UNIVERSIDADE FEDERAL DO RIO DE JANEIRO

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THE ESPORTS ECOSYSTEM AND ITS FUTURE:
a scenario planning analysis

RIO DE JANEIRO
2019

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Dissertação de Mestrado apresentada ao Instituto COPPEAD de Administração, Universidade Federal do Rio de Janeiro, como requisito parcial à obtenção do título de Mestre em Administração

Orientadora: Paula Chimenti

Rio de Janeiro
2019

CIP - Catalogação na Publicação

Bassani, Rafael Varejão Guerzet
B317t THE ESPORTS ECOSYSTEM AND ITS FUTURE: a scenario planning analysis / Rafael Varejão Guerzet Bassani. -- Rio de Janeiro, 2019.
86 f.

Orientadora: Paula Chimenti.
Dissertação (mestrado) - Universidade Federal do Rio de Janeiro, Instituto COPPEAD de Administração, Programa de Pós-Graduação em Administração, 2019.

1. Esport. 2. Esporte Eletrônico. 3. Ecossistema de Negócios. 4. Planificação por Cenários. I. Chimenti, Paula, orient. II. Título.

Elaborado pelo Sistema de Geração Automática da UFRJ com os dados fornecidos pelo(a) autor(a), sob a responsabilidade de Miguel Romeu Amorim Neto - CRB-7/6283.

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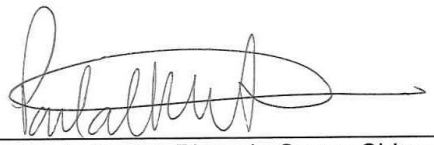

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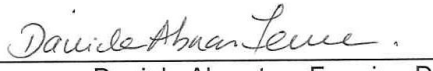

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AGRADECIMENTOS

Agradeço a Deus por me dar força e saúde para realizar esse trabalho. Agradeço, também, à minha namorada, Mirela, por me apoiar e me incentivar durante todos os momentos e suportar a distância temporária que essa jornada nos apresentou. Ao meu irmão, Leandro, e aos meus pais, Aureo e Jacqueline, pelas palavras e atos de suporte sempre presentes. À minha orientadora, Paula Chimenti, por me guiar e pelas correções e incentivos. Aos meus amigos pelos ensinamentos e momentos de descontração. Por fim, gostaria de agradecer à CAPES, pelo apoio financeiro que possibilitou que me dedicasse de forma integral a essa pesquisa.

BASSANI, Rafael Varejão Guerzet. **The esports ecosystem and its future:** a scenario planning analysis. Rio de Janeiro, 2019. Dissertação (Mestrado em Administração) – Instituto COPPEAD de Administração, Universidade Federal do Rio de Janeiro, Rio de Janeiro, 2019.

O objetivo desse trabalho é desenhar e analisar o ecossistema de esports e realizar um exercício de planejamento com cenários no intuito de desenvolver a discussão estratégica sobre o tema. Usa-se uma pesquisa qualitativa baseada em entrevistas com participantes do ecossistema brasileiro para desenhar e analisar estrategicamente a economia interligada do esport. O fenômeno de esports está crescendo rapidamente e se tornando uma oportunidade promissora de investimento. O entendimento mais profundo das principais dinâmicas do esport pode ser valioso para a academia, bem como para empresas participantes e para as interessadas em investir no ecossistema. Com a informação obtida, o ecossistema de negócios dos esports foi desenhado e analisado. As dinâmicas exploradas foram o papel do publisher, legitimidade e preconceito, publicidade e patrocínio, franchising, profissionalização e realidade virtual. Depois disso, a ferramenta de planejamento com cenários foi utilizada para aprofundar o entendimento de possíveis cenários para o futuro do ecossistema de esports.

Palavras-chave: Esport. Esporte Eletrônico. Ecossistema de Negócios. Planificação por Cenários.

Comentado [MOU1]: É eSports ou esports assim mesmo?

Comentado [L2R1]:

Comentado [L3R1]:

BASSANI, Rafael Varejão Guerzet. **The esports ecosystem and its future**: a scenario planning analysis. Rio de Janeiro, 2019. Dissertação (Mestrado em Administração) – Instituto COPPEAD de Administração, Universidade Federal do Rio de Janeiro, Rio de Janeiro, 2019.

The objective of this work is to draw and analyze the esports ecosystem and to perform a scenario planning exercise in order to further develop the strategic discussion on the subject. A qualitative research based on interviews with participants of the Brazilian ecosystem was used to draw and strategically analyze the networked esport economy. The esport phenomenon is growing fast and becoming a promising opportunity for investment. The deeper understanding of the main dynamics of the esports can be valuable to the academia, as well as to the participating companies and the ones interested on investing on the ecosystem. With the information gathered, the esports business ecosystem was drawn and analyzed. The explored dynamics were the role of the publisher, legitimacy and prejudice, advertisement and sponsorship, franchising, professionalization and virtual reality. After that, the scenario planning tool was used to advance the understanding of possible scenarios for the future of the esport ecosystem.

Comentado [MOU4]: Arrumar com as mudanças da versão em protugues

Keywords: Esport. Electronic Sports. Business Ecosystem. Scenario Planning.

FIGURE LIST

TABLE LIST

1 INTRODUCTION

Comentado [MOU5]: A ideia da introdução é justificar e apresentar o estudo. Faltou dizer porque isto merece ser estudado e qual o gap na literatura que justifica fazer este estudo

For decades, video game enthusiasts have been gathering for tournaments, festivals and LAN parties. However, the evolution of digital distribution channels, the increasing presence of internet connection worldwide and the growth of gaming in general has given rise to an esport[1] ecosystem with many of the same dynamics as traditional major sports. The top tier players are now part of professional teams that in many cases have multiple sponsorship contracts, offer them several benefits, including salaries and revenue sharing, coaches and training facilities. The most prestigious competitions on the esport scene, like Dota 2's The International and League of Legends' World Championship are offering prize pools that enter the eight-digit domain: tens of millions of dollars (Morgan Stanley, 2018).

The objective of this work is to understand the esport phenomenon, the modern esport ecosystem and to perform a scenario planning exercise in order to improve the strategic analysis of the ecosystem. The esports is an ongoing phenomenon that is situated at the intersection of the entertainment industry, the gaming software and hardware production, the events business and the world of sports. With advertising and sponsorship deals that are growing 42,2%, it is intertwined with the contemporary digital distribution channels and is already an important business ecosystem with global revenues reaching $906 million. This figure is on track to increase to $1.65 billion by 2021 (NewZoo, 2018).

This work will explore the esports from its beginnings on the 90's and early 2000's, when it first began to be noticed on the academia and formally defined (Kushner, 2004; Lee, 2005). The debate on the fit of esports to the traditional sports world helps to deepen the analysis and detail the characteristics of the practice. The adopted definition of esports as a form of sport facilitated by the electronic systems is fairly broad and encompasses the distinctive and defining features of competitive gaming and serves as a foundation to explore the material interpenetration of media content, sport and networked computing (Kushner, 2004; Lee, 2005; Hamari and

[1] The Associated Press Stylebook and Briefing on Media Law defined the writing style of the term as "esport". The entry is as follows: "esports: Acceptable in all references to competitive multiplayer video gaming. Use alternative forms like *eSports* or *e-sports* only if part of a formal name, like an organization or arena. Capitalize at the start of sentences. Like other collective nous that are plural in form, *esports* takes singular form when the group or quantity is regarded as a unit."

Sjöblom, 2017). Several academic works focused on the psychological traits of esport players and their audience (Martoncik, 2015; Taylor, 2016; Seo, 2016) while others focused on the streaming phenomenon and the reasons why people watch other play video games (Woodcock, 2017; Brock, 2017; Hamari and Sjöblom, 2016; Hamari and Sjöblom, 2017). However, there is still no academic study on the esport ecosystem that characterizes the participants and explore their dynamics. This work will dive into this complex business network and draw conclusions that are valuable to the academia, as well as the participating companies and the ones interested on entering the esport ecosystem.

A qualitative research driven by interviews with Brazilian ecosystem participants was used to draw and strategically analyze the networked esport economy. Based on the current ecosystem literature, the fundamental participants of the ecosystem are characterized and analyzed individually prior to the investigation of their connections. Then, some of the dynamics of the ecosystem are discussed to reveal the publisher's role on the market, the importance of legitimacy, stability and professionalization to the growth of the scene and the technological uncertainties that lie ahead. The scenario planning exercise amplifies the reach of the strategic analysis by methodically focusing on the main topics of the esports ecosystem and helps to depict possible future narratives for the esport ecosystem's development.

It is important to highlight that, even though there are powerful conglomerates like Amazon and Tencent that own important companies inside the global esport ecosystem, this work is limited to study the esport ecosystem, its participants and the main dynamics between them and not the motivations behind the investments of those powerful companies on esport.

2 LITERATURE REVIEW

2.1 CURRENT UNDERSTANDING OF ESPORTS

With the purpose of studying esports, the first step is to correctly define the term so that a good understanding is achieved. In the last few years, the growth in awareness and importance of the esport ecosystem has lured public interest into the topic. However, only a small number of academic definitions have been proposed regarding esports and there is no generally accepted definition (Hamari and Sjöblom, 2017). Contemporary academics seem to have a shared conceptual frame for labeling esports that involves two principles: competition and technology. The principle of competition includes the characteristics of challenging mind and body, professionalism towards victory and the presence of organized events with spectators. The principle of technology involves computers, the cyberspace and electronics that enable the player by becoming an extension of his body.

Academic observations on the phenomenon of esports started to appear in the early 2000's (Kushner, 2004; Lee, 2005) whereas the first attempt to formally define the phenomenon was done by Dennis Hemphill in the article "Cybersport" (2005) in the Journal of the Philosophy of Sport. Hemphill elaborates on the increasing use of computer-generated models or simulations of activities such as auto racing, golf, football, skiing, boxing and basketball under the label of "entertainment" while exploring the possibility that those computer game simulations could be considered sports.

Michael Wagner (2006) contributed by providing an important definition for the field that carried the influence of an academically sound and broad definition for the term "sport" proposed by the sport scientist Claus Tiedemann (2004). A simplified version of Tiedemann's definition of sport is an area of activity where humans develop their abilities in skilled motion, achieve results and compare themselves with other people. Following a similar path, Wagner (2006) defines esports as an area of sport activities where people use information and communication technologies to develop abilities of the body and mind. The main criticism to Wagner's definition is that it shows an overly broad aspect of esports that, according to Hamari and Sjöblom (2017), could

refer to such a large set of activities that even office-based software training could be included as a sport. Conversely, Witkowski (2012) criticized Wagner's definition by stating that "information and communication technologies" defined esports too narrowly in a way that it was not able to induce the complex mixture of both physical and electronic aspects that the term brings in it.

The definitions of Hemphill and Wagner were succeeded with a significant growth in the field of esports. According to Heaven (2014b), there are two main reasons for esports growth: better video streaming technology, faster internet connections and access to elite competition. The author adds that a unique attraction of esports is that fans are able to see their favorite players talk through their game. Then, an interesting comparison is made: "If you had Usain Bolt giving an analysis of his own race, people would love that." (Heaven 2014b, paragraph 10-11).

The growth in awareness and accessibility that the last few years have delivered to esports ended up attracting academic interest and, therefore, more definitions of the term were proposed. Weiss (2008, 2011) describes esport as playing competitive games on the internet according to generally accepted rules of leagues and tournaments. Szablewicz (2011, 2016) gives us a fairly complete description of esports:

> Broadly speaking, E-Sports involve a number of different game genres including first person shooters, sports games, racing games, action games and real time strategy games. These games are played competitively, either one-on-one or in small teams. Importantly, games usually gain acceptance as 'E-Sports' once they have been selected for official inclusion in an international E-Sports competition (p. 9; see also Szablewicz 2016).

There are definitions that use the wording "competitive online gaming" as in Ryzhov's (2011) work, while others use a broader approach by suppressing the "online" part. In Witkowski's (2012) understanding, esport stands for "an organized and competitive approach to playing computer games", in the work of Maric (2011) as "organized and competitive video gaming", in Taylor's (2012) work, esports is "the world of professional videogame play" and in Bornemark's (2013) it is considered "a general term to describe the play of video games competitively".

On this work, we will adopt one of the most recent definitions proposed in 2017 by Hamari and Sjöblom. Based on the notions of "real world" (or "physical world") and the "virtual world", where the esports are played, Hamari and Sjöblom (2017) define

esport as “a form of sport where the primary aspects are facilitated by electronic systems; the input of players and teams as well as the output of the esports system are mediated by human-computer interfaces.”

2.2 ESPORTS VS SPORTS

The utilization of the term “electronic sports” or “esports” goes back to the year of 1999 when the Online Gamers Association (OGA) made use of it in their first press release (Gestalt, 1999). The term esport created an association between games and sports that is debated on the academic environment until today. Therefore, it is valuable to deeper explore the thoughts surrounding the dilemma: Do esports fit the definition of sports?

Proponents of gaming believe that esports mimic central features of sport, such as interpersonal competition, skill training and development, adherence to rules, goal attainment, and some involvement of coordination and agility and because of that, should be considered as sports (Crawford & Gosling, 2009). As previously seen on the work of Hamari and Sjöblom (2017), the notion of sport is central for their definition of esports.

On the same line, Jay Coakley (2009), in his book “Sport in society: issues and controversies”, considers sport a mutable social construction. Also, he states that esports can be considered sports in that the definition of sports evolves throughout the time. Also in the same line of reasoning, using a framework proposed by the Faculty of Health Sciences in the University of Western Ontario, Américo (2014) concludes that the sport is a socially constructed practice that is modified over time. The author states that esport is a phenomenon of the contemporary digital culture situated on a new ecosystem that encompasses sport, media and technology.

However, several authors defend that esports do not completely fit with definitions of sports. Jenny et al. (2017) contributed to this matter by comparing esports with traditional philosophical (Guttmann, 1978) and sociological (Suits, 2007) definitions of sport. In accordance with these two definitions, the authors establish seven characteristics that an activity must possess in order to be considered a sport. The activity must include play, be organized, include competition, be comprised of

skills, include physical skills, have a broad following and have achieved institutional stability where social institutions have rules which regulate it, stabilizing it as an important social practice. After that, the authors debate physicality and institutionalization as the two characteristics that esports might lack.

For the physical dimension, the authors argue that the manner by which an athlete performs an action, like a basketball shot, has a direct impact on the outcome of the action. On esports, however, the way that a button is pushed will not change the outcome of the in-game action. She continues by arguing that for a game to be considered a sport, the successful execution of physical movements must have a direct impact on the athlete's task.

