

E-sport's moving into the big leagues

A business study of the e-sport market
in Hungary and the V4 countries



Introduction

03

Market overview

E-sports, virtual sports games, fantasy sports
The origins of e-sports
International organisations and competitions
E-sports in Hungary

04

Market analysis

Participants and cash flows
Revenue sources in the e-sports market

07

Social listening analysis of the Hungarian and regional consumer environment

Statistical results of the V4 nations
Central topics in Hungary
Content in the Czech and Slovak languages
Polish content
Perception of e-sports in the V4 countries

13

The relationship between traditional sports and e-sports

The relationship between traditional sports and e-sports
Traditional sports clubs in e-sports
Should e-sports be treated as sports?

20

Challenges

The loot box problem
Cheating
Protecting the physical and mental health of young people

25

The economic and social impacts of e-sports

Economic impacts
Social impacts

26

Future vision of the development of e-sports

29

Introduction

One result of the digitalisation of today's culture is that many things around us, including sports, are being redefined. The growth of e-sports is dictating a faster tempo than any other branch of sport, or indeed any other sector within the leisure industry. What kind of economic structure underlies the development? Who is profiting from the growth in the sector? How can companies participate as investors or sponsors? These are the questions we set out to answer in this study.



Market overview

E-sports, virtual sports games, fantasy sports

According to the most widely accepted definition, electronic sports, otherwise known as e-sports, is where professional players pit themselves against each other in organised, competitive video game tournaments. It is important to emphasise that all three criteria have to be met in order to fit the definition of e-sports. Gaming at home, as a hobby, is not considered to be e-sports.












The video games that are most commonly encountered in relation to e-sports are real-time strategy, fighting, first-person shooter (FPS), and multiplayer online battle arena (MOBA) type games. Also popular are the video-game versions of classic sports, such as football or motor racing games.

According to research by eNet, in Hungary the most popular games played as e-sports are Counter Strike: Global Offensive (CS:GO, FPS), League of Legends (LoL, MOBA), and Hearthstone (online collectible card game).

E-sports should not be conflated with virtual sport and fantasy sport. Virtual sport is where the outcome of the game is determined by a random combination of computer-based algorithms; viewers can follow the game in the form of broadcasts transmitted via an electronic platform. The most common virtual games are virtual football, horse racing and motorcycle racing, where fans can place bets in line with the traditional sports betting model.

With fantasy sport, the players can assemble their own dream teams consisting of players who exist in real life. The result achieved by the team is based on the outcome of the real-life players' performance in real competitions. The best-known fantasy sport, NFL Fantasy Football, has spawned a whole industry in the United States, with fantasy consultants and television programmes. The main difference between this and virtual sport is that fantasy sport is a social pastime. The players create separate leagues within their group of friends, and play against each other throughout the NFL season.

Figure 1
Types of e-sport game with examples

Real-time Strategy	Fighting	First-Person Shooter	Multiplayer Online Battle Arena	Classic Sports	Other - Hybrid
					
					

Source: PwC Hungary survey

The origins of e-sports

E-sports tournaments have existed for more than 40 years now. The first virtual encounter was played in 1972 with a game called Spacewar. The US home electronics company Atari organised a video game competition in 1980, with more than 10,000 participants.

E-sports as we know it today were born in the '90s. This was when it became technically possible for players not only to play against the computer, or “bot”, but also to compete directly against each other.



International organisations and competitions

To understand the complex structure of e-sports, the individual elements of the traditional world of sport may serve as a useful analogy. In the world of traditional sports, the major clubs like FC Barcelona, for example, do not limit themselves to operating in a single branch of sport, but are also active in the fields of football, handball or basketball. This is also the case for some of the teams in e-sports, who enter various team members in various games. A good example of this is Fnatic from the United Kingdom, or SK Telecom from South Korea. Other teams, on the other hand, concentrate exclusively on a single game, only taking part in League of Legends competitions, for example.

Unlike football, however, e-sports do not have a global governing body. Instead, various national and international associations operate in parallel with each other. The oldest and largest e-sports organisation in the world is the ESL (Electronic Sports League), which runs competitions worldwide. The Cologne-based organisation maintains 11 offices and several international TV studios around the world. Another recognised international organisation is the International e-Sports Federation (IeSF), founded in 2008, which currently has some 50 member states in five continents.

The decentralised organisational structure means that several teams can compete simultaneously in numerous tournaments and leagues, usually in a knock-out system, in parallel with each other. The producers of the games themselves are often present as organisers at these events. This is related to the fact that the publishers have intellectual property rights in the case of every game, so nobody can organise a competition without permission from the publisher concerned. One of the most influential actors in the international e-sports industry is the US games developer Riot Games, which produces League of Legends, among others, and is also responsible for organising the League of Legends Championship Series (LCS). Its competitor Valve, which produces Counter-Strike and Dota 2, organises the major competition known as The International, where most recently it was possible to compete for a prize of over USD 24 million.

E-sports in Hungary

The local precursor to e-sports was aired in Hungary between 1990 and 1993 in the form of the TV programme 'Elektor Kalandor' presented by household name Tibor Dévényi, in which callers played Super Mario on an NES (Nintendo Entertainment System) console, using the buttons on their telephone keypads. In contrast to this, in response to global trends, securing Hungary's place on the e-sports map is now a national strategic objective.

The "One Million for Hungarian e-sports" movement (or E-sportmilla for short) was launched in 2013 at the initiative of gaming enthusiasts, and has operated as an association since 2017. The Association has received HUF 2 billion (USD 7,2 M) in support for development of the industry. Also in 2017, the Hungarian e-Sports Federation was established, and since then it has commenced the process of joining the International e-Sports Federation.

In an interview Balázs Biró (founder of E-sport1.hu, president of the One Million for Hungarian E-sports Association, and chief organiser of the V4 Future Sports Festival), said that the purpose of the initiative is to educate society and lobby for the recognition of e-sports as an official branch of sport, and to put in place the organisational frameworks for e-sports in Hungary. He considers the latter to be essential to strengthen the confidence of sponsors and competition organisers in e-sports, thus unlocking its full potential.



Market analysis

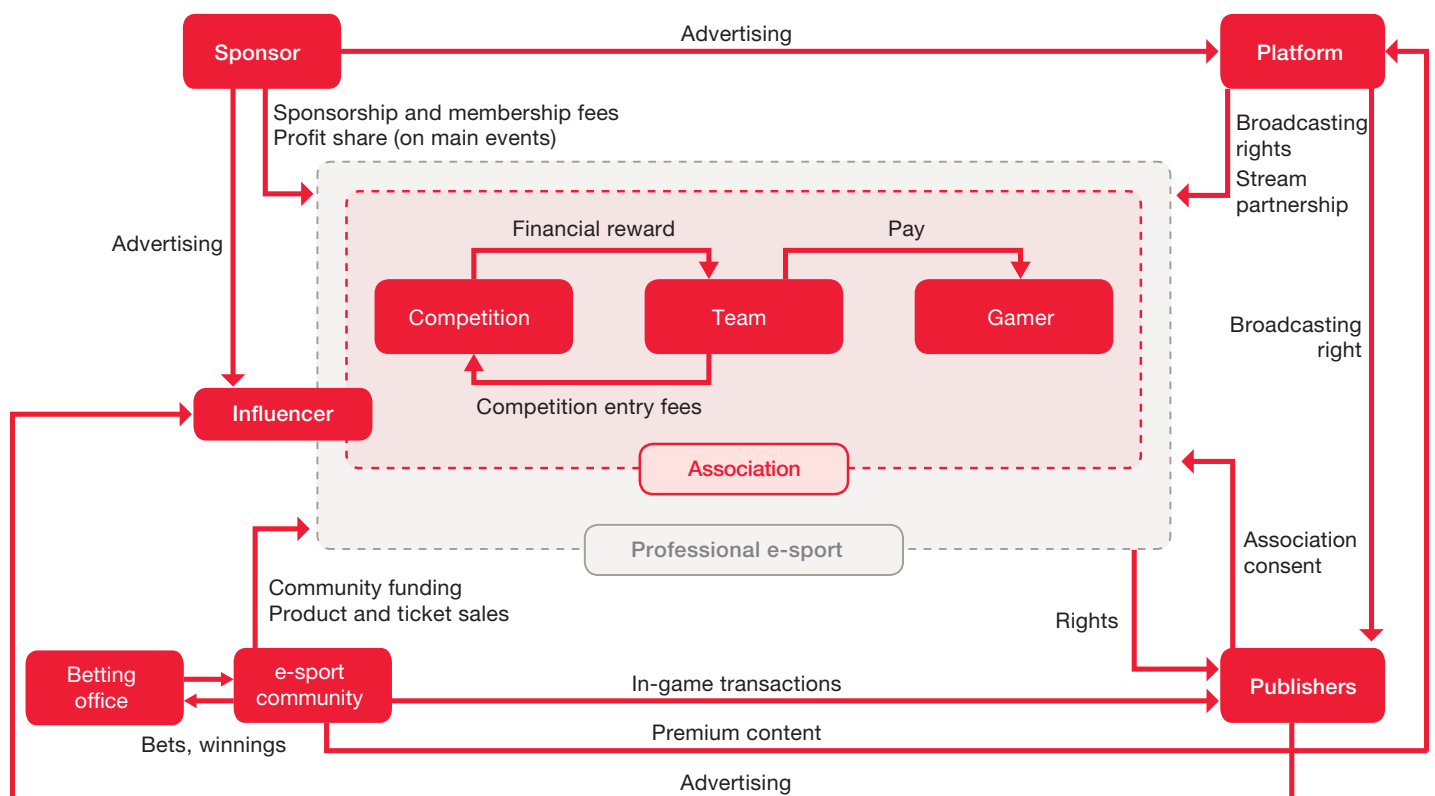
Participants and cash flows

All the participants in e-sports have their own sources of revenue. The ecosystem is driven by the gamers, the teams organised around them, the tournaments at which the teams compete, and the audience. Naturally, the games themselves are developed, and the right to hold competitions is sold by the

publishers, which is why their role within the ecosystem is key. Access to e-sports via the broadcasting of content (competitions, game streams, commentary) is provided to audiences by what are known as platforms such as Twitch.tv and YouTube. The other participants, such as sponsors,










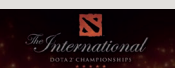
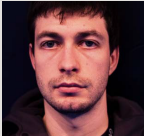







influencers – these will be discussed in the chapter on Sponsorship and Advertising – and betting offices, promote the growth of the e-sports market, an arrangement that is ultimately beneficial to all concerned.

