traditional sports simulation video games but numerous of the most famous esports titles have nothing to do with traditional sports. Video games may be categorized in a variety of ways, like the system on which they are played, for example, console, personal computer, mobile phone, or by the number of players

who can play the game, for example, single-player and multiplayer games. However, probably the most effective method to categorize video games is by genre, and there are various genres of video gaming (p. 12). Esports are typically organized around particular game genres, such as Multiplayer Online Battle Arena (MOBA), Shooters, Real-Time Strategy (RTS), Digital Collectible Card Games (DCCG), Player Versus Player (PvP) or Sports Games hence, generating multiple sub-cultures within esports, just as “traditional” sports do (Hamari and Sjöblom, 2017, p. 212). While there are numerous of several types of esports titles (Collis, 2020, p. 2), just a few video games or franchises have established worldwide competitive circuits and audiences (VGEE, 2021, p. 12). All the genres addressed in Table 2, according to VGEE (2021, pp. 12-13), are some of the most popular genres and titles as well as franchises in esports that have many titles and thriving esports communities and competitions in various regions of the globe.

Table 2. Most popular genres in esports (Author’s own, 2023).

Genre	Description
Auto Battlers:	According to VGEE (2021), auto battlers are strategy games where players assemble and place competing armies in a chess-like arrangement, then let them fight without any other input from the players. Some of the most popular auto battler’s games are, for example, Dota Underlords, and Teamfight Tactics (p. 13).
Battle Royale (BR):	BR games are comparable to shooter games in that they involve chaotic everyone-for-themselves battles from either an FPS or third-person perspective (Collis, 2020, p. 2), in which a huge number of players or teams battle to see who can be the last one standing (VGEE, 2021, p. 12), throughout a large-scale, but continually shrinking battle arena (Collis, 2020, p. 2). Some of the most popular BR games are, for example, Apex Legends, and PlayerUnknown’s Battlegrounds (VGEE, 2021, p. 12).
Digital Collectible Card Games (DCCG):	A form of online card game that involves developing a card deck strategically (VGEE, 2021; Collis, 2020), in which a series of virtual objects which are typically cards are played on a digital board (Collis, 2020, p. 2). Furthermore, each object has unique abilities and costs, necessitating careful planning and execution to maximize its effectiveness (Collis, 2020, p. 2). Some of the most popular DCCG games are, for example, Hearthstone, and Legends of Runeterra (VGEE, 2021, p. 13).
Fighting Games:	Fighting games center on two players fighting using martial arts in a 2D or 3D setting (Collis, 2020, p. 2), in a ring-like environment (VGEE, 2021, p. 13). As said by Collis (2020) fighting games are modern versions of the popular arcade game Street Fighter. Fighting games have altered the least over the beginnings of gaming (p. 2). Some of the most popular fighting games are, for example, Brawlhalla, Mortal Kombat, Street Fighter, Tekken, and Virtua Fighter (VGEE, 2021, p. 13).

Multiplayer Online Battle Arena (MOBA):	MOBA games are team-based strategy games (VGEE, 2021, p. 12), which generally include teams of five players (Collis, 2020, p.2), where each player manages a single character (VGEE, 2021; Collis, 2020), from a 3D isometric view (Collis, 2020, p. 2), and cautiously executing their unique skills and abilities (VGEE, 2021; Collis, 2020), to eliminate the opposing forces and destroy the enemy team's fortified base (Collis, 2020, p. 2). Some of the most popular MOBA games are, for example, Arena of Valor, Brawl Stars, Dota 2, League of Legends, and Smite (VGEE, 2021, p. 12).
Racing Games:	VGEE (2021) state that racing games are motorsports simulation video games. Some of the most popular racing games are, for example, Asseto Corsa, DiRT, F1, Forza Motorsports, Gran Turismo, iRacing, MotoGP, and TrackMania (p. 13).
Real-Time Strategy (RTS):	RTS games are strategy games typically one versus one (VGEE, 2021, p. 13), an army-management simulator that is played from the top-down and 3D isometric perspective (Collis, 2020, p. 42). Collis (2020) states that within the RTS, a player commands a single faction, which dictates the production buildings that can be built and the military units they recruit. The player then controls their forces to gather resources, build new structures, and train new warriors, all while competing for control of the map's limited resources (p. 42). Some of the most popular RTS games are, for example, Starcraft 2 and Warcraft 3: Reforged (VGEE, 2021, p. 13).
Rhythm and Dance Games:	According to VGEE (2021), rhythm and dance games are Music-themed video games that test the player's sense of rhythm. They usually concentrate on dancing or simulated musical instrument playing. Some of the most popular rhythm and dance games are, for example, Dance Dance Revolution and Just Dance (p. 13).
Shooters:	Shooter games are gun-based combat games (VGEE, 2021; Collis, 2020) either from a first-person (FPS) or third-person perspective in which the player sees the game character from behind and slightly above (VGEE, 2021, p. 12). As stated by Collis (2020), shooter games emphasize accuracy and reflexes. Shooter games are modern versions of classic games like Doom and Wolfenstein, but significantly more difficult to play due to their fast pace, 360-degree aiming, and team tactics (p. 2). Some of the most popular shooter games are, for example, Call of Duty, Counter-Strike, Overwatch, Rainbow Six Siege, and Valorant (VGEE, 2021, p. 12).
Sports Games:	As stated by VGEE (2021), sports games are sports simulation video games. Some of the most popular sports games are, for example, FIFA, and NBA 2K (p. 13).

2.1.3 Esports ecosystem

According to Scholz (2020), the modern esports industry began in the 1990s with the emergence of broadband internet and has just lately matured into the next massive thing in media and entertainment. The esports ecosystem appeared from the idea that people could play video games against anyone in the world via the internet. The phenomenon began as a worldwide and online phenomenon and quickly expanded to local and offline markets. This development differentiates esports as a distinctive and innovative

phenomenon, as it is one of the first industry sectors to face the challenging task of transitioning from global to local, and from online to offline (pp. 2-3). The Esports industry arose from the merger of three entities which are sports, media, and entertainment thus, it encompasses a wide range of industries (Wong and Meng-Lewis, 2023, p. 944).

According to Scholz and Nothelfer (2022), though the initial scenario and crucial functions within various esports ecosystems are relatively similar, the structures are highly variable in terms of the specifics, which can be rather complex. Therefore, esports should not be regarded as an individual and homogeneous ecosystem. Numerous esports genres like in traditional sports, differentiate fundamentally in their contents, how they are played, and the overall structure of their ecosystems (p. 23). Hence, as stated by Julkunen et al. (2021), the ecosystem of the esports phenomena is complicated, and each actor has their objectives and roles in esports. The esports industry includes a wide range of business organizations, institutions, and individuals. Along with the professional players who compete in video games, there are esports organizations that these professional players represent, game developer organizations that own the right to their games, and tournament and league organizers (p. 40). The typical esports ecosystem is illustrated in Figure 2.

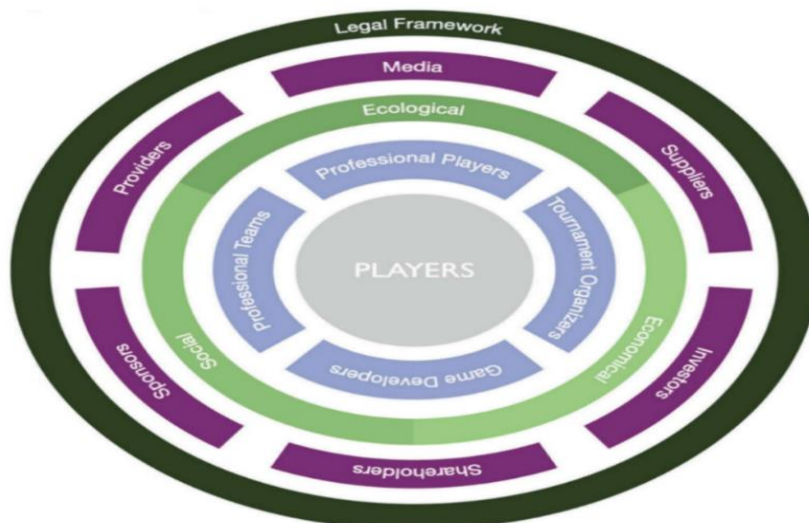


Figure 2. Categorization of the esports ecosystem (Scholz, 2020, p. 5).

Nevertheless, esports as an ecosystem is constantly evolving (Wong and Meng-Lewis, 2023; Scholz and Nothelfer, 2022). According to Scholz (2020), the esports industry and its different stakeholders can be viewed as an intertwined network. The esports industry is operated by innovations and technologies, but it additionally operates by the interconnection of creative people attempting to fully capitalize on technologies. Despite the esports industry's constantly evolving characteristics and its complex nature, the understanding of running a network eventually generating revenue from the audience/player continues to be an essential part of any business model (p. 4). The primary stakeholders and the entire esports ecosystem centers around the players (Scholz and Nothelfer, 2022; Scholz, 2020; Carrillo-Vera and Aguado, 2019), who are followed by the target audience and the customers (Scholz, 2020, pp. 6-7). As stated by Scholz (2020), esports organizations, game developers, professional players, and tournament organizers are primary stakeholders in the esports ecosystem. There are over 400 competitively playable game titles. This network of primary stakeholders is also necessary to build up the amateur and grassroots level, and every esports evolves differently, primarily based on the game as well as the strategic involvement of the game developer. This intertwined business-model network of primary stakeholders determines the sustainability of the esports-devoted sub-ecosystems. Moreover, secondary stakeholders include such as media, investors, shareholders, sponsors, suppliers, and providers (p. 7). Only the primary stakeholders possess an indispensable role in the esports ecosystem, and hence, without the primary stakeholders, the esports industry would fail (Julkunen et al., 2021, p. 46). By mapping out the primary stakeholders in the esports ecosystem, can the operation of the esports ecosystem be elucidated (Wong and Meng-Lewis, 2023, p. 944). The primary and secondary stakeholders are further elaborated in Table 3.

Table 3. Esports stakeholders (Author's own, 2023).

Stakeholder	Description
Primary stakeholder: Esports organizations	According to VGEE (2021, p. 27), esports teams are also known as team organizations or esports organizations. Several professional esports teams currently compete in esports events and tournaments throughout the world (p. 27). As stated by Scholz (2019, p. 62), esports organizations are important stakeholders in the

	<p>esports industry, and these teams are required to establish sustainable conditions for high-level competitions. Players frequently organize themselves as individual or team players in esports organizations that can be functionally equated to traditional sports organizations (Scholz and Nothelfer, 2022, p. 27). However, an esports organization does not adhere to the usual definition of a sports organization in the sense that each team specializes in a single sport because, in esports, organizations may participate in multiple games at the same time (Julkunen et al., 2021; VGEE, 2021). Professional esports teams have established complicated organizational structures that utilize highly technical personnel such as coaches, analysts, scouts, dieticians, physiotherapists, and psychologists (VGEE, 2021, p. 27). Thus, as stated by Scholz (2019), they provide training opportunities and a setting where professional players can concentrate exclusively on improving and defeating the competition. These esports organizations, like professional organizations in traditional sports, attempt to recruit the best players. In general, professional esports organizations aim to take care of their players in a growing manner, especially since these players are the foundation of any revenue stream for professional organizations and the products they sell to the public. Hence, the core business is to find and support players who will win tournaments (pp. 62-70). Nonetheless, professional esports organizations frequently seek alternative sources of finance to operate, typically from outside funding or by expanding their business model by including media activities (Scholz and Nothelfer, 2022, p. 27). Numerous professional esports organizations have greatly improved their professionalism in recent years, and they are now able to compete with some traditional sports organizations (Scholz, 2019, p. 63). Since social media has an enormous impact on all societies today, professional esports organizations' involvement in the esports ecosystem will grow in the near future (Julkunen et al., 2021, p. 50).</p>
<p>Primary Stakeholder: Game developers</p>	<p>As stated by Scholz (2019, p. 49), the game developers are likely to be the most crucial stakeholders because they create and own the esports titles that everyone is playing. Hence, they own intellectual property rights and therefore they have inherent power in the ecosystem (Völkel, 2021; VGEE, 2021). Additionally, game developers produce and sell esports products as well as organize esports tournaments (Julkunen et al., 2021, p. 48). Several esports titles are constantly updated, and new content is distributed frequently (Scholz, 2019, p. 50). However, games have a limited lifespan and cannot be guaranteed to appear in a competitive setting indefinitely (Völkel, 2021; Jalonon, 2019). Game developer's crucial role demonstrates an essential distinction between esports and traditional sports (Julkunen et al., 2021; VGEE, 2021), nobody owns for example, football (VGEE, 2021, p. 9). Thus, without video games, there would be no esports (Julkunen et al., 2021; VGEE, 2021). Hence, according to Julkunen et al. (2021), game developers act as a person who controls access to the video games that are played in tournaments and streamed. Game developers play a critical part in game and gameplay decision-making, which is the most vital role in the esports ecosystem. Available literature has revealed that game developers have provided a continuous role of regeneration through their esports businesses, which has proven to be critical to the esports industry's success. The esports ecosystem is dependent on game developers and</p>

	<p>would perish without them. Furthermore, game developers are the most powerful stakeholders in the esports ecosystem, with connections to every other stakeholder (pp. 48-49).</p>
<p>Primary Stakeholder: Professional players</p>	<p>According to Scholz (2019, p. 67), professional players are arguably perhaps the most essential stakeholders in the esports industry since, (Wong and Meng-Lewis, 2023, p. 953) esports tournaments and league competitions rely on and are produced for professional players. Scholz and Nothelfer (2022, p. 26) state that an esports athlete's primary activity is to play competitively in video games. On the other hand, the fundamental motivation varies such as a hobby, training and competition, public relations efforts, and content creation, and it might be cumulative (Scholz and Nothelfer, 2022; VGEE, 2021). The players can be classified to operate in one of four levels of professionalization that are hobbyists, amateurs, semi-professionals, and professionals, with the transition between the classifications being fluid (Scholz and Nothelfer, 2022; VGEE, 2021). Furthermore, according to Scholz and Nothelfer (2022), the professional player's precise nature of the activity, and hence its legal classification is mostly dictated by its level of professionalization. The competitive mode or the game mode of the esports title, as well as the competition conditions specified by the tournament organizer, determine the specifics of the activity of the professional players. Also, esports athletes do not always play only one esports title thus, players may occasionally simply transfer to a new esports title, especially within a specific genre (pp. 26-27). Julkunen et al (2021, p. 50) assert that esports players are gaining a more prominent position not just in sports entertainment, but also in business.</p>
<p>Primary Stakeholder: Tournament organizers</p>	<p>As stated by Scholz (2019), tournament organizers serve an important and distinct role in the esports ecosystem. Tournament organizers bring variety to the esports ecosystem, especially in an era of increasingly centralized league structures. Tournament organizers have served as an influential force in the history of esports, especially as game developers have frequently ignored their esports titles (pp. 59-60). Tournament organizers provide a channel for different actors and stakeholders to interact and do business (Julkunen et al., 2021, p. 51). They link game developers with their specific audiences while also working to improve the relationship between these two (Scholz, 2019, p. 60). According to Scholz and Nothelfer (2022), in traditional sports, tournament organizers have been sports federations, while, in esports, a dualism exists that is based on the game developers' legal power and strategy, as they possess the exclusive and unrestricted rights to exploitation, utilization, and commercialization of the video game. The game developer either organizes the competition themselves or allows a third-party organization to arrange it via licensing or unpaid toleration (p. 23). Although several of the world's most prestigious esports tournaments and leagues are run by game developers, there is a worldwide ecosystem of third-party event organizers (VGEE, 2021; Colaco et al., 2019). Tournament organizers create professional as well amateur video game contests, adhering to the specifications and regulations set by the game developer over each video game, having a legally binding agreement, or having obtained from the game developer any necessary licenses or permissions needed to organize or broadcast each contest (VGEE, 2021, p. 26). Also, most tournament organizers</p>

	manage broadcasting (Scholz and Nothelfer, 2022, p. 23). Moreover, many tournament organizers have become exceedingly professional and efficient throughout the years (Scholz, 2019, p. 60).
<p>Secondary stakeholders:</p> <p>Media, investors, shareholders, sponsors, suppliers, and providers</p>	<p>Secondary stakeholders include such as media, investors, shareholders, sponsors, suppliers, and providers are additionally part of the esports ecosystem and have an impact on the development of the esports ecosystem (Scholz, 2020, p. 7). Media encompasses several distinct categories that concentrate on fan engagement (Colaco et al., 2019, p. 17). For investors and shareholders, their main objective is to profit from esports (Scholz, 2019, p. 84). The sponsors are companies and/or individuals who invest or otherwise sponsor events, teams, players, or a combination of these (Julkunen et al., 2021, p. 52). As stated by Scholz (2019), suppliers and providers can be regarded as companies or individuals who can be categorized as infrastructure providers that are critical in reaching consumers anywhere, they are and anytime they want to access esports content. Service providers who enhance the esports ecosystem by providing crucial services and lastly, the hardware providers who supply consumer electronics. Secondary stakeholders do not contribute directly to the value chain network but have a significant impact on the esports industry via investments or pressure for change to a specific direction (pp. 45-70).</p>

2.1.4 Esports market overview

Since esports is fast growing and developing industry, it is necessary to briefly provide the most recent market overview in terms of revenue and audience. Additionally, it contributes to identifying and perceiving esports impact on society. Various businesses and educational institutions have been collecting data on gaming and esports for several years, but a cohesive market analysis has proven challenging for a variety of reasons (Scholz and Nothelfer, 2022; Ahn et al., 2020). For instance, as stated by Scholz and Nothelfer (2022), trustworthy information is often absent, as many stakeholders in the esports industry keep their data strictly confidential for competitive reasons and data availability varies substantially between countries. As a result, many figures must be estimated and each institution collecting data in these domains does so based on its own definition of esports and the subject of interest. Some definitions are narrow and solely apply to the events side of the industry, while others are broader. Also, some institutions exclude some stakeholders from their calculations and some view esports as a whole, while others evaluate individual esports titles (p. 29).