For the institutionalization dimension, Drewe (2003), Suits (2007) and Tamburrini (2000) defined four aspects that are needed for an activity with a long history to be considered institutionalized: The first is that rules have to be developed and standardized; The second is that the learning of the game has to become formalized; The third is that expertize must develop; And the fourth is that coaches, trainers, officials and governing bodies must emerge. Jenny et al. (2017) concludes that the emergence of officials and governing bodies is still unproven.

In the conclusion of this work, the authors state that "esports currently lack great physicality and institutionalization." (Jenny et al.,2017, p. 15).

Karhulahti (2017) opens an interesting analytical perspective on the topic presenting an economic perspective for esport and the executive ownership that the publishers maintain. The author points that, unlike the majority of previously known sports, esports operates on gaming systems that are developed, distributed and maintained as commercial products of profit-seeking companies.

Karhulahti states that the games used as esports (even if they were initially created by the fan community and enthusiasts) are ultimately developed, distributed and maintained by a profit-seeking company. Also, that those games have been expanded and updated by their owners to make financial profit. The author states that if the game stops being profitable, the status of esport ceases to exist.

Then, the author presents the large difference that exists between the relation of an esport product and its profit-making owner and the relation between any traditional sport and its independent governing institution (like FIFA, the Fédération Internationale de Football Association). The article presents the descriptive analysis performed by Lefever (2012) on the "sports-media complex" (i.e. the interdependence

of sport organizations, media conglomerates, sponsors, and athletes) and how this ecosystem can dictate the characteristics of events or even change fundamental aspects of the sport. Karhulahti then explores the even more complex esport ecosystem with the presence of executive owners of games. As stated in the article: “An executive owner is much more than an interdependent component; it literally (re)writes the rules of its game, supplies the essential technology, and ultimately decides on the existence of the sport as a whole.” This distinctive dynamic of executive ownership is then explored in three dimensions: Firstly, executive ownership of esports limits the freedom of playing the esport whenever one desires; Secondly, executive ownership puts the governing company into an exceptional position in terms of organized competition; Thirdly executive ownership of esports includes the financial responsibility to keep the products playable and up-to-date with patch-metagame cycles.

Finally, Karhulahti uses the fifth criteria of the Sport Accord (2015) definition of sport to conclude. The author argues that even though esport is a form of sport when analyzed from the dimensions of competition, skill, physical precision and ethical aptness, the executive ownership of the game hurts the fifth aspect where the sport should not rely on equipment that is provided by a single supplier.

Therefore, the author defies the status of sport, as esport always relies on a commercial play product that is governed by an executive owner. With this conclusion, the author proposes a reconsideration of the “e” of esports by suggesting that the label term and theoretical basis for esport be “economic” (rather than “electronic”).

It is important to highlight that some authors and people from the field of esport do not enter the discussion of whether it is or is not a sport, with the reasoning that esport is a noteworthy subject on itself and that this controversy is irrelevant for the study of the phenomenon. Indeed, Wagner (2006) thinks that there is no need to face esport as a field that satisfies a traditional definition of sport and that it must be seen as a completely different field of study. Also, he points out that the overestimated issue of esport being or not a sport is irrelevant for the academic discussion about the subject.

A report written by Brett Hutchins (2008) on the World Cyber Games (WCG) has an intriguing point of view that must be taken into consideration. Hutchins discusses the utility of the term “sport” inside the esport reality, defending that esport is unique and should not be “simplified” into the definition of sport:

> The pliability of the term ‘sport’ appears to negate the need for a new term such as e-sport. To think in these terms misreads the subject matter and ignores the distinctive and defining feature of the WCG and competitive gaming, which is something no sport shares: the material interpenetration of media content, sport and networked computing (Hutchins, 2008, p. 851).

The inclusion of esports into the Olympic Games is debated as the controversy of the esport sportiness continues (Clapperton, 2015; Kates, 2015). The organizers of the Paris Olympic Games are talking with the International Olympic Committee and various professional esport organizations to introduce esports as a medal-winning sport during the Olympics. Tony Estanguet of the Paris committee said that introducing esports would help to make the Olympics more relevant to the younger generations. The final decision as to whether video games will be featured in the 2024 Olympics will be made in 2020 (Morris, 2017).

Some countries already consider esports an actual sport and are recognizing their esport athletes. The International esports Federation (IeSF), a global organization based in South Korea that has the mission of having electronic sports recognized as a legitimate sport, already has 48 countries as members. In 2013, Canadian League of Legends player Danny "Shiphtur" Le became the first pro gamer to receive an American P-1A visa, a category designated for "Internationally Recognized Athletes" (LA Times, 2013). Since 2013, universities and colleges across the United States have been reinforcing esport’s legitimacy by recognizing esport players as varsity athletes and offering athletic scholarships. In March of 2018, more than 50 programs were available with the majority being part of a national governing body known as the National Association of Collegiate Esports (NACE) (Tassi, 2015; Morrison, 2018). In 2017, Tespa, the collegiate esports division of Activision-Blizzard, announced its initiative to expand collegiate esports with $1 million in scholarships and prizes for collegiate esports clubs competing in its tournaments (Wu, 2017). In 2016, the French government started working on a project to regulate and recognize esports (O’Brien, 2016). The Games and Amusements Board of the Philippines started issuing athletic license to Filipino esports players who are vouched by a professional esports team in July 2017 (Sheldon, 2017).

The dilemma of esport being a sport or not imply on interesting and important consequences for the field as the official recognition of esports as a sport by countries and international organizations could mean more investments, visibility and legitimacy

for the scene. On this study, we consider esports as an actual sport, what is in line with the adopted definition of Hamari and Sjöblom (2017) that defines esport as “a form of sport” facilitated by electronic systems.

2.3 ESPORT GAMES

Esports is commonly organized around are real-time strategy or RTS (e.g. Starcraft 2, Warcraft 3, Age of Empires), multiplayer online battle arena or MOBA (e.g. Dota 2, League of Legends, Heroes of the Storm, Smite), first-person shooter or FPS (e.g. Counter-Strike: Global Offensive, Halo, Call of Duty, Overwatch), battle royale games (e.g. PlayerUnknown's Battlegrounds or PUBG and Fortnite), collectible card games (e.g. Hearthstone) and sports games (e.g. FIFA).

The essence behind those esports is fundamentally different, therefore each one of them forms a sub-culture of their own within esports, in the same way that “traditional” sports do (Hamari & Sjöblom, 2017).

The most important genres for esports are explained hereafter.

Real-time strategy (RTS) games are a subgenre of strategy video games where the game does not progress incrementally in turns. Usually, RTS games involve resource gathering, creation of structures and units in order to overcome another player. The term “real-time strategy” dates back to the early 1990’s when the game Dune II was launched (Geryk, 2008). Nowadays, the most popular RTS title is the acclaimed Actvision-Blizzard’s StarCraft II (2010). This is especially true in South Korea, where there are two television channels dedicated to broadcasting professional StarCraft matches and the game has also been referred to as the national pastime (Bellos, 2007). The StarCraft series is usually considered as the first major esport (Karhulahti, 2017) and, ultimately, became a commercial success by selling nearly ten million copies. It is generally documented as the product that shaped esport into its present form (Huhh, 2008; Jin, 2010; Chee, 2012; Groen, 2013; Felczak, 2015). For StarCraft, Blizzard Entertainment decided to use the pay-once monetizing method and to distribute StarCraft with a feature called “spawning,” which allowed the player-versus-player mode to be played by multiple players with a single retail copy (Korean Creative Content Agency, 2013).

Multiplayer online battle arena (MOBA), also known as action real-time strategy (ARTS) is a subgenre of real-time strategy video games in which a player controls a single character in a team who competes versus another team of players (generally five versus five) with the objective of destroying the opposing team's main structure. Multiplayer online battle arenas are open for a huge combination of characters (usually around 100 characters) and a big number of strategies, what gave birth to the comparison: "it is a combination of football - soccer for the Americans - and chess" (Liu, 2014). The genre largely began with Aeon of Strife (AoS), a custom map of StarCraft (1998) where four players each controlling a single powerful unit and aided by weak computer-controlled units were put against a stronger computer (GetDota.com, 2010). Defense of the Ancients (DotA), a map based on Aeon of Strife for Warcraft III: Reign of Chaos and The Frozen Throne, was one of the first major titles of its genre and the first MOBA for which sponsored tournaments have been held (Gosugamers.net, 2013). Until 2009, the effort of developing and maintaining DotA was done entirely by community's enthusiasts without any monetary compensation. The developing team had the job of balancing the game for competitive purposes while adding new heroes, items and mechanics to the game (Gosugamers.net, 2013). In October 2009, IceFrog, the main DotA developer, announced he had been hired by Half-Life's studio Valve in a project that lead to the creation of Dota 2. DotA was followed by the two spiritual successors, Heroes of Newerth and League of Legends (Riot), the world's most played and watched videogame (Newzoo, 2018). Eventually, Valve's Dota 2 (2013), was released as well as numerous other games in the genre such as Heroes of the Storm (Activision-Blizzard) and Smite. By the early 2010s, the genre had become a staple of the emerging esports scene (Funk, 2015). Unlike the real-time strategy esports monetization strategy, the MOBA is, in general, free to play and there is no need for the retail purchase. Dota 2 employs a monetization method that relies mainly on decorative virtual item sales that do not affect competitive play performance (Lehdonvirta & Castronova, 2014).

First-person shooter (FPS) is a videogame genre that has a gun or other combat weapon as the focal element in a first person perspective, which means that the player experiences the action through the eyes of the controlling character. In the 21st century, the first-person shooter is the most commercially viable video game genre, and in 2016, shooters accounted for over 27% of all video game sales (Statista, 2017). The genre goes back to 1974 when Maze War was launched. The FPS games

evolved into a more violent form with Wolfenstein 3D (1992) and Doom (1993) forming the archetype of today's FPS games. In 1998, Valve published the Sierra Studios' Half-Life and, in 1999, Counter-Strike (a Half-Life's "mod") was released. In 2000, Valve acquired the rights to the intellectual property of the game and the developers working on it at the time (Vic, 2012). In 2012, Valve released the popular Counter-Strike: Global Offensive, the fourth game in the Counter-Strike series. Nowadays, the most popular titles for FPS esports are Counter-Strike: Global Offensive (Valve), Halo (Microsoft), Call of Duty (Activision-Blizzard) and Overwatch (Activision-Blizzard). For those games, the monetization strategy is a mix of the real-time strategy (pay-once) and the multiplayer online battle arena (in-game purchase) as it is, generally, necessary to pay in order to acquire the game and there are in-game skins and other products that can be purchased (Beck, 2017). Another noteworthy FPS esport is Activision-Blizzard's Overwatch (2016) that mixes the characteristics of an FPS with some elements of a MOBA (hero-based game that emphasizes teamwork).

The battle royale game, is a genre of competitive video game that mixes the last-man-standing with the survival gameplay (surviving, exploration and scavenging). The game is centered around the challenge of multiple players that need to explore a map in search for equipment and be the last player standing by staying inside a shrinking "safe area" and eliminating other players. The name of the genre is based on a 2000 Japanese film called Battle Royale (Winkie, 2017). The genre battle royale started to become popularized with PUBG Corporation's game PlayerUnknown's Battlegrounds (2017) that sold millions of copies by the end of 2017. However, the game and software development corporation Epic Games rapidly released a free-to-play battle royale called Fortnite (2018) that became PUBG's main competitor and was able to overtake it in terms of number of players and also in revenue (Andronico, 2018). Fortnite is now wildly popular not only because it is free-to-play, but also because of the multiplatform approach. The game, that has a "cross-platform" compatibility, is playable in PC (Mac and Windows), mobile (iOS and soon in Android), Xbox One, PlayStation 4 and Nintendo Switch (Tach, 2018).

Collectible card game (CCG) is a genre of the strategy card game where players first buy starter decks and then later are encouraged to buy booster packs to expand their selection of cards to play. The first collectible card game that followed this pattern was Magic: The Gathering (1993). Nowadays, there are virtual collectible card games that are free to play, like the popular title Hearthstone (2014) responsible for

making US$40 million per month for Activision-Blizzard as of August 2017 (Wilson, 2017). The game is a turn-based card game between two opponents, using constructed decks of 30 cards along with a selected hero with a unique power. Activision-Blizzard made sure to make the game simple enough so that it could be compatible for PC and for the mobile platforms in order to reach more players. While being free-to-play, Hearthstone uses the in-game purchase monetization method, where the player acquires booster packs in order to speed up the improvement of his deck.

Games that simulate traditional sports are also common as esports. The genre goes back to the launching of FIFA International Soccer (1993) and is still significant on the gaming and esport industry with FIFA 2018 and FIFA 2019.

Fighting games is a video game genre based around interpersonal combat between a limited amount of characters in which they fight until they defeat their opponents or the timer expires. They have an important role on the history of gaming and esports. Heavyweight Champ was released in 1976 and from there, many titles were successful, like Street Fighter II (1991), Mortal Kombat (1992), Tekken (1994) and Street Fighters IV (2008).

2.4 BUSINESS ECOSYSTEMS

More than 60 years after the British botanist Arthur Tansley introduced the term ‘ecosystem’ to describe a community of organisms interacting with each other and their environments, the strategic planning concept of a Business Ecosystem was created by James F. Moore in the year of 1993. Nowadays the term is widely used in the business world, especially in the high tech community, where strategic planning is paramount. The concept of business ecosystems first appeared in Moore’s 1993 article "Predators and Prey: A New Ecology of Competition" published in Harvard Business Review, where he defines the business ecosystem as organisms that interact to form an economic community. Those organisms are organizations and individuals of the business world. The author explains that the economic community produces goods and services of value to the customers, that are themselves members of the ecosystem.

To analyze how value is created on a business ecosystem, a broad view of the value network needs to be used. Allee (2000) describes relationships between business ecosystem organisms by three types of value transaction: goods, service and revenue; knowledge; and intangible value. The author describes that direct revenue exchanges are only part of the scene and that knowledge and intangible value are of significant importance. Because of that, building a web of trusted relationships is a competitive advantage to the ecosystem entities (Allee, 2000).

The interacting organisms tend to align with the direction set by one or more central organism. They also coevolve their capabilities and roles, meaning that organisms holding leadership positions may change over time. The leadership role is valued by the community, as it enables members to move in a commonly desired direction and align their investments. Moore also explains that a business ecosystem encompasses a variety of industries meaning that a company should not be viewed as a member of a single industry. The organisms of the ecosystem work cooperatively and competitively to coevolve capabilities around new products, challenges, customer needs and incorporate innovation (Moore, 1993).