Figure 2
The e-sport ecosystem



Source: PwC Germany, PwC Hungary

Figure 3
Examples of participants

Developer/ Publisher	Sponsor	Platforms	Competitions	Influencers	Teams	Betting
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Source: PwC Hungary

Revenue sources in the e-sports market

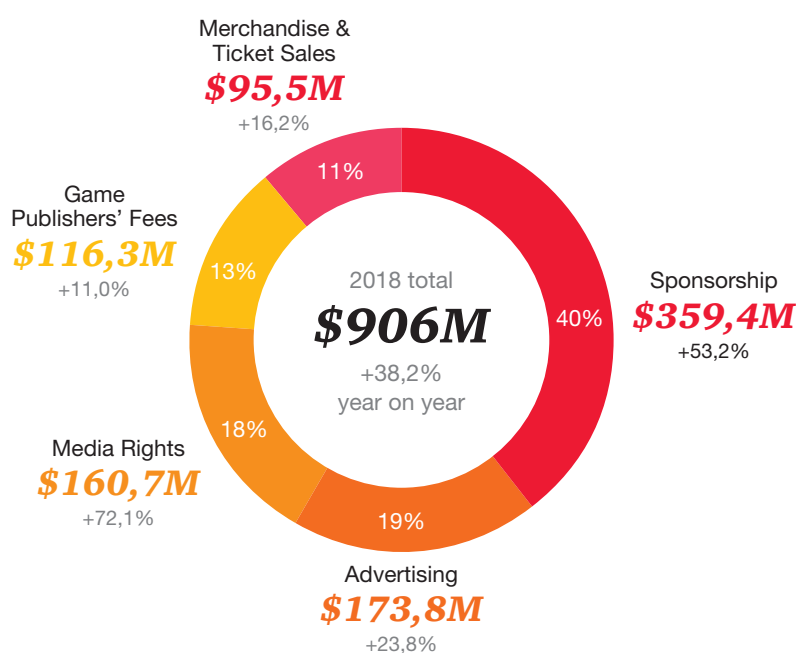
In Newzoo's estimate, based on brand investments, in 2017 e-sports had grown to become a USD 655 million dollar industry globally, and in 2018 this will expand by a further 38.2% (\$906 M), and go on to top USD 1.5 billion in 2020. Newzoo has identified five main categories of revenue source. Sponsorship and advertising have the biggest slice, at almost 60% of overall revenues. This is followed by media rights with almost 20%, then by games publishers' royalties and merchandising and ticket sales, which have almost equal shares.

The Hungarian e-sports market is small for the time being, but is growing dynamically. Specific data relating to the size of the e-sports market is not available, but the size of the domestic video games market gives a good approximation. In a 2017 survey, eNet estimated the size of Hungary's video games market at USD 109 million. This amount was calculated on the basis of transactions conducted in the following three categories: in-game purchases, hardware and game software purchases. In 2016 this figure was around half the currently estimated value. This rate of growth permits us to conclude that e-sports is increasingly of interest not only to sponsors, but also to investors.

The most important e-sports markets continue to be the United States, South Korea, China, and Germany. In South Korea, where e-sports has enjoyed great popularity for far longer than elsewhere,

a relatively minor degree of market saturation has been observed recently, and thus since 2015 the United States has taken South Korea's place as the world's largest e-sports market.

Figure 4
Global distribution of e-sport revenue in 2018



Source: Newzoo

Sponsorship and advertising

The most important source of revenue – at approximately USD 359.4 million based on preliminary estimates – is sponsorship, where a segment growth of 53.2% is expected. The sponsors support individual teams as readily as they do the large-scale events, such as the ESL One, or the V4 Future Sports Festival, which recently debuted in Budapest. The companies providing the most financial support are usually companies that distribute gaming devices: for example, Intel, Asus, Samsung, Alienware, Logitech, NeedforSEAT, Noblechairs, Razor or Nitrado. In Hungary, in addition to the Digital Welfare Program, Magyar Telekom is listed as a primary sponsor.

”

In our team, HellRaisers, approaching the sponsors in person is not allowed. Only team-level agreements are permitted. This is one of the reasons I don't stream very much, because it's not expected of me. Incidentally, it's mainly in the USA that teams tend to be more permissive when it comes to personal brand building.”

Böröcz „DeadFox” Bence,
Top CS:GO player

Possible directions for sponsorship:



Sponsorship of individuals

One of the strategic directions that we see emerging is where economic actors commit to backing individual influencers (commentators, gamers, ex-gamers, social media celebrities) who are trusted by Generation Z, as a means of getting close to the members of this cohort and remaining relevant to them.



Sponsorship of teams

Sponsoring a team can carry the greatest risk for the sponsor, as the composition of the team, and thus the results it achieves, can change extremely rapidly. Due to the exceptionally rapid pace of growth in the industry, however, sponsoring a winning team can bring outstandingly high returns for sponsors.



Sponsorship of events

Sponsoring a particular event is a safer option, but the cost implications are also greater.

E-sports consumers and their interests are clearly definable. Maintaining a presence through e-sports represents an exceptionally efficient channel for the marketing activity of the brands that target them. It is precisely this group that is very difficult to reach using traditional methods, because they do not watch television and use ad blockers for filtering out simple online advertisements. For this reason, it is increasingly common to find brands

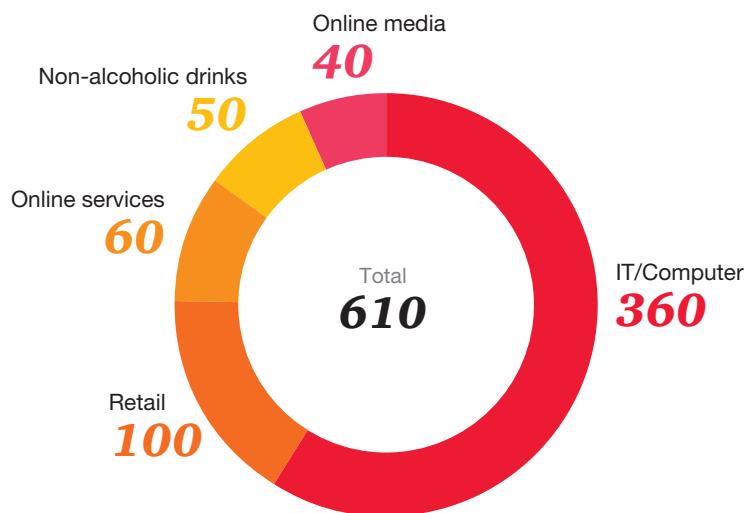
without a direct connection to e-sports among the sponsors. This is also demonstrated by the fact that over 600 sponsorship agreements were made from 2016 to mid-2017, with more than 100 of these being what are known as non-endemic brands. The telecommunication sector (Vodafone, T-Mobile, SK Telecom), for example, sees e-sports as a potential goldmine, but investors are also arriving from the automotive industry, FMCG industry, body care and financial sectors.

In this light, it is hardly surprising that the revenues from advertising space sold during online streaming are in second place among the major sources of revenue. In 2017 these amounted to USD 140.4 million – a growth of 23.8% year on year – which considerably exceeded the rate of growth in the revenues of this kind in traditional branches of sport.

According to some sources, at this year's Intel Extreme Masters championship and expo, the total value of advertisement sales may have been as high as USD 27 million. The event had a total of approximately 169,000 visitors during the five days, in addition to the millions of online viewers, so the non-endemic brands brought multitudes of their product ideas to the event in order to find out how they can connect more effectively with the fans of e-sports. The holding of physical events, therefore, could be an important building block for the sector's development. Large-scale events however, require the appropriate infrastructure. Accordingly – in Hungary too – the development of sports facilities and Internet access could have a beneficial effect on the industry, because the availability of a good-quality venue at an affordable price could attract global events to our country.

Figure 5

Approximate number of sponsorship agreements made from 2016 to mid-2017, by sector



Source: Nielsen Market Intelligence

Gillette entered the e-sports market in 2017 by concluding a global partnership agreement with ESL to become a sponsor of the Intel Extreme Masters world championship in Katowice, Poland.

”

“Young men are increasingly difficult to reach via traditional channels, so we could not neglect the upcoming generation, present en-masse in e-sports. Gillette’s entry to the market was preceded by a major survey, as we had to step out of our tried and tested processes. Due to the exceptionally broad international access, national or regional approach is no longer relevant. We had to understand how e-sports consumers think and communicate, what is important for them, and what brands they listen to. Relevance and humility were important in order to gain the community’s acceptance, as gaming culture is very closed. In this scene, the members of the community actively and assertively make it known if they don’t like something. This is where the greatest risk of market entry lies: if you get it wrong, you could kill off your brand for a whole generation. Gillette has received very positive feedback so far, so I can say that we will continue to maintain a presence in this sector going forwards.”