According to Scholz and Nothelfer (2022), some institutions describe an esports athlete as someone who plays professionally, while others define it as someone who plays competitively. The emphasis is frequently on the audience as an enthusiast, occasional viewers, and fans. However, what constitutes an enthusiast, an occasional viewer, or a fan differs from one surveying organization to the next (p. 30). The audience drives the esports economy (VGEE, 2021, p. 39). Newzoo (2022) estimated that the worldwide esports audience reached 532 million in 2022, up 8.7% year on year. The total audience will surpass 640 million in 2025 (p. 31), as illustrated in Figure 3.

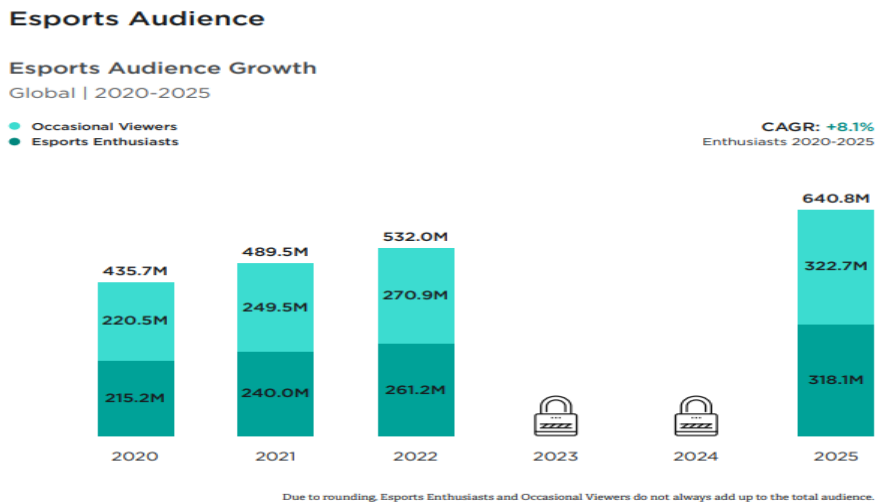


Figure 3. Esports audience growth (Newzoo, 2022, p. 31).

Newzoo (2022) predicted that esports were on course to generate about 1.38 billion dollars in revenue by the end of 2022, up from 1.11 billion dollars in 2021 which is a +16.4% year-on-year increase. Also, by 2025, global revenues will have surpassed 1.86 billion dollars, showing a compound annual growth rate of +13.4% (p. 34), as illustrated in Figure 4. However, Ahn et al. (2020) estimated the esports industry market size at 24.9 billion dollars for 2019 which included the revenue equation for each major stakeholder of the esports industry leading to a more precise estimate of the size of the esports market. Esports revenues are controlled by game publishers, who are forecast to account for 64% of the esports industry's revenue (p. 1). According to Scholz and Nothelfer (2022), the dilemma is complicated by the fact that esports, as a part of the game industry, cannot

be evaluated in isolation. Even publisher revenues from esports cannot be easily separated from other non-competitive gaming revenue of a publisher. Also, some organizations exclude some stakeholders from their calculations and other revenue streams.

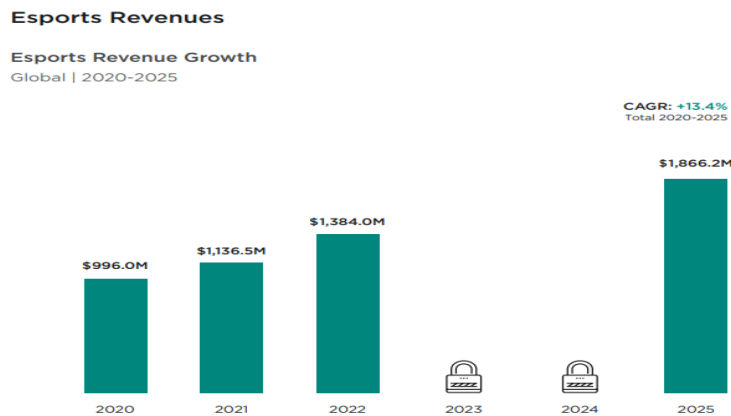


Figure 4. Esports revenue growth global / 2020-2025 (Newzoo, 2022, p. 34).

2.2 Institutional theory

According to Subbady (2013), an approach to understanding organizations and management practices as the results of social rather than economic constraints is referred to as institutional theory. Because of its capacity to explain organizational behaviours that contradict economic rationality, it has become a prominent perspective within management theory (p. 380). For instance, the literature on sports management has utilized institutional theory in a various context such as collegiate athletics, professional sports leagues, and national-level sports organizations (McCullough et al., 2015, p. 1044). Also, according to Subbady (2013, p. 380), it has been used to explain, for example, why some managerial innovations are embraced or spread throughout organizations despite their incapacity to improve organizational efficiency or effectiveness. Berthod (2018, p. 1) defines the institutional theory as follows:

“The institutional theory of organizations puts institutions at the core of the analysis of organizations’ design and conduct. From this point of view, organizations are local instantiations of wider institutions. Institutions, understood as taken-for-granted beliefs,

rules, and norms, shape the creation and spreading of organizational forms, design features, and practices. Complying with institutionalized prescriptions is considered a means for gaining legitimacy, decreases uncertainty, and increases intelligibility of organization's actions and activities." (Berthod, 2018, p. 1).

As stated by Subbady (2013, p. 380), according to institutional theory, the argument is based on the core premise that many organizational practices are often more dependent on social constraints for conformity and legitimacy than on technical pressures for economic performance. Internal and external stakeholders constantly analyse organizational personnel, apply pressure, and urge them to justify their actions, decisions, and strategies in order to establish their legitimacy (McCullough et al., 2015, p. 1045). Subbady (2013) also state that institutional theory continues to have a major influence on organizational theory. It has been described as the dominant method of understanding organizations. For instance, in the early twenty-first century, business managers were more involved with issues of CSR, which can be considered as a means for managers to engage directly with the institutional environment (p. 383). Esports organizations can be considered institutions within the context of the gaming industry. They often have a formal structure, management teams, financial operations, and competitive agendas similar to traditional sports organizations. Furthermore, they play a significant role in shaping the competitive landscape of esports and can have a strong influence on gaming culture and communities.

2.3 Sustainable development

Sustainable development (SD) can be regarded as a normative societal concept (Steurer et al., 2005, p. 275), and it outlines desirable development paths of society (Hahn et al., 2015, p. 298). The terms SD and sustainability are frequently used interchangeably (Ruggerio, 2021; Isaksson, 2019), even in the academic and scientific areas (Ruggerio, 2021, p. 2), which is also done in this study. According to Mensah (2019), SD is a fundamental concept in global development policy and agenda. It provides a mechanism for society to interact with the environment without jeopardizing future resource availability.

Therefore, it is a development paradigm and a concept that calls for enhancing living standards without endangering the earth's ecosystems or producing environmental problems, which can lead to issues such as climate change. There are three fundamental issues of SD which are economic growth, environmental protection, and social equality. Thus, the concept of SD is based on three conceptual pillars which are economic sustainability, social sustainability, and ES. Economic sustainability involves a production structure that meets current consumption levels without jeopardizing future demands. Social sustainability includes concepts such as equity, empowerment, accessibility, participation, and institutional stability. ES is associated with the natural environment and how it can remain productive and resilient to support human life (pp. 6-10).

As stated by Mensah (2019), historically, the concept of SD originated from the subject of economics. The question of whether the Earth's limited natural resources could support the continually rising human population gained prominence in the early 1800s (p. 6). Ruggiero (2021) states that several authors indicate that the concept of SD gained visibility in the early 1970s when various works warned about the need to set limitations to the Western development model (p. 2). The concept of SD became more visible, in the 1980s, as an attempt to fill in a space between environmental worries about the more obvious ecological repercussions of human activities and socio-political concerns about human development challenges (Robinson, 2004, p. 370). According to Akao (2022), the International Union for Conservation of Nature and Natural Resources (IUCN) popularized the concept of SD in its World Conservation Strategy report in 1980. The report emphasized ecosystem conservation and the sustainable use of living resources. The United Nations Brundtland Commission, formerly known as the World Commission on Environment and Development (WCED), was founded in 1983 to build a worldwide agenda to foster international collaboration toward sustainable development, extending this concept by emphasizing the well-being of future generations (p. 124). Mensah (2019) states that WCED continued its campaign for SD, culminating in the publication of the Brundtland Report in 1987. The concept of the needs of the world's poor should be given precedence and the idea of limitations imposed by the state of technology and social

organization on the environment's ability to meet present and future needs were the two key issues in the report (p. 7). The concept of SD has evolved into a reference for environmental scientific research and has taken on a paradigm aspect for development since it appeared in the WCED Report 1987 (Ruggerio, 2021, p. 2). According to Akao (2022), among the various definitions of SD, the WCED definition is the most widely used (p. 124):

“Development that meets the needs of the present without compromising the ability of future generations to meet their needs.” (WCED, 1987, para. 27).

According to Ruggerio (2021), most of the world community interpreted the statement of WCED (1987) as the new development paradigm. Nevertheless, various authors have exposed several problems with this definition. For instance, authors have expressed concerns about the lack of precision in the definition of SD which includes the physical laws of nature (p. 3). One of the most noticeable aspects of the SD definition is that it signifies different things to different people and organizations (Drexhage and Murphy, 2010; Robinson, 2004). Nonetheless, there is no general agreement on the definition of SD (Robert et al., 2005, p. 20). As stated by Mensah (2019), the WCED report engendered the United Nations Conference Environment on Environment and Development (UNCED), also known as the Rio Earth Summit, in 1992. The report stated that SD should become a priority on the international community's agenda and the report continued to recommend that national strategies be designed and developed to address the economic, social, and environmental pillars of SD (p. 7). According to Ruggerio (2021), since the Rio Earth Summit in 1992, the concept has become powerful and has been included in various countries' international treaties, national constitutions, and laws globally. Academic scholars from various fields have used SD in several issues and it has become the conceptual base of theoretical approaches (p. 2).

According to Connelly (2007), the image of three overlapping circles, each representing a concern related to the economy, society, and the environment, has probably been the

most prominent and influential manner of representing and introducing the concept of SD. SD is found in the three-fold overlap at the center, in which it combines the three areas of concern. This representation, which seems to have been established in the early to mid-1990s by the International Centre for Local Environmental Initiatives (ICLEI), has proven to be both fruitful and long-lived (p. 263). The SD is illustrated in Figure 5.

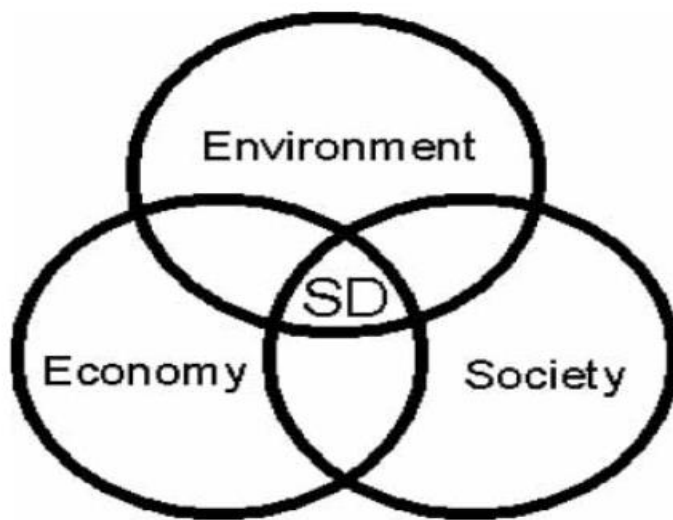


Figure 5. The three circles of sustainable development (Connelly, 2007, p. 264).

According to Robinson (2004, p. 373), several individuals in the environmental community expressed doubts about the SD from its start. One of the concerns for environmentalists and researchers was the quickness with which the rhetoric of SD was adopted by governments and industries and applied in ways that appeared to many to move in the opposite direction (Robinson, 2004, p. 373). According to Dernbach and Cheever (2015), also the concerns about the gravity of escalating climate damage, sustainability is simply too late to be helpful. Nonetheless, these are not the only criticisms that SD faces (p. 267). While some researchers argue that the concept of sustainability has lost some of its meaning and that its ambiguity may impede its use in research, the traditional sustainability perspective allows for an analysis of both the current and potential future state of an emerging industry such as esports (Nyström et al., 2022, p. 13).

2.4 Corporate sustainability

According to Hahn et al. (2015), a long-standing appeal has been made for the application of the SD system-level concept to the organizational level via the concept of corporate sustainability (CS). Most academics appear to believe that CS necessitates businesses to address interrelated and interdependent economic, environmental, and social challenges at distinct levels (p. 297). Concisely, CS is the business version of SD (Behringer and Szegedi, 2016, p. 22). Nonetheless, esports is a diverse social phenomenon, but it is frequently viewed as a business or economic industry (Nyström et al., 2022, p. 3). Business has a key role in managing the impacts of population on ecosystems, ecosystem resources, food security, and sustainable economies to reduce the load that society places on the environment (Montiel and Delgado-Ceballos, 2014, p. 113). Because of the key role of business, the concept of CS has emerged. (Hahn et al., 2015, p. 298,).

Steurer et al (2005) state that CS is a business guiding model that addresses an enterprise's economic, social, and environmental performance. SD implies that business enterprises implement business strategies and activities that fulfil the demands of the enterprise and its stakeholders now while conserving, sustaining, and enhancing the human and natural resources that will be required in the future (p. 274). CS embraces the idea that business enterprises face a variety of demands to fulfil societal-level objectives, all of which appear desirable and acceptable in isolation but are inexorably linked and internally interdependent (Hahn et al., 2015, p. 298). According to Steurer et al. (2005, p. 274), the IISD et al. business-level definition of SD in 1992 is often referred to as CS. Nevertheless, several definitions of CS have been used in various research (Montiel and Delgado-Ceballos, 2014, p. 119). There is no universally accepted definition of CS (Hahn et al., 2015, p. 298). IISD et al (2001, p. 1) define CS as follows:

“For the business enterprise, sustainable development means adopting business strategies and activities that meet the needs of enterprise and its stakeholders today while protecting, sustaining and enhancing the human and natural resources that will be needed in the future.” (IISD, WBCSD, Deloitte and Touche, 2001, p. 1)

According to Epstein et al. (2014), the scope of corporate responsibility is shifting. The question of whether business enterprises should consider their sustainability or the effects of their activities on their stakeholders is no longer debatable. The challenge has shifted from “whether” to “how” to incorporate the corporate social, environmental, and economic consequences of sustainability into daily management decisions. It is now about how to be more socially responsible or sustainable and how to effectively engage business stakeholders. It is about the specific activities that managers may execute to effectively cope with the dilemma of attempting to increase both organizational sustainability and financial performance at the same time. This involves concerns about CSR for business enterprises (p. 23). Business enterprises are increasingly considering CS conditions to be essential components within their portfolios of economic activities, either selectively handled through CSR or integrated into comprehensive strategic considerations (Gerner, 2019, p. 2), as illustrated in Figure 6.

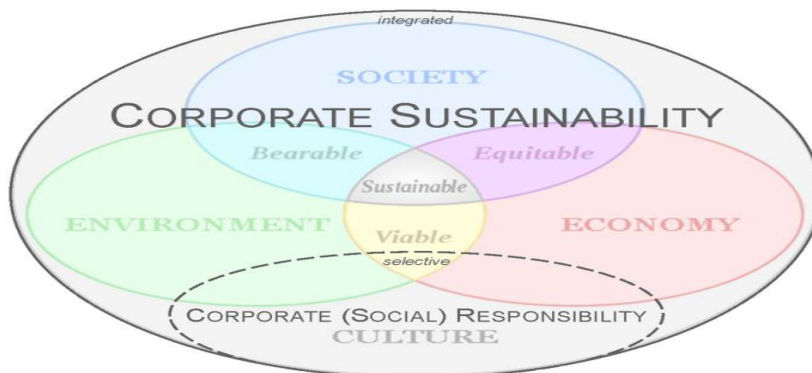


Figure 6. Corporate (Social) Responsibility subsumed under Corporate Sustainability (Gerner, 2019, p. 2).

As stated by Epstein et al. (2014), businesses are increasingly becoming more sensitive to social, environmental, and economic challenges, as well as stakeholder concerns, and are striving to be better corporate citizens. The crucial relevance of managing and controlling the business's social, environmental, and economic performance has become increasingly clear to businesses. When businesses fail to address the societal repercussions of their activity, the results are typically severe. Many business's reputations have suffered because of negative sustainability implications (p. 24).