The ecosystem's health can be assessed by the examination of three main indicators: Productivity, Robustness and Niche creation. Productivity stands for the capacity of consistently transform technology and other raw materials of innovation into lower costs and new products – a relatively simple indicator is return on invested capital. Robustness of a business ecosystem is the ability of surviving unforeseen disruptions – a good indicator is the survival rates of ecosystem members over time relative to other comparable ecosystems. Niche creation is the ability of the ecosystem to create meaningful diversity through the creation of valuable new functions, or niches – one way to assess niche creation is to look at the extent to which emerging technologies are actually being applied in the form of a variety of new business and products (Iansiti & Levien, 2004).

2.5 ESPORT ECOSYSTEM

For decades, video game enthusiasts have been gathering for tournaments, festivals and LAN parties. However, the evolution of digital distribution channels, the

increasing presence of internet connection worldwide and the growth of gaming in general has given rise to an esports ecosystem with many of the same dynamics as traditional major sports. The top tier players are now part of professional teams that in many cases have multiple sponsorship contracts, offer them several benefits, including salaries and revenue sharing, coaches and training facilities. The most prestigious competitions on the esport scene, like Dota 2's The International and League of Legends' World Championship are offering prize pools that enter the eight-digit domain: tens of millions of dollars (Morgan Stanley, 2018).

2.5.1 Revenues

In the last few years, the esports numbers are growing and exposing the future potential of a burgeoning ecosystem that already is a noteworthy media phenomenon. When diving into the revenues of the ecosystem, the category was worth an estimated $655 million in 2017, and that figure is on track to increase about 30% a year over the next few years, reaching $1.65 billion by 2021. In 2018, global esports revenues will reach $906 million, a year-on-year growth of +38.2% (NewZoo, 2018).

Splitting this revenue by source, the sponsorship segment will represent 40% of the total, summing up to $359.4 million in 2018 (compared to $234.6 million in 2017) as it can be seen on the Figure 1. However, there is a high expectation that media rights will increase significantly on the next few years, given that it has been the fastest growing segment with a compounded annual growth (since 2016) of 49,8% (NewZoo, 2018).

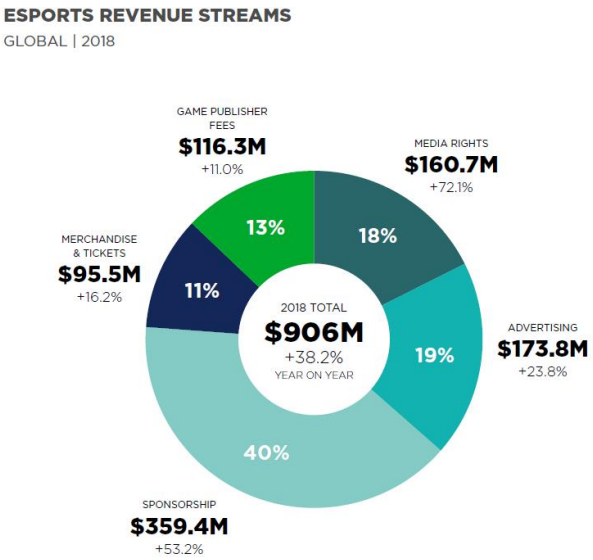

Figure 1: Esports Revenue Streams (NewZoo, 2018)

2.5.2 Competitions

Competitions of esports are events where a given game is played competitively. It can be organized in a physical location (e.g. in a stadium or theater) in a form of an offline LAN (Local Area Network) or organized online with the support of the internet. In the years between 2000 and 2010, esport grew significantly bringing a large increase in competition's prize money and viewership (Miller, 2010). During this period, there was a noteworthy grow in the number of esport tournaments, going from about 10 in the year of 2000 to about 260 in the year of 2010 (Popper, 2013).

In 2017, there were 588 major esports events that generated an estimated $59 million in ticket revenues, up from $32 million in 2016 (NewZoo, 2018). The 2017 League of Legends World Championship generated $5.5 million in ticket revenues with an estimated attendance of 80 thousand fans on the Bird's Nest – Beijing National Stadium. In 2018, the LoL Championship finals had 99.6 million unique online viewers (Li, 2017; LoL esports staff, 2018). On Figure 2, it can be seen a picture of the League of Legends 2017 World Championship final at the Bird's Nest in Beijing.

The total prize money of all esports events held in 2017 reached $112 million (NewZoo, 2018). The International, Valve's Dota 2 World Cup, is the biggest and most prestigious Dota 2 competition in the world. The International's staggering millionaire prize pool is in part a reflection of the fact that Dota 2's community is simply willing to spend more money in the game than any other. Dota 2 professional athletes have collectively won more playing Dota 2 than they have in League of Legends, Counter-Strike: Global Offensive, StarCraft II, and Counter-Strike 1.6 combined (Allen, 2017).

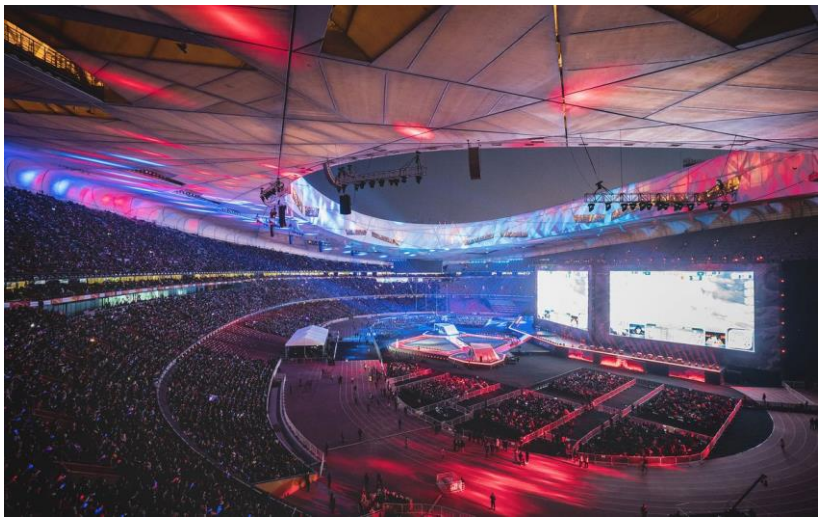

Figure 2: League of Legends 2017 Championship final at the Bird's Nest (Dot esports, 2017)

The method that Valve used in order to get a US$25.5 million dollar prize pool for The International 2018 is to crowdfund their way. Every year, Valve puts down $1.6 million as the base prize pool for The International. This prize pool is then boosted by fan contributions. Purchasing an in-game item known as the Battle Pass (costing a minimum of US$9,99) will add more cash to the total, with 25% of every sale being added to the prize pool (Stubbs, 2017). From 2014, when the contribution system started to bring huge improvements for the prize pool, until 2017, the total contribution from the community have been increasing with a compound annual growth rate of 35,5%. This means that not only the community is willing to spend money, but also that Valve is doing a good job of attracting new purchases every year with the in-game

advertisement of the Battle Pass. On Figure 3, it is possible to see the evolution of the crowdfunding for the competition since 2015:

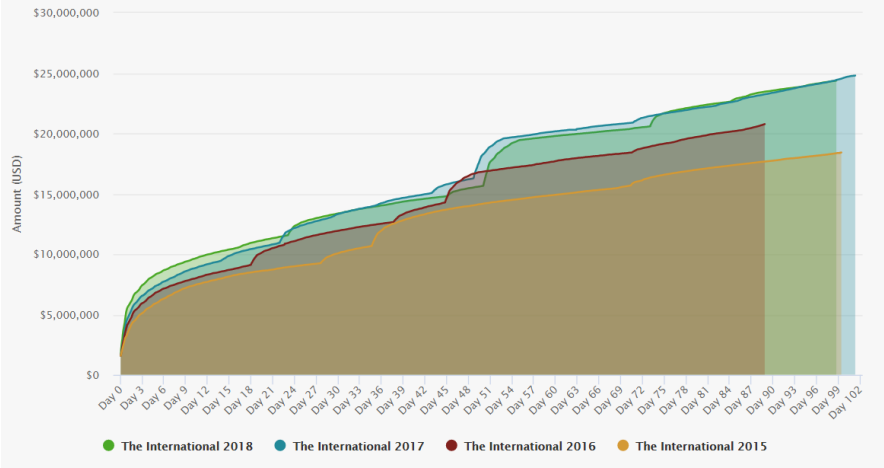

Figure 3: The International's daily prize pool tracking comparison graph (Dota 2 Prize Pool Tracker, 2018)

However, the total fan contribution of US$23.9 million for the 2018's The International has only increased 3.2% from the US$23.2 million acquired in 2017, a big drop from the historic 35.5% compounded annual growth since 2014, when the contribution was US$9.3 million. This may suggest that the community's contribution for the biggest Dota 2 tournament is approaching its limit.

In spite of the huge prize numbers, the competition on the high tiers of esport is fierce and only the very best teams will profit from tournament winnings, being an unreliable revenue stream. Some organizations split the winnings with the players retaining a portion of the total. Usually, the winnings are distributed directly to the players and therefore, the vast majority of esport teams earn most of their income through sponsorships and advertisements (Van Sloun, 2018).

The popularity of esports in the last years have opened more opportunities for gamers and teams to compete on the professional level and earn endorsements, prize money and salaries (Dubois, 2018). The average starting North America League of Legends Championship Series (NA LCS) player salary is now over $320,000, with over 70% of the players performing on multi-year contracts (Heitner, 2018). However, not

all esport players are able to obtain such high salaries and the lack of transparency in the world of esports makes it difficult for information to be acquired and for fair compensation to be widely practiced (Duran, 2016).

Amateurs can now easily participate in esports competitions. Launched in June of 2014, Gfinity (Gfinity.net) provides online daily esports competitions and awards almost $50,000 in prize money each month (Heaven, 2014b). Also, esports tournament platforms like FACEIT and esport Amateur Competitor's League (EACL) support more than 8 million gamers to compete in tournaments, championships and leagues of multiple games with monthly prizes of US$2.5 million.

2.5.3 Viewership and streaming services

The streaming service is the offer of digital audio or video so that users are able to watch or listen without the need to download the entire digital video or audio file before they start to play it, while live streaming stands for the delivery of digital content in real-time. Live-streaming has been already defined as a media phenomenon through which anyone can become a TV provider, broadcasting themselves and their activities to a potentially large crowd of online viewers (Pires & Simon, 2015).

In the 2000's, the televised esports coverage was best established in South Korea with Starcraft and Warcraft III competitions whilst elsewhere, the esports television coverage was sporadic (Kim, 2007). However, in the early 2010's, the esport live-streaming services emergence started. Since then, the live-streaming media consumption has gained significant traction in an extremely short period of time, and has become a staple of the video gaming community (Hamari and Sjöblom, 2017). Nowadays, competitive video gaming as a spectator sport is being live-streamed to a global audience of over 380 million people (NewZoo, 2018).

The fast growing popularity of the service called the attention of companies that started to strategically invest on live-streaming. In 2014, Twitch, a spinoff from Justin.tv, was considered the fourth largest source of peak Internet traffic in the United States and, in that same year, the service was acquired by Amazon for US$970 million (Woodcock, 2017). In 2016, Riot Games, the publisher of League of Legends, signed a seven-year US$350 million dollar broadcast deal with the digital platform BAMTech.

In 2017, Disney-ABC Television Group, the owner of ESPN, started to have a say in League of Legends streaming services since they acquired a controlling stake of BAMTech (Dubois, 2018).

Nowadays, Twitch is the most famous online streaming platform and is considered one of the most important players in the esports ecosystem with 355 billion minutes of content viewed, 2 million broadcasters monthly and over 15 million unique daily visitors on its platform in 2017 (Perez, 2018; Wawro, 2014).

With the creation of the Twitch experience, the act of watching the gameplay of others, something that has always been seen as a common characteristic inside the video game culture, changed dramatically. Now, the spectator can find a new kind of closeness with the broadcaster, fostering a strong sense of community (Taylor, 2016). This new proximity, seldom found in other types of media, is due to two main factors: firstly, the possibility of the viewers to interact in real-time with the streamer via the stream chat and; secondly, the feeling of community that is created around the streamer (Carrigan et al., 2019). Because of this, Twitch has become more than just an entertainment medium; it is the home of the largest gaming community in history (Churchill & Xu, 2016).

Twitch run its model on advertisements, in which brands pay to be displayed on their site and on their videos and live-streams. Also, the live-streaming platform offers a monthly paid subscription (Twitch Turbo) for $8,99 so that, among other upgrades, users can enjoy a smoother game viewing experience while no ads are shown. Besides that, Twitch has a partner program created to encourage the popular and regular streamers to get more viewers, once they will be receiving a share of the CPM (Cost Per Mille, cost per thousand impressions) from advertisers, monetization of merchandise sold through their channel and the possibility to have paid channel subscription. Twitch earns money from channel subscription when users pay $4.99, $9.99 or $24.99 a month in order to receive some benefits like ad-free viewing and special chat features on a determined channel. Twitch will take about half of the subscription revenue; however, some big streamers will receive 60% or even 70% of the subscription revenue. Therefore, streamers can make a living out of their gameplay (Nawal, 2018; Van Sloun, 2018; Woodcock, 2017).

2.5.4 Audience

According to the independent esports analyst and forecaster, NewZoo, the number of esports enthusiasts worldwide will reach 165 million in 2018, a year-on-year growth of +15.2%, while the total esports audience (enthusiasts and occasional viewers) will reach 380 million, a year-on-year growth of +13.5%. The forecast for 2021 is of 307 million occasional esport viewers and 250 million enthusiasts summing up to an audience of astonishing 557 million people (Newzoo, 2018).

With the objective of attracting audiences, game developers are focusing on esports that are designed not only simply to be played, but to be increasingly visually pleasing for spectators (Dubois, 2018). Another natural strategy that developers use to make watching esports more pleasant is the implementation of an easy to use and understand “spectator mode” that reflects on a better experience for the audience and for casters (Sullivan, 2011). While on spectator mode, the audience has the ability to access information that players do not have (no vision constraints and live statistics). Games like League of Legends, Counter-Strike: Global Offensive, Call of Duty, StarCraft II and Dota 2 have a spectator mode.