András Papp

Gillette Brand Communications Leader,
EIMEA region at Procter & Gamble

Revenues from media rights, game publishers' fees, merchandise and ticket sales

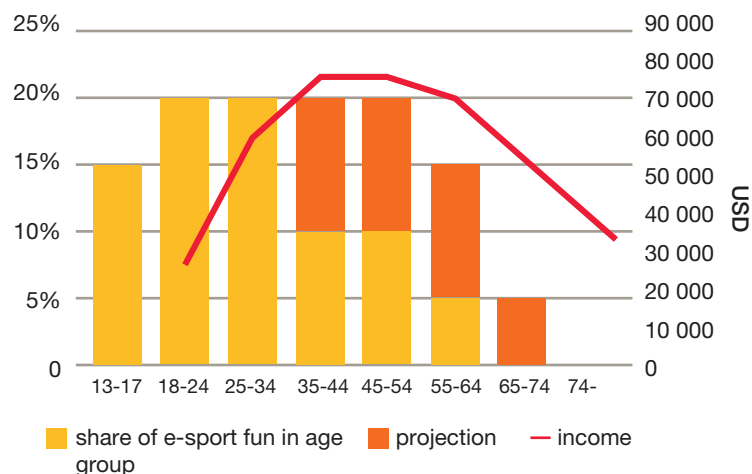
The game publishers' fees listed by Newzoo (estimated at USD 116.3 million, or HUF 31.8 billion, for 2018) represent publisher expenditures on the organisation of e-sports events that go to independent partners, or what are known as white label organisers. This sum does not include the fees for events the publishers organise themselves.

Additional revenues derive from the amounts charged for the competition media broadcasting rights, both on TV and online. Both broadcasting and content production are dominated by the online platforms, among which Twitch.tv and YouTube stand out, although conventional television channels also exist; for example, in Hungary, the mindiGO Sport service package created by Antenna Hungária includes an international e-sports television channel.

Similarly to the traditional branches of sport, the e-sports industry now also offers merchandise such as clothing and various computer accessories. The revenues from such merchandise and ticket sales are expected to total USD 95.5 million in 2018.

Spending by e-sports fans, incidentally, is currently significantly lower than that of the fans of other sports. By way of comparison: while an average e-sports fan's spending on e-sports in 2017 was USD 3.6 (HUF 1000) in the United States, the average spent on conventional sports, taking all sports into account, was USD 54 (HUF 14,800) per annum. We assume that the spending of e-sports fans will creep upwards as the years pass, just as it has done in the case of the traditional sports. One reason for this could be that, as the market matures, a growing number of sponsors will build a rapport with a substantially higher number of consumers. Also, the current audience consisting of minors or people at the start of their careers is likely to maintain its connection with e-sports later, when it has greater purchasing power.

Figure 6
Digital natives are expected to maintain their interest in e-sport in the long run while their income is increasing



Source: PwC, Statista, Newzoo

Revenues of the e-sport-related gambling industry

Newzoo's estimate does not include revenues from gambling related to e-sports. We will present these on the basis of Statista's forecasts.

According to Statista's forecast, e-sports gambling revenue could rise from USD 24 million (2015) to USD 1.8 billion by 2020. One of the main reasons for the expected growth in the betting market is that the e-sports market itself is also expanding. The fan base is getting bigger, and a growing number of professional events are being organised. The greatest challenge is represented by the uncertainty surrounding regulation, which we discuss in the section entitled Challenges.

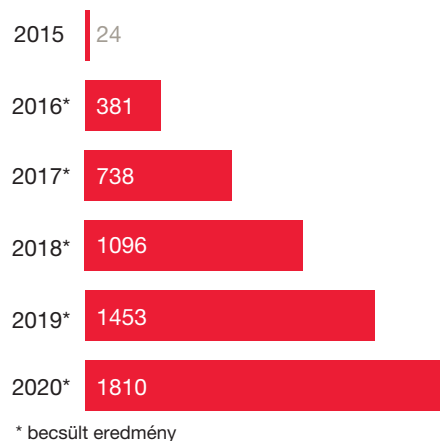
Games of chance in e-sports can usually be played with real money, virtual currency or virtual consumables (such as game elements of value) and represent an extraordinarily wide variety. One of the most popular forms of gambling is placing bets on the outcome of e-sports events. This type effectively works in the same way as traditional sports betting.

In addition, the e-sports industry (as a result of its digital nature) has introduced numerous new types of gambling into the realm of conventional sports betting. The greatest turnover is generated by the following types of game:

- **“skin betting”**: “Skins”, which are virtual cosmetic elements (such as an ornately decorated helmet or gold Kalashnikov) that can be accessed in the games, are used as virtual currency. The bets on the results of games are made for these. The “skins” may be redeemable for real money later.

- **“social betting”**: Bets are made in groups, either with real money or virtual currency, and in this way the members of the group can bet on several events or with greater sums than if betting individually.
- **fantasy betting**: The e-sports version of the fantasy leagues associated with conventional sports: the players themselves can assemble their own dream e-sports teams of players who exist in real life. The result achieved by the team is based on the outcome of the real-life players' performance in real competitions.
- **challenge betting**: The players hold competitions between each other, which anyone can join for a fee. The competition is played for the nomination fees collected from the players.

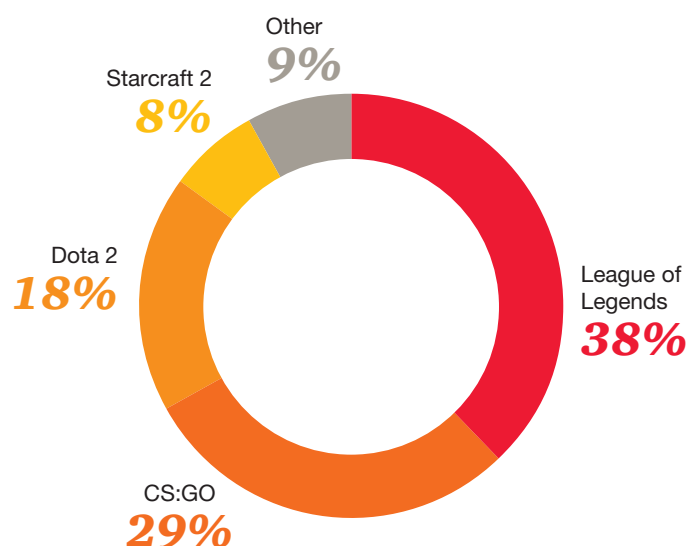
Figure 7
E-sport betting market revenue worldwide



The total European sport betting market revenue is currently appr. 185 000 mUSD

Source: PwC, Statista, Naurus Advisors

Figure 8
E-sportsbook betting volume by game, 2016



Social listening analysis of the Hungarian and regional consumer environment

Due to the rapid international expansion, according to Newzoo's calculations, e-sports is as popular as ice hockey or baseball among American men aged between 21 and 35 (with 22% of them watching it). The number of viewers globally could reach 380 million this year. According to eNet's research, in Hungary e-sports had more than 223,000 individual viewers in 2016. This figure had grown to 420,000 by the end of 2017.

To complement the traditional surveys, PwC Hungary also conducted a study of the e-sports topic using the social listening methodology. The purpose of

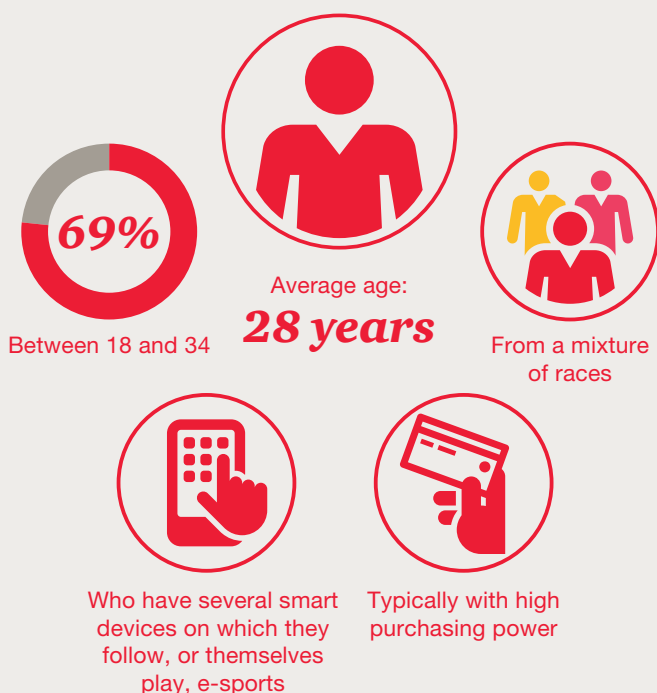
the analysis is, based on the massive quantities of qualitative and quantitative data accessible in the "online space" (social media websites, news portals, forums, blogs, etc.), to be able to give a new and different perspective on the user attitudes towards e-sports, the impulses, events and anomalies that trigger interest in the topic.

Our research extended to include a study of the online discourse emerging in relation to e-sports in the "Visegrád 4" group of countries during the past six months, in the context of which we analysed the news items, posts, focus

topics and opinion leaders generating outstanding levels of interest in the topic, as well as the distribution of the content-related and statistical data along various dimensions. The study also included an analysis of the overall emotional charge of user-generated content.

In the analysis we studied content generated between 1 September 2017 and 20 March 2018 in the Hungarian, Polish and the Czech and Slovak markets (we examined the Czech and Slovak content together due to the similarities between the two languages and the lower number of hits).