2.4.1 Sustainability in esports

Sustainability is a general challenge in the modern age, and it is also true for esports (Scholz and Nothelfer, 2022, p. 9). Esports sheds light on the issue of sustainability in a digital society (Scholz and Nothelfer, 2022; Nyström et al., 2022). The SD is becoming crucial for all organizations (Isaksson, 2019, p. 1173). Today, sustainability is expected of all organizations, and it is also largely regarded as an ethical manner to conduct business (Florin-Samuelsson et al., 2022, p. 83). Therefore, we can expect sustainable and responsible actions from esports organizations as well (Kaillinen-Kuisma and Auvinen, 2022, p. 48). According to Scholz and Nothelfer (2022), SD implies that esports organizations need to utilize sustainable business models and integrate social and environmental elements into the ecosystem. However, sustainability factors do not appear to be prioritized in the esports industry in the current rapid growth that the esports industry is experiencing (p. 46). Nonetheless, we may consider this as a possibility for learning how to accomplish environmental, social, and economic sustainability effectively in esports (Scholz and Nothelfer, 2022; Nyström et al., 2022).

A current topical issue in the esports industry regards its sustainability (Nyström et al., 2022; Scholz, 2019), and it has been a crucial element of corporate strategies and business models within the esports industry (Nyström et al., 2022; Ashton, 2019). According to Nyström et al. (2022), sustainability will become more important for all stakeholders as esports grows, even though several actors in the esports ecosystem lack sustainability. Historically, sustainability in esports has been focused on industry stability and corporate growth. The sustainability concepts in esports, economic sustainability refers to the more efficient use of resources in the pursuit of economic progress, while ES refers to the preservation and enhancement of natural support systems and services for current and future generations. Social sustainability refers to individuals' physical well-being and basic needs, as well as quality of life and equity (p. 3). A simultaneous focus on economic, social, and environmental pillars is the basis for SD (Völkel, 2021, p. 12). As illustrated by the model of sustainability, all the dimensions benefit from and support one another (Nyström et al., 2022, p. 3). Sustainability concepts in esports are illustrated in Table 4.

Table 4. Sustainability concepts in esports (Nyström et al., 2022, p. 3).

Sustainability concept	Definition
Economic sustainability	The effective use of resources concerning economic growth.
Social sustainability	The physical well-being and basic needs of individuals, quality of life, and equity.
Environmental sustainability	The maintenance and improvement of natural support systems and services for current and future generations of living creatures.
Esports sustainability	The ability of esports to survive or persist.

As stated by McCauley (2022), because of its inventive, digital, and widespread character, esports are increasingly influencing the realms of sports, technology, business, and culture. Nonetheless, it is still dealing with a fragmented ecosystem powered by a plethora of passionate and driven individuals all seeking a sustainable future. Therefore, it is more crucial than ever that esports create a future based on the three main pillars of SD as it becomes a more widespread phenomenon with a younger audience (p. 4). According to Nyström et al. (2022), if esports are to become sustainable, both practitioners and researchers must put effort into addressing these mentioned concepts. The ability of esports to survive and thrive is largely determined by how well industry stakeholders address these concepts (pp. 2-12). However, a potential conflict of interest between the game developer and other stakeholders could jeopardize the esports industry's sustainability (Flegr and Schmidt, 2022, p. 638).

2.5 Corporate social responsibility

Businesses are increasingly considering CS conditions through CSR (Gerner, 2019, p. 2). CSR is a voluntary managerial approach to SD (Behringer and Szegedi, 2016; Steurer et al., 2005). CSR as a business model, fosters business contributions to SD, that is, it establishes a balance between economic interests, environmental needs, and social expectations by incorporating the principle of SD into the business strategy (Behringer and Szegedi, 2016, pp. 21-22). According to Kanji and Chopra (2010), CSR is an essential component of a business's operations in which it voluntarily contributes to society in the form

of economic, environmental, ethical, and social investments. Hence, the CSR means managing a business in a socially responsible manner in which the business:

- Pursues ethical employment and labour practices by enhancing workplaces;
- Is involved in the development of local communities and communicates with affected communities on the consequences of its actions and products;
- Invests in the development of social infrastructure;
- Contributes to a healthier natural environment as well as its protection and sustainability; and
- Contributes to overall economic development through corporate governance (p. 120).

As stated by Kanji and Chopra (2010), organizations then should measure these components to have a positive and proper impact on both society and the organization. Proper CSR refers to a corporation maximizing its positive effect on society while simultaneously maximizing its profitability. In a nutshell, CSR is about corporations making a positive contribution and providing back to society (p. 120). CSR is illustrated in Figure 7.



Figure 7. Cyclical matrix of corporate social responsibility (Kanji and Chopra, 2010, p. 121).

EC (2011) proposed a simpler definition of CSR in 2011 and outlined what a company should do to meet that responsibility. When CSR is completely incorporated into company strategy, it is most likely to contribute to the business's long-term success (pp. 1-3). EC (2011, p. 1) defines CSR as follows:

“The responsibility of enterprises for their impact on society.” (EC, 2011, p. 1).

Nevertheless, according to Sheehy (2015, p. 625), CSR is both complex and difficult to define. Many scholars and practitioners note that understanding the meaning of CSR is difficult since the concept can easily be understood as covering practically everyone and everything, and because the concept keeps evolving, primarily in response to stakeholder claims (Steurer et al., 2005, p. 274). One confounding aspect of the concept of CSR is that it signifies different things to different people (Lyon and Maxwell, 2007, p. 3). While the concept of CSR is frequently used in management theory and practice, a universally recognized definition remains elusive (Preuss, 2023, p. 5) thus, there is no widely accepted definition of CSR (Behringer and Szegedi, 2016; Watts and Holme, 1999).

2.5.1 Corporate social responsibility in esports

Razer (2023), a gaming hardware provider in the esports industry conducts quarterly CSR activities to help the global fight against climate change. In addition, Razer has launched a global donation matching scheme to encourage employee donations to environmental initiatives (p. 25). Also, esports event organizer the ESL FACEIT Group (EFG) states that CSR is a vital focus area for them. The EFG has launched GGFORALL, a long-term program to inspire improvement through esports and gaming, to maximize their efforts. GGFORALL works across five segments which are universal participation, eliminating toxicity, mental and physical well-being, environmental impact, and fair play for all (2023). However, according to Hayday et al. (2022), CSR agendas are in their initial stages in esports business models. Kelly et al. (2022) state that the esports industry has the potential to adopt a CSR policy to generate positive effects. For example, influence the conduct of others, including spectators and commercial partners, as the football club Manchester

United attempts to accomplish through its own CSR policy (p. 160), or as football club Inter Milan (2023). Moreover, Saiz-Alvares et al. (2021, p. 14) emphasize the esports industry's CSR potential and that increased CSR policies in the esports industry could produce social change and fight poverty in the most economically disadvantaged locations, especially during times of upheaval due to the epidemic.

2.6 Environmental sustainability and esports

According to Mensah (2019), the ES concept is associated with the natural environment and how it can remain productive and resilient to support human life. ES is related to ecosystem integrity and the natural environment's carrying capacity. It necessitates the use of nature's resources as a source of economic inputs as well as a waste sink in a sustainable manner. Moreover, the implication is that natural resources must be collected no more rapidly than they can replenished, and waste must be emitted no quicker than it can be assimilated by the natural environment (p. 10). As stated by Nyström et al. (2022), the ES concept in esports refers to "The maintenance and improvement of natural supports systems and services for current and future generations of living creatures". ES in esports deals with, for example, the responsible consumption of natural resources, such as the utilization of sustainable technologies and energy-efficient practices within video gaming and competitive events (pp. 3-13). Thus, as stated by Kanji and Chopra (2010), the company contributes to a healthier natural environment as well as its protection and sustainability. There is a broad agreement that business has an ethical responsibility to the natural environment (pp. 120-124).

Rashid et al. (2015, p. 705) state that several scholars have eventually adopted the theoretical model of CSR while endeavouring to further research other crucial new dimensions of CSR like the environmental dimension. As stated by Rahman and Post (2012), environmental corporate social responsibility (ECSR) is an essential and distinct component of the comprehensive concept of CSR (p. 307). The ECSR emphasizes environmental waste reduction, pollution prevention, and environmental management implementation for fostering ecological well-being (Alam and Islam, 2021, pp. 1-2). According to Rahman

and Post (2012), ECSR in general, focuses on firm-specific measures, both compliance and preventative, to limit these companies' negative environmental impact. However, scholars have interpreted the ECSR in a variety of ways. Existing ECSR definitions in the literature indicate that the concept is multidimensional (pp. 307-308). Lyon and Maxwell (2007, p. 3) define ECSR as environmentally friendly practices that go beyond legal obligations by offering public goods privately or internalizing negative externalities. Other individuals have defined ECSR as environmentally friendly practices that go beyond legal obligations by offering public goods privately or internalizing negative externalities (Rahman and Post, p. 307). Mazurkiewicz's (2004, p. 7) definition of ECSR is:

"The duty to cover the environmental implications of the company's operations, products, and facilities; eliminate waste and emissions; maximize the efficiency and productivity of its resources; and minimize practices that might adversely affect the enjoyment of the country's resources by future generations." (Mazurkiewicz, 2004, p. 7).

Nevertheless, according to Alam and Islam (2021), companies are increasingly recognizing the strategic benefits of incorporating environmental concerns into their CSR operations. It has been found that the development of new environmentally sustainable products and business processes results in increased efficiency in terms of resource investment, improved market, better business branding, higher sales, and sustained competitive advantages (p. 1). However, ES is currently not perceived as a relevant topic in esports (Nyström et al., 2022, p. 13), even though, esports highlights one of the most significant problems of digitalization, the ES (Scholz and Nothelfer, 2022, p. 9). As stated by the Esports Research Network (ERN), considering the global climate crisis, ES in esports is mostly ignored, with only a few organizations addressing the issue (2022). Esports stakeholders should not continue to ignore these problems, which calls into question the esports industry's seemingly endless expansion (Nyström et al., 2022, p. 13). Nonetheless, as understanding the environmental effects of the gaming and esports industries grows, the environmental dimension of sustainability will undoubtedly become a key aspect of esports in the future (ERN, 2022).

2.6.1 Role of esports in environmental sustainability

Esports has the power and potential to have a vital role in ES. Esports and gaming are effective platforms for connecting, raising awareness, and making a contribution to the fight against climate change in all parts of the complex ecosystem (GEF, 2021). According to Playing for the Planet (P4TP) (2023a), around 2.8 billion people worldwide play video. The gaming industry reaches one in three people worldwide, making it an ideal platform for displaying and spreading essential environmental messaging (pp. 8-9). P4TP (2023b) conducted their largest survey ever in 2022 which reached over 380 000 players across 11 games and discovered that video games can inspire positive behaviours and attitudes toward the environment in real life. More than 81% of video gamers want to see more environmental content in video games and more than two-thirds of those surveyed had contemplated changing their behaviour because of in-game environmental content. Additionally, around 80% of gamers are concerned that environmental issues are affecting them now and will in the future, indicating a genuine desire for action (pp. 12-45).

As stated by Hayday et al., because the esports industry is connected with innovation and transnational connectivity, stakeholders in the industry recognize their responsibilities to contribute to a low-carbon future and combat the effects of climate change. Esports has been identified as a cultural phenomenon capable of influencing and mobilizing climate change knowledge and behaviour. Nonetheless, esports platforms have been recognized to be highly influential in disseminating knowledge and reinforcing vital messages about climate change and other critical environmental challenges (2022).

Esports fans form ties with teams in the same way that traditional sports fans do, and esports franchises that use localization can generate fans with stronger identification and emotional attachment to the team (Ross and Fisackerly, 2023, p. 3). According to Julkunen et al. (2021), every week, hundreds of millions of people across the world watch esports on various platforms and channels. Every month, more than 100 million users watch esports on the popular video game streaming site Twitch. Also, game developer Riot Games reported that their League of Legends esports finals in 2018 had 99.6

million spectators globally, and the events were broadcast in 19 languages and across more than 30 platforms and TV channels (p. 40). Regarding the player count, the game League of Legends in 2022, had more than 150 million active players played nearly every month (Kicurovski, 2023). According to most estimations, the game Fortnite has over 80 million monthly active players (Ashley, 2023). The game Counter-Strike: Global Offensive has a monthly player count average of around 700 000 to 900 000 total players (Morris, 2023). As of 2023, the game Dota 2 has had an average of roughly 455 000 players online at any given time (Wong, 2023). Thus, esports has an enormous innovative ability to mobilize its massive esports user base to generate traction for climate change and discussion efforts (Hayday et al., 2022). The expanding esports community will have an enormous effect on gaming's future (Jayasingha, 2022, p. 9).

As stated by Ludwig et al. (2022), the European esports fan base is typically young, diverse, value-conscious, digitally native, and becoming increasingly rare on traditional communication channels. The most frequent European esports consumers are the highly desirable Millennials and Generation Z and esports stakeholders access and initiate interactions with esports spectators of such ages. European esports spectators have a high level of understanding of social and lifestyle topics (p. 12). The youthful esports audience is the demographic most impacted by climate change and they are typically acutely aware of the issue (ERN, 2022).

2.6.2 Esports impact on the environment

Academic studies have already highlighted the detrimental effects of digital infrastructures and video games on the environment (Besombes, 2022; Nyström et al., 2022). However, little is understood about how esports affects the environment (Besombes, 2022; Nyström et al., 2022). According to Ross and Fisackerly (2023, p. 1), there is a lack of knowledge regarding esports and its environmental impact, and it is a critical gap, particularly as we attempt to gain a better understanding of the industry's role in, and threats from climate change. Below is considered and demonstrated the impact of esports on the natural environment.

In-person events in esports can be conducted in public assembly venues, with the competitions streamed for an audience outside the venue itself (Ross and Fisackerly, 2023; Chaloner, 2020). As Ross and Fisackerly (2023) state, in-person esports events and venues necessitate the use of electricity to power the event facility because the hardware is necessary for esports. Also, water, raw materials, food, chemicals, and other natural resources are extracted from the environment to run the venue and event, as well as accommodate players, officials, and spectators. This then generates, garbage and recyclables from attendees, which must be appropriately disposed of to prevent burdening the natural ecosystem with additional human-generated wastes. Therefore, in-person esports events and venues generate waste and emissions that are going to have a negative effect on the environment (pp. 3-4).

Ross and Fisackerly (2023) state that fuel is going to be used due to the transportation of people and materials to in-person esports events and venues which then produces greenhouse emissions. Transportation is regarded as one of the most damaging to the environment because it is one of the main sources of greenhouse emissions (pp. 3-4). According to European Environment Agency (Enea), transportation accounts for around 25% of the European Union (EU) total greenhouse gas emissions (2023). It is estimated that spectators travelling to a single traditional sporting event contributed as much as 55% of total greenhouse gas emissions (Ross and Fisackerly, 2023; Collins et al., 2009), with athlete and team travel accounting for 24% of their overall greenhouse gas emissions (Ross and Fisackerly, 2023; Dolf and Teehan, 2015). As stated by Besombes (2022), France Esports conducted research to study and estimate the carbon footprint of the largest French LAN and the focus was on mobility. The total carbon footprint of the event was estimated to be 72 tons, with 66 tons of CO₂ equivalent from participant's long-distance travel to and from the event and 6 tons of CO₂ equivalent from local mobility, meaning travel from their accommodation to the venue during the stay (pp. 19-20).

According to Ross and Fisackerly (2023), another aspect of esports environmental impact is the utilization of hardware and software. Video games generate and retain massive

amounts of data through their connectivity, data exchange, and high-resolution streaming (p. 4). In 2016, global online gaming traffic hit 915 petabytes per month, making it the world's fastest-growing data usage sub-segment and this data flow creates carbon emissions (Patterson and Barratt, 2019, p. 20). This necessitates a significant amount of electricity to power servers (Ross and Fisackerly, 2023; Gordon, 2020). The energy consumption of the video game industry was estimated to be 34 terawatt hours a year alone in the United States (US) in 2016, equivalent to the energy consumption of over 5 million cars (Ross and Fisackerly, 2023; Mills et al., 2019). Moreover, as stated by Mills et al. (2019), in 2016, the collective energy demand in the US for computer gaming amounted to 2.4 % of total home electrical energy use, or almost 85 million refrigerators (p. 172). Furthermore, game purchasing has transitioned away from physically packaged games and toward digital downloads, and from 2009 to 2017, digital sales in the US increased from 20% to 79% (Patterson and Barratt, 2019, p. 20). This massive data flow also generates several hundred tons of carbon emissions per year from every server farm (Ross and Fisackerly, 2023; Gordon, 2020). According to the International Energy Agency (IEA), data centers and data transmission networks account for 1% of all energy-related greenhouse gas emissions globally (2023). All these server farms need to be constructed and expanded as more internet-connected individuals connect with more data-demanding needs, contributing to internet pollution (Ross and Fisackerly, 2023, p. 4).

Additionally, every video game needs to be developed for esports to exist (Ross and Fisackerly, 2023, p. 4). Several esports titles are constantly updated, and new content is distributed frequently (Ross and Fisackerly, 2023; Scholz, 2019). Additionally, games have a limited lifespan and cannot be guaranteed to appear in a competitive setting indefinitely (Völkel, 2021; Jalonen, 2019). As stated by Jalonen (2019), unlike in traditional sports, institutional structures in esports are still being developed and dynamic. Football has been played in its current form for over a century, so any reforms to propel the sport forward will take time. One of the most notable distinctions between traditional sports is the power of game developers to set the substance of esports events. Football is not a specific operator's intellectual property, but a video game, for example, is a product

developed and controlled by a game developer, and any rule changes in the game are made by the company, not an international sports association (p. 309). Moreover, as stated by Jalonen (2019), esports dynamic nature generates constant change and progress, new games emerge, and old ones perish. Nobody knows which game will pique people's interest in 2024 (p. 309).