The esports audience is widely connected, does not consume media in the same way that older generations did and are increasingly less interested in many traditional sports products. Moreover, the esport fan has a considerable purchasing power and is more likely to be on a full-time job than not. A household income of $75,000 or higher is the reality of 43% of the esports fans and 53% of them have a full-time job. On top of that, the esport enthusiast is more likely than the total population to have a Netflix or Spotify subscription and to shop more frequently. Also, fans are not only watching esports from traditional TV’s or computer screens, as 70% of them tune in from mobile phones or connected TV devices. An audience connected to multiple platforms implies on more advertisement opportunities for brands to explore. Therefore, this segment is extremely valuable for big brands, digital media provider and peripheral manufacturers. The esport is seen as one of the ways that brands can have access to this valuable fan base (Mindshare, 2016; NewZoo, 2015; NewZoo, 2018).

2.5.5 Virtual Reality Technology

On the end of 2018, Oculus VR, the Facebook owned technology company hosted at San Jose, California, the Oculus Connect 5, the company's annual developer's conference where the Echo Arena grand finals took place. Echo arena is a VR cooperative esport played on a virtual zero gravity arena where players try to score goals against the opposing team (Glitch, 2017).

Figure 4: Professional Echo Arena player in action (Haskins, 2018)

Echo is an example of how esports can evolve into a more physical demanding competition with the introduction of VR. However, there are still technological issues to be solved: level of precision on interaction, hand tracking, eye tracking, graphics and VR sickness, among others (Glitch, 2017).

Virtual reality may transform esports into a more "sporty" experience. Virtual reality esports competitor Tim McGuinness, top player of Echo Arena, explains: "It's different from traditional gaming. There is a lot of physicality, so you will break out in a sweat after a 10 minute match". Not only that, but the hand-eye coordination, endurance, form and practice are big part of VR esports. A good example was the 2017 Echo Arena finals where Tim and his team had to play for almost 12 hours on one day (England, 2018).

Also, VR has the power to completely change the audience experience as shown by Sliver.tv where viewers who choose to watch CS:GO VR coverage will get a virtual representation of a real space in which viewers are focusing on a virtual space. This concept is illustrated on the Figure 5.

Figure 5: A virtual representation of a space in which the audience is able to see, in VR, the action from a vantage point (Sliver.tv, 2019)

However, the mainstream adoption of Virtual Reality still needs to overcome challenges like price, user experience and technology.

VR devices' price point still represents entry barriers to fans worldwide, as they do not come cheap. In 2018, Facebook showcased the Oculus Quest, a $399 wireless VR device that CEO Mark Zuckerberg describes as the "all-in-one VR experience we have been waiting for" (Smith, 2018). Even with a high price point, a research done by The Nielsen Company in 2017 showed that 37% of esport fans across US, UK, France and Germany were inclined to buy a VR device then or in the next 12 months, what represents an opportunity for VR companies to focus esport fans (Pike, 2017).

However, for the general public, the price is not only represented by the headset as a gaming PC or a console will have to be bought. When analyzing the gaming community, the PC or the console are in most cases a given, but to introduce

VR to other demographics, the investment gets higher. Adding to that problem is the graphic needs that VR demands, requiring players to invest on costly graphic cards in order to be able to play the more advanced games and have a positive experience.

Price is a relevant factor, but according with Paler Luckey, the founder of Oculus, it is not a dominant one. He believes that “No existing or imminent VR hardware is good enough to truly go mainstream, even at a price of $0.00”. In Luckey’s opinion, the user experience is currently lacking by explaining that “higher resolution, improved ergonomics that cater to a wide variety of users, and enough deep content to engage that same wide variety of users are all key factors”. However, Luckey acknowledges that most of the big players working on VR devices also run content platforms and, therefore, have the incentives to invest on hardware and software that are able to deliver better user experience (Lang, 2018).

Trying to change this reality for the duo esports and VR, Intel partnered with ESL and Oculus. According to Scott Gillingham, Intel's Gaming and esports lead, VR Adoption on esports is still slow: "I think the overall esports players, they're not all rushing to do this... that's a slow process. But the ones that have done it have [had] a great experience, [so] there's a definite future there with VR coming" (Smith, 2018).

There are also some inherent problems that the current VR technology faces like eye tiredness and virtual reality sickness. Traditional esports live-streams are able to broadcast for hours, but many VR users still suffer from eye strain during sessions that exceed 20 minutes (Mukamal, 2017).

The types of sickness are usually defined in relation to their related vehicles or situations, such as car sickness, sea sickness, air sickness and space sickness. Motion sickness can induce a number of symptoms including eye strain, headache, pallor, sweating, vertigo, ataxia, nausea, and vomiting. VR sickness can be seen as a mimic of motion sickness and is called cyber-sickness because it is the result of conflict between the vestibular and visual organs. This means that a disconnection between what is being seen and what the body perceives can cause VR sickness. Other factors like low frame rate (usually when a computer does not have the minimum requirements to execute the application) can also induce sickness (Min, 2004; Chin-Teng, 2007). With 25% to 40% of consumers experiencing this discomfort, many companies are searching for solutions to reduce VR sickness. No compete solution, however, has been introduced to the market (Samit, 2018).

In order to further explore the strategical analysis of the esport ecosystem, the scenario planning tool was chosen. It is introduced on the following section.

2.6 SCENARIO PLANNING

Scenario Planning is a Strategic Planning tool used to prepare flexible long-term plans for organizations. Instead of trying to come up with a forecast (with a high probability of being wrong), the tool opens the possibilities for multiple futures so that the organization is able to rehearse its plans for different future possibilities and avoid surprises by breaking through the “illusion of certainty”.

The exercise is done by first determining the geographical scope and the time spectrum that will be analyzed. Then, a research is made in order to understand the driving forces that might move the organization into distinct directions. Those driving forces can be divided into predetermined and uncertain. We will refer to the former as tendencies and the latter as uncertainties. Predetermined forces are the ones that are unlikely to change drastically on the time frame defined for the scenario planning.

After identifying the predetermined forces, all of the other driving forces are classified as uncertain. The uncertainties are then analyzed by level of importance and the top two that most likely will significantly change or define the course of the future around the studied subject are labeled critical uncertainties. It should be highlighted that the selection of the main uncertainties is of the utmost importance for the scenario planning method. When properly selected, the critical uncertainties allow the organization to focus on the unknown strategic aspects that can be the competitive differentiator when looking for the future (Schoemaker, 1995; Garvin e Levesque, 2006).

After establishing the two critical uncertainties, each one of them is reduced into a single dimension axis, with the extreme possibilities on opposite sides. The two axis created by the continuum of the two critical uncertainties are combined in order to create a double dimension plane called scenario framework where there will be four distinct quadrants representing different futures. The goal is to end up with a few clearly contrasting possible futures, whose differences make a difference to decision makers (Schwartz, 1991).

The different futures that result from the interaction between the critical uncertainties are called scenarios. They are plausible, alternative hypotheses about how the world might unfold. They are designed to highlight risks and opportunities that the organization might face on the specified time frame. When properly done, the scenarios will challenge the thinking of the participants by suggesting a deeper analysis of the factors that might shape the future. It is important to understand that there are no right or wrong scenarios. Scenarios do not fall smoothly into good or bad worlds, desirable and undesirable futures.

After that mapping the scenarios (or alternative futures), each one of the four scenarios are crafted into a narrative or a story. These stories need to be logically coherent and consistent. They should hang together like a well-written novel, with persuasive plots that stretch the imagination and break old stereotypes without being seen as science fiction. To that end, it is important to link the scenarios back to the present by answering the question: “How did the world get from here to there?” This link increases the probability that scenarios will be perceived as realistic, rather than as a far-fetched staff exercises.

Each scenario is named in a way that it is easy to differentiate each one and also it is chosen a simple name that is associated to the future reality of the narrative.

3 METHOD

The objective of this work is to understand the esport phenomenon, the modern esport ecosystem and to perform a scenario planning exercise in order to improve the strategic analysis of the ecosystem.

This study addresses an ongoing and relatively recent phenomenon that is staring to get academic attention and still does not count with a vast academic production. Because of that, it was decided that this would be an exploratory study using the qualitative approach (Creswell, 2014). The data collection was primarily performed with in depth interviews using informal and semi-structured script that is adequate for the capture of motivations and values of the interviewees in relation to the studied topic. With a flexible script formed mainly by open questions, the interviewer is able to guide the interview to keep the focus while also gathering unforeseen information. This method favors an intense contact with the field and provides a deep visualization of the observed phenomenon (Creswell, 2014).

Interviews were made with some of the participants of the Brazilian esports ecosystem. The interviews were performed between March and November of 2018. All of the interviews were recorded with the authorization of the interviewees. The interviewees and their role on the esport ecosystem are listed on Table 1.

The interviews were transcribed and then all of the material was read so that the overall ideas of the interviewees could be visualized. After that, the data was coded by categories (Rossman & Rallis, 2012). The information was then interpreted qualitatively based on the researcher's personal understanding, culture, history, and experiences of the inquirer. It is important to observe that the experiences of the researcher, as an esport fan himself, do influence the analysis and the conclusions. In order to check the validity of the findings, the triangulation of data strategy was performed. The author collected data through multiple sources including interviews, observations and document analysis (Creswell, 2014). The validity check triangulation was performed with a secondary set of data obtained through articles, newspapers and the internet (Creswell & Miller, 2000).

Table 1 – Interviewed participants of the esport ecosystem

Interviewee	Ecosystem Participant	Company	Position
E#1	Publisher	1	Publishing Manager
E#2	Publisher	1	Esport Operation Manager
E#3	Competition Organizer	2	Amateur Competition Organizer
E#4	Broadcaster and News Provider	3	Vice President
E#5	Esports Investor	4	Head of Games and Esport
E#6	Esport Psychologist	5	Psychologist
E#7	Competition Platform	6	Competition Organizer
E#8	Esports Fan	-	-
E#9	Esports Fan	-	-

The information gathered from academic papers and the interviews was verified by the triangulation of data (qualitative data verification strategy) from multiple sources allowing the esports business ecosystem to be drawn and analyzed (Creswell, 2014). After that, the scenario planning tool was used to advance the understanding of possible scenarios for the future of the esport ecosystem (Schoemaker, 1995).

4 RESULTS

The results of this research will be presented as four sections. The first will be used to introduce the esport ecosystem structure. The second will briefly characterize the ecosystem participants. The third will be used to analyze the ecosystem as a whole and present the main dynamics of the esports network. The scenario planning exercise will be developed on the fourth section, where the ecosystem main tendencies and uncertainties are explored to form the narratives' story telling.

4.1 THE ESPORT ECOSYSTEM STRUCTURE

The ecosystem was drawn with the information from the interviews and the data obtained from documents, articles, the internet and the researcher's previous knowledge of the esport ecosystem. First, the participants were mapped. Then, the connection between each of the ecosystem participants was explored according to the importance that the interviewees and the literature gave to each of the interactions. This analysis was done by the insertion of the participants on a square matrix. The connection between each of the participants was established on the matrix with a number between 0 and 3 according to the level of importance of the connection. For example, the connection between the participants "TV Maker" and "Coach" was weighted as 0 while the connection between "Professional Players" and "Teams and Organizations" had a weight of 3. This information was used as an input for the Gephi software to generate the ecosystem shown on the Figure 6.

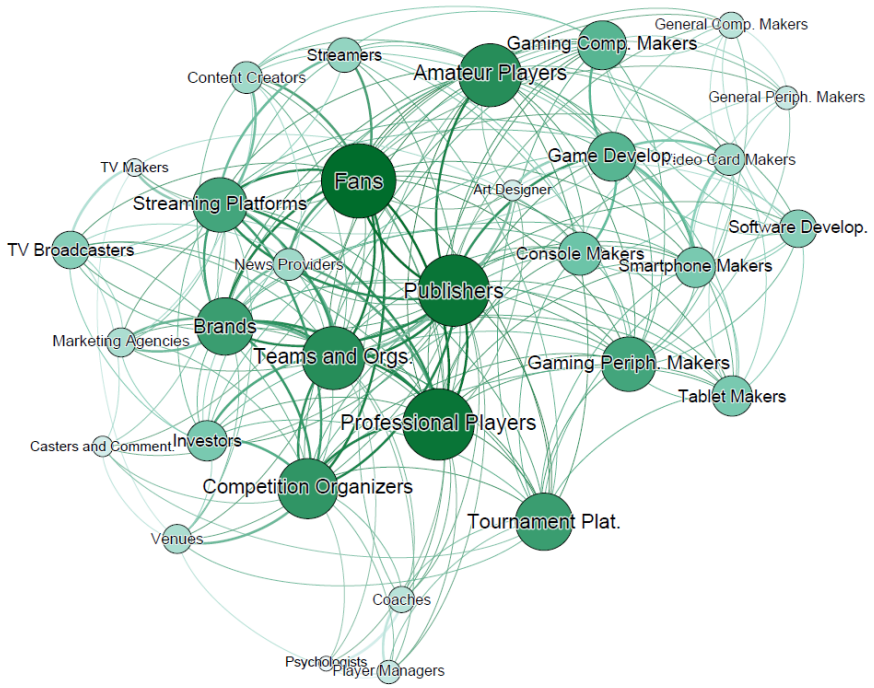

Figure 6: Esports Ecosystem

Hereafter, the esport ecosystem participants are briefly introduced and characterized.

Game Publishers: Video game publishers are the companies that study the market, finance the game developers or develop themselves, promote, physically manufacture, stock and distribute the games and deal with the platform providers (console, computer or mobile). Usually, the publisher retains the intellectual property of the game. They are responsible for updating the game, creating new content, organizing the esport competitions or deal with the third-party competition organizers (Bradley & Barlett, 2008; MacInnes et al., 2002; Ofek, 2008; Vaz, 2013).

Notable esport publishers include Riot (League of Legends), Microsoft Studios (Halo 5, Gears of War), Activision-Blizzard (Overwatch, Hearthstones, Starcraft 2, Call of Duty), Valve (Dota 2, Counter-Strike: Global Offensive) and Epic Games (Fortnite).

Game Developers: Game developers are software developers who are responsible for the creative (design) and technical (programming) process of game development. Developers can range in size from small groups making casual games to housing hundreds of employees and producing several large titles (Moore & Novak, 2010).

In terms of esports, some of the most famous game developers are also publishers: Activision-Blizzard with the Warcraft series, the Starcraft series and Overwatch; Valve Corporation with Counter-Strike and Dota 2; and Riot Games with League of Legends.