According to a survey by **PwC Global Media Outlook**, the group of people interested in e-sports (either as viewers or players) is as follows:



Basic social listening concepts

Mention: an individual social media post or internet news item, comment, forum thread or other content featuring any key words of the topic being analysed; also, all posts/comments that are associated with relevant content relating to the same issue.

Access: the number of individual views generated by the analysed mentions. (In the present analysis this does not denote the number of individual users!)

Statistical results of the V4 nations

Mentions, views

The diagram below shows the statistical results of our social listening survey, the recognition of the e-sports topic, in the analysed Visegrád countries.

As the chart clearly shows, the recognition and popularity of the e-sports topic – even allowing for the different sizes of their populations, differs for the individual countries. In Poland, the large user base and correspondingly substantial numbers of mentions and views are primarily due to the large population; but users with an interest in e-sports are exceptionally active in comparison with the other analysed language regions whether we examine them in terms of the absolute or relative values. Based on our research, the activity of Hungarian users is also significantly higher than that of the Czech and Slovak commenters.

A total of almost 50,000 mentions appeared on Hungarian-language online platforms, generating 35 million views. The Czech and Slovak content fell somewhat short of this, as we measured 27,300 mentions and around 12 million view on these online platforms. The Polish market far exceeds the above figures, with more than 334,000 mentions in the period under analysis. These mentions generated 117 million views.

Figure 9

E-sport in numbers in the V4 countries

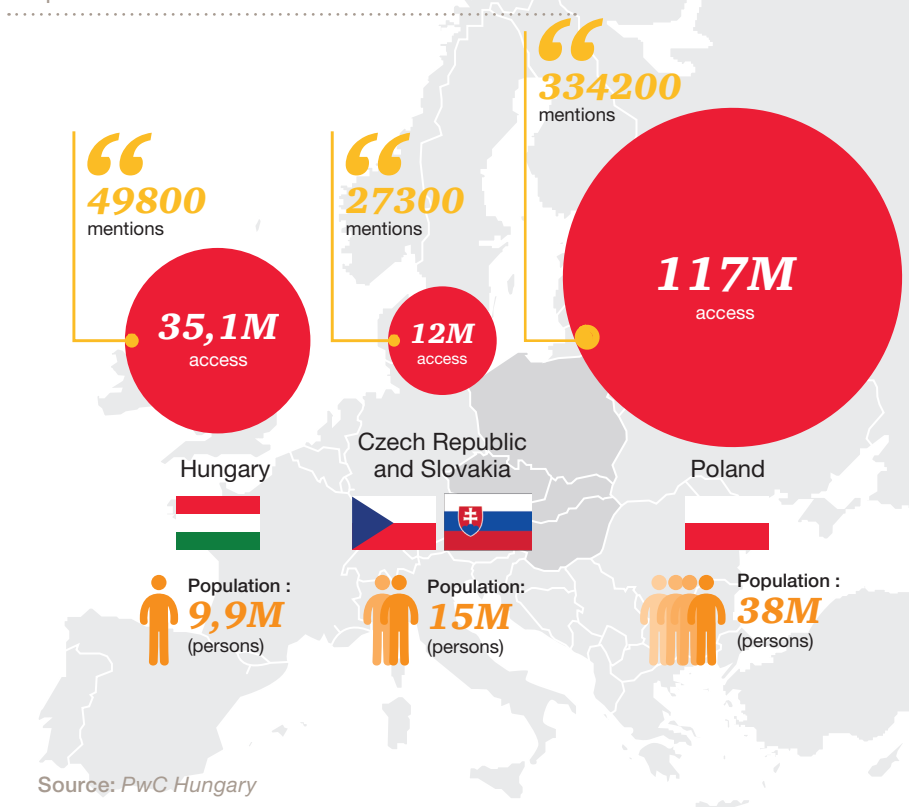
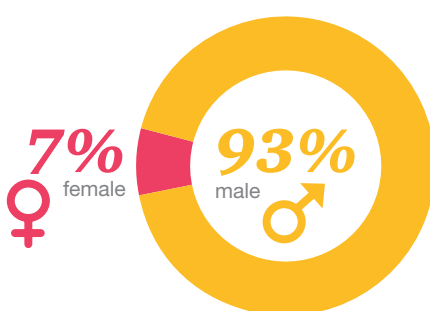


Figure 10

Distribution of e-sports mentions by gender



A man's world

Several studies concerned with the topic make mention of the fact that e-sports are generally of interest to male users, with the majority of analyses estimating their share at 70-80%. Our social listening survey also provides evidence of the male-dominated nature of discourse on the topic; the distribution of the mentions by gender leads to the conclusion that not only are more males interested in e-sports, but they also participate far more actively in the online discourse than female users in the whole V4 region.

Central topics in Hungary

Hungarians are true omnivores

The word cloud that emerges from the online discourse of Hungarian gamers reveals which were the most popular games in the past six months.

CS:GO is the most popular game in Hungary, with the present version of Counter-Strike featuring in 2000 of the analysed mentions.

Other leading game titles:

- LoL (1729 mentions),
- Overwatch (1275),
- Hearthstone (1075),
- PUBG - PlayerUnknown's Battlegrounds (1050).



Hungarian users are far more open to the various more colourful genres of game than their Czech and Slovak, and especially their Polish counterparts, because – as we will discuss later on – in the latter language regions CS:GO almost completely displaces the other games. It is important to note, however, that FIFA as a sports game, and the games that are regarded as leading title on mobile

devices (e.g. Clash Royale) are also absent from the word cloud; interest in these titles is lower.

Other words featuring in the word cloud provide a great illustration of the parallels between e-sports and traditional sports. These are “team”, “player”, “tournament” or “championship”.



Photo by Maxime Rossignol on Unsplash

E-sports in provincial towns

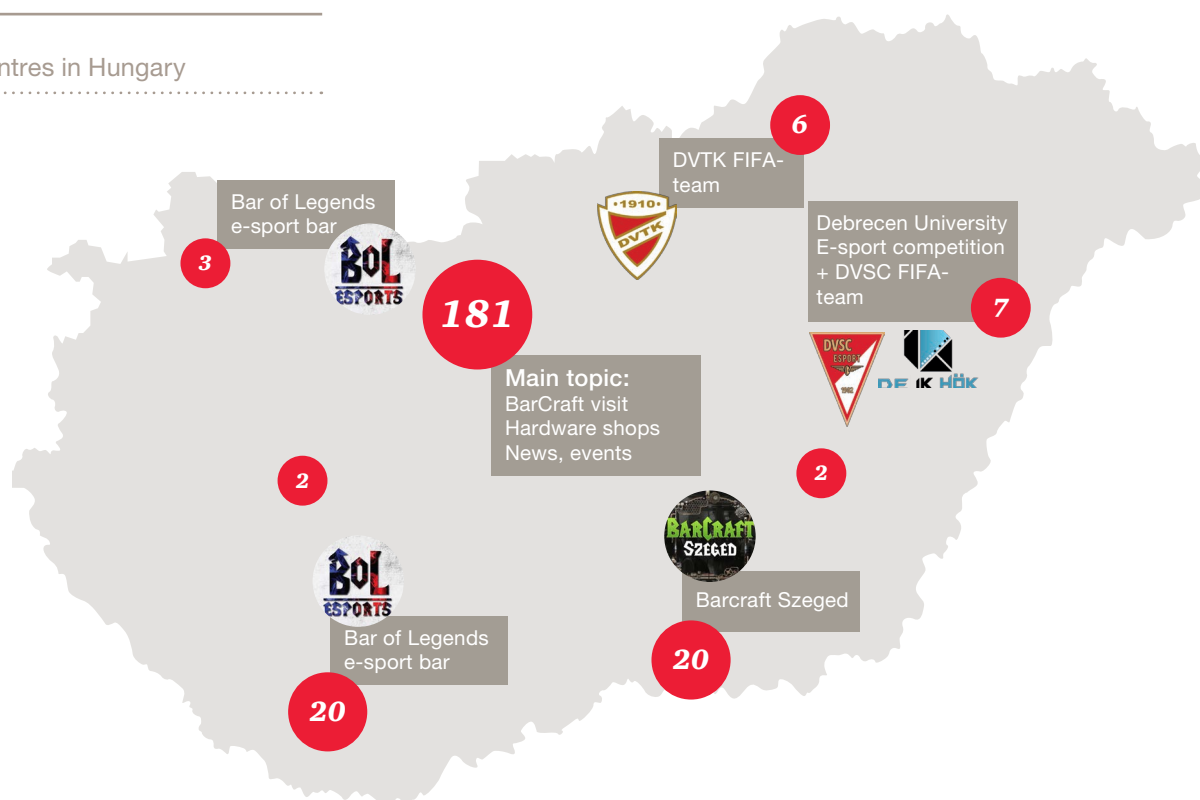
An examination of the geographic distribution of the mentions reveals that, in Hungary, almost 75% of geotagged content was generated in Budapest. Naturally, the capital city has more events and venues that are specifically concerned with e-sports. Examples of these include the several e-sports bars and hardware and computer peripheral shops that promote e-sports; but the majority of e-sport-related competitions and events are also held in Budapest.

An interesting phenomenon is that mentions relating to the topic are “exported” to provincial areas by the various themed bars/café. In Pécs, Győr and Szeged, establishments similar to the sports bars of Budapest have opened, which make it possible to practice e-sports in this form.

A relatively major centre for mentions relating to the topic is Debrecen, where the IT faculty of the local university was the first in the country to organise an e-sports championship between universities, and the FIFA e-sports team of the local football club DVSC also posted from the city.

The situation is similar in Miskolc, where several posts were generated in connection with the foundation of a similar team at the local club, DVTK.