Moreover, as stated by Patterson and Barratt (2019), most electronic hardware gadgets last only five years on average over the world, e-waste generation is rapidly increasing, from 50 million tons in 2019 to a projected 120 million tons by 2050. Electronic waste or e-waste represents one of the world's fastest-growing streams of waste and less than 20% of e-waste is recycled globally. Personal gadgets such as PCs, mobile phones, tablets, and televisions, which are also utilized as gaming hardware, account for half of all e-waste (p. 20). Most of the hardware needed required the mining and extraction of rare elements, minerals, and petroleum-based materials, especially plastics (Ross and Fisackerly, 2023; Gordon, 2020). These materials are eventually shipped throughout the world which contributes to the transportation emissions, further for assembly, distribution, and usage (Ross and Fisackerly, 2023, p. 4). Because of the never-ending update loop, possible non-recyclable materials are repeatedly sourced, used, and discarded (Ross and Fisackerly, 2023; Patterson and Barratt, 2019). The Shift Project (2019, p. 4) estimated that the internet, gadgets, servers, and infrastructure were responsible for 3.7% of the global greenhouse gas emissions in 2019. Since new console editions, software versions, and updates are being published regularly by game developers, this loop of hardware and software upgrades should be expected to continue in the future (Ross and Fisackerly, 2023; Patterson and Barratt, 2019).

According to Planet Mark, the English esports organization Fnatic reported its carbon footprint for the entire year of 2021. Reporting boundaries included London, Berlin, and Belgrade. The emission sources included electricity, transmission and distribution losses, natural gas, waste only from the London site, business travel, paper only from the London site only, and homeworking only London site and excluded from the total footprint.

The report included 85 Full-Time Equivalent employees. The location-based total carbon footprint was 32 100 tons of CO₂ and the total carbon footprint per employee was 0.4 tons of CO₂. The market-based total carbon footprint was 35 400 tons of CO₂ and the total carbon footprint per employee was 0.4 tons of CO₂ (2022). According to Walker, Esports Insider, calculated by utilizing data that was publicly accessible that American esports organization FaZe Clan CS:GO game team generated a total of 100 tons of CO₂ alone in 2022 due to flights, facility maintenance, and other travel. Walker noted that it all builds up over each professional esports organization and each game. There are more issues since merchandise sales are an important source of revenue for professional esports organizations, yet polyester, the favoured material for most team jerseys, is not biodegradable and causes millions of tonnes of microplastic pollution every year. Additionally, there are also sponsors and investor entities with a poor track record of ES that are increasingly turning to esports to alter their image (2022). Furthermore, Danish esports organization Astralis (2023, p. 9) stated in their 2022 annual report that with more than 100 professional gaming stations, a retail store, and facade lighting, Astralis Nexus's two-story flagship store has an energy consumption above average.

As stated by Ross and Fisackerly (2023, p. 5), when researching esports in broad terms, it is possible to recognize that it requires environmentally sensitive resources while generating environmentally detrimental byproducts such as wastes and discharges, emissions, and chemical pollutants. Also, esports competition requires equipment and software such as competitive equipment, venue equipment, data analytics, broadcast, and streaming among other technology requirements thus, there is a large emphasis on the development of hardware and software as a part of the competition in esports (Ross and Fisackerly, 2023; Chaloner, 2020). Thus, Ross and Fisackerly (2023) state that we can be certain that esports have an impact on the environment, particularly in the context of climate change. Nonetheless, more research is needed to scientifically evaluate esports environmental impact and guarantee that esports decrease their impact on the environment (p. 6).

2.7 Conceptual framework of the study

According to Tamene (2016), a conceptual framework is a network of interconnected concepts that enable a broad understanding of a phenomenon (p. 51). Nonetheless, there is no end to organizational activity to mitigate environmental issues, and organizations approach these concerns in a variety of ways (McCullough et al., 2015, p. 1044) thus, not every aspect can be covered, and limits must be set in order to keep the study tidy. Hence, the themes identified based on the literature review and utilized are green facilities and operations, equipment and gear choices, travel and transportation practices, waste reduction and recycling, partnerships and collaborations, projects and initiatives, and communication and reporting. These themes support the research question by opening the conversation to relevant topics. The conceptual framework of this study is demonstrated in Figure 8.

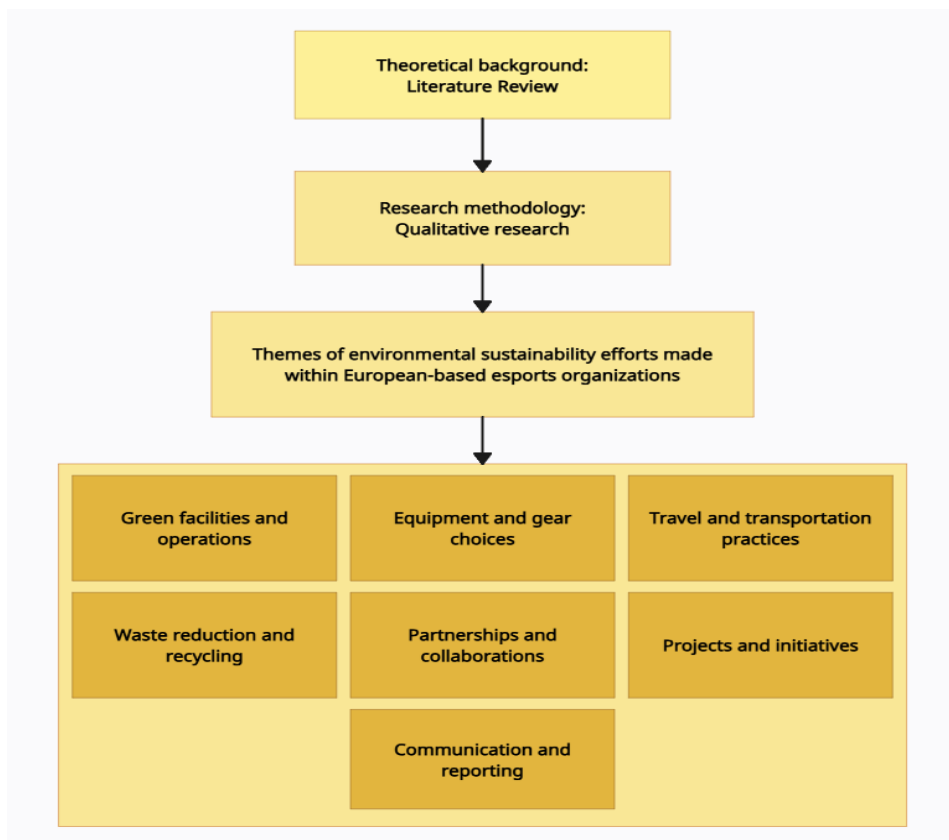


Figure 8. Conceptual framework of the study (Author's own, 2023).

3 Research methodology

This chapter describes the research methodology of the study. The structure and the content of this chapter is based on the “research onion” which was coined by Saunders et al. (2019, p. 130). “Research onion” is illustrated in Figure 9. The chapter focuses on presenting the philosophy, approach, method, strategy, data collection method, data analysis method, reliability and validity, and the case companies as well as interviewees.

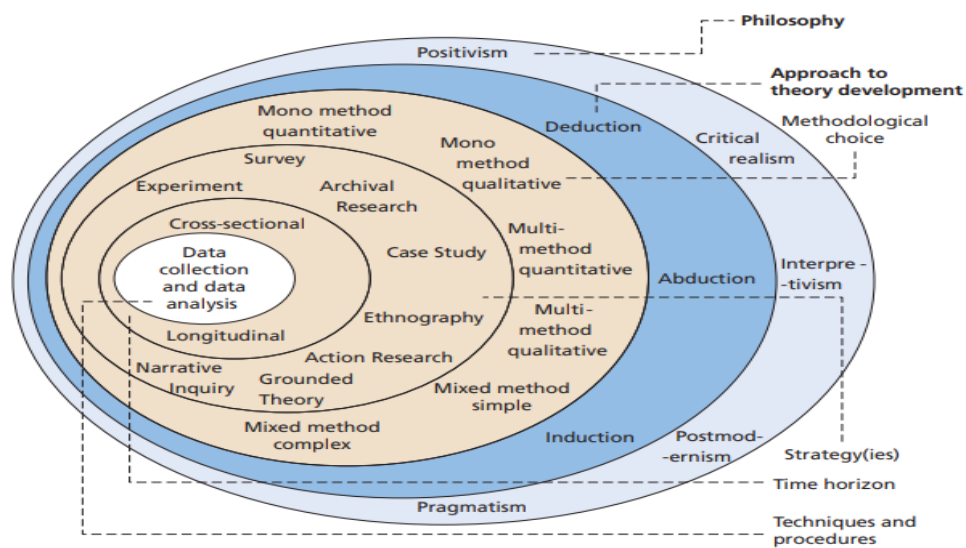


Figure 9. The research ‘onion’ (Saunders et al., 2019, p. 130).

3.1 Research philosophy

According to Saunders et al. (2019), a research philosophy is a set of beliefs and assumptions regarding the development of knowledge. When a researcher embarks on research, it develops knowledge in a specific field. The researcher is embarking upon may not be a new theory, but even by addressing a specific problem in a particular organization, the researcher is nonetheless, developing knowledge. At every stage of the research, whether the researcher is conscious of them or not, the researcher will make a variety of assumptions. These include ontological assumptions which refer to assumptions regarding the realities encountered in the research, epistemological assumptions which

refer to human knowledge, and axiological assumptions, concerning the level and manner in which the researcher's own values influence the research method. The assumptions inevitably impact how a researcher understands its research question, the methodologies utilized, and the interpretation of findings. Additionally, the assumptions must be distinguished as a multidimensional set of continua such as objectivism and subjectivism. Objectivism includes the assumptions of the natural science, stating that the social reality that we study is external to us and others. Subjectivism includes assumptions from the arts and humanities, claiming that social reality is formed by the views and actions of social actors, the people (pp. 130-137). Therefore, a researcher must select the philosophy within which it will operate, comprehend the nature of their chosen philosophy, and demonstrate its philosophy selection in their writing (Ponelis, 2015, p. 538).

The research philosophy of this research is interpretivism. According to Saunders et al. (2019), interpretivism emphasizes that humans are distinct from physical phenomena since they generate meaning, and these meanings are studied. The purpose of interpretive research is to produce new, deeper comprehensions and interpretations of social settings and contexts. For business and management researchers, this entails viewing organizations through the eyes of different groups of people (pp. 148-149). According to Ponelis (2015), ontologically, interpretivist philosophy contends that all observation is both theory- and value-laden and that exploring the social world is not, and cannot be, the pursuit of detached objective truth. Epistemologically, the interpretivist philosophy viewpoint is that our understanding of reality is a social construction created by human actors. Axiologically, interpretivist philosophy prioritizes relevance over rigour (p. 538). The interpretive research philosophy is characterized by a desire to understand the world as it is from a subjective point of view, and it seeks an explanation within the participant's frame of reference rather than the objective observer of the activity (Saunders et al., 2019, p. 149). This study is conducted in the field of business and management, and (Saunders et al., 2019, p. 149) the interpretivism philosophy is highly proper for this field because not only are business situations complex, but they are frequently unique, in terms of context. This statement supports the research philosophy chosen for this study.

3.2 Research approach

According to Saunders et al. (2019), a research project will involve the use of theory. The extent to which the research focuses on theory testing or theory development poses an essential question for the researcher to answer about the design of the research project. This is often portrayed as an approach to the reasoning the researcher adopts. The reasonings are deductive, inductive, or abductive. The deductive approach starts with a theory, often developed from reading the academic literature, and the researcher designs a research strategy to test the theory. In the inductive approach, research begins with data collection to explore a phenomenon, and the researcher generates or builds a theory, frequently in the form of a conceptual framework. The abductive approach is a combination of both. In the abductive approach, the researcher collects data to explore a phenomenon, identify themes, and explain patterns in order to build a new or modify an existing theory, which is then tested using further data collection (pp. 152-156).

This study's approach is abductive. Theories on institutions, SD, CS, and CSR are established and widely available thus, the deductive approach is used in these parts of the study's theoretical background. On the other hand, regarding the esports linkage to the established theories, according to the detailed literature review, prior research is scant thus, an inductive approach is utilized. Additionally, the conceptual framework is formulated with an inductive approach.

3.3 Research method

According to Saunders et al. (2019), the research design is vital in research projects when designing research and achieving methodological coherence. The research design is the general plan for how the researcher will approach answering the research question. It will include clear objectives drawn from the research question, the source, or sources from which the data is collected, how the researcher proposes to collect and analyse this data, and a discussion of ethical considerations and the limitations faced. Most importantly, it should demonstrate that the researcher has carefully considered the

elements of specific research design. The first methodological choice is what kind of research method the researcher follows (pp. 172-174). According to Greener (2008, p. 15), there are numerous methods for conducting business research. However, as stated by Saunders et al. (2019), the three common research methods are quantitative, qualitative, or mixed methods. One approach to distinguish quantitative from qualitative research is to differentiate between numerical data such as numbers and non-numerical data such as words and audio recordings. With this approach, quantitative is frequently used as a synonym for any data collection method, such as a questionnaire, or data analysis method, such as graphs or statistics, which generate or utilize numerical data. On the other hand, qualitative is frequently used as a synonym for any non-numerical data collection method such as interviews or data analysis methods such as categorizing data that generates, or uses non-numerical data. Furthermore, many business and management research designs can have both quantitative and qualitative features, which is referred to as mixed methods (p. 175).

As stated by Eriksson and Kovalainen (2008), the research method chosen by the researcher should be proper for answering the research question formulated by the researcher earlier. Thus, the research question determines the methodologies used and the type of research setting (p. 27). As a result, the chosen research method in this study is the qualitative method. The qualitative research method focuses on the interpretation and understanding of the issues that are being researched (Eriksson and Kovalainen, 2015), and since the primary aim of this study is to gain a better understanding of ES efforts made within EBEOs, it supports the research method chosen for this study. As stated by Greener (2008), when attempting to understand what is happening in an organization or other group of people, it rarely makes sense to look just at numerical measured data. Thus, there is a need for qualitative method studies, which look at people's subjective perceptions, experiences, or interpretations as this will affect both day-to-day and long-term strategic operations within organizations (p. 80). Even though this study focuses on the operations of businesses, personnel are responsible for the business actions implemented within these organizations.

Saunders et al. (2019) state that the research can be designed to fulfil either exploratory, descriptive, explanatory, evaluative purposes, or a combination of them. The researcher's approach to formulating the study's research question will inevitably involve exploratory, descriptive, explanatory, or evaluative research (p. 186). This study's design is exploratory in nature. Exploratory studies arise when little is known about a certain phenomenon, previous research results are ambiguous or have major limitations, the topic is complicated, or there is insufficient theory to guide the development of a theoretical framework (Sekaran and Bougie, 2016, p. 43). As demonstrated earlier in this study, the esports phenomenon is complicated. There is a lack of data produced and published in the field of esports and there is a thin shared comprehension in the recent esports' literature of business approaches including the structure of the esports business environment. Additionally, sustainability in esports has received little attention in academia, and there is, particularly, a lack of research on ES themes in esports. Therefore, this study fulfils exploratory purposes. Exploratory research questions usually begin with 'What' or 'How' (Saunders et al., 2019, p. 186). The formulated research question of this study is "What kind of environmental sustainability efforts are made within European-based esports organizations?" hence, the research question is aligned with an exploratory nature. Qualitative methods are frequently used in exploratory research (Sekaran and Bougie, 2016, p. 43). As stated by Saunders et al. (2019), an exploratory study is especially useful if the researcher wants to clarify an understanding of an issue, problem, or phenomenon, for example, if the researcher is unsure of its specific nature. Also, exploratory research has the advantage that it is flexible and adaptable to change (p. 187). Moreover, the focus of the exploratory study is broad at the beginning and becomes narrower as the research progresses (Sekaran and Bougie, 2016, p. 43).

3.4 Research strategy

Saunders et al (2019) state that a strategy, in general, is a plan of action to achieve a goal. A research strategy is thus a plan for how the researcher intends to answer the research question. It is the methodological connection between philosophy and the subsequent method of data collection and analysis. Experiment, survey, archival and documentary

research, case study, ethnography, action research, grounded theory, and narrative inquiry are just a few of the research strategies that have emerged as a result of different research traditions. The research question and objectives are going to guide the research strategy selection process. Additionally, the coherence by which these are related to philosophy, research approach, and purpose. Moreover, considering the depth of current knowledge, the amount of time and other resources available, and access to possible participants, and other data sources. Nonetheless, these strategies should not be viewed as mutually exclusive (pp. 189-190).

Qualitative research is related to several strategies (Saunders et al., 2019, p. 180), but an often-used strategy with qualitative research is a case study (Rashid et al., 2019, p. 2), which is the strategy utilized in this study. Additionally, the case study strategy is most often used in exploratory research (Saunders et al., 2007, p. 139), and since this study is designed to fulfil exploratory purposes, it supports the selection of the research strategy. Moreover, as stated by Saunders et al. (2019), the digitalization of data and the establishment of online archives, as well as open data initiatives by governments and businesses have expanded the opportunities to utilize an archival and documentary research strategy. This implies that such materials can now be accessed online from anywhere in the world and could provide considerable scope in designing a research project that utilizes a variety of secondary data sources (p. 195), and thus, archival and documentary research strategy is utilized within a case study strategy in this study.