Competition Organizers: Competition organizers on the esports ecosystem are companies that are responsible to produce and organize esport tournaments. The professional esport competitions can be divided in two main groups: publisher organized competitions, where the competition is hosted by the game's own publisher; and third-party organized competitions, where the competitions are run by an independent organizer company that hosts the esport's official events in exchange for a payment from the publisher (Ellis, 2016).

Some of the most important publisher competitions are The International (Dota 2), League of Legends World Championship, Call of Duty World League and Overwatch League. For third-party competitions, some of the most known are the ESL, DreamHack, StarLadder, MLG and Beyond the Summit.

Streaming Platforms: Streaming platforms are companies that offer the streaming service for connected customers. Usually, the main product of the streaming platforms is the live-streaming, serving as a form of broadcast. On the esport ecosystem, the streaming platforms buy the rights to broadcast esport tournaments from the publisher or from the third party competition organizer.

Some of the most important streaming platforms are Twitch, Dailymotion Games and Hitbox.

Teams and Organizations: Professional esport teams can range from the simple gathering of players to the top tier team that will support players with coach, manager, psychologist, training center, salary, travelling tickets and other benefits. The professional teams will create the highest tier of esport competition by facing each

other on tournaments. Esport organizations are usually an umbrella of teams that play different esports genres.

Some noteworthy esport teams or organizations are Team Liquid, FaZe Clan, OpTic Gaming, Evil Geniuses, Team SoloMid, Cloud9, Fnatic, Mineski, Counter Logic Gaming, SK Telecom T1, Splyce, Team EnVyUs and Natus Vincere.

Professional Players: The professional esport players are the people who compose the professional esport teams. The esport athletes' training is focused on mechanical execution (hand-eye coordination) and training the mind with game updates investigation and strategy studying. They are mostly men with an average age of 23 years old (Stanton, 2015; Zalik, 2015; Gibson, 2017).

Some noteworthy esport players are Lee Sang-hyeok known as "Faker" (League of Legends), Søren Bjerg known as "Bjergsen" (League of Legends), Jarosław Jarząbkowski known as "pasha" (CS:GO), Gabriel Toledo de Alcântara Sguário known as FalleN (CS:GO), Danil Ishutin known as "Dendi" (Dota 2) and Amer Al-Barkawi known as "Miracle-" (Dota 2).

Fans: The esports fans are the worldwide audience of esport tournaments. It must be understood that the esport fan is the spectator of live and online tournaments and esport content. Therefore, the fan searches for and is exposed to esport content while may play the esport or not. Contrary to the expectations, in the United States, 38% of the fans are females and are not massively composed by teenagers as 65% of fans have ages between 18 and 34. The esport fan has a considerable purchasing power and is more likely to be on a full-time job than not. These factors partly explain why the esport is seen as a major opportunity for brands (Mindshare, 2016).

Brands: Brands are a big part of the esports ecosystem. The main drivers of revenues of the ecosystem are sponsorship and advertising, as the revenues from media rights are still on their infancy and not able to maintain the business. In 2018, brands will invest $533 million in the esports ecosystem, 59% of the total market, in the form of advertisements and sponsorships (NewZoo, 2018).

The investing brands in esports can be divided between two groups: the endemic and the non-endemic. Endemic sponsors are brands that already belong or that have a natural connection with the esport market, like brands that offer products

or services used in the production or on the act of playing esports, like computer components (processors, graphics cards, RAM cards), peripherals (mice, keyboards, headsets) and software. Energy drinks receive almost an endemic status (some classify them as semi-endemic) on the esports scene because of the long and strong association between them and the competitive gaming scene. The endemic sponsors are still the majority on the esports ecosystem (Pike, 2017).

The non-endemic sponsors are the ones that do not belong or do not have a natural connection with the esports market, like brands that produce automotive products, razor blades, noodles and beer among others. Some of the biggest non-endemic brands on esport are Mercedes-Benz, PSG, Coca-Cola, Mountain Dew, Mobil 1, Audi and Airbus.

Investors: The esport investor is the person or company that allocates capital on esports with the expectation of a future financial return.

Content Creators: Content creators are the ones that use esport information (of games, events, subculture knowledge, memes and curiosities among others) to create digital content and share on streaming platforms (live or not).

Streamers: Streamers are the people that create streaming media such as live-streams on streaming platforms like Twitch.tv.

News Providers: News providers on esports are the entities that investigate the world of esports and deliver news for their users to consume.

Marketing Agencies: Marketing agencies of esports are the companies that specialize themselves on esports marketing and communication. They help clients to communicate with the esport audience, help investors to correctly invest their money on esports and also create their own investments on esports.

Amateur Players: Amateur players are the ones that play the esport for entertainment or competitively but without the full-time dedication or structure that is common for professional esport players. The amateur player may also be an esport fan (following the previous definition).

Tournament Platforms: Tournament platforms are digital platforms that organize esport tournaments for teams (from professional to amateur) to compete online or on live-events (offline LAN events).

Venues: Venues are the esport tournament arenas. They vary a lot on size, being as small as to fit two teams up to big arenas like the Bird's Nest in China.

Casters and Commentators: Casters are the people responsible to narrate the esport games. Commentators work with the casters and analysts to supply the audience with interesting information and gameplay analysis.

Software Developers: In the esport ecosystem, software developers are the companies that create software solutions to advance the gaming capabilities. They may be operational system creators, video game platforms developers and communication application developers among others.

Video Card Makers: Video card makers are the technology companies that produce the Graphic Processing Units (GPU) for the ever more graphically demanding games.

Smartphone Makers: Smartphone makers are the technology companies that produce smartphones that will be the platform for some of the esport players to compete and for some of the fans to watch esport content.

Tablet Makers: Tablet makers are the technology companies that produce tablets that will be the platform for some of the esport players to compete and for some of the fans to watch esport content.

Console Makers: Console makers are the technology companies that produce consoles, like Playstation, Xbox, Nintendo Wii and Nintendo Switch, that will be the platform for some of the esport players to compete and for some of the fans to watch esport content.

TV Makers: TV makers are the technology companies that produce televisions and smart TVs that will be the platform for some of the fans to watch esport content.

Gaming Computer Makers: Gaming computer makers are the computer makers that focus on computers for the gaming public. They create computers that have a great processing power, graphic capabilities and hardware and software optimizations to smooth the demanding gaming experience. They can also produce non-gaming computers.

General Computer Makers: General computer makers are the computer producers that do not focus on the gaming public. They are important for the esport ecosystem because they also produce innovations that benefit the esport ecosystem and may drive prices down.

Gaming Peripheral Makers: Gaming peripheral makers are the companies that produce peripherals focused on the gaming public, like gaming mice, headsets, keyboards, screens and mouse pads among others. They usually produce general peripherals as well.

General Peripheral Makers: General peripheral makers are the companies that produce general peripherals not focusing the gaming public. They are important for the esport ecosystem because they also produce innovations that benefit the esport ecosystem and may drive prices down.

TV Broadcasters: Television broadcasters are the companies that broadcast esports on the television. On the western world, they usually are traditional sport broadcasters, like ESPN and SporTV among others, that create a space for esports transmission.

Psychologist: The esport psychologist is the professional that works on the psychological condition of the esport team. The esport psychologist has to understand the game, the characters and the strategies. The professional needs to be able to observe when a player is differing from the group, what kind of emotional and

behavioral fluctuations led to performance fluctuations, among other indicators. The esport Psychologist also works as a professional that tries to keep the group together.

Coach: The coach is a professional with the responsibilities of analyzing their own team's and opponents strategies, improve their team's individual skill on the game, plan and organize training sessions and to point the team in the right direction for them to meet their objectives (Phillips, 2017).

Player Manager: The manager's job in an esports team will depend on the size of the team. With a small team, the manager will be responsible for arranging scrims, handling prize money claims and communicating with sponsors, the team owner, tournament organizers and fans via the team's social media. In a bigger team, the manager job becomes more of a facilitator for the players training routine.

Art Designers: Art designers on the esport ecosystem are the professionals that design in-game items for the publisher to sell on the in-game market. The designs may be collaborative with professional players and teams.

4.2 ANALYSIS OF THE ESPORT ECOSYSTEM

The esports ecosystem as we know today is young, complex, and fast-growing. The ecosystem is growing astonishingly fast with expected double digits annual growth on its revenues for the next few years. Because of that and the value of the esports audience, big brands from several different industries are trying to find space at this incipient and promising ecosystem.

> It is all very fast on the esport scene. 5 years ago, I couldn't imagine that it would be at this size here in Brazil. And we still have a lot of space to grow, a lot of fans to work on, a lot of people to help. I think that the ecosystem is in its beginning, based on the number of people watching and companies that are entering the market. – E#2.

The development of digital distribution channels, the evolution of the gaming industry and the rising connectivity all over the world has prepared the ground for the

ascent of an esports ecosystem with many of the same characteristics of the traditional major sports, as noted by E#4.

> The similarities that you can find between the esports and the sports are huge: community sensation, will to learn, will to follow, will to watch live, the friendships that are created, the idols, fans and athletes. The big difference is the technological matter that makes everyone connected the whole time. And this will only increase. – E#4

The central participants of the esport ecosystem are publishers, professional players, teams and organizations, streaming platforms, competition organizers, brands and the fan base. The remaining participants are essential for the survival of the ecosystem, however, they have a least central role on the functioning and development of this networked economy.

4.2.1 The Role of the Publisher

Video game publishers are central to the esport ecosystem. Usually, the publisher retains the intellectual property of the game, even though it was the developer's idea, in exchange for the financing. (Bradley & Barlett, 2008; MacInnes et al., 2002; Ofek, 2008; Vaz, 2013). They are able to strategically control many of the economic traits and the official competitive scene of their esports (Karhulahti, 2017). Because of that, publishers of big esports hold an immense amount of power inside their ecosystem.

From the game developer's and publishers' perspective, there is an increasing incentive for investing on the creation of an esport. This can be explained by two main reasons. The first is that a game able to become an esport creates a rich environment with teams, star players and a multitude of competitions and events that foster a strong long-term customer engagement and generate extra possibilities for revenue streams, like broadcast contracts, sponsorship and advertisement incentives for brands to invest on the game. Those aspects make the title's valuation higher in comparison with a regular "pay once" title, according to AGF's report on esports. (AGF, 2018).

4.2.1.1 In-game Market

Publishers of esport games vary the monetization strategy over their tittles. Activision-Blizzard, for example, charges for titles like Overwatch and Starcraft but does not charge for Hearthstone and Heroes of the Storm. The publisher explores, for each game, the business model that will fit their overall strategy, creating more value for the company. A game that is free to play and have similar features (graphics, gameplay, customer service) will most likely have a larger potential to attract more players than a game that has to be purchased. However, when publishing a free game, the company has to create other revenue streams that are able to compensate for the opportunity cost of offering a free gameplay experience.

Most publishers create engaging and creative in-game content for customers to purchase and offset the revenue opportunity of not selling the game. A noteworthy revenue contributor for publishers is the in-game skin purchase. A skin is a different version of a character, a weapon, a map, an ability or even a weather effect. It is important to notice that the purchase of a skin does not offer any competitive advantage on competitive gameplay of most esports, being simply cosmetic. However, the fact that players appreciate the customization and do pay significant money for it, transformed this kind of digital product into a major source of revenue for game publishers. Publishing Manager at a major esport publisher, E#1, explains that the details of the revenue source are confidential and, therefore, not disclosed to the public. However, the significance of the in-game market is shown.

> [Our revenues] are a kind of information that we do not disclose. However, the answer to how we make money is the in-game market of cosmetics (character and items skins). The most significant source of revenue comes from our in-game market. We also have sponsorship contracts, the leagues that we operate and other sources. – E#1

Not disclosing the financials is a common practice inside esports. The lack of information around the profits of the big publishers take the bargain power out of the hands of the other participants on the ecosystem that will not have the information to demand a bigger slice of the pie.

The publisher can do the skins' artwork in-house or purchase the designs from art designers. Teams and players can work alongside designers, that can be

independent or from the publisher itself, so that skins based on the public's stars can be created. The revenue generated from the skin purchases is then shared between the publisher, the designers, teams and players that collaborated, according to esports analysts (Hollister, 2014; Van Sloun, 2018).

Other important revenue stream for publishers are right fees charged from streaming platforms that broadcast the publisher's game content. In January of 2018, Activision-Blizzard closed a $90 million deal with Amazon's Twitch.tv for the exclusive streaming rights to all Overwatch League's matches for two years. According to esports analysts, other tech giants, like Facebook and Google are also showing interest in esports streaming rights, what can ramp up the competition for exclusiveness and, therefore, further benefit the esport publishers (Christou, 2018).

4.2.1.2 Publisher Control

One factor that deeply affects the ecosystem is the amount of control that the publisher imposes on the competitive scene. Some publishers, like Riot, the owner of League of Legends, are very strict and control practically the whole competitive scene of their esport. Riot controls the competitive scene by organizing all of the official competitions, imposing the rules and balancing the game for competitive purposes.

E#1 explains that the publisher where they work do not allow third parties to organize official competitions.

> [We as publishers], organize all the official tournaments. This includes one of the biggest and with most visibility esport leagues in Brazil. Because of that, I believe that we are an important and critical player on our ecosystem. – E#1

E#8, a long-time esport fan, explains his thoughts on the publisher's strict approach.

> The strict control of the esport scene can bring benefits: 1) The publisher will be able to directly control the revenues from all of the official competitions; 2) The publisher has control of the rules and is able to standardize the tournaments. – E#8

However, a drawback of that strategy is that the publisher has to count with a bigger esport department in order to cope with the huge amount of work that the organization of esport events creates.

On the other hand, there are publishers, like Valve, the owner of Dota 2 and Counter Strike: Global Offensive, that have a more laissez-faire approach. They do not control the scene so strictly, letting third party competitions organizers conduct the events of their esports. E#8, explains his opinion on having a more laissez-faire approach.

> The laissez-faire approach also has its benefits, like: 1) The publisher has a smaller number of employees, as they don't need to organize all the official competitions and can focus more on the game instead of on the esport scene; 2) It creates a natural competition between the third-party competition organizers to make the tournaments better, contract better casting and commenting talents and to innovate, for example, on the way that the replays are shown or on the camera movement as it has happened on the Dota 2 championships. – E#8

The downside of this strategy is that the publisher will not control the whole esport scene and is vulnerable to different styles of tournament organizers. This is explained by E#8:

> An important aspect is the amount of attention and care that the players will receive during the tournament. There are organizers that supply travel costs, hotel, transportation to the arena, training area, etc. Other organizations don't supply those things. So the players are left with this uncertainty depending on the third party organizer. – E#8.