Figure 11
E-sports centres in Hungary



Source: PwC Hungary

Content in the Czech and Slovak languages

Extatus, the Czech-Slovak “show team”

In the case of the Hungarian content, it was observed that the mentions were generated in relation to many different topics; there was no central, predominant game, news item or event in respect of which an especially high number of posts was generated.

In the Czech and Slovak analysis, by contrast, it was observed that the users always showed a special interest in the Extatus international (Czech-Slovak) team. Not only news of the team itself, but items related to Extatus were also popular, such as the more significant international competitions, developments and trends in the team's primary game, CS:GO, and reports on many websites concerned with professional e-sports.

This phenomenon shows how important and beneficial it is for a nation to have its “own” internationally successful, recognised e-sports team (later we will see how this is especially true in the case of the Polish market).

The Instagram post of the prize competition, with a Razer gamer set up for grabs
(Source: Instagram)



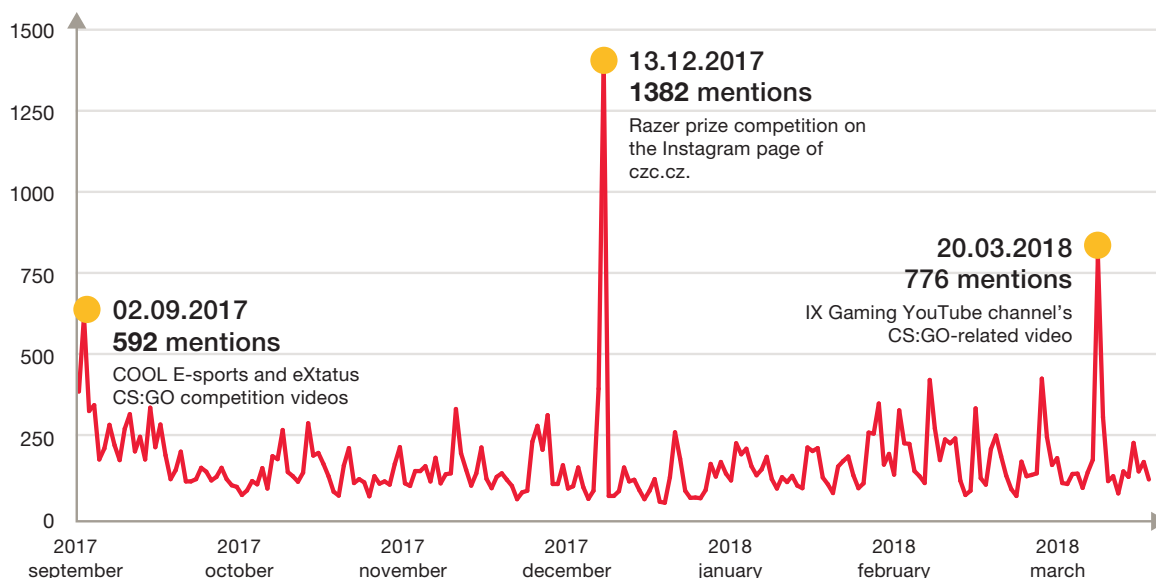
E-sports, a new marketing channel for peripheral manufacturers

Among the timeline-trend analyses of the social listening survey, we highlighted the results of the analysis of content in the Czech and Slovak language, which show what an important channel the e-sports scene has become for companies that manufacture and distribute gaming peripherals.

The Czech website *czc.cz*, which sells hardware and gamer peripherals, advertised prize competitions for social media followers on several occasions, where the prizes were devices that had been used by professional e-sportspersons.

During the total analysed period – as the graph below shows – the greatest user activity was triggered by such a prize competition, overtaking all the other e-sport-related posts by a significant margin.

Figure 12
User activity in social media



Polish content

Poland, the stronghold of e-sports in Central and Eastern Europe

The introductory, statistical data have already revealed that e-sports enjoy greater popularity in Poland than in the other countries included in the survey. The deeper content analysis of the online mentions, however, revealed not only that the quantitative data represent a different order of magnitude, but also that the Polish e-sports market is also more mature than that of the other V4 countries.

Poland has a CS:GO team that has achieved major successes at global level, Virtus.pro, the members of which are real stars in their home country. The most popular and successful player in the team is Wiktor “TAZ” Wojtas, whose name is also the most frequently featured word related to the topic – probably a result of his currently pending transfer. After his matches, his performance is analysed in the minutest detail, sometimes in comparison with past games.

The success of Virtus.pro in Poland has contributed greatly to the fact that in recent years not only has the number of fans grown considerably, but an increasing number of professional teams have also appeared on the scene, who have also been able to build up large fan bases for themselves (e.g. GO, CS:GO teams).

The maturity of the Polish market is also evidenced by the success of YouTube channels associated with the individual e-sports, which show match commentary and competition summaries (for example Rito E-sports or DD E-sports). These video channels make very in-depth, professional summaries that are evocative of traditional sport analyses, to which the users also display an obviously serious attitude, and engage in professional discourse regarding the videos.

With respect to the Polish content, it was observed that CS:GO, as an e-sports title, clearly dominates in comparison to the other games, with one of the main reasons for this being that the most successful Polish teams all compete in this game.

The Boniek “scandal”

Zbigniew Boniek, now retired, is one of the most famous and successful Polish footballers of all time. Boniek tweeted about e-sports on several occasions during the analysed period, taking the position that “e-sports is not a sport”.

All his comments of this nature went viral in the Polish e-sports scene, with almost all the major websites concerned with e-sports sharing the news and stating their arguments against Boniek’s opinion.

Not long after the incident, TAZ (a member of the Virtus.pro team) also shared a fan’s comment, which said that professional gamers are now celebrities who can mobilise crowds of people with a single gesture, who have tens of thousands of fans and are role models for a lot of young people, and thus they certainly deserve recognition. TAZ did not mention Boniek directly in his post, but a connection can be identified between the two. The post naturally went viral, garnering great success among gamers.

“E-sport’s a big bubble. I understand that there’s lots of money in it, but the whole thing’s a joke. Sitting for hours on end and doing battle with a joystick?”

Source: Twitter



Zbigniew Boniek 
@BoniekZibi

Boguś bez jaj,e-sport to jest i będzie duża kasa,ale to także świadectwo pewnej patologii.Siedzieć godzinami i walić w joystick?

9:34 AM - 2 Jan 2018

Perception of e-sports in the V4 countries

One of the great advantages of the social listening methodology is that the algorithm is capable of measuring the emotional charge of the individual mentions, and determining whether a given user opinion, expression or comment is positive, negative or neutral in tone.

In the next section, we take a look at which content and topics gave rise to the most important expressions of sentiment.

The Polish and the Czech and Slovak users have a very positive opinion of the content generated in relation to the topic. The general sentiment of Hungarian users was significantly more negative than that of the other V4 countries, but nevertheless it can be stated that, overall, the distribution of sentiment is also favourable with respect to the Hungarian results.

Note:

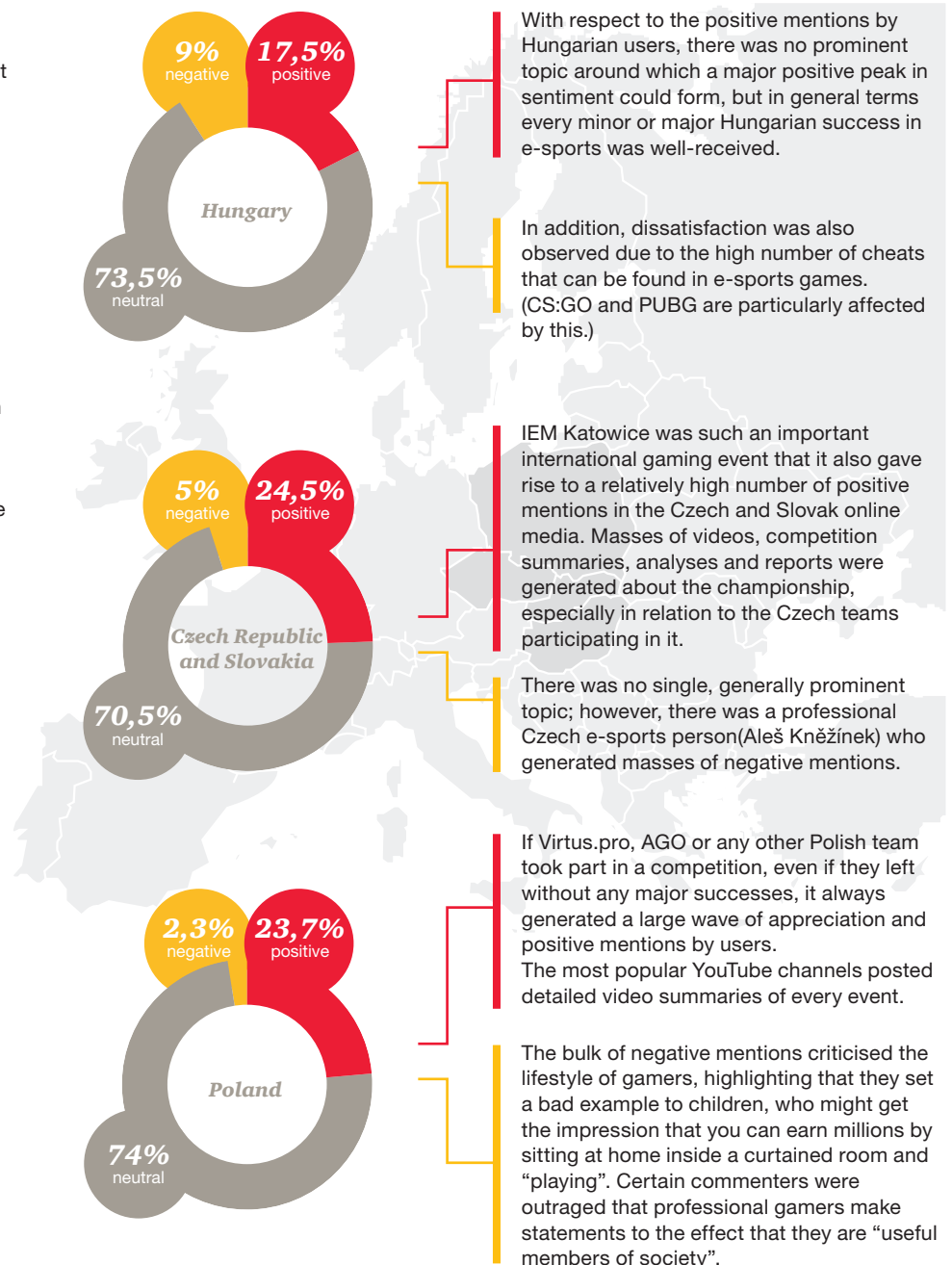
Based on PwC Hungary's social listening surveys to date, it can be established that the number of mentions is generally high in these types of study because there is a lot of undirected conversation regarding the individual topics in the online space. It is also important to highlight that, based on our research to date, a positive mention rate of over 15% or a negative mention rate of below 10% can be considered as a clearly supportive user attitude.