According to Rashid et al. (2019, p. 2), the case study explores the phenomena in-depth within its naturally occurring context, with an understanding that context makes a difference. In case study research, the term case can refer to a person, a group, an organization, an association, a change process, an event, or a variety of other case subjects (Saunders et al., 2019, p. 196). In this study context, the term refers to an organization. A case study strategy has the potential to provide insights from intensive and in-depth research of phenomena in their real-life context, resulting in rich, empirical descriptions and the development of theory (Saunders et al., 2019, p. 197). Hence, the case study strategy

assists in answering the research question, achieving the aims and objectives, and fulfilling the ambition. According to Saunders et al. (2019), it is also necessary to determine the nature of the case study strategy, which can be divided into two dimensions. The first dimension is single case and multiple cases. The second dimensions are holistic case, and embedded case (p. 198). This study is conducted as a multiple case study. As stated by Yin (2017), a multiple-case study consists of two or more cases or replications across the cases that are used to analyse the same phenomenon. Also, Yin (2017) states that the multiple case study can generate compelling evidence. According to Saunders et al. (2019), the second dimension refers to the unit of analysis. If the research is only concerned with the organization as a whole, it is approached as a holistic case study (p. 199), which is the case in this study.

According to Saunders et al. (2007), archival and documentary research utilize administrative records and documents as the main sources of data (p. 143). However, even though archival and documentary research uses documents as the main sources of data, in this study, the archival data has been collected to bring a general understanding of the matter and with the help of interviews, it is possible to refine and specify the information obtained on the basis of the documents. Nonetheless, as stated by Saunders et al. (2007), the term archival can refer to both recent and historical documents. Textual documents contain communications between individuals or groups such as emails, letters, and blog postings. Individual records including diaries, and notes. Organizational documents include administrative records, meetings, contracts, notes, personnel files, plans, policy statements, press releases, reports, and strategy statements. Government documents include publications and reports. In addition, there are media documents such as printed and online publications, as well as other data. Moreover, visual and audio documents encompass advertising posters, audio recordings, digital recordings, photographs, promotional commercials and recordings, and web images. While great caution must be taken when utilizing documents for research purposes, they can offer a rich supply of data for analysis (pp. 143-196).

3.5 Data collection method

Since this study is conducted as a multiple case study, according to Saunders et al. (2007), the data collection methods may include, for instance, interviews, observation, documentation analysis, or questionnaires. Additionally, a combination of these methods can be used (p. 139). In this study, the interviews were selected as the data collection method for collecting primary data. Saunders et al (2007) state that an interview refers to a purposeful conversation between two or more people. Interviews can aid in the collection of valid and reliable data relevant to the research question and objectives (p. 310), hence it is utilized in this study. Nonetheless, as Saunders et al. (2007) state, the term research interview refers to several types of interviews. This is crucial because the nature of any interview should be in accordance with the research question and objectives, the purpose of the research, and the research strategy utilized. Interviews can be highly formalized and structured, with standardized questions for each respondent, or they can be unstructured and informal discussions. Interviews can be classified into types: structured, semi-structured, unstructured, or in-depth interviews. Also, interviews can be differentiated into standardized and non-standardized interviews. Moreover, they can be differentiated by respondent and informant interviews (pp. 310-312).

In this study, semi-structured interviews will be utilized as the primary data collection method. Gillham (2010, p. 65) states that in case study research, semi-structured interviews are the most essential type of interview. As stated by Saunders et al. (2007), semi-structured interviews are non-standardized. In semi-structured interviews, the researcher has a list of themes and questions to cover, however, these can vary from interview to interview. Depending on the flow of the discussion, the order of the questions may also be adjusted. However, given the nature of occurrences within specific organizations, more questions may be required to explore the research question and objectives. Because of the nature of the questions and the subsequent discussion, data will be recorded by audio-recording the discussion (p. 312), which will be done in this study. In this study, semi-structured interviews can be labelled as respondent interviews. According

to Saunders et al. (2007, p. 312), a respondent interview is in which the interviewer guides the interview, and the interviewee responds to the researcher's questions.

According to Saunders et al. (2007), interviews can be classified according to the nature of the interaction between the researcher and participants who take part in the process. Interviews can be one-to-one, involving the researcher and a single participant, or one-to-many, involving the researcher and a group of participants. Interviews can be carried out in person, over the telephone, or electronically over the internet (pp. 312-313). In this study, one-to-one interviews will be utilized. As stated by Guest et al. (2017, p. 693), individual interviews may yield more detailed data, and offer greater insight into a participant's own thoughts, feelings, and worldview. Therefore, it is selected as an interview form in this study. Also, the interviews in this study are conducted electronically over the Internet. According to Saunders et al. (2007), the term electronic interviews refers to interviews held in real-time using the Internet. When the group of people the researcher wants to interview is spread out geographically, using the Internet provides tremendous advantages (p. 342). Since the interviewees are geographically spread, it is reasonable to utilize electronic interviews.

Regarding the nature of the interview questions, the questions were open-ended. Saunders et al (2007) state that open-ended questions allow participants to describe and clarify a situation or event. Open-ended questions are intended to elicit an extensive and developed response from the interviewee, and they can be used to gather facts. For these types of scenarios, a semi-structured interview is optimal (pp. 316-329). The questions were derived from the themes identified in the theoretical background through a literature review. The questions aim to explore the specific actions taken by esports organizations to integrate ES into their daily operations and broader engagements.

In addition to the primary data, secondary data was collected in this research through case companies' websites and other data sources to gain a more comprehensive understanding of the research topic. According to Saunders et al. (2007), secondary data is

data that has been collected for another purpose. It can be a beneficial source for answering the research question. Secondary data comprise both quantitative and qualitative data and they might be raw data with little processing is made or compiled data with some type of selection or summarization. Such data is most commonly used in business and management research as part of a case study (pp. 246-248).

The primary data collection of the study was conducted in the form of two semi-structured interviews from two different case companies. The process of semi-structured interviews was done in the following way. The procedure began with identifying the proper case companies and the appropriate personnel from these case companies. The identification process was done by exploring relevant companies and personnel via the Internet. When the identification process was done, the potential participants were approached by email interview invitations (Appendix 1) including the introduction of the author, background, and objectives of the study. Additionally, the email contained an attached interview guide (Appendix 2) document containing the themes and interview questions. The interview guide was divided into ten themes which included seventeen open-ended questions. The interview guide allowed the participants to familiarize themselves with the material and to prepare for the interviews. With the interviewees who agreed to participate, one-to-one interviews were booked with the time and video communication app suitable for them. The actual interviews were conducted in Finnish and English via Microsoft Teams and Google Meet. The total duration of the interviews ranged from thirty to fifty minutes. The interviews were recorded with the approved permission of the interviewees. Interview details are illustrated in Table 5.

Table 5. Interview details (Author's own, 2024).

Case company	Interviewee	Interviewees position	Interview type	Duration	Language
HAVU	Lasse Salminen	CEO / Co-founder	Online / Microsoft Teams	33 minutes	Finnish
Ninjas in Pyjamas	Laura Rojas	Director of Innovation	Online / Google Meet	49 minutes	English

3.6 Data analysis method

According to Saunders et al. (2007), qualitative data can be found in a variety of formats. As stated earlier, qualitative data refers to all non-numerical or unquantified data that can be a result of any research strategy. The meanings are represented through words serve as the foundation for qualitative data. The qualitative data can range from responses to open-ended questions in an online questionnaire. To more complex data such as transcripts of semi-structured interviews. For the data to be useful, this data must be analysed, and their meanings comprehended, and this is aided by qualitative data analysis processes. It can include both deductive and inductive approaches (pp. 470-474). According to Bingham (2023), the deductive approach is a top-down data analysis approach, and it frequently entails applying pre-determined themes to the data in qualitative analysis. On the other hand, in the inductive approach, the researcher reads over the data and allows themes to emerge, and it is a bottom-up analytical approach (pp. 2-3). In this study, the deductive approach is utilized since the data is approached with pre-determined themes that were identified during the theoretical background.

In this study, the thematic data analysis method is utilized. Thematic analysis is a method for identifying, analysing, and interpreting patterns of meanings which are referred to as themes, in qualitative data (Clarke and Braun, 2017, p. 297). As stated by Alhojailan (2012), it illustrates the data in extensive detail and addresses a wide range of subjects through interpretations. Thematic analysis is thought to be the best choice for any study that seeks to discover through interpretations. It adds a structured component to data analysis. Understanding and collecting varied features and data is required in qualitative research. Thematic analysis provides a more comprehensive understanding of any issue. To begin, successful qualitative research must develop interpretations that are compatible with the data obtained. Keeping this in mind, thematic analysis can detect and identify aspects or variables that influence any issue presented by participants. Thus, the interpretations of the participants are important in terms of providing the best relevant explanations for their behaviours, activities, and thoughts (pp. 40-41). However, there is no standardized method for qualitative data analysis (Saunders et al., 2007, p. 478).

The process of data analysis was done in the following way. The first step was familiarization with the data which involved listening to the recordings and transcribing the spoken words into text format. A raw transcript from the spoken words was first created. Then the raw transcript was converted to written language where the expletive and repetitious words were cleaned, and it only included the main points of each sentence. The interview which was done in Finnish was translated into English as well as possible to make the message of the interviewee clear and correct. Additionally, the transcriptions were sent to the participants to have the possibility to correct and elaborate their answers. The transcription process was conducted by utilizing Microsoft Word. After when the transcripts were concluded, the process of considering relevant aspects of the data to the theoretical framework and research question was done. Since the thematic analysis approach was deductive, the data was considered from a logical perspective where progress was made from general concepts to concrete conclusions.

3.7 Reliability and validity

As Saunders et al. (2007) note, the problem of the credibility of research findings is essential to consider within the research design. When subjecting findings to how does the research know, and will the evidence and conclusions withstand the most rigorous scrutiny. The answer is that the researcher cannot know in the literal sense of the question. Everything that the researcher can do is lower the chances of getting the answer wrong, and this is why a solid research design is essential. To reduce the probability of getting the wrong means, two specific emphases of research design must be paid attention which are reliability and validity (p. 149).

According to Saunders et al. (2007), reliability is the degree to which the researcher's data collection methods for gathering data or conducting analyses will produce consistent findings. There are numerous types of biases and errors to consider. The research reliability could be threatened by, for example, four factors which are subject or participant error, subject or participant bias, observer error, and observer bias. Subject or participant error suggests that different times of the week may produce different results.

The researcher could select a more neutral time of the week for the interview when personnel might be anticipated to be neither looking forward to the weekend on Friday, or they have the workweek ahead of them on Monday. Subject or participant bias refers to the factor, for instance, interviewees may say something that matches up with the desired result of the research. Therefore, procedures might be taken, such as preserving respondents' anonymity. Additionally, the use of open-ended questions should help to avoid bias thus, increasing the reliability (pp. 149-324). To ensure subject or participant error fluctuations do not bias the findings, the times for the interview were suggested middle of the week to increase the reliability of the study. However, only one of the semi-structured interviews was able to be conducted in the middle of the week. To ensure subject or participant bias error fluctuations, interviewees from the case companies were offered the possibility to participate in the research anonymously to increase the study's reliability and participation rate. Additionally, open-ended questions were utilized in the semi-structured interviews and a thorough and systematic procedure was implemented to examine the interview data to increase the reliability of the study. Furthermore, the reliability of this study relies on selecting proper theories related to the observations and mapping of the topic before beginning the writing. The selected theories contribute to a more thorough comprehension of the research topic.

As stated by Saunders et al. (2007), validity is associated with whether the findings are truly about what they appear to be about. Validity indicates the degree to which the researcher has access to the participant's knowledge and experience and can infer the meaning intended by the participant from the language used by this individual. The threats to validity can be, for example, history, testing, instrumentation, mortality, maturation, and ambiguity about casual direction (pp. 150-319). To increase the validity of this study, the case companies that were selected have already made ES efforts. The interviewees from these case companies were selected based on their knowledge of the efforts made within the identified themes. Additionally, a review of relevant literature also contributed to validating the findings. Moreover, the interview guide was sent via email to the interviewees in advance in order to clarify the nature of the interviews and

to ensure that they had enough time to prepare their responses to increase the validity. The transcription of the semi-structured interviews was sent to the interviewees to correct and elaborate their answers which increases the validity of the study. However, as one of the interviews was conducted in Finnish, the findings required translation into English which can distort the original interpretation and thus, it can decrease the validity.

3.8 Case companies

The study included two interviewees from two separate case companies. The case companies are introduced below in terms of the name, company background, and teams in esports titles. Moreover, the interviewees from these companies are introduced below in terms of the names, positions in the organization, the description of the position in the organization, and the general background.

3.8.1 HAVU

HAVU is a professional esports organization founded in 2017 by different esports and marketing professionals, and it is based in Finland. The goal of HAVU is to succeed at the highest level of competitive gaming and to do it by playing with style. HAVU targets to be a positive role model and influencing societal, social, and environmental issues are at the core of their operations. The organization wants to improve Finland's esports culture, support Finnish players, and make an impact on society. The HAVU family supports a positive and inclusive gaming environment as well as the player's professionalism and healthy lifestyle. HAVU emerged from the idea that there were not enough professional esports organizations in Finland to support players. The game titles where HAVU competes at the moment are Counter-Strike 2, NHL, and SIM Racing. Moreover, HAVU has individual streamers under the organization. The interviewee Lasse Salminen is one of the co-founders and one of the shareholders of the HAVU organization. Currently, he works in the role of CEO and is responsible for HAVU's partnerships. Also, he generally works a lot with the teams. Lasse has been doing sales work in the media sector before HAVU for a long time in different media companies.

3.8.2 Ninjas in Pyjamas

Ninjas in Pyjamas, often abbreviated to NIP, is a professional esports organization founded in 2000 with Counter-Strike in their blood and is based in Sweden. NIP has been the pioneer in the esports scene from its inception. They have earned their stripes by competing at the very top level across almost a dozen game titles, and they are not happy with anything less than being the best at any game they compete in. Back then, esports was barely a thing, and the fast-growing global esports industry today happened because of organizations such as NIP who decided to change the industry. Today, NIP is one of the largest and most legendary esports teams in the world. The vision of NIP is to bring gaming culture to a world without boundaries. NIP is committed to adopting and promoting fair practices within the esports industry through innovative solutions for tackling climate change. The game titles where NIP competes at the moment are League of Legends, Counter-Strike 2, Rainbow Six: Siege, EA Sports FC, Fortnite, and Rocket League. The interviewee Laura Rojas is the Director of Innovation in the NIP. Laura has been working in NIP for seven years. Before, she worked in NIP as the head of merchandise and apparel, and e-commerce manager, and has directed some of the biggest campaigns in NIP. Additionally, she has worked in various organizations such as the UN, and the fashion industry. Moreover, Laura is the coacher in the Culture and Creative Sector Industries (CCSI) for Climate Change represented in the United Nations Framework Convention on Climate Change (UNFCCC) in the pavilion of innovation.

4 Findings

The main findings are presented in this chapter via collected archival data and semi-structured interview data. The aim was to receive knowledge of the environmental sustainability strategies utilized within EBEOs. The main findings of the ES efforts made by esports organizations based on secondary data are illustrated in Table 6. Note that Table 6 includes esports organizations beyond Europe due to scarcity of the data on EBEOs ES efforts and to bring a general understanding of the matter.

Table 6. Environmental sustainability efforts made within esports organizations (Author's own, 2023).