Some of the event's aspects might not be controlled by the publisher on this strategy, like: rules for how the teams are directly invited or qualified, the way that the tournaments will be organized (elimination, group stages, upper and lower brackets, etc.), the merchandise that will be available on the event and the price, the quality standard for the way that the players are treated on the tournament, among other factors.

4.2.2 Legitimacy and Prejudice

The fan is central to the esport ecosystem. An important success factor for the ecosystem is its legitimacy for the fans and the public. The validation of the esport practice as a serious business and entertainment mean have significant impacts on the way that investors and sponsors behave towards the ecosystem.

Still, with all of the legitimate characteristics of esports as a business, an important phenomenon and the passion that enthusiasts have for the games, 63% of them say that there is still a stigma of prejudice around esports, according to a survey performed by Mindshare. This number rises for 73% when talking about Multiplayer Online Battle Arena (MOBA) games, like Dota 2 and League of Legends (Mindshare, 2016). Players are mistakenly considered to be sedentary or introverted people and pro-players do not have the recognition they should.

> One of the biggest challenges that we had to face was to overcome the prejudice that surrounded the esport. The prejudice doesn't affect our company directly, but it affects our players and we are always very worried about the experience that our player has. If a player can't talk about esports with his friends, we still have to work to make it clearer for the society. How do we do that? We work in order to have good media results and get a positive feedback from the community. But it is done in an organic way: When we appear on Globo Esporte or SporTV it is because we are making a good job. – E#2

Many of the interviewees think that the most impactful transformation that happened on the Brazilian esport ecosystem on the last few years was the decrease of the prejudice around esports. Moreover, they believe that the prejudice was fought mainly with the increasing exposure of esports as a mainstream entertainment industry.

> The biggest transformation was the paradigm break on the prejudice that existed around gaming. It was like this: "It is video game, it isn't a sport. It is just for fun." Just because you can play at home, sitting on a chair I front of a screen, some people see it as something for lazy people... for people that don't want anything of their lives. But this stereotypical view has changed along the years. More and more people see that it can be entertainment or sport. – E#7

> The prejudice around esports has reduced a lot in the last years. One key driver of that was the broadcasts of esports on mainstream sports channels (SporTV from Grupo Globo in Brazil) that gave more confidence to all the involved participants of the ecosystem. The discussion of being or not a sport ended right there. – E#2

> The broadcast of esports on giants like SporTV was a significant moment for us. It opens the esport for a new audience. This validates and legitimates the

> esport for our main audience. Now, the players can show to his friends and family that the game they play is on the same channel where they see the Flamengo football games. – E#1

E#4 explains how their broadcasting and news provider company is trying to increase awareness by taking esports to the general public in Brazil.

> Our mission is to help esports to reach the mainstream public and to be treated like a traditional sport. We want esports to leave the niche (that is big already) and be more accessible to the mainstream. By doing that, we create value to the esports ecosystem. In order to accelerate the process, the big media groups can help on that too. – E#4

However, E#4 also explains the difficulties of presenting esport material on a mainstream sport news provider.

> There is a big distance between the mainstream public and the esports scenario. It was hard for us to be able to explain, mainly for the older demographic (average age of 40 for television). On the other hand, you have the esports consumer that is already watching and playing for almost 5 years and is using digital platforms like Twitch.tv to do it. For those enthusiasts it was also hard to communicate because of the specific language (need to create a specific channel), the highly segmented audience (more than 10 different tribes inside esports) and of the difficulty of staying updated. Therefore, it was hard to get to the enthusiast and very hard to explain to the mainstream public. – E#4

The increasing exposure of esports as a mainstream entertainment industry is the most important factor for the sharp awareness growth in most regions. The improvement of IT infrastructure on emerging countries of Latin America, Middle East, Africa and Southeast Asia has been a significant driver of growth on audience and awareness (NewZoo, 2018). E#4, explains their view on esports and the rise of live-streaming with connectivity.

> Connectivity is the key: A lot of people with access to quality internet that facilitated the consumption and transmission of videos through the internet. It became easy to produce and to consume streams. I think that the solution of this technologic matter was fundamental for the rise of esports. – E#4

Another factor for the growth in awareness is the rise of new games like PUBG, Fortnite and Overwatch, as young generations, to whom esport is a natural phenomenon, promptly adhere to them (NewZoo, 2018).

This can be explained because esports are an extremely appealing source of entertainment that is intrinsically enjoyable to watch: According to esport analyst Bryce Blum, 42% of esports viewers don't even play the game they watch (Blum, 2017).

> The number of people that watch but don't play has grown a lot. I fit on that category, as I don't have much time to play anymore, but I always save some time to watch championships. – E#3

> I watch tournaments of Age of Empires II, Fortnite, World of Warcraft, CS:GO, Hearthstone and Chess but I don't play any of them. – E#8

Because of that, esports have successfully attracted younger viewers, while traditional sports struggle to diversify their audience demographics. From 2006 to 2016, the average age of MLB (Major League Baseball) TV fans grew from 52 to 57 and the median age of an NFL (National Football League) fan rose from 46 to 50 (Lombardo, 2017).

4.2.3 Advertisement and sponsorship dynamics

As previously explained on the Audience section, the esports fan base is extremely valuable for brands, as it is relatively young and wealthy. On top of that, they are difficult to reach by traditional advertisement means, as noted by E#1: "esports relates to an audience that is growing with habits of entertainment consumption that are different from years ago." Naturally, with the growth in awareness, those factors elevated esports as a valuable advertising opportunity and is starting to bring brands on board of the esport ecosystem.

As noted by E#1, publishing Manager at a major publisher, the entrance of big non-endemic sponsors is important for the sponsorship and advertisement growth, as it encourages other brands to enter the market.

> One pretty significant transformation on the esport ecosystem was the entrance of non-endemic players like Gillette. They really embraced the community with Gillette ULT e "Um novo atleta todo dia" (Portuguese for "A new athlete everyday"). This kind of work shows how it is done and opens the way for other sponsorships on esports. – E#1

Non-endemic sponsors are starting to understand what esports is and how to approach it. The recent media exposure and the success of some non-endemic brands, like explained by E#1, are encouraging esports investments from non-endemic brands. Naturally, brands are excited to jump in looking for an opportunity. However, E#5, head of games and esports at an esports and games investing company, warns unprepared investors.

> We have an incipient ecosystem with an evolving professionalization that, depending on the allocation of the investments, might not become sustainable. Incorrect investments may harm the size and the growth of the esports ecosystem. So, investors have to proceed carefully. They can't think that just because it is esports, a blossoming ecosystem, any endeavor will succeed. Investors and entrepreneurs need to study a lot in order to understand the ecosystem and create long-lasting projects or enterprises. – E#5

In the case of brands trying to advertise their products or services it is necessary to understand the community and act accordingly. This is explained by the fact that the esports audience is strongly engaged: according to esport analyst Matt Nichols, esports enthusiasts sum up to more than 40% of the total number of the audience (Nichols, 2017). This poses a threat for non-endemic brands that try to enter the market without a strong grasp on esports.

> When talking about brand investment on esports, the brands need to have an extensive knowledge of the game's community in order to succeed. It is not like buying a pitch side advertisement on a football game. If you "buy a pitch side advertisement" on esports, people will go to your social media page and say how much they dislike that. – E#5

Truly, this kind of advertisement is not well seen by the community, as 57% of esport fans are willing to pay money not to see ads while watching a game (Midshare, 2016). Endemic brands of esports are much more involved in the subculture, usually being more efficient on communicating with the audience. Therefore, investing non-endemic brands need to learn how to communicate with the esports community and understand the subcultures in order to create effective impressions.

There are good news, however, for the brands interested on esports: The fact that the esports ecosystem is still relatively incipient does lower the cost for brands to create relevant campaigns and engage in meaningful partnerships with esports.

Also, brands that are able to correctly communicate with the audience are having success. A noteworthy case is of Mercedes-Benz, a non-endemic sponsor, reaching a new level on communicating with the Dota 2 audience with the sponsorship of the ESL One Hamburg Major in 2017. Along with the slogan “Grow up. Rise on. Drive.”, where the automobile manufacturer was able to legitimize the professional esport player as a coveted job, Mercedes-Benz was able to effectively communicate with the Dota 2 community in an organic way. Some of the actions taken by the sponsor are shown hereafter.

Mercedes-Benz created a customized screen for the drafting phase of the games on the event with the brand’s three-pointed star. Of course, their cars were omnipresent on the event. Before the matches, on the announcement of each team, the organizers showcased a pre-recorded footage of the players driving a customized Mercedes-Benz car. After acknowledging the existence of a meme created on the tournament, Mercedes-Benz used it on Tweeter to engage with the esport fans. On top of the activation, Mercedes-Benz announced that the MVP (Most Valuable Player) of the tournament would receive €50,000.00 to buy his own new Mercedes-Benz. In order to better reach the fan community, the decision of the MVP would be made by the audience (40%) and the casting talent (60%).

The way that Mercedes-Benz decided to approach the Dota 2 community was organic, without massively pushing the advertisements. Mercedes-Benz was able to add value to their brand by advertising in an organic way, rather than driving consecutive advertising spots. This doesn’t mean that thirty second spots on esports are bad, but that brands, in order to communicate more effectively with the esport demographic, should try to be part of a larger, organic strategy that feels authentic to the game.

4.2.4 Franchising on esports

In the professional esports scene, organized play is usually centered around the promotion and relegation system to select the teams that will be able to participate in the most prominent competitions. The best ranked teams will be promoted for the upper division while the worst ranked teams will be relegated to the division below.

On the point of view of the sponsor, a team that is at the top of today's major esports titles is significantly valuable. However, this same team may fade into obscurity with relegation within 12 months as the scene continues to shift. With that, the team will eventually lose the viewership attached to the top league, making it far less valuable to a sponsor. This presents a threat for an ecosystem with media rights under development, where teams are beholden to their sponsors far more so than traditional sports teams.

The solidity of esport organizations and teams is an important factor that can be decisive for the influx of investments on the scene. The fan base will naturally bond with teams and their star players. If the organizations are not able to increase their robustness by maintaining their teams and holding their talents, the good results and stability that is needed to gather sponsorships and advertisement revenue can be harmed.

> It is common in esports to see a team that is world champion in one year and is dissolved or relegated on the next. And I see that this fragility of the teams is frequent not only performance wise but also when tackling the solidity of the organization. For me, the most important things in an esports organization are their teams and athletes that are battling for space, recognition and accomplishments. This is because they create the opportunity for sponsorships, content creation and sales of licensed products. However, some organizations seem to get lost on the way and focus on the content production and marketing of branded merchandizing instead of paying attention to the well-being of their teams and athletes on the long run. – E#6

Because of this lack of stability, some publishers have created leagues that follow the approach used in North American professional sports, like the NFL and the NBA, where all teams participate in a season of scheduled matches and none of them are promoted or relegated. According to esport analyst Ben Goldhaber, in this system that is usually called franchising, there is an investor or group of investors that owns the team. Each team's name is started with a geographical location (usually a city name) which they represent, followed by their denomination. Examples are the Cleaveland Cavaliers in the National Basketball Association, Dallas Cowboys in the National Football League and Florida Mayhem in the Overwatch League (Goldhaber, 2018).

> The leagues that were created for Overwatch and LoL, like it has been done for years on the US for traditional sports, is also a way to improve professionalization of the scene and give more safety to sponsors. – E#8

> The franchising system adopted on the American esports (borrowed from the traditional sports) tends to make the esport less dependent on organizations and publishers (that are profit seekers). They increase the lifespan of teams and provide more stability to professional players. Maybe the Brazilian esport can even show the Brazilian traditional sports how it's done, as we can see strong teams being relegated over and over. – E#6

The Overwatch League (OWL) is a noteworthy franchised professional esports league created and directed by Activision-Blizzard for the tier one play of the game Overwatch (2016). In the OWL, each one of the teams has an owner that invested on the creation of the team with a minimum buy-in of US$20 million. The players at the OWL are assured a minimum annual salary of US$50 thousand, benefits, and a portion of winnings and revenue-sharing based on how that team performs in the season (Goldhaber, 2018; OWL Rulebook, 2018).

In 2016, when the OWL was announced, the esport community found many benefits attached to the franchising structure of the OWL. Already in 2017, Riot Games officially announced that in 2018, the League of Legends North America League Championship Series (NA LCS) would become a 10 teams franchising system with a US$10,5 million buy-in for each one of them. According to Whalen Rozelle, the head of esports in Riot Games, relegation brings uncertainty for long-term projects, like sponsorships and construction of high-end training centers (Riot Games, 2017).

Moreover, the permanent nature of teams on the Overwatch League, when compared to the promotion and relegation format, would also create opportunities for team owners to find additional revenue models by running their own stadiums with new merchandising opportunities.

4.2.5 Professionalization

The faster the pace of professionalization of the scene, the more robust the ecosystem will be. That's because the investment influx is already in place and if the industry is able to use those investments to their fullest, the increased confidence of investors will improve the ecosystem's health.

> In my opinion, it is a matter of maturity of the scene. Insofar as the scene becomes more professionalized, the fan base will identify more with the

> games, the players, the teams and the audience will follow with stronger engagement, becoming even more valuable. – E#8

> The biggest challenge that I had on the esport ecosystem was to understand an incipient market and deal with non-professionalized participants. The regulation and labor ties are examples of concerns that still need to be resolved. When those issues are set and the professionalization of the ecosystem increases, the level of investments grows, the game gets bigger and the ecosystem participants are benefited from it. – E#5

The lack of professionalization of an ecosystem makes it riskier to invest and harder to succeed. Moreover, the legal concerns are still not solved in most countries. From contractual law, employment, endorsements, intellectual property, leagues, players and teams, there are new legal issues that are still in course of maturity.

4.2.6 Competitive Professionals

Professional esport players are the stars of this competitive network and are in the center of the ecosystem. Differently from traditional sport games, where the training creates a physical fatigue on the body of the athlete, esports training is much more focused on the mind. Because of that, the esport athletes usually have exhaustive routines of training.

> When I started to watch esports we could see that the kind of people playing was extremely rare and that very few people could get there. It was a mix of talent, hard work and fun. Today I see that it has become a lot more professional with intense training and routine with a clear goal. – E#9

For example, according to Business Insider, Team liquid's professional League of Legends team practice for a minimum of 50 hours per week and most of them play the game far more (Jacobs, 2015). The intensity of this routine may result in burnouts.