Positive content is hard to judge, because users who are concerned with the topic are almost always happy to see any content that relates to their hobby. If somebody photographs a player at a tournament, or if an article is published on the gamer scene, the commenters show a great deal of enthusiasm.

Where neutral content is concerned, it is safe to say that, overall, neutral mentions were generated with regard to a great many individual topics, due to the informal nature of online discourse.

Moreover, it is also a common phenomenon that communicating users depart from the topic during the individual posts.

In many cases, the mentions analysed in the online space have low analytical potential due to their low information content, and consequently they are placed in the neutral category (e.g. pictures, certain emoji, abbreviations, slang, etc.)



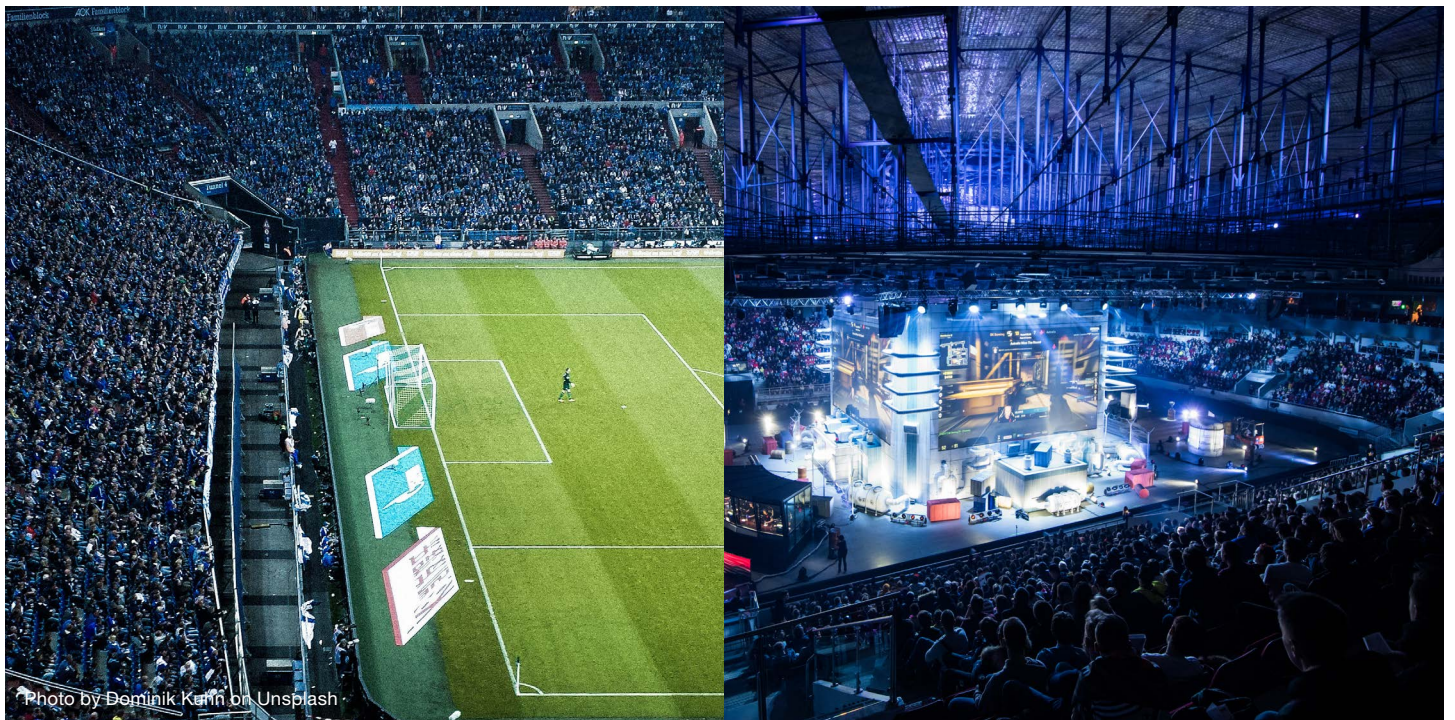
The relationship between traditional sports and e-sports

The relationship between traditional sports and e-sports

If we examine this aspect scientifically, in accordance with the definitions, then stamina, strategic thinking or reaction times are just as important in e-sports as they are in the traditional branches of sport. Therefore, just as chess, darts and poker are sports, e-sports can also be regarded as mind sports.

E-sports adopts, from traditional sports, numerous factors that strengthen its claim to be treated as a sport:

- **Physiology (physical fitness):** Comprehensive training is just as important here as in classic sports, which is why the professional teams have also incorporated physical training plans into their programmes. An e-sportsperson can perform up to 400 keystrokes or mouse manoeuvres per minute, which is four times the number of actions performed by an average computer user.
- **Psychology (mental fitness):** Besides the advanced motor skills, a high level of strategic thinking, situational awareness and lightning quick decision-making abilities are needed; and all these are usually deployed in the context of a teamwork situation.
- **Structure and competition system (organisational structure)** Various teams play against each other in leagues, where there are also championships at regional and global level. The matches are watched by tens of thousands, and sometimes millions of viewers, and their fairness is overseen by a referee.
- **Community (institutional affiliation):** Similarly to other sports, in e-sports too, every team has its own base of fans, and there are also bars that specialise in showing e-sports tournaments.
- **Media (coverage of sport in the media):** The championships or players generate coverage in the media just like with traditional sports, though typically, of course, via different platforms.
- **Technology (development of equipment and clothing):** The quality of the gamers' devices is very important, just like Formula 1 motor racing: you need a car as well as the driver. The right kind of chair, for example, is just as important to a star player of Overwatch or Dota 2 as Roger Federer's tennis racquet or Lionel Messi's football boots.



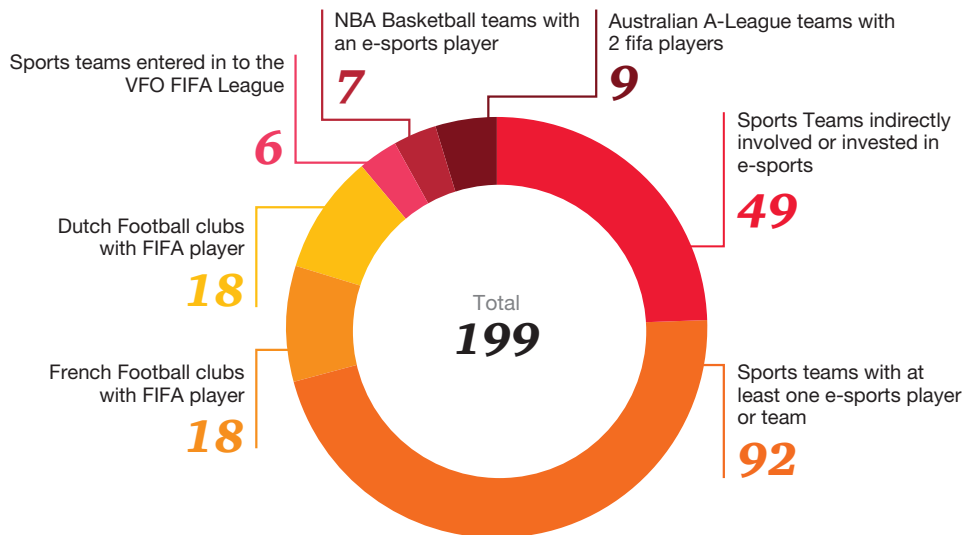
Traditional sports clubs in e-sports

The number of teams that play traditional sports and also have a direct or indirect interest in e-sports, in the outstanding performance of e-sports players, or in the sponsorship of teams now exceeds 200, and this figure is growing at an exceptionally rapid pace. This February, FC Barcelona announced that it would participate in the first ever Pro Evolution Soccer 2018 gaming championship. After this, it is hardly surprising that the smaller clubs are also moving in this direction.

In line with international practice, the trend for traditional sports associations to establish e-sports teams has also started to take hold in Hungary; the pioneers in this country are MTK (Budapest), DVTK (Miskolc) and Honvéd (Budapest), but DVSC (Debrecen) also has a formidable FIFA team, and most recently FTC and UTE also launched their own e-sports sections.