Esports organization	Environmental sustainability efforts
Astralis	Danish esports organization Astralis (2023) and their two-story flagship store Astralis Nexus is in Denmark Tivoli Gardens. Since they are tenants of Tivoli, they are part of Tivoli's green energy policy. Hence, energy consumption is anticipated to be covered by renewable energy. In general, Astralis seeks to reduce its environmental impact through an active energy-saving policy within the organization (p. 9).
Betcltic Apogee Esports	Portugal esports organization Betcltic Apogee Esports collaborated with ZeroWaste-Lab, a non-profit organization dedicated to zero-waste solutions. Addressing the most invisible type of waste, which is ever-increasing alongside our electronic and digital life. A straightforward but efficient app was created to track real energy consumption for each team member, based on their individual hardware, simply by clicking on a timer during travel, training, competing, or working online. All data collected is transformed into CO2 equivalent emissions and their corresponding number of trees as carbon capturers. The team analyses all its actual emissions and then offsets their impact by investing in carbon-capture solutions that promote regenerative practices, a procedure that has been accredited by ZeroCertified (2023).
FlyQuest	According to Walker (2022), the American esports organization FlyQuest launched its Go Green initiative in 2020. This led to environmental campaigns, for example, TreeQuest, SeaQuest, and WorldQuest being integrated into the organization (Daniels, 2021). The initiative started with TreeQuest, which involved planting trees whenever certain events occurred in the team's LCS games in 2020 (Walker, 2022), and resulted in the donation of over 10 000 trees to the One Tree Planted organization (Esguerra, 2020). According to Esguerra, the SeaQuest was the second part of FlyQuest's Go Green initiative. Whenever certain events occurred in the team's 2020 LCS Summer Split, donations were made to the Coral Reef Alliance which is one of the world's largest coral reef foundations (2020). The third part of the initiative, the WorldQuest, FlyQuest planted trees and replenished corals throughout the 2020 League of Legends World Championship (Vejvad, 2020). According to Hyrikova, FlyQuest declared in 2021 that it will begin producing eco-friendly clothing

	<p>and as a result, all future merchandise will contain at least 25% recycled and sustainable materials. Furthermore, the organization started to systematically eliminate non-eco-friendly merchandise at the end of 2021 (2021).</p>
Fnatic	<p>Fnatic, an English-based esports organization has a dedicated internal environmental working group that meets regularly to take responsibility for its carbon footprint and implement activities needed to improve across all aspects of its operation. Fnatic is collaborating with Planet Mark, who is actively aiding them in realizing their personal mission statement of achieving a net zero carbon footprint. Planet Mark is a group of sustainability specialists who are aiding Fnatic, as well as many other forward-thinking companies, in accelerating the reduction of carbon emissions through measurement and concrete recommendations to improve and push further. Fnatic is helping to protect endangered rainforests by supporting Planet Mark's partner Cool Earth. Additionally, Fnatic is a founding member of Gamers 4 The Planet Alliance, an esports and gaming-focused sustainability movement. Moreover, Fnatic is collaborating with ChopValue, a circular economy company, to create the world's most sustainable carbon-negative gaming desks, thereby helping to offset the carbon footprint of esports (2023).</p>
HAVU	<p>Finnish esports organization HAVU and energy company Vattenfall started their partnership in 2022. Consumers have chosen Vattenfall as Finland's most responsible electricity company for four years in a row. HAVU's professional players consume a lot of electricity while playing, and HAVU wants to make gaming more responsible by switching to fossil-free electricity. The partnership focuses on illustrating the concrete positive effects of using fossil-free electricity. In the future, the partnership will concretely highlight the importance of choosing the form of electricity production. Vattenfall and HAVU published a CO2 report of one HAVU player every month, which revealed the number of game hours and CO2 savings (2022). Both parties have decided to continue the partnership until 2023 (HAVU, 2023a). Vattenfall's and HAVU's goal for 2023 is to highlight fossil-free energy options with the Pelikeli campaign (HAVU, 2023b). The campaign refers to electricity produced by solar, wind, and hydropower and their pros and cons (HAVU, 2023b). At the center of the campaign are three produced videos, for each energy, and these will be seen on broadcasts, as well as on the channels of HAVU and its influencers (HAVU, 2023b). HAVU also sells several types of ecological merchandise (HAVU, 2023c).</p>
Ninjas in Pyjamas	<p>The World Wide Fund for Nature (WWF) collaborated with the Swedish esports organization Ninjas in Pyjamas (NIP) for the Earth Hour campaign in 2021 stated Luongo (2021). Earth Hour, organized by WWF, is a global campaign that took place on March 27, 2021, and encouraged people all over the world to turn off their electronic devices in support of nature and the planet (Luongo, 2021). Both organizations collaborated on a global fundraising campaign to create a livestream event series to collect funds and boost awareness for WWF's wildlife conservation and ES projects which aired from March 13 to March 28, 2021 (Luongo, 2021). NIP also partnered in 2021 with digital electricity company Tibber for compensating the energy consumption of gaming computers states Kolasinli (2021). Tibber, rather than earning from the electricity they provide, offers renewable electricity at a cost price via an app (Kolasinli, 2021). Moreover, NIP has collaborated with Swedish lifestyle</p>

	<p>brand A Good Company which launched a recycled water bottle in 2022 (Daniels, 2022). By the announcement, the collaboration signals the start of a sustainability-focused relationship between the two organizations (Daniels, 2022). The NIP's cooperation with Singaporean-American multinational technology company Razer, which designs, develops, and sells consumer electronics and gaming hardware, and is a leading global lifestyle brand for gamers. With the cooperation, Razer equips the NIP's players with gaming gear, including peripherals like mice, headsets, and keyboards (Stelzner, 2021). Razer (2024) fully complies with the Hong Kong Stock Exchange's Environmental, Social, and Governance (ESG) requirements. Furthermore, Razer is committing to ES through various initiatives such as green organization, green products, green community, and green investments.</p>
Team Liquid	<p>According to multi-regional esports organization Team Liquid, their Commerce and apparel department's main focus is to be more planet-friendly and they are constantly re-evaluating and optimizing their production process (2023a). They are devoted to creating their products with sustainability and every step of their production process has been and will be modified to be more planet-friendly to leave a smaller ecological footprint (Team Liquid, 2023a). From developing sustainable materials, treatments, and eco-friendly fabric to minimize their water and energy consumption per garment and working with a dyeing process that is 100% non-toxic and 100% natural (Team Liquid, 2023a). Additionally, Team Liquid (2023a) states that they are aiming to increase their renewable methods and reduce their material waste to close the loop on apparel and contribute to a circular economy. For example, (Team Liquid) planet Liquid Terra is Team Liquid's first environmentally friendly apparel collection which was launched in 2022. The production approach prioritizes sustainability by minimizing waste and maximizing the use of eco-friendly treatments and fabrics, and the use of high-quality materials (2023b).</p>
Team Vitality	<p>French esports organization Team Vitality's main partner is Tezos (2023a). Tezos is the world's most advanced, self-upgradable, and energy-efficient blockchain, employing proof of stake technology, which has a substantially lower impact on the environment than other market leaders that use proof of work technology (Team Vitality, 2022). It also has a track record of security and scalability (Team Vitality, 2023b). According to Team Vitality, the groundbreaking collaboration will strive to engage the esports and gaming communities with blockchain and to promote sustainable development and the utilization of technologies (2022). Team Vitality also states that these characteristics are compatible with the team's wider efforts to promote ES and to develop with the support of a worldwide community (2023b).</p>

As stated by Hayday et al., in practice, esports have already demonstrated their ability to be innovative in their climate change initiatives (2022), and Table 6 illustrates this. Esports organizations have adopted various methods of ES within their operations. For instance, the formed relationships involving the esports industry, sustainable companies, and climate change organizations which strengthen the esports position and ability to

contribute to social change worldwide (2022). Additionally, esports organizations have demonstrated a wide range of ES campaign initiatives which play a crucial role in safeguarding the natural environment for current and future generations. Moreover, esports organizations procure and sell sustainable merchandise which then protects and preserves the natural environment.

The main findings of the ES efforts made by EBEOs based on primary data from the semi-structured interview data are presented in the next subchapters consisting of two interviewees with comprehensive experience and knowledge about ES efforts made within their organization from two separate case companies. The interviewees represent case companies that can be found in Table 5 presented previously which enables to validate and deepen the observation made from the existing archival data. The findings of semi-structured interview data are divided into seven themes which were identified in the theoretical background through the literature review. These themes are, (1) Green facilities and operations, (2) Equipment and gear choices, (3) Travel and transportation practices, (4) Waste reduction and recycling, (5) Partnerships and collaborations, (6) Projects and initiatives, and (7) Communication and reporting. The findings are based on the questions derived from the themes to get a broad understanding of how esports organizations within their current conditions implement ES practices.

4.1 Green facilities and operations

Green facilities and operations refer to practices aimed at promoting sustainability, strategies to ensure that buildings and business operations are conducted in an environmentally sustainable and efficient manner, and technologies employed to minimize the environmental impact of facilities and business operations. The aim is to reduce resource consumption, waste generation, and carbon emissions while promoting sustainability and efficiency. Overall, green facilities and operations integrate environmental considerations into all aspects of building design, construction, and management, with the goal of minimizing environmental impact and promoting long-term sustainability. Nonetheless, the organizations personnel perform their work activities, and the players

participate in activities such as boot camps, training matches, or online competitions via gathering in person at the organizations facilities. The consumption of different kinds of materials is required during these activities in the facilities that are harmful to the environment. ES through companies reducing and eradicating specific material use in their facilities is a crucial aspect of CR and environmentally conscious practices. This approach involves identifying materials that are harmful to the environment, such as single-use plastics, toxic chemicals, or non-recyclable substances, and implementing strategies to minimize or eliminate their use. Both of the organizations are aware of this and have already addressed this issue within their organizations facilities by not using or hardly using single-use plastics as outlined by Salminen from HAVU and Rojas from NIP.

“Except for garbage and plastic bags, we have hardly used any single-use plastics in our facility” (Lasse Salminen, HAVU, 2023).

“Single-use plastics are completely abolished from our facility. There are no single-use plastics in the NIP facility, they are out of the question” (Laura Rojas, NIP, 2023).

Utilizing recyclables in organizations facilities is a positive step towards ES and it is one of the aspects of a broader sustainability strategy. As Rojas from NIP outlines, they utilize recyclable water bottles and all of the personnel of the organization have access to it.

“In our facility, for instance, we have space and access to reusable water bottles and all of them are 100% recyclable” (Laura Rojas, NIP, 2023).

The organizations facilities and the players and personnel operations within the facilities require electricity to power the facility’s temperature to keep warm, light to see, and electric appliances to work and game. Esports organizations facilities can have many professional gaming and workstations and other electric devices which can cause higher than average energy consumption. Overall, esports as a part of the video game industry, necessitates a significant amount of electricity. ES through procuring sustainable energy

for its facilities is a vital aspect of CR. Procuring sustainable energy in the facility involves investing in and utilizing renewable energy sources such as solar, wind, and geothermal power. According to the interviewees, the organizations have no or little influence over procuring sustainable energy for their facilities since both of the organizations were facility tenants as outlined by Salminen from HAVU.

“We have the situation that our rent includes the implementation of the electricity, which means that we cannot influence how and from where the electricity or energy comes to our facility. Hence, our lessor is responsible for the facility’s energy, which we have no control over” (Lasse Salminen, HAVU, 2023).

However, both interviewees are aware of the importance of procuring sustainable energy for their facilities. Efforts to find different alternative solutions have been made. Solutions and attempts have been made through collaborations with electricity companies supplying renewable energy to organizations personnel privately and investigation of the possibilities to utilize sustainable energy in their facilities.

“Our cooperation with electricity company Vattenfall, individual players and personnel of the organization have electricity contracts with Vattenfall” (Lasse Salminen, HAVU, 2023).

“This is one of the issues that I have encountered here, and I have approached it. We have considered, for example, renewable geothermal energy possibilities for our office building, but it was not possible to implement due to various reasons. We have been discussing with our lessor about how we can possibly find a solution to utilize renewable energy resources and we have not succeeded yet, but it is on our to-do list” (Laura Rojas, NIP, 2023).

ES through the implementation of specific technologies to improve energy efficiency in facilities is crucial for reducing carbon emissions, mitigating climate change, and

conserving natural resources. To enhance energy efficiency in facilities, several key technologies commonly are utilized for this purpose, such as LED lighting, dimmers, timers, and energy monitoring systems. By integrating these technologies, facilities can significantly improve energy efficiency, reduce environmental impact, and achieve sustainability aims.

Installing LED lights in facilities is a common practice adopted by many companies for ES. LED lights offer several benefits that contribute to environmental conservation. By implementing LED lighting solutions, companies can make significant strides toward ES. Both of the organizations are aware of this and have installed LED bulbs in their facilities as outlined by both of the interviewees.

“All of our office lightning is from LED lamps. We have removed the big halogen lamps and LED lamps have been installed in their place” (Lasse Salminen, HAVU, 2023).

“All of our office lamps are LED” (Laura Rojas, NIP, 2023).

Lighting in esports is a crucial element that contributes to the atmosphere, visibility, and professionalism of competitive gaming facilities. Proper lighting ensures that players can see their screens clearly without any glare or shadows and this is essential for maintaining optimal performance and reaction times during gameplay. Lighting should be comfortable for players to ensure they can focus on the game without distractions and discomfort. Harsh lighting or flickering lights can negatively impact performance. Salminen from HAVU reflects on the importance of lighting in esports.

“We can also adjust the lighting with the LED lamps. Otherwise, if you think about what esports lighting is, it is often the case that there is never too much lightning on. We have indeed taken this into account when designing the lighting in our office” (Lasse Salminen, HAVU, 2023).

ES through dimmers and timers in lighting involves the use of technology to reduce energy consumption and minimize environmental impact while maintaining adequate lighting levels for comfort and productivity. Overall, incorporating dimmers and timers into lighting systems is a practical and effective strategy for promoting ES. As outlined by Rojas from NIP, they are utilizing dimmers and timers within their facility.

“All of the lamps have dimmers, and they start dimming and turning off as soon as people leave the rooms. We also have timers in the lighting, so by 10 pm unless someone is in the office, the lights turn off automatically” (Laura Rojas, NIP, 2023).

Implementing energy efficiency monitoring systems allows facilities to track energy usage in real-time, identify patterns, and pinpoint areas of inefficiency. This data-driven approach enables informed decision-making and continuous optimization of energy performance. As outlined by Rojas from NIP, they utilize a monitoring system and if issues occur, the root cause can be determined and solved effectively.

“We have a meter, if the usage of electricity increases there will be an alert to different people who have access to the office, and they have to come to see what is happening in case, for example, if there are five computers that are on” (Laura Rojas, NIP, 2023).

ES through temperature setting adjustment in facilities involves, for instance, optimizing heating to reduce energy consumption and minimize the environmental impact associated with heating and cooling operations. Overall, adjusting temperature settings in facilities is a fundamental strategy for contributing to ES by reducing energy consumption, conserving resources, and demonstrating corporate sustainability. Organizations do not have influence over the heating of the facilities and little over the temperature setting adjusting due to the tenant status as stated by both of the interviewees.

“Regarding the heating, it is defined for the office, and we cannot greatly influence it. Of course, there is a small adjustment that we can make. However, if you think about HAVU’s office, it is hardly used every day” (Lasse Salminen, HAVU, 2023).

“There is a central temperature in the whole building and that’s the temperature stays for the whole building. We are at the constant of 19-20 degrees in the whole building” (Laura Rojas, NIP, 2023).

ES through turning equipment off when not in use is a practice commonly known as energy conservation or energy efficiency. It is a simple yet impactful practice that can significantly reduce energy consumption and minimize environmental impact. It is a crucial aspect of CR towards reducing energy consumption and minimizing carbon emissions. Turning off electrical devices when not in use is a common practice for HAVU as Salminen outlines.

“Of course, the devices are turned off whenever they are not in use” (Lasse Salminen, HAVU, 2023).

4.2 Equipment and gear choices

The equipment and gear are used within the organizations facilities and privately by the personnel of the organization for multiple different uses. Typically, a facility consists of office furniture and essentials, electronics, and various other assets. ES through the procurement of reusable and environmentally sustainable work and gaming equipment is a growing trend driven by CR initiatives. It involves making conscious choices to minimize the environmental impact associated with the production, use, and disposal of these products. The key points that can be considered are lifecycle assessments, eco-labels and certifications, material selection, durability and longevity, and supplier engagement. By integrating ES principles into procurement practices, not only can esports organizations contribute to ES and meet the work and gaming needs but also for the long-term success and resilience of business in an increasingly environmentally conscious world.

Additionally, prioritizing environmentally sustainable products can also lead to cost savings over the long term through lower maintenance costs, and decreased waste disposal expenses. Regarding office furniture, it includes assets such as desks, sofas, tables, and chairs. Both of the organizations have considered the ES aspect regarding the office furniture. HAVU has acquired reusable and environmentally friendly office furniture in a way that utilizes the circular economy perspective as reflected by Salminen. The furniture is from a Finnish manufacturer, Martela, who offers sustainable solutions and products with the lowest possible environmental impact and has been issued the ISO 14001 environmental management system certificate (Martela, 2024).

“One that is a good example is that our premises were made and designed in cooperation with Martela and Martela Outlet. All our office furniture is from the Martela Outlet, i.e. used furniture, which brings a circular economy aspect to it. In other words, we have not bought any office furniture new, but we got used office furniture through them” (Lasse Salminen, HAVU, 2023).

NIP’s approach to procuring office furniture is buying more expensive to gain better quality. Longer-lasting and high-quality office furniture allows for financial savings and a more environmentally responsible decision when purchasing office furniture. The office furniture is bought from a small manufacturer and the furniture has been in the office since the opening of the NIP’s office as well as NIP gets furniture repaired if they get broken as outlined by Rojas.

“Regarding the office furniture, we took the approach of buying expensive and this way, higher quality and lasting longer. We bought our office furniture from a small manufacturer. Every single piece of furniture, we had them since we opened the office years ago. If the office furniture gets broken, we get them repaired” (Laura Rojas, NIP, 2023).

Office essentials are all of the consumable supplies organizations need on a daily basis, such as writing instruments, folders, notebooks, mailing supplies, and anything else needed to get the work done. Rojas from NIP stated that they procure environmentally sustainable office essentials from a Swedish lifestyle brand Agood Company for their organizations use. Agood Company produces sustainable eco-friendly products made from natural and reusable materials and is certified by B-Corp which means that the company demonstrates high social and environmental performance, makes a legal commitment, and exhibits transparency (Agood Company, n.d.).

“As for office essentials, they are all made by Swedish lifestyle brand Agood Company” (Laura Rojas, NIP, 2023).

Gaming equipment items typically include gaming consoles, PCs, monitors, keyboards, mice, controllers, and headsets but in vary widely. As regards to the electronics i.e. gaming equipment, it plays a significant role in esports, as it directly impacts a player’s performance and overall experience. As outlined by Salminen from HAVU, it is a highly relevant and essential part of esports and the performance of the players on the servers in the in-person or LAN events depends on this. Additionally, Salminen outlined that HAVU procures gaming-related equipment from their electronics retailer partner Jimms PC-Store with cooperation that utilizes the circular economy pillars.