> Burnout is a very present reality. Since the beginning of my work, people thought that it wasn't something as consuming as it is because there is no physical preparation and overtraining on the physical side. However, the wearing of a professional esports player is huge. Also, it is very difficult to measure, but possible with bio-feedback and neuro-feedback for example. – E#6

> I've seen burnouts that encompass the tilt of the player because of fear and anxiety mixed with exhaustion leading to a state where they can't meet basic demands like properly respond to interviews after long matches. – E#6

In order to cope with this exhaustive routine, esport organizations already have implemented obligatory physical workouts with professional personal trainers and other leisure activities in order to keep their talents away from excessive mental fatigue (Red Bull eSports, 2017).

The esport most successful teams and organizations are also paying attention to the work-life balance of their players. Nowadays, many esport teams still work on a Gaming House, a house where players, coach and other members of the team live and train. This dynamic of working and living on the same place can bring all sorts of relationship problems between the team members. On the other hand, the Gaming Office is an office where professional esport teams work. On this more professional scheme, players work but go to their own houses to sleep if they want to, as some Gaming Offices have lodging facilities.

> Gaming Houses (GH) are still the norm in Brazil. It was a challenge for me to understand the relationship dynamics of a gaming house. It is very different from the professional relationship that you see on the traditional sports. On the GH scheme, you live where you work, you share everything, you have to be with your team colleagues almost 24/7. Usually it is hard to cool off after a hard day. All of this leads to unnecessary stress and the potential for relationship conflicts is often higher than on the traditional sport. – E#6

> People on the ecosystem are beginning to realize the importance of the Gaming Office. One example is INTZ that created a facility with lodging, support of psychologist, nutritionist and physiotherapist. – E#7

The change from Gaming Houses to Gaming Offices and the continued focus on a better condition for players is a trend that shows the professionalization grown of the ecosystem.

As previously stated, the professional players and teams are the cornerstone of the competitive scene. On esports, differently from the traditional sports, the connectivity is reflected on the proximity of players with his fans. E#4 observed this phenomenon where professional esport athletes stream their training sessions for his fans:

> The athletes train online all the time and their fans can watch. The athletes were practically born on this connected world, so for them this is very natural... very obvious. "I will stream because I like, I can... I just do it. And people want to watch it. Good for me!" – E#4

The most successful streamers have over or close to one million followers and regularly pull in tens of thousands of viewers, what shows the scale of the phenomenon and the capacity that this personalities have to gather popular attention with a celebrity status (Woodcock, 2017). For example, the Twitch channel of the famous Fortnite streamer Ninja has 13 million followers, an average of 39 thousand concurrent viewers and 47 thousand subscribers (TwitchTracker, 2019). As previously explained, the streamers receive revenue from donations, subscriptions, product placement, advertisements and revenue sharing of the selling of products with their discount codes (Van Sloun, 2018).

As explained before, the solidity of teams and organizations is key to attracting fans and potential revenue sources. E#8, esport fan, expresses his opinion about the benefits of creating a solid and multi esports organization.

> I'm seeing the growth of the organizations that now have teams in many esports like how it works with the Brazilian big sport clubs. This creates a deeper bond with the fan base on different esports. Ultimately, this results on more visibility and stability for the organizations, increasing the possibilities for them to find better deals around the ecosystem. – E#8

The streaming platforms know the potential crowd that a player or a team can bring and sign deals for exclusive broadcasting rights with teams and players. According to the Esports Insider, in 2017, Team Liquid announced that they would continue to have Twitch as their exclusive broadcasting partner. This kind of contract is clearly mutually beneficial. Team Liquid has a multitude of teams (Starcraft, League of Legends, Hearthstone, Counter-Strike: Global Offensive, Dota 2, Heroes of hte Storm, Smash, SFV, Halo and Overwatch) and fans all over the world. With the deal, the organization will exclusively stream on Twitch in exchange for financial gain while the platform will benefit from the legion of fans tuning in their broadcasts (Ring, 2017).

Teams that participate on competitions can also profit from media rights deals and ticket sales originated from the tournaments. The media right deals are done between the competition organizer (that may be the publisher) and the platform that broadcasts the event (for example, between ESL and Twitch.tv) while the revenue of

the media right deal will be shared with the competition organizer and the participant teams (Juho Hamari and Max Sjöblom, 2017; Van Sloun, 2018).

4.2.7 Virtual Reality on esports

Virtual Reality has a natural fit with gaming in general and can bring huge changes to esports. Audiences watching games in a virtual reality space, first-person shooters tournaments with “real” guns and players immersed on the games instead of playing with mouse and keyboard are already present on the esport ecosystem. However, there are still several uncertainties about the mainstream adoption of VR on the esports. E#4 shows his thoughts about the future of esports on this subject:

> I think that we will have many different forms of esport: The technology will evolve and create many other forms of watching and playing. The Virtual Reality is one of them and I believe that it will have a significant impact on esports. But it is hard to know the limits of that, because Virtual Reality has broad horizons… It is even scary to think about what can be done with it. – E#4

Indeed, when discussing the applications of VR, its limits are still being tested in many fronts: games, sport, cinema, robotics, medicine, education and others. On the esport ecosystem, VR is beginning to change how some competitions are played and watched. However, some esport fans are used to the current situation of esports and have a hard time to visualize the change in competitive gaming from “keyboard and mouse” to VR.

> A Player-Versus-Player experience in Virtual reality ends up being a paintless paintball. I just don’t see people playing against each other in a competitive Virtual Reality game. Maybe a cooperative game makes more sense… or a competitive game played individually where the player that makes more points wins. – E#8

It is understandable that some people could not conceive VR on esports, considering the current VR technology. However, there is a lot of interest around virtual reality and since esports function on a digital field of play, it can be the driver for virtual reality technological development and mainstream adoption.

4.3 SCENARIO PLANNING

As previously explained on the literature review, the scenario planning is a strategic planning tool used to prepare flexible long-term plans for organizations. The tool opens the possibilities for multiple futures so that the organization is able to rehearse its plans for different future possibilities and avoid surprises by breaking through the “illusion of certainty” (Garvin & Levesque, 2006).

The exercise is done by first determining the geographical scope and the time spectrum that will be analyzed. The timeframe for this scenario planning exercise on the esport ecosystem will be of 5 years.

The driving forces that might move the ecosystem into distinct directions were mapped. Those driving forces can be divided into predetermined and uncertain. We will refer to the former as tendencies and the latter as uncertainties. Predetermined forces or tendencies, the ones that are unlikely to change drastically on the time frame defined for the scenario planning, are shown hereafter.

4.3.1 Tendencies

From the literature review, interviews and secondary dada, the main tendencies that were mapped for the esport ecosystem are presented below.

Growth: All the interviewees believe that the esport scene will have a significant growth in the considered timeframe.

> I believe in a growth on the medium and long terms because "we are only beginning". – E#2

> In my opinion, in 5 years, the esport will be a national power on the Brazilian market, being taken seriously with university scholarships like it is done

> abroad. It won't be like football, but I see the majority of the public up to 35 years old wanting to participate of the esport events. – E#7

Higher influx of big brands: There is a belief that more endemic and non-endemic brands will join the ecosystem, growing the capacity of revenue generation for the ecosystem with bigger advertisement and sponsorship deals.

> I see a bigger ecosystem with big brands supporting the scene, more leagues and more content creation around it. – E#1

Move of Gaming Houses to Gaming Offices: Nowadays, many teams still work with Gaming Houses. The Gaming Office is like a work office, where players go to train, but go to their own houses to sleep if they want (some Gaming Offices have lodging facilities). The professionalization of the scene tends to increase the number of Gaming Offices.

> The future of esports will bring the change from Gamming Houses to Gamming Offices. Here in Brazil I know two big esport teams that already are using Gamming Offices. – E#5

Move from "promotion and relegation" into franchised leagues: The "promotion and relegation" adds another layer of instability to the esport investor. Because of that, there is a belief that the future of esports will see more franchised leagues.

> The franchising system adopted on the American esports (borrowed from the traditional sports) tends to make the esport's organizations more stable. – E#6

4.3.2 Uncertainties

After identifying the predetermined forces, all of the other driving forces are classified as uncertain. The main uncertainties that were mapped on the research are shown below:

Games' lifespan: Short x long: The duration of the popularity of a game is vital for investors, as they don't want to be associated with a esport that turns out to be

a fad and want their investments to endure more than a couple of years. Some popular games have already shown signs that a saturation point might be near. One of the signs is a decline on the number of active players and viewership.

> I believe that the esport movement is here to stay, but the modality, the game, the player... this seems to be more fragile. Today, we have a bigger LoL scene. But who said that it cannot change to another esport? – E#6

> One uncertainty for the future will be the duration of a specific esport. This is important because brands that are willing to sponsor esports will weigh their investment with the expected lifespan of an esport. – E#3

Competition between publishers: Fierce x moderate: If the competition between publishers is too fierce (like as if volleyball competed with basketball), we could see a lack of collaboration in the direction of forming a robust esports ecosystem with big bundled events, like the Olympics for traditional sports.

> There is an important uncertainty about the relationship between publishers. A faster and healthier growth may be achieved if there is no fierce competition among the publishers. – E#4

Saturation of growth: Near x far: E#9 states that one of the uncertainties of the ecosystem's future is the saturation of growth and where it might be:

> The big uncertainty that remains is where the [growth] limit is. I think that it is going to stabilize at some point. And at that point, we can only guess how the investor will interpret the future profitability of the esport. I say that because since I've been following the scene, it has only been growing and, for instance, The International 2018's prize pool did not follow the historic trend. I believe that it might be a reflex of the saturation of the market and the ecosystem of this specific game. – E#9

Rhythm of growth: Faster x slower: Will the esport scene have a very high rate of growth that can be used by investors to create value to the ecosystem and brand awareness or will it be a slowly paced growth. This can be the difference between huge or mild investments.

> Esports are on a very strong growth moment. But the rhythm of this evolution is an uncertainty. How fast will we be able to convince brands and content creators that this is a space worth investing? – E#1

Community: Toxic x supportive: This could reflect on the limitation of sponsors to the whole ecosystem.

> The community itself is a big uncertainty. The gaming community is considered by some to be extremely toxic. This can taint the reputation of the modality and sabotage the development of the scene. – E#7

Fast growth fragility: Low x High: Will the fast growth turn esports into a fad or an enduring practice? Will the professional maturity of the ecosystem evolve on the same pace of the revenues? Will it be structured so that the whole ecosystem profits together or will there be a clear winner and several starving players? E#6 expresses his thoughts about this phenomenon:

> The speed of growth of the esports really calls my attention. The space that it has gathered in so little time among fans, investors, organizations and social acknowledgement is incredible. But this worries me a little, because something that is built so fast may end up with significant fragilities. – E#6

> We have to keep an eye on the esports ecosystem in order to check if it will turn out to be a healthy one. Usually, I look at this with an optic of cultural practices. Are there some fad characteristics? Yes. But will it be sustainable on the future? We will have to wait and see. – E#6

Virtual reality adoption on esports: Niche x mainstream: Virtual Reality has a natural fit with gaming in general and can bring huge changes to esports. Audiences watching games in a virtual reality space, first-person shooters tournaments with “real” guns and players immersed on the games instead of playing with mouse and keyboard are already present on the esport ecosystem. However, there are still several uncertainties about the mainstream adoption of VR on the esports. Will the technology solve the VR sickness issue? Will the prices drop? Will the user experience improve? E#4 shows his thoughts about the future of esports on this subject:

> I think that we will have many different forms of esport: The technology will evolve and create many other forms of watching and playing. The Virtual Reality is one of them and I believe that it will have a significant impact on esports. But it is hard to know the limits of that, because Virtual Reality has broad horizons… It is even scary to think about what can be done with it. – E#4

The uncertainties are then analyzed by level of importance and the top two that most likely will significantly change or define the course of the future around the studied subject are labeled critical uncertainties.

The two most important uncertainties mapped on the selected timeframe are **fast growth fragility** and **virtual reality adoption on esports**. The choice of those uncertain driving forces was based on their capacity of defining or significantly change the way the future unfolds around the determined timeframe. The fragility that may result from a fast growth when the ecosystem doesn't have the required professionalization in place may harm the capacity of the scene to develop accordingly to the expectations and deliver the results to the investors. On the other hand, the to the importance that the interviewees and the literature gave to each of the interactions virtual reality has the potential to change the esport ecosystem to a more physically centered scene and improve the fan engagement, when considering the capacity of immersion that VR can offer.

After establishing the two critical uncertainties, each one of them is reduced into a single dimension axis, with the extreme possibilities on opposite sides. The two axis created by the continuum of the two critical uncertainties are combined in order to create a double dimension plane called scenario framework where there will be four distinct quadrants representing different futures. The goal is to end up with a few clearly contrasting possible futures, whose differences make a difference to decision makers (Schwartz, 1991). The scenario framework can be seen on Figure 7.

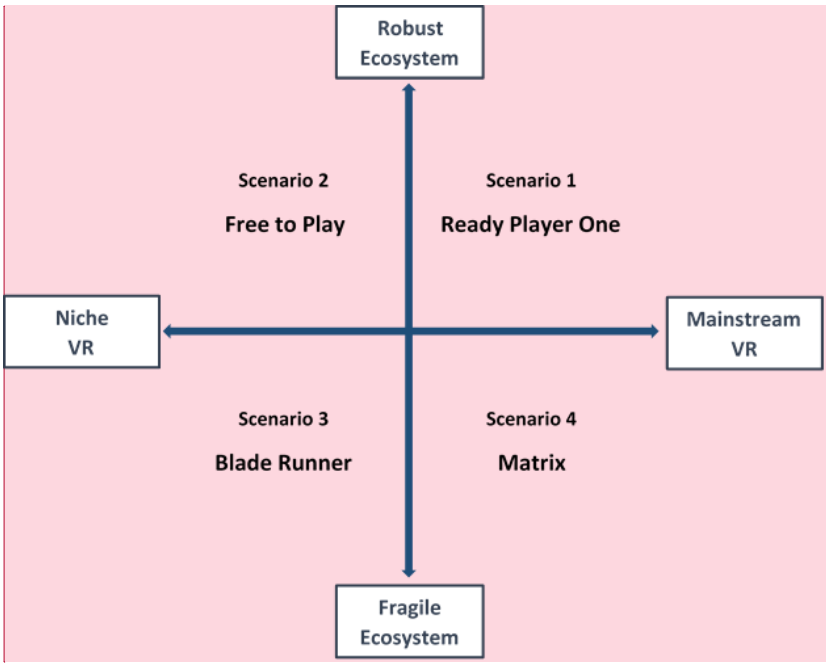

Figure 7: Scenarios

Comentado [MOU6]: Colocar os números dos cenários no quadrantes

4.3.3 Scenarios

The different futures that result from the interaction between the critical uncertainties are called scenarios. They are plausible, alternative hypotheses about how the world might unfold. They are designed to highlight risks and opportunities that the organization might face on the specified time frame.