Figure 13

Total Sports teams invested or who have an interest in e-sport directly through players or teams



Source: Reddit.com

Examples of sports clubs with e-sports teams:



“

The idea of creating the MTK E-sports Team came up during a friendly conversation. The initial idea took shape after a bit of planning, and last September we contracted the best FIFA players in the country, then in a pilot scheme we launched our pro-clubs FIFA team (in pro-clubs game mode, every character is controlled by a different player). The launch went so well that last year we came second in the domestic pro-clubs championship. Encouraged by this success, we have decided to also compete in the 1v1 game, and we will be debuting in this at the beginning of May (in 1v1 game mode, a single player controls the whole team of 11). The decision to choose FIFA was motivated by our desire to adopt the online version of a game that the fans of traditional sport also know and love. We hope that the overseas model will take hold here too, and through e-sport we will succeed in winning back young fans who have dropped out of the traditional football scene. Besides this, another objective is to get the media on side. MTK is negotiating with several channels regarding the broadcasting of e-sports matches.

Alongside our achievements in Hungary, we would also like to attain international successes. In partnership with an events management company, we plan to hold a championship in our stadium as soon as this year. And next year we expect to add another game to our portfolio. Precisely what game this will be has yet to be decided, as there are lots of factors to weigh up. We wouldn't like to be associated with a game that is seen to be controversial, hard-to-follow or violent. Incidentally, we are not only targeting the 15-25 age group that is regarded as the classic e-sports fan base, but also the over-40s. I know from my own experience how exciting it can be to see how the game that I myself used to play when I was younger has developed.

In business terms, so far the section has no significant revenue; but a sponsorship agreement was recently concluded with a Hungarian IT company, and we hope that as the team develops more sponsors will follow. At the moment, for example, a financial institution is showing serious interest in the team.

The question of whether there is any need to channel e-sports into the frameworks of traditional sports is often asked. Along with a number of experts, I don't believe this is necessarily a requirement. I believe there is a realistic possibility that, based on a well-defined set of rules, under certain circumstances, an “e-Division 1” could be created in collaboration with the Hungarian Football Association (MLSz). This will require determined advocacy, however, because feelings of hostility towards e-sports are still encountered within the traditional sport professions.

The future certainly holds considerable business potential. However, I cannot predict which games will be the vehicle for this expected success. Here in Hungary, if the government's interest is maintained in the years to come, our prospects are very encouraging.”

Péter Szegő
Head of the MTK E-sports Team

Should e-sports be treated as sports?

The upward curve of the branch of sport is shown by the fact that medals will be awarded for e-sports in the forthcoming 2022 Asian games. Beside this, the hot topic among audiences is whether e-sports will be accepted as an Olympic sport in time for the 2024 games in Paris, which would send a clear message out to the sceptics.

Our social listening analysis reveals that the acceptance of e-sports as “traditional” sports has been the subject of debate for a relatively long time now, both within the gamer community and outside it. The inclusion of e-sports in the Olympic Games would represent a form of high-level legitimization for e-sports.

Although this topic did not generate a high number of mentions, the majority of such opinions concur that e-sports includes games that are not necessarily suitable for the Olympics. Even supporters of e-sports; that is, users who would include it among the traditional sports, tend to be in favour of the establishment of its own events, competition structure and system.

A positive phenomenon related to the topic is that the number of people who completely reject the legitimacy of e-sports, or their nature as competitive sports, is negligible.



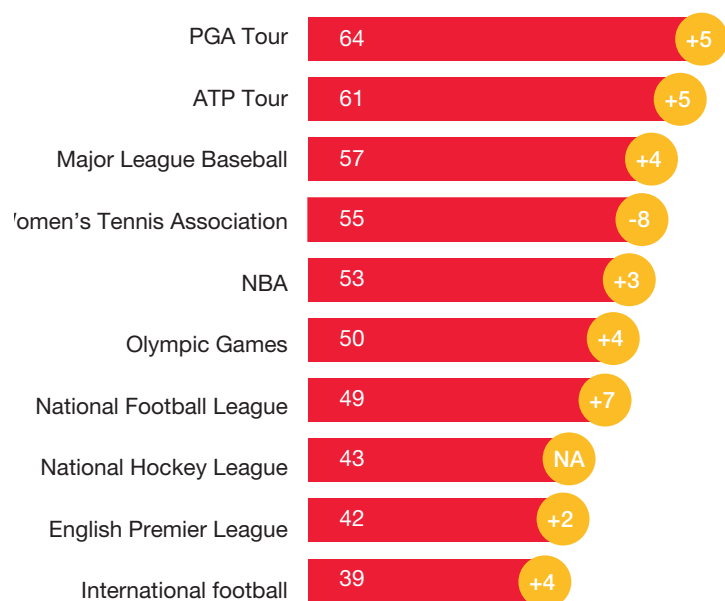
Source: Facebook

The recognition of e-sports as an official branch of sport, incidentally, is progressing at a different pace in each country. At present, there are more than 60 countries where e-sports is classed as an officially recognised branch of sports. These include, among others, China, the USA and South Korea. In France, the same labour-law and residency-law rules apply to e-sportspersons as to professional sportspersons engaged in traditional sports; but at the same time, e-sports is still not explicitly recognised as a real branch of sports.

In legal terms, e-sports is currently not one of the official branches of sports in Hungary. Recognition as a sport, however, would have tangible positive aspects. Digital sports would be able to share in the sport funding provided by federations, and non-profit sports clubs could receive tax breaks. With these benefits, and by ensuring employees' rights, the base of e-sportspersons could be further expanded.

The e-sports community, however, is not lobbying for its activity to be recognised as a sport – they say that they do not need the obligations that this entails. Moreover, the difference between MOBA and FPS is greater than that between running and motor racing, so it is not certain that the two would be able to coexist well within the framework of a single federation. According to members of the community, the general norms are already informally in place, and it would not necessarily be a good thing for e-sports, which currently operates on a market basis, to be subdivided into federations similar to those of traditional sports. They confirm, however, that in the long term it will be necessary to commit to some kind of structure. Overall, however, we are seeing that it is more important for the traditional sports to channel e-sports in their own direction; because after all, they are the ones whose audience is aging dramatically.

Figure 14
Viewership demographics for top properties



■ Median age of TV viewers in 2016 ● Change since 2006

Source: PwC's Sports Survey

The Hungarian Government is working to leverage the opportunities offered by e-sports, and develop a national digital sport strategy as part of the Digital Welfare Programme, and in its role as regulator, to react quickly to the needs of the new industry.

“

Sport is another part of our lives that is being fundamentally affected by the digital transformation. In order for Hungary to maintain its outstanding international success in the traditional fields of competitive sport, continuous digital innovations are needed in the area of sport as well. These can be used to give an improved sporting performance. For example, a unique digital technological innovation that improves competitors' cornering technique contributed to the Olympic gold win of our short track speed skaters. Digital innovations can be used to bring the “sporting experience” closer to young people who are starting to drift away from traditional sports. Traditional sporting events supported with virtual and augmented reality, and the new generation of smart stadiums, together with e-sports, represent excellent opportunities for traditional sports to retain and attract young fans. This is because such tools can mobilize large numbers of people who would not otherwise take part in sport-related community events.

E-sports help to strengthen skills that also make a substantial contribution to the development of digital competencies and digital literacy. Besides this, digital sport and e-sports offer excellent opportunities for Hungarian technological startups, whose developments can easily go on to achieve international successes. Another interesting question is whether e-sports will remain technology/platform/publisher-dependent in future, or whether an integrating platform will emerge that is capable of unifying the market.

Many people ask me why we launched our efforts for the development of e-sports in the context of a V4 initiative. The V4 countries and Germany have traditionally had a close economic and cultural relationship. Germany is one of the drivers of digitalisation in Europe, while the V4 countries make up the most dynamically developing region in the EU, so it was self-evident that the V4 countries would be Germany's digital partners when it came to industry 4.0, 5G, or e-sports.

It is my conviction that if Hungarian e-sports will be a part of the Hungarian system of sports institutions with equal rights and status, this could contribute to a strengthening of Hungarian sports. I consider it important for e-sports to be defined as sports in the Act on Sport. A positive change such as this could greatly assist the Hungarian e-sports community in growing to become one of the leading forces in the European market.”

Tamás Deutsch

Deputy chairman of the Hungarian Olympic Committee, president of the National Federation of Sport Associations, chairman of the MTK football club and Prime Minister's Commissioner for the Digital Welfare Programme

Challenges

The loot box problem

The unregulated e-sports market, accessible by everyone, poses a very serious problem in that it can lead to addiction, which is particularly dangerous for the young. Without appropriate regulations or follow-up monitoring, young people are spending thousands of dollars either on in-game purchases or on websites operated by third parties.

Dr. Mark D. Griffiths, an expert on game addiction, explained that the loot box system of rewards is very similar to the way slot machines work, and accordingly, buying them can lead to addiction. (such as when a player finds an in-game loot box of unknown content that requires payment to unlock). Despite this in his country, the United Kingdom, loot boxes

are not classed as gambling. The regulation, however, is not consistent and every country sets its own boundaries; so in Belgium, for example, loot boxes are treated as a form of gambling.

Due to the criticism they have received, the games publishers are also trying to do something about the phenomenon. For example the publisher of CS:GO, Valve, has introduced a rule that freshly acquired virtual plunder may not be sold commercially for seven days. This could be effective because the majority of gambling-based websites rely on the ability to trade high quantities of items very frequently, and not on maximising the amounts received from the individual bets.

It seems to be in the interest of participants in the e-sports market to eliminate such problems, so further regulatory steps can be expected in the near future.

The loot box is a consumable virtual item that can be used to obtain further virtual game elements in a random manner. The game elements expand the range of opportunities for customising the player's avatar, for example, but can even be used for the purpose of obtaining equipment such as weapons or armour, which could alter the course of the game. In most cases these boxes can be purchased using points acquired in the game or with real money.