“Regarding the gaming equipment, we try to keep the gaming equipment fresh, of course, because the player’s performance in the games must be as good as possible. We get new gaming equipment from our partner Jimms, and then when we have used them for a year or two, they are returned to Jimms and then, Jimms send us new ones for use. Those that have returned there, they are checked and cleaned and sold on as used” (Lasse Salminen, HAVU, 2023).

The core business of esports organizations is to perform well in the tournaments they enter to win cash prizes from tournaments or to increase sponsorship possibilities. On

the other hand, merchandise sales are the secondary business for esports organizations where the teams can make money to support their operations. Merchandise sales are an important source of revenue for professional esports organizations. Apparel and other products are major negative contributors to the natural environment. Nonetheless, it is an area where esports organizations can have a direct opportunity to affect their climate footprint through negotiations with the equipment and apparel suppliers. This has indeed been addressed by both of the organizations regarding collaborations and supply chains. Salminen from HAVU reflects on their collaboration with Finnish textile recycling company Pure Waste through apparel collection. Pure Waste (2024) produces and offers responsibly produced clothes and accessories made of recycled fibres.

“We have made clothing collections together with Pure Waste, which is a Finnish textile recycling company, so in practice, part of our clothing collection is clothes produced from waste fabrics” (Lasse Salminen, HAVU, 2023).

Rojas from NIP reflects on the origin of the suppliers, manufacturing quantities and control of the supply chain.

“The moment I started at the NIP, we stopped manufacturing in China and started to manufacture in Portugal at smaller quantities. It can be seen on our websites, that a lot of our products are sold out. This is because we do not make big productions. We do not want the market to overflow and also, we do not want to buy a lot of products and have them in our warehouse for years. Now we make 150 units per piece, except for jerseys we make way more and we make them also in Europe. On the other hand, Lagom and Ninjutsu collections were done in China, but they did not travel by plane. All of them travelled by train and boat to get to Sweden. We have looked at the whole supply chain, from the beginning to where was the cotton sourced to the moment that it arrived at the user, so every single step of the supply chain has been controlled” (Laura Rojas, NIP, 2023).

On the other hand, HAVU is a young and still relatively small esports organization compared to globally. Thus, there are challenges to take into consideration of the ES aspect in this matter. Due to this and with other conditions existing in esports organizations, it is difficult to equal the environmental pillar with the economic pillar. The challenges come with the order quantities but efforts to take into account the ES aspect are still done which is reflected by Salminen from HAVU.

“These are challenging for us in a certain way, because if our core business was to sell clothes, then we would be able to take such things into account better. We have indeed had a clothing collection with Pure Waste, but the challenge came from the fact that the minimum order quantities were large if you wanted customized clothes. Since we are a young and still relatively small esports organization compared globally, the sale of our products has not yet been a big part of the organization throughout its existence. With these order volumes, what we order jerseys and other products, it is impossible for us to fully take into account such things, but we always try to take this into account” (Lasse Salminen, HAVU, 2023).

Nonetheless, both of the organizations have made efforts to procure apparel and other products from manufacturers and suppliers with environmentally sustainable practices. ES through procuring equipment from suppliers with environmentally sustainable practices is a crucial aspect of modern business operations. This approach involves procuring goods and services from suppliers who prioritize environmentally friendly practices throughout their production processes, supply chains, and operations. Cooperation with sustainable manufacturers and suppliers is one of the NIP’s top priorities as outlined by Rojas.

“We cooperate with reliable and sustainable manufacturers who use, for example, solar panels, and have right label certifications. These are the only suppliers that we collaborate with” (Laura Rojas, NIP, 2023).

4.3 Travel and transportation practices

Esports teams travel a lot to tournaments and practices. Fuel is used in transportation when organizations are participating in these events. All of the fuels used to transport esports teams to esports events generate greenhouse emissions that negatively affect the environment. Transportation is regarded as one of the most detrimental activities to the environment. ES in travel and transportation practices revolves around minimizing the negative impacts of human mobility on the environment while maximizing the positive contribution to conservation and preservation efforts. Key aspects and strategies can be transitioning to cleaner modes of transportation and encouraging the use of public transportation and carpooling. Furthermore, encouraging individuals within the organizations to adopt more sustainable travel and transportation practices through education, and policy measures. As outlined by Salminen from HAVU, they have taken this into account by utilizing public transportation and carpooling.

“Players go everywhere by train, and if they do not, we have gone on some tournament trips in a big car that can fit everyone. Some individual players may come by car themselves if they have a different schedule, but otherwise, everyone travels by train, or we carpool. There is not much private driving in our operations” (Lasse Salminen, HAVU, 2023).

There are also challenges regarding transportation due to the visibility of the organizations personnel and players. However, recommendations have been given concerning the transportation guidelines within the organization, which are outlined by Rojas from NIP in her statement.

“I do not have full visibility on what every single organization individual or department is doing. However, I have given our departments recommendations on travelling in terms of policies” (Laura Rojas, NIP, 2023).

In addition to transportation, as regards to reducing specific transportation modes within the organizations such as air travel, challenges arise. This is due to low influence over the selection of transportation modes when participating in foreign LAN events since it is taken care of tournament organizers which is reflected by Salminen from HAVU.

“This is something beyond our control. We have been to foreign LAN events, but in general the tournament organizer pays the flight costs, and we cannot influence what and how we fly” (Lasse Salminen, HAVU, 2023).

Moreover, in general, NIP has reduced unnecessary travelling at the whole organization level. Not only because of the financial point of view but also from the ES aspect which then saves costs and reduces the negative impact on the natural environment outlined by Rojas in her statement.

“We have reduced travelling in general at our organizational level. There is a filter of three people in the organization that will ask you if it is necessary to travel somewhere. Not only because of the financial aspect but also for the carbon footprint that it leaves” (Laura Rojas, NIP, 2023).

4.4 Waste reduction and recycling

Human activities generate an enormous amount of waste, and more waste is being generated each year. Waste generated by human activities encompasses a wide range of materials and byproducts. Along with wasting precious resources, waste can result in serious detrimental effects on the environment. Waste contributes directly to greenhouse gas emissions and can cause global warming. ES through waste reduction and recycling is a crucial aspect of modern environmental stewardship. It involves minimizing the generation of waste materials and reusing or recycling existing ones to reduce environmental impact and conserve resources. Overall, ES through waste reduction and recycling is a multifaceted approach that addresses resource conservation, pollution reduction, and the promotion of a circular economy. Nonetheless, both of the

organizations are aware of this, and general strategies have been implemented. HAVU's Salminen outlines that small amounts of waste are generally generated from their activities at their facility, and their partner's products are being recycled.

"In our office, the amount of generated waste is quite small, and dining is probably the biggest source of waste. We use quite a lot of our partner Kotipizza's products, which come in fully recyclable pizza boxes, and we then take these to cardboard recycling. Of course, we have Celsius as a partner at the moment, and we get energy drinks in cans, and also, these cans go recycling" (Lasse Salminen, HAVU, 2023).

NIP's Rojas reflects on their waste management strategies within their facility by separating waste bins and all of the organizations personnel are keeping each other in check concerning waste reduction and recycling.

"Here at our facility, we have bins divided for different wastes. Also, everyone is aware, and we all keep each other in check regarding this" (Laura Rojas, NIP, 2023).

Electronic waste is one of the world's fastest growing streams of waste and it is poorly recycled globally. Most of the hardware needed for gaming equipment requires mining and extraction of rare elements, minerals, and other materials which contributes negatively to the natural environment. Regarding the recycling of gaming-related materials, as stated by HAVU's Salminen earlier about their partnership with Jimm's, this then brings the circular economy into effect and conserves the natural environment.

"We have an agreement with Jimm's that we use their equipment and then when we have used them for a certain period of time, they are sold used via them. It also has a bit of the circular economy angle to it, but we are the first users. All of our gaming equipment, what we use and what we have played with, will be resold via Jimm's" (Lasse Salminen, HAVU, 2023).

On the other hand, regards to the recycling of gaming-related materials and equipment, NIP's Rojas reflects that this is something they are currently focusing on within the organization and talks with their partners are ongoing.

"This is something that we are working on. We already have some preliminary talks and plans with our partners regarding the recycling of gaming-related materials" (Laura Rojas, NIP, 2023).

4.5 Partnerships and collaborations

ES through partnerships and collaborations is a strategy that leverages the strengths and resources of multiple stakeholders to address complex environmental challenges. Partnerships allow organizations with different expertise, resources, and capabilities to come together to tackle environmental issues. This pooling of resources can range from financial investments to technical expertise, infrastructure, and networks. Both of the organizations have formed partnerships and collaborations with organizations and companies that have committed to ES. HAVU's partner Vattenfall is a European energy company and one of the largest providers of fossil-free electricity in Europe (Vattenfall, n.d.). Furthermore, HAVU's partner Kotipizza (2023) expects a lot from themselves regarding sustainability, and various climate work has been done (pp. 1-18). Moreover, NIP has collaborated with WWF (2024) organization which is the largest conservation organization and works in nearly 100 countries. Also, NIP's partner FILA's (2023, pp. 7-8) dedication to sustainability has been widely recognized by major worldwide ESG rating organizations, and actions for the planet have been taken such as UN Climate Change Conference participation, transition to sustainable packing materials, and increasing the production of sustainable products. HAVU's Salminen and NIP's Rojas reflect on their organizations partnerships.

"Definitely, our two biggest partners Kotipizza and Vattenfall are both, I would argue, much more active than normal in the aspect of environmental sustainability. Vattenfall talks a lot about fossil-free energy and sustainable development.

Vattenfall has also been selected as Finland's most sustainable electricity company. Our partner Kotipizza has also been chosen as Finland's most sustainable restaurant industry brand, and sustainability is an important part of everything they do, for example, what materials they use, and more than half of their restaurants use nearly emission-free wind power. It has always been important to us in partnerships that there is a certain kind of sustainability involved in some way" (Lasse Salminen, HAVU, 2023).

"The partnership that we have done with shoe and apparel company FILA is a partnership that innovates in logistics and how we do logistics through electrical chips that hold the history of the garment, from material sourcing to tournament attendance and this is in the process of implementation. We have formed a partnership and done things with Agood Company which produces eco-friendly products made from natural and reusable materials. We have done collaborations as well with WWF organization who works in the field of wilderness preservation and reduction of human impact on the environment" (Laura Rojas, NIP, 2023).

4.6 Projects and initiatives

ES through projects and initiatives encompasses a wide range of efforts aimed at reducing environmental impact, conserving natural resources, and promoting long-term ecological balance. Some common types of projects and initiatives in this can be such as renewable energy, energy efficiency, waste reduction, conservation and restoration, sustainable transportation, green building, and education and awareness campaigns. Salminen from HAVU reflects on the Pelikeli campaign done with the Vattenfall partnership which aims to raise awareness of ES and they take a strong stance on the matter.

"Our entire Vattenfall Pelikeli campaign is based on talking a lot about environmental sustainability. We also have a video in partnership with Vattenfall where our player says that he plays this much a year and then when he has Vattenfall's energy contract in use, he saves this much of carbon dioxide emissions and how

many trees the binding amount is and here we also bring conifers aspect to it like our organizations name indicates. And then also, if all the players played with Vattenfall's fossil-free energy, how much it would reduce emissions per year. With this particular campaign, we take a strong position on this issue of environmental sustainability" (Lasse Salminen, HAVU, 2023).

Sustainable Web Manifesto (SWM) is an approach to designing web services that puts people and the planet first, and it was signed by NIP in 2022. NIP by signing the manifesto, declares commitment to things like services they provide and services they use will be powered by renewable energy, the products, and services they provide will use the least amount of energy and material resources possible, and the products and services they provide will support an economy that nourishes people and planet (SWM, n.d.). This declares a solid commitment to creating a greener web as outlined by Rojas.

"We have signed in 2022 Sustainable Web Manifesto declaring our further commitment to creating a sustainable internet" (Laura Rojas, NIP, 2023).

Education of ES refers to the process of educating individuals about environmental issues, promoting awareness, and fostering behaviour changes that contribute to the conservation and preservation of the environment for present and future generations. This approach recognizes the interconnectedness of human activities with the natural world and seeks to empower individuals to make informed decisions that minimize negative environmental impacts. Rojas from NIP reflects on the power of education regarding ES and she has done this actively with a primary focus on apparel.

"When it comes to the projects from the environmental sustainability aspect, I have found education as the most crucial point of view and action. That is what I have been doing with a main focus on apparel and I have talked about stopping the over-production, and micro-production, making sure that products are

reparable, and using good quality. Also, what does it do and how can we evolve from that” (Laura Rojas, NIP, 2023).

Projects focused on ES are crucial for safeguarding the planet and ensuring a sustainable future. For projects that go through NIP’s innovation department, an ES angle is necessary to include before it is implemented as outlined by Rojas.

“We do not do any projects that are non-sustainable. Every single project that goes through the NIP’s innovation department, has to have a sustainability angle, and has to have something that we are doing for the environment” (Laura Rojas, NIP, 2023).

4.7 Communication and reporting

ES communication and reporting involves the dissemination of information regarding environmental practices, impacts, and initiatives within an organization. It serves as a crucial aspect of CSR and transparent governance, aiming to promote accountability, engagement, and continuous improvement in environmental performance. Both organizations actively and transparently communicate their ES projects, initiatives, and collaborations through their websites. However, no official ES reporting is done due to the costs associated with it as NIP’s Rojas outlines.

“We do not form any official reports on our environmental sustainability with a stamp of approval because they are very expensive. We are doing nothing more and less than just being respectful to our planet and also being a role model” (Laura Rojas, NIP, 2023).

5 Discussion

In this chapter, the study's findings are analysed and interpreted in the context of existing knowledge, the study's theoretical background and the research question. Additionally, the limitations of the study are discussed. Lastly, the suggestions for future research are presented.

5.1 Discussion of the findings

The primary aim of this study was to gain a better understanding of ES efforts made among EBEOs. The overall ambition of this study was to conduct a study that generates insights into relevant and applicable ES strategies applied by EBEOs which can be utilized by other esports organizations, business entities participating in the esports ecosystem, and any other interested business organizations from different industries in order to decrease their negative climate impact. The purpose of this study was to achieve the aims, fulfil the ambition, and find an answer to the research question which was formulated as follows:

“What kind of environmental sustainability efforts are made within European-based esports organizations?”

As stated by Nyström et al. (2022), “The maintenance and improvement of natural supports systems and services for current and future generations of living creatures”. ES in esports is concerned with the responsible utilization of natural resources like the use of sustainable technologies and energy-efficient procedures (pp. 3-13). According to Alam and Islam (2021, p. 1), companies are increasingly recognizing the strategic benefits of incorporating environmental concerns into their CSR operations. As the findings of this study indicate, it is also evident in the context of EBEOs.

The findings indicate that EBEOs have reduced and eradicated specific material consumption in their facilities by utilizing recyclables and not using or hardly using single-

use plastics. ES through reducing specific material use in an organizations facility is a critical aspect of modern business operations. By reducing and eradicating single-use plastic consumption within their facilities, EBEOs play a significant role in promoting ES. EBEOs have not only decreased their environmental footprint, conserved natural resources, and realized cost savings in the process (UNEP, 2021, pp. 1-44), but also contributed to long-term business resilience and competitiveness (Alam and Islam, 2021, pp. 1-16), in an increasingly environmentally conscious marketplace (Johns et al., 2023).

The findings data suggest that the influence of EBEOs over the procurement of sustainable energy for their facilities is low or non-existent. This is because, generally EBEOs are tenants in their facilities. Nonetheless, some of the European-based esports organization landlords have green energy policies as in the case of the Danish esports organization Astralis (2023, p. 9). By procuring sustainable energy in facilities, EBEOs could reduce their environmental footprint, contribute to mitigating climate change, and demonstrate leadership in sustainable business practices. As stated by the United Nations (UN), renewable energy sources generate electricity with significantly reduced emissions, resulting in having a lesser environmental effect than compared to burning fossil fuels (n.d.). Although EBEOs have little influence in the procurement of sustainable energy for their facilities, the findings indicate that attempts have been made to find different substitute solutions, such as negotiations with landlords and cooperation with sustainable electricity companies. Cooperation with electricity companies presents an opportunity to align economic growth with environmental stewardship, fostering a more sustainable and resilient energy future. Moreover, according to the findings, EBEOs have also a low influence over the temperature settings within their facilities and this is also due to the tenant status. However, minor adjustments can be made. Through sustainable cooling and heating, EBEOs within their facilities could reduce their energy consumption, conserve resources, and reduce overall the environmental impact associated with heating and cooling operations. Utilizing various solutions and approaches to sustainable cooling and heating reduces financial and environmental costs (Quefelec, 2022).