After that mapping the scenarios (or alternative futures), each one of the four scenarios are crafted into a narrative or a story. The scenarios, their characteristics and narratives for each one of the possible futures are shown below:

Scenario 1: Ready Player One

Characteristics: Robust ecosystem and mainstream VR

Narrative: On this scenario, the investments injected on esports formed a robust and productive environment. Critics relating virtual games and sedentarism grew stronger and propelled VR's popularity while Alphabet, Facebook and Amazon saw VR as a valuable technology for the future and invested massively on focused hardware and software for VR. Following South Korea, most countries already put in place the regulation for esports with well-established labor ties contracts that protect players, employees and companies. This provided the ecosystem with stability and good relationships among the participants. A fair ecosystem was built with fair licensing fees and no overwhelming power to a single company. Investments in esports were proved to be productive, meaning that they were profitable when properly managed. Old and new publishers started focusing on innovative and engaging VR esports while Facebook owned Oculus VR was able to improve the technology and finally solve the VR sickness. This technological effort of tech giants also resulted on a dramatic improvement of the VR user experience with deeper VR experiences, better and more precise interactions, better graphical resolutions and ergonomics. Those factors helped VR to be widely consumed while prices drove down. After the VR Overwatch franchised league was created, most esports leagues follow the franchising format in order to benefit from more stability and visibility. Almost all leagues are being watched online in VR spaces where the audience interaction is meaningful and engaging. The growing value of the VR esport's audience caused a migration of investments from traditional sport's sponsors like Nike, Emirates, Adidas and Chevrolet to esports. The VR esports success is widespread and first VR Olympics are scheduled to 2024 in Paris with the presence of the major VR esport titles. Gaming houses are seldom seen because the norm has moved to Gaming Offices, giving teams good working conditions and an improved work-life balance. All of the above provided massive competitive and legal incentives for the organizations to attract esport and VR esport talents and keep them on the long run, creating solid and professional organizations.

Scenario 2: Free to Play

Characteristics: Robust ecosystem and niche VR

Narrative: On this scenario, the esports as a business turned into a healthier ecosystem with plentiful opportunities for professionals of many different backgrounds. Big technology companies invested on VR, but their investments ended up being unsuccessful on captivating the general population. When the video "Children throwing

up on VR" got viral, many countries restricted by age the use of VR, harming its reputation. By now, most countries already put in place the regulation for esports with well-established labor ties contracts that protect players, employees and companies. This provided the ecosystem with fairness, more stability and good relationships among the participants. A fair ecosystem was built with fair licensing fees and no overwhelming power to a single company. The VR sickness issue has not improved with more cases of discomfort, nausea and vomiting during VR sessions. Deeper VR experiences with good resolutions, precise interactions and ergonomics are rare while also having a higher price point than before with costly high-end VR devices, extravagant graphic cards and expensive consoles or gaming computers. Investments in esports were proved to be productive, meaning that they were profitable when properly introduced and managed. The productivity of the esport ecosystem brought a high influx of new investments from advertising brands, new organizations are formed, publishers are looking for innovating with new esports and technology companies are competing to participate on the ecosystem with massive investments on innovative software and hardware. The franchised format for leagues is massively adopted giving more stability and profitability for the competitive scene. The esports success is widespread and first eOlympics are scheduled to 2024 in Paris with the presence of the major titles. VR, however, didn't manage to enter the event. Gaming houses are seldom seen when the norm has moved to Gaming Offices, giving teams good working conditions and an improved life-work balance. All of the above provided massive competitive and legal incentives for the organizations to attract esport talents and keep them on the long run, creating solid and professional organizations. However, because of price, shallow user experience and the vomit inducing reputation it has acquired, VR only reached hardcore fans. Those factors prevented VR from going mainstream and most esports competitions are still being watched online on regular screens.

Scenario 3: Blade Runner

Characteristics: Fragile ecosystem and Niche VR

Narrative: The expectation of investors of esports proved to be a lot higher than the actual ability of the ecosystem to deliver returns. The fast growth of the industry led to a big hype among investors that ended up with returns significantly lower than expected, slowing down the growth of the scene. The multi-millionaire losses of the Overwatch League private investors were followed by lawsuits against Activision-

Blizzard that ultimately resulted on the company's bankruptcy. After this episode, esports investments growth went significantly down, what impaired the ability of the ecosystem to attract the amount of professionalism that the environment needed. Big technology companies invested on VR, but their investments ended up being unsuccessful on captivating the general public. The abundance of VR sickness cases got to the mainstream public and the use of the technology for entertainment was strongly rejected by the general population. Only a small number of countries put in place the regulation for esports and the ones that did, are tightly regulating the environment. This environment formed an ecosystem with fierce competition between players and low stability. The esports ecosystem now is ruled by a few ecosystem dominators (Riot, Valve and Twitch.tv) that, instead of sharing, begun to drain the value from the system, affecting the other players. The VR sickness issue has not improved yet with more cases of discomfort, nausea and vomiting during VR sessions. Deeper VR experiences with good resolutions, precise interactions and ergonomics are rare while also having a higher price point than before with costly high-end VR devices, extravagant graphic cards and expensive consoles or gaming computers. Many investments were badly introduced on the esports environment and were poorly managed. Of course, some investments were properly introduced and managed and there are successful companies on the market, but the influx of investments has slowed down. Big players of the game ecosystem, like Nintendo, are not as interested as before on esports and already made huge divestments while recognizing significant losses. The prevalent league format still is the promotion and relegation as investors don't feel confident to buy a costly spot on franchised leagues. Gaming houses are still fairly common because of the costs of Gaming Offices. Organizations are not able to keep their teams and talents for a long period of time, as it was shown by the failure of Team Liquid, once a major esports force. Many professional players do not feel confident to invest all of their lives into an esport career and usually try to find a better professional option after few years on the job. On the VR side, with high prices, shallow user experience and the vomit inducing reputation it has acquired, it was only able to reach hardcore fans. Those factors prevented VR from going mainstream and esports competitions are still being watched online on regular screens.

Scenario 4: Matrix

Characteristics: Fragile ecosystem and Mainstream VR

Narrative: The expectation of investors of esports proved to be a lot higher than the actual ability of the ecosystem to deliver returns. The fast growth of the industry led to a big hype among investors that ended up with returns significantly lower than expected, slowing down the growth of the scene. The investments growth went significantly down, what impaired the ability of the ecosystem to attract the amount of professionalism that the environment needed. The steep increase of child obesity and sedentarism on the last years created a bad reputation for virtual games. The growing criticism propelled VR's popularity as a more "sporty" alternative for gaming. Shifting their focus from esports to VR, ex-esport giants Valve and Riot saw VR as the opportunity for the future and invested massively on focused hardware and software for the technology. Only a small number of countries put in place the regulation for esports and the ones that did, are tightly regulating with scrutiny. The esport law was not able to mature yet and several judicial decisions were criticized to be disproportionate, creating judicial instability on the ecosystem. This environment formed a combative ecosystem with fierce competition between players and low stability. The esports ecosystem now is ruled by a few ecosystem dominators that, instead of sharing, begun to drain the value from the system. On a partnership effort, Riot and Facebook owned Oculus VR were able to evolve the technology and finally could solve the VR sickness. This technological effort resulted on a dramatic improvement of the VR user experience with deeper VR experiences, better and more precise interactions, better graphical resolutions and ergonomics. Those factors helped VR to be widely consumed while prices drove down. The VR esports started to compete for spectatorship on streaming platforms with "keyboard and mouse" esports. However, due to the ecosystem domination of the strongest publishers, the "keyboard and mouse" esports were able to close exclusivity contracts with Amazon's Twitch.tv, esport championship venues and many of the bigger advertisement brands. This aggressive posture severely weakened the VR esports scene. On the other hand, VR game and hardware developers continued to invest, but mainly focusing on the gaming ecosystem as the esport ecosystem has shown to be unhealthy with a significant aversion to innovation. Many investments in esports were badly introduced on the esports environment and were poorly managed. Of course, some investments were properly introduced and managed and there still are successful companies on the esport market, but the influx of investments has slowed down. The prevalent league format still is the promotion and relegation as investors don't feel confident to buy a

spot on franchised leagues. Gaming houses are still fairly common because Gaming Offices are too costly. Organizations are not able to keep their teams and talents for a long period of time. Many professional players don't feel confident to invest all of their lives into an esport career and usually try to find a better professional option after few years on the job. VR grew significantly and now is a major force on the gaming ecosystem with the launch of their own superstars like of Resident Evil VR, Spider Man VR and Red Dead Redemption III VR obtaining historic sales records.

4.3.4 Discussion

The four scenarios were mapped with the information acquired from the literature review, the esport ecosystem participants, the secondary data and the ecosystem analysis previously presented on this work. With the creation of the narratives based on the critical uncertainties and the tendencies, the ecosystem participants need to place their organization within each of the four scenarios and explore the implications and options of the alternative futures. This analysis must be done for each individual company that is immersed or willing to invest on the esport ecosystem. No general strategy can be drawn from the exercise because each company has its own strategic planning and need to act differently for each scenario. This analysis will reveal strengths and weaknesses and necessary actions that the participants will need to address. The companies have to investigate the gaps, vulnerabilities and opportunities that the possible futures present and investigate the capacities that must be developed, bought ou let go for the scenarios. After the close analysis of the implications that each scenario will force on the company, managers need to keep track of indicators that highlight the likely emergence of one scenario or another. Those implications are called early warning signals and they suggest that the world is moving in a particular direction. Therefore, they can be used to trigger strategic re-evaluation and midcourse corrections on the present strategy. When properly selected, the early warning signals can be a significant differential over the competition for when the environmental change occurs.

5 CONCLUSION

This study showed that the esport ecosystem is an evolving and complex network of actors where the roles are still not completely established. Some of the defining dynamics of this structure were presented and discussed.

From the publisher's point of view, there are business modeling and competitive control choices that are defining to the ecosystem's structure. Driven by a passionate and engaged fan base, the in-game market is proving to be a massively successful revenue source for publishers. In the end of the day, in-game marketing and artistic design can be crucial factors to the profitability of a publisher. On the control subject, the intellectual property held by the publisher allows them to possess a significant power over the competitive scene. The amount of control that the publisher exerts is a vital information for the ecosystem participants, as it can prevent certain endeavors from succeeding, like events and competition organization. The transparency of the publisher regarding competitive control choices towards the ecosystem is, therefore, a basic and important matter.

The professionalization of the esport ecosystem is key for the development of a robust ecosystem where players are fairly treated and the legal rules are established. The pace of the professionalization of the ecosystem may determine the health of the network and end up being a decisive factor for the esports in general.

The study also showed that virtual reality is already present on the esports scene, but as a niche modality. The developments of VR technology and user experience will determine the adoption. Clearly, price will also determine the general adoption, however, as previously discussed, the user experience might be the real defining condition for VR to go mainstream.

Naturally, brands are eager to enter the esport ecosystem. Nevertheless, it is necessary to previously understand the intricacies of the ecosystem's community before investing, as the enthusiastic fans have very specific desires and behaviors. By validating and valuing the esport with meaningful and organic campaigns, brands can profit from the loyalty of the esport audience. The franchising of the esports leagues are trending and seem to solve some of the team's stability issues and unlock the true power of the long-term partnerships between brands and esports.

On this research, four scenarios were mapped with the information acquired from the esport ecosystem participants and the secondary data. With the creation of the narratives based on the critical uncertainties and the tendencies, the ecosystem participants need to place their organization within each of the four scenarios and explore the implications of the alternative futures. This analysis will reveal strengths and vulnerabilities, strategies and necessary actions that the participants will need to address. After the close analysis of the implications that each scenario will force on the company, managers need to keep track of indicators that highlight the likely emergence of one scenario or another. Those implications are called early warning signals and they suggest that the world is moving in a particular direction. Therefore, they can be used to trigger strategic re-evaluation and midcourse corrections on the present strategy. When properly selected, the early warning signals can be a significant differential over the competition for when the environmental change occurs.

In order to remain relevant on the esport ecosystem, the organizations that are immersed on it must be prepared for the future by obtaining or developing new skills and resources that might not be present on the company at the time of the exercise. However, this does not mean that the companies must make immediate investments, but that strategic partners have to be identified so that they may be used in the future.

From the academic viewpoint, considering the study's limitations, this research brings relevant contributions about the way that the esports ecosystem has evolved, how it works and how it may change in the future. Future studies can further develop the discussion with the analysis of the strategic implications and option generation for a specific participant of the esports ecosystem. Also, future studies can help on the development and monitoring of early warning signals to indicate the likely emergence of one specific scenario and widen the strategic discussion. The application of the Delphi technique with the utilization of a systematic interactive forecasting and structured experts panel can also help to increase the robustness of the scenario description. Another factor that can increase the robustness of the analysis is the development of more entities that could supply the market with reliable information on the esports market so that their information could be challenged or validated. Studies with more ecosystem participants and from different geographical regions can bring broader insights on the esports phenomenon.

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APENDIX A – INTERVIEW SCRIPT (ESPORT ECOSYSTEM)

1) Talk a little bit about your professional trajectory inside the company that you work for.

2) Talk a little bit about the trajectory of your organization inside the esport ecosystem.

Explore what was the motivation behind the investment on esports.

Explore the biggest challenges faced on that trajectory.

3) In your opinion, what were the most significant transformations that the esport ecosystem faced on the last few years?

4) In your opinion, from the main participants of the ecosystem (publishers, competitions, streaming platforms, teams, players, fans, sponsors), which ones suffered the most impact from those transformations? Why?

Explore positive and negative impacts.

5) Your organization has contact with which of the ecosystem participants? In your opinion, with which participants it works closer?

Explore revenue model and the importance of the participants for the health of the company.

6) In your opinion, what is the importance of your company's job on the ecosystem?

7) How do you see the future of esports?

Explore tendencies and uncertainties.

8) Until now, how do you see the results obtained by your company on esports? With that and the expected future of the esports ecosystem, your company is willing to continue with the investment on esports?

Increase, decrease or maintain?