Cheating

Cheating in games; that is, manipulation of the program, is not a problem. Attempts can be detected during the competitions. If cheating is found to have taken place, the player concerned is banned from the league, and often his or her account linked to the game is blocked, which has sufficient deterrent force.

Doping, however, is a real problem. At the competitions, referees watch and perform random testing for possible drugs that boost concentration, such as the non-prescription product Adderall, in the bodies of the players. However, we can find no clear guidelines regarding precisely what kind of other materials

should be looked for in the event of which suspicious behaviour patterns. All of this, as in the case of the traditional sports in the past, is dangerously unregulated for the time being.

Protecting the physical and mental health of young people

Mental development

In e-sports, many players and fans are still minors, so those who fear for the health of our children, mostly on the basis of stereotypes, regularly make their voices heard. It is often claimed on various forums that aggressive behaviour and social isolation can be observed in gamers as a response to first-person-shooter games, but these claims are refuted by a whole series of independent research studies. To protect the psychological development of young people, strict organisations censor the games and

furnish them with various advisory warnings. First-person-shooter games and the e-sports events related to them are subject to age restrictions. This is supervised by the PEGI in countries of the European Union, and the ESRB in the United States. Furthermore, the social integration of young people can directly benefit from the fact that they have to cooperate and communicate in the course of the game. Besides this, several grassroots organisations provide venues and common events for the gamers, where they can also meet up in person.

Developing physical fitness

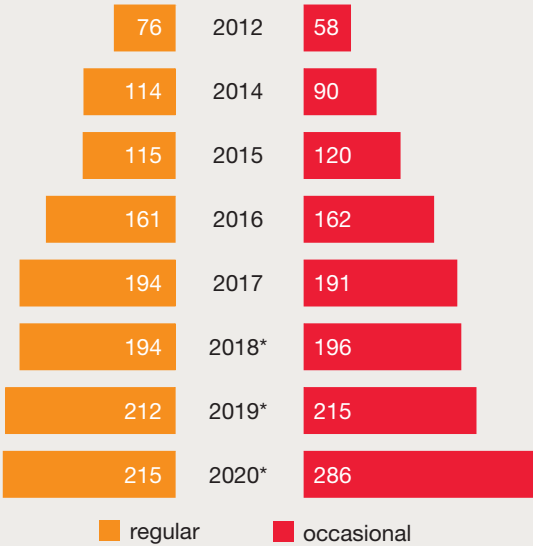
The physical health of gamers, similarly to traditional sports, is an important success factor during a game. Most teams make it compulsory for players to regularly visit the gym, because in order to give 100% in a game they need to keep their bodies fit as well, and in this way they also set a good example for their fans.

The economic and social impacts of e-sports

Economic impacts

In this study we have indicated several times that the e-sports market looks forward to substantial growth in the years ahead. The number of players is expected to increase as a growing number of children/young adults become involved, while the existing players will probably remain faithful to the branch of sport as they get older.

Figure 15
Change in the number of regular and occasional viewers globally (million people)



*Result of data estimate relating to the year

Source: Statista

The growing fan base will make e-sports even more popular among sponsors than it is at present, as it allows them to target an important young target group. Because of this, money will continue to flow into the industry from advertisers.

Due to the rising number of interested parties, the demand for diversity in games will necessarily grow, which will represent both a challenge and an opportunity for the game design companies. And the hardware manufacturers can also count on steady growth in demand related to e-sports.

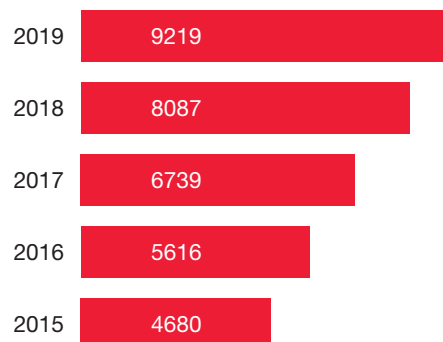
Balázs Biró takes the view that the combining of e-sports with virtual and augmented reality, and its spread on mobile platforms, also presages substantial growth in demand and interest towards the industry.

E-sports fans will have a growing need to make contact with each other and their favourite players not only in the online space, but also in person. Narus Advisors forecasts growth in the number of offline e-sports events (with 9,219 offline events expected in 2019), which will have a beneficial effect on tourism revenues in the towns serving as venues for these, due to the spending by visitors to them.



The question inevitably arises of whether the expansion of the e-sports market will come at the expense of the market for traditional sports. According to eNet's research, the rate of participation in traditional sports is higher among gamers than among the population as a whole. Besides this, the traditional branches of sport see considerable potential in using e-sports to stimulate the interest of the young generation in traditional sports; just take, as an example, the e-sports teams established by sports clubs. In the near future, therefore, we can expect to see the intermingling and co-existence of traditional and electronic sports.

Figure 16
Projected number for e-sport events



Source: Naurus Advisors

Social impacts

The impact of video games on youth

According to Dániel Hodozsán, founder of E-sport1.hu, Hungary's largest electronic news portal, and one of the chief organisers of the V4 Future Sports Festival, the social criticism most frequently directed at e-sports is that video games make children stupid, and take up the time that should be spent studying. In his opinion, however, most games improve young people's ability to concentrate and their strategic thinking. At a higher level, played in teams, project management and communication skills also come to the fore, as a team often has to be kept together across several different continents and time zones.

E-sports could have a positive, community-building effect on youth, as Martin Fritzen explained at the V4 Future Sports Conference. Under his leadership, in Denmark a hobby e-sport clubs was established in each village, where young people could gather after school and play e-sports. The communities formed in this way become friends who often support each other in real life too.

It should be stressed, however, and regulators, game producers and organisers must bear in mind, that video game addiction represents a serious and genuine danger, especially among the young. In South Korea, to prevent the spread of addiction the "Cinderella Law" has been passed, which prohibits children below the age of 16 from playing video games between midnight and six in the morning. Those who have already developed the illness are treated in clinics that specialise in video game addiction.

In addition to this, Balázs Biró also emphasised that regulators need to find an answer to illegal gambling related to e-sports as soon as possible, as this represents another serious danger to young gamers.

Toxic behaviour and sexism in e-sports

Fanni Bányai, e-sports psychologist and organiser of the V4 Future Sports Festival, highlights another important social phenomenon that is present at the micro-level, namely, the issue of toxic players. So far no consensus has been reached on the definition of a toxic player, but it is generally held that the

essence of toxic behaviour is that it has, whether via a player's own behaviour, an avatar, or verbal means (written and/or oral), a negative effect on the ability of other players to enjoy the game, for example through offensive references to gender or ethnic identity. Toxic behaviour includes the sexism that unfortunately features prominently in games to this day. This behaviour can be interpreted as a form of cyberbullying that arises specifically among video game audiences, which even today is a widespread and serious problem in e-sports communities.

Fanni takes the view that the prevalence of toxic behaviour could be reduced through the education and sensitisation of players. Certain games, such as Overwatch, League of Legends, penalise players if they display toxic conduct, but so far this practice has not become widespread, and depends to a large extent on the ethos of the game and the community that has formed around it.

Cutting down on toxic behaviour is desirable not only from a social, but also from an economic perspective, as sponsors and advertisers are not happy about giving their support to players or teams whose behaviour could reflect badly on the brands that they represent.

Future vision of the development of e-sports

Expectations regarding the growth of e-sports and the e-sports market are unanimously very upbeat. Our interviewees also agree with this statement. As e-sports is recognised as an official branch of sport by a growing number of states, it is becoming increasingly attractive to major sponsors and investors. Stadiums are being built for the e-sports leagues that represent individual towns, and existing facilities are also being used for such events.

The size of the audience with an interest in e-sports is set for unbroken growth in the foreseeable future. This is not only due to the masses of young people joining and showing an interest in the scene in the existing market, but also to the emergence of new markets due to rising affluence. The craze for e-sports is expected to spread to Mexico, the Philippines and the BRICS countries, whose massive populations represent substantial, as-yet-unexploited potential.

With technological advances, more and more new tools will be available for redefining the experience. For example, virtual reality or augmented reality will make it possible to bring the experience closer to e-sport fans. In this field we can expect to see some great applications in the years ahead, which could appear in stadiums or even in our own homes.

Besides these, the surge in games that are optimised for mobile platforms, and the evolution of the internet, points to the likelihood of e-sports becoming even more widespread.

Even taken individually, the above considerations all give cause for optimism; however, it is important to emphasise that a few factors acting against growth need to be successfully neutralised in order for the full potential of e-sports to be realised.

Both Balázs Biró and Dániel Hodozsán stressed how important it is for sponsors

to have unwavering confidence in e-sports. To ensure this, it will be necessary to suppress the toxic behaviour that is still widespread in the industry, and to make e-sport stars aware of the fact that, as opinion leaders, their fans expect them to show responsible conduct.

Regulation is important, and so is the establishment of some sort of institutional background. However, it is not necessarily required or desirable for this to mean a framework that is identical to that of traditional sports, since traditional sports are fundamentally organised on a national basis, while e-sport teams often consist of several different nationalities.

In order to raise the confidence of players and sponsors, it is essential to provide a reassuring answer to the prevention of doping and cheating, and to channel e-sports betting into a regulated and transparent framework.



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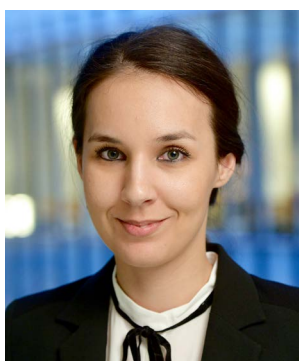
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