The findings demonstrated that EBEOs have implemented specific technologies in their facilities such as energy monitoring systems, LED lighting, dimmers, and timers. The implementation of energy monitoring systems has enabled EBEOs to make informed decisions and continuously optimize their facility's energy performance. The effective use of energy management systems helps organizations manage their energy use in a sustainable way which results in reduced costs and environmental impact (McLaughlin et al., 2015, p. 1). Due to installation of the LED lighting in facilities, EBEOs have substantially saved consumption of energy within their facilities. LED lighting is today's most efficient method of illumination and lighting with high energy efficiency (IUP, n.d.) Additionally, due to the longer lifespan of the LED lights and chemicals used in LED lights, EBEOs have decreased waste generation and reduced environmental impact within their facilities. The primary advantage of LED lights is their long lifespan, and LED lights are also free of toxic chemicals as well as fully recyclable (IUP, n.d.). Moreover, because of the utilization of dimmers and timers, EBEOs have enhanced their energy consumption savings to a greater extent. Dimmers and timers provide energy savings since lights are used at a reduced level and turned off automatically (DOE, n.d.). Furthermore, practices in the regards of turning electrical equipment off when not used is a common practice for EBEOs according to the findings which significantly reduces energy consumption within their facilities. Turning off electrical equipment when not in use is a straightforward yet effective way to promote ES by conserving energy, reducing carbon emissions, saving costs, prolonging equipment lifespan, promoting awareness, and demonstrating corporate sustainability. Therefore, with the integration of these technologies and practices, EBEOs have improved their energy efficiency, reduced carbon emissions, and reduced the environmental impact of their facilities. Overall, EBEOs sought to reduce their environmental impact through active energy-saving policies.

According to the findings and theoretical background of this study, EBEOs have procured reusable and environmentally friendly work and gaming equipment for their facilities, and merchandise and apparel from suppliers with environmentally friendly practices. As regards the office furniture within the facilities, EBEOs have procured new and used

office furniture from cooperation with companies with sustainable practices and circular economy companies. In addition, EBEOs gets office furniture repaired if it gets broken. Regarding office essentials, EBEOs have procured environmentally sustainable office essentials from cooperation with companies with sustainable practices and ES certifications. Moreover, EBEOs have procured electronics through cooperation with companies that utilize circular economy, and through cooperation with companies that have a high environmental performance. Regarding the procurement of merchandise, EBEOs have procured environmentally friendly merchandise for sale through collaboration, for instance, recyclable water bottles. As regards to the apparel procurement, EBEOs have procured environmentally friendly apparel through collaborations with suppliers and manufacturers utilizing the circular economy's pillars. By incorporating ES principles into the procurement processes, EBEOs have contributed to ES while creating healthier and more environmentally friendly work environments within their facilities. Sustainable procurement improves corporate environmental performance and contributes to enhanced environmental well-being (Etse et al., 2023, p. 527).

This study's findings and literature review indicate that EBEOs utilizes public transportation and carpooling when travelling to in-person events. Public transportation significantly reduces greenhouse gas emissions that are harmful to the environment (Hodges, 2010, p. 1), and carpooling reduces energy consumption and emissions (Shaheen et al., 2018, p. 2). Additionally, EBEOs have tried to reduce travelling in general. Moreover, EBEOs have utilized carbon-offsetting, and reporting their carbon footprint regarding travelling. However, in some cases, such as participating in events, EBEOs cannot influence the transportation mode due to the geographical location of the event and since tournament organizers usually cover it. Nonetheless, by implementing these strategies, European-based esports organization's travel practices have preserved natural resources.

This study's findings illustrate that EBEOs have implemented general waste management strategies such as prevention, minimization, recycling, and reuse. Additionally, the literature review indicates that EBEOs have reported and measured its waste generation

carbon footprint. Moreover, European-based esports organization's personnel keep each other in check regarding waste reduction and recycling. European-based esports organization's implementation of sustainable waste management strategies results in significant positive benefits to the natural environment. Recycling conserves natural resources, reduces CO₂, conserves energy, and diverts waste from landfills and incinerators, reducing pollution and emissions (EPA, n.d.). By integrating waste management strategies into daily business operations, EBEOs play a significant role in mitigating environmental degradation and building a more sustainable future.

This study's findings and theoretical background demonstrate that EBEOs have formed various collaborations and partnerships with manufacturers, suppliers, distributors, and retailers, and organizations from different industries that commit to ES. These organizations vary from non-governmental organizations, lifestyle brands, consultant companies, cryptocurrency and blockchain platforms, and utility companies to restaurant chains. Collaboration facilitates the exchange of knowledge, best practices, and innovative solutions. By working together, partners can advocate for environmentally friendly policies, regulations, and practices, driving systemic change. Furthermore, collaboration can help spread risks associated with environmental projects among multiple partners. Partnerships enable initiatives to scale up and have a broader impact. By bringing together diverse perspectives from various sectors, partnerships can foster creativity and new approaches to environmental problems. By combining efforts, projects can reach larger geographical areas, affect more stakeholders, and achieve greater results than individual efforts. By sharing responsibilities and liabilities, organizations can minimize individual exposure and enhance project resilience. Forming collaborations and partnerships with organizations enables businesses to fulfil environmental goals, hence enhancing environmental performance (Ramanathan et al., 2020, p. 1218). Overall, European-based esports organization's collaborations and partnerships play a crucial role in advancing ES by harnessing collective action, fostering innovation, and promoting inclusive and equitable solutions to complex environmental challenges.

EBEOs have illustrated a wide range of ES projects and initiatives according to the findings and theoretical background in this study. These vary from campaigns, manifestos, donations, and education to created alliances. Overall, ES projects and initiatives play a crucial role in addressing global challenges such as climate change, biodiversity loss, and resource depletion. EBEOs implement innovative solutions and foster collective action, these efforts have contributed to building a more resilient and sustainable future for generations to come.

Regarding this study's findings and theoretical background, EBEOs are actively and transparently communicating their ES projects, initiatives, and performance. However, official ES reporting is not done in all EBEOs. Through communication and reporting, EBEOs have facilitated ES awareness. Effective and transparent communication and reporting are essential for driving ES by raising awareness and fostering innovation.

Furthermore, EBEOs as an institution within the context of the gaming industry, play a significant role in shaping the competitive landscape of esports and can have a strong influence on gaming culture and communities. Even though, as stated by Hayday et al. (2022), CSR agendas are in their initial stages in esports business models. It can be seen that EBEOs managers are increasingly involved with issues of CSR and ECSR. This can be considered as a means for managers to engage directly with the institutional environment (Subbady, p. 383, 2013). Additionally, as the study's findings and literature review highlight, EBEOs have a huge potential for increasing ES awareness to a global audience which is estimated to grow year on year basis in the future as estimated by Newzoo (2022). With millions of followers currently worldwide and growing, EBEOs have a unique chance to utilize its power to engage followers in conversations on ES. This not only raises awareness but also empowers people to make informed decisions and practices sustainable habits in their everyday lives. By incorporating environmental themes into activities, EBEOs can drive significant change and contribute to a sustainable future. Moreover, it is apparent that esports do affect the natural environment harmfully, as indicated by Ross and Fisackerly (2023, p. 6). For esports to function, it necessitates natural resources.

5.2 Limitations

This study has potential limitations. Firstly, even though academic research in esports is expanding and developing, it is still in its initial stages and there is a lack of data produced and published in the field of esports. Especially, a lack of prior research studies on the topic of esports in the context of ES, which caused limitations to the scope, depth, and applicability of the study. Secondly, this study mostly only included publications and papers written in English except for a few Finnish publications. Informative material may have been published in other languages that were not included in this study. Thirdly, this study was conducted as a multiple case study with a sample size of two semi-structured interviews from two different case companies which fell short of the preliminary sample size intended. By including more case companies in the study, a more comprehensive comparison between the companies might be made and further useful findings could be discovered. This then could generate more valuable knowledge on ES efforts made within EBEOs. Additionally, since the sample size was two case companies, the results may not be generalized to a larger population. Thus, since the two case companies represented the esports industry's primary stakeholders esports organizations, the findings may not be generalized to all esports organizations. Furthermore, since this study had a geographical limitation due to its focus on EBEOs, the results might not be applicable to be generalized outside of Europe. Fourthly, since the study's empirical part was conducted in the form of two semi-structured interviews with interviewees from two different countries, it must be noted that one of the interviews was conducted in Finnish and the interview guide was translated into Finnish, and the other interview was conducted in English which was not the first language of the interviewee hence, interviewees might understand the questions differently. Fifthly, there might also be embellished truth in the findings, especially in sensitive matters such as ES efforts made within the organizations. Lastly, due to the lack of prior research in the context of ES efforts made within esports organizations, the interview guide may limit the representativeness, validity, and reliability of the data.

5.3 Future research

There is an evidently lack of research regarding esports, especially in the context of ES. As the field of esports continues to grow globally, so too does the need to understand and address the environmental impact of it. Esports organizations, being prominent actors in the industry, have a significant role to play in fostering sustainability initiatives. This study opened up several potential avenues for future research aimed at exploring and enhancing ES efforts within esports organizations and deepening our understanding.

Future research could focus on conducting quantitative assessments of the environmental footprints of esports organizations. This analysis could involve measuring carbon emissions, energy consumption, water usage, and waste generation associated with various aspects of the organization's operations, including organization facilities, events, and travel. By quantifying environmental impacts, researchers can identify key areas for improvement and track progress over time. Additionally, more in-depth research about efforts made within esports organizations with a larger sample size and expand the study's geographical location to cover other countries outside of Europe. By analysing successful sustainability initiatives, the research could inform best practices and inspire other esports organizations to implement similar measures. Moreover, research on collaboration and knowledge sharing within the esports ecosystem can facilitate collective action toward ES goals. Investigating partnerships between esports organizations, environmental organizations, government agencies, and industry stakeholders can identify opportunities for synergies, and resource sharing.

The proposed future research suggestions encompass a broad spectrum of interdisciplinary inquiries. Future research on ES efforts within esports organizations holds enormous potential for advancing our understanding of how the esports industry can contribute to a more sustainable future. By conducting quantitative analyses, exploring best practices, and fostering collaborations, researchers can contribute to the development of evidence-based strategies for mitigating environmental impact and promoting sustainability in the rapidly evolving landscape of esports.

6 Conclusions

This study has explored the active and diverse ways in which ES efforts are being integrated within EBEOs. Through an in-depth examination of existing literature and interviews conducted, it is evident that the EBEOs are recognizing their responsibility to address environmental concerns, and are implementing ES efforts in a variety of methods. One of the key findings of this study is the multifaceted nature of ES efforts within EBEOs. EBEOs are not only focusing on reducing their carbon footprint through energy-efficient practices and technologies, and sustainable procurement processes, but also implementing environmentally sustainable practices across various aspects of their operations, including travelling practices, waste management and reduction strategies, and forming environmental partnerships. This comprehensive approach underscores the EBEOs commitment to fostering environmental stewardship at various levels. Furthermore, the case companies interviewed and analysed in this study have demonstrated the feasibility and effectiveness of integrating ES into EBEOs. EBEOs are showcasing innovative solutions to mitigate their environmental impact. Additionally, the literature review highlights that esports affects the natural environment harmfully and it has a unique contribution to it due to its remote competition possibility and emphasis on technology. Moreover, the literature review and findings highlight the potential of esports organizations for promoting environmental awareness and activism among a global audience. With millions of followers worldwide, esports organizations have a unique opportunity to leverage their influence and engage audiences in discussions about ES. This not only serves to raise awareness but also empowers individuals to make informed choices and embrace sustainable behaviours in their daily lives. By incorporating environmental themes into activities, esports organizations can inspire meaningful change and contribute to a more sustainable future.

There is a scarcity of academic literature addressing esports, especially the intersection of esports and ES. This study is filling a critical gap in the existing research landscape of esports and ES. Nonetheless, ES is increasingly important across all industries, including esports. This study's investigation of how esports organizations in Europe are

approaching sustainability provides valuable insights into the emergence of eco-conscious practices within a rapidly growing sector. Additionally, this study offers practical insights for esports organizations and other business entities participating in the esports ecosystem, and any other interested business entities from different industries seeking to adopt or enhance their sustainability initiatives and decrease their negative climate impact. Furthermore, this study sheds light on the environmental impact of esports and showcases efforts to mitigate it, hence raising awareness among esports enthusiasts, professionals, and stakeholders. This awareness can foster a sense of responsibility and encourage further action towards sustainability within the esports industry. Moreover, this study contributes to the academic discourse surrounding both esports and ES. It provides a foundation for various potential avenues for future studies to build upon and has immense potential for improving our comprehension of how ES within esports can help to create a more sustainable future and facilitate a deeper understanding and exploration of this multifaceted intersection.

Nevertheless, while significant strides have been made, it is essential to acknowledge that the journey towards ES within the esports industry is an ongoing process. As the industry continues to evolve and grow, there will inevitably be new challenges and opportunities on the horizon. Esports organizations must remain vigilant, adaptable, and committed to advancing sustainability principles in all aspects of their operations. To conclude, the findings of this study underscore the transformative potential of integrating ES efforts within EBEOs. By embracing sustainable practices, fostering awareness, and fostering collaborations, EBEOs have the opportunity to not only reduce its environmental footprint but also to inspire positive change on a global scale. As the esports industry continues to evolve, sustainability will undoubtedly remain a cornerstone of its future growth and success. Looking towards the future, I hope that the insights presented in this study will inspire academics to further explore the ES within esports, and serve as a catalyst for further progress towards a more sustainable and environmentally conscious esports industry.

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Appendices

Appendix 1. Interview cover letter

Subject: Invitation to participate in a Master thesis interview

Hello,

I hope this message finds your organization well. My name is Emir Hasanovic, and I am a student in the Master's Degree Programme in International Business (MIB) at the University of Vaasa, Finland. I am working on a research project under the supervision of Professor Arto Ojala, the School of Marketing and Communication, International Business, University of Vaasa.

I am writing to your organization today to invite someone knowledgeable about environmental sustainability efforts made within the organization to participate in a study entitled "Environmental sustainability efforts made within European-based esports organizations". This study aims to gain a better understanding of environmental sustainability efforts undertaken by European-based esports organizations. The organization's expertise and insights in this field would be invaluable to gaining a comprehensive understanding of the initiatives within the esports industry. The perspective that your organization offers would provide vital insights that can contribute significantly to the ongoing discourse on environmentally sustainable practices in the esports landscape.

This study involves a 15-30 min individual interview that will take place via the video communication app (e.g., Microsoft Teams, and Zoom). With the participant's consent, interviews will be audio-recorded. Once the recording has been transcribed, it will be sent back to the participant for review. When the recording is verified, it will be destroyed.

While this project may involve some professional risks, care will be taken to protect the participant's identity if it is wished. This can be done by keeping all responses anonymous and allowing the participant to request that certain responses not be included in the final project. Participants will have the right to end their participation in the study at any time, for any reason. If the participant chooses to withdraw, all the information provided will be destroyed. Moreover, the research data will only be accessible to the researcher and the research supervisor.

Please find attached the interview guide document for your kind consideration. If someone from the organization would like to participate in this research project or have any questions or concerns about the research, please don't hesitate to contact me via e-mail or mobile phone.

I am enthusiastic about the opportunity to discuss this important topic with you and greatly appreciate your kind consideration of this invitation. Thank you for your time, and I look forward to hearing from you soon.

Sincerely,

Emir Hasanovic

Appendix 2. Interview guide

Interview Guide	
Themes	Questions / Details
1 Introduction	<ul style="list-style-type: none"> - Interviewer self-introduction - Introduction of the study topic - Description of the aims of the study
2 Background information of interviewee and organization	<ul style="list-style-type: none"> - Name of the interviewee - Position in the organization - Description of the position in the organization - Length in the position and general in the esports industry - Name of the organization - Organization background - Teams in esports titles
3 Green facilities and operations	<ul style="list-style-type: none"> - Does the organization try to reduce and eradicate specific material use in its facilities? (e.g., single-use plastics) - Does the organization procure sustainable energy for its facilities? (e.g., solar, wind, and bioenergy) - Has the organization implemented any specific technologies to improve energy efficiency in its facility? (e.g., use of energy-efficient lighting such as LED bulbs) - Has the organization implemented any specific practices to improve energy efficiency in its facility? (e.g., temperature setting adjusting, and equipment turned off when not used)
4 Equipment and gear choices	<ul style="list-style-type: none"> - Does the organization procure reusable and eco-friendly work and gaming equipment? (e.g., office furniture, electronics, and office essentials) - Does the organization sell/use procured merchandise and apparel that is eco-friendly? (e.g., team jerseys, other clothing, and water bottles) - Are there efforts to source equipment from manufacturers/suppliers with environmentally sustainable practices?
5 Travel and transportation practices	<ul style="list-style-type: none"> - Has the organization implemented any measures to minimize the carbon footprint associated with team travel? (e.g., carpooling, and public transportation) - Does the organization try to reduce specific transportation modes? (e.g., air travel)
6 Waste reduction and recycling	<ul style="list-style-type: none"> - What strategies does the organization employ to minimize waste generation, especially during events and in facilities? - Are there recycling programs in place for gaming-related materials and equipment? - Does the organization have any other recycling initiatives?
7 Partnerships and collaborations	<ul style="list-style-type: none"> - Has the organization formed any partnerships/collaborations with organizations/sponsors/companies that commit to environmental sustainability?
8 Projects and initiatives	<ul style="list-style-type: none"> - Does the organization have environmental sustainability initiatives/projects? (e.g., carbon off-setting, educational content, player involvement, environmental sustainability awareness promotion, and donations)
9 Communication and reporting	<ul style="list-style-type: none"> - Does the organization communicate/report its environmental sustainability efforts or topics in any way? (e.g., ecological performance, and environmental sustainability initiatives)
10 Closing	<ul style="list-style-type: none"> - Interviewee's questions if any - Interviewer explains the next steps - End of the interview