STATE OF THE POLISH VIDEO GAME INDUSTRY '17

REPORT 2017

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INTRODUCTION

Just several years ago, video games seemed to be reserved only for technology enthusiasts or younger demographics.

Over 2 billion players around the world. Over 15 million players in Poland. A branch of the economy that generated USD 101.1 bn globally in 2016, according to analytics firm Newzoo's estimates, and PLN 1.85 m in Poland. The video games industry has had a short journey from being the niche entertainment we remember from 30 years ago, reserved for a niche audience, to being entertainment for the masses, a vital element of pop culture, and a vibrant international sector of creative industries – a sector to which Polish companies make significant contributions. In April 2017, according to data provided by Newzoo, Poland was 23rd in the top 100 markets for video games based on generated income.

2015 was a golden year for the Polish video games industry, thanks in part to the commercial success of The Witcher series from CD PROJEKT, while 2016 saw further strengthening of the image and significance of the Polish video games sector, both in Poland and around the world. And although the only products released by the main market players were add-ons for games (The Witcher 3: Blood and Wine by CD PROJEKT, This War of Mine: The Little Ones by 11 bit studios and Dying Light: Following by Techland), it's worth pointing out that the industry has not been stagnating and that games released by smaller studios (such as Superhot, Layers of Fear, Shadow Warrior 2) were met not only with favourable reviews, but also did well commercially. The European Games Developer Federation estimates that Polish game development studios earned around EUR 300 million (around PLN 1.26 million) in 2016.

The strength of the Polish game sector is also visible in the valuation of its companies on the Warsaw Stock Exchange. At the beginning of December 2016, CD PROJEKT was valued at over PLN 5 bn. In July 2017, it was valued at PLN 7 bn, making it the highest-valued technology company in Poland. There are already six game development studios on the main market and another seven on NewConnect, with a combined income in 2016 exceeding PLN 733 m (net revenue over PLN 267 m).

Compared to its 2015 results, which were influenced by the commercial success of CD PROJEKT's and Techland's various games, the total value of the income generated by Polish game developers in 2016 saw a decline of 21.8%. Still, most smaller companies saw an increase in revenue in 2016 on 2015.

Some game development studios are not present on the exchange, including, among others, Techland. In spite of this, the CEO and full owner of Techland, Paweł Marchewka, was listed 12th on Forbes magazine's '100 Wealthiest Poles of 2017' list, with a net worth of PLN 2.13 bn, while Marcin Iwiński and Michał Kiciński of CD PROJEKT were 56th and 65th respectively.

The last two years have also seen the beginning of organized cooperation between companies in the game development sector. The Polish Games Association and the Indie Game Foundation Poland, both established in 2015, are increasingly effectively representing Polish developers in front of public institutions in Poland as well as on the global arena, promoting Polish productions. One important indication of the positive change in how the games industry is perceived by public institutions is the creation of a sectoral programme entitled GameINN, by the National Centre for Research and Development, as part of the Program for Intelligent Development. The goal of the program is to increase the competitiveness of Poland's video game development sector on the global market by 2023. The first GameINN competition resulted in 38 projects receiving PLN 116 m in financing between them.

The new mass appeal of video games has also influenced a change in the stereotype of the Polish gamer. The image of the Polish game market and Polish gamers reflects global trends. In the last 10 years, the gamer demographic has changed drastically, thanks to an increase in the number of 'new' gamers from demographics who are quite new to this type of entertainment, such as middle-aged women and older people. Games have now become a popular past-time, such as going to the movies or reading a book. They have also become the domain of educated adults with a steady job, in at least an average financial situation. So it's no longer surprising to see a woman in her 40s or 50s playing a puzzle or adventure game on her mobile phone while riding a tram or bus. It's also not surprising that playing on a console is an ordinary part of social gatherings.

Social phenomena, such as the popularity of ***Pokémon GO***, which uses augmented reality, or the popularity of eSports[1], have moved games into the realm of real-world interactions and emotions that were heretofore reserved for sporting events, like football.

Advertising and media agencies are also interested in games, and are searching for unconventional solutions for clients wanting to reach gamers or exploit the advertising potential of games. The goal of the authors of this publication was to prepare a comprehensive report that would allow a broad spectrum of people to understand the current specificity of the Polish video game market in light of global trends, by – among other things – presenting the current profile of gamers in Poland, the value of the video games industry and the key components contributing to that value.

Section 1 contains general information on the value of the global games market and an estimation of the value of individual elements of the Polish market. The subsequent sections present in detail its main components – the publishing and distribution market, the Free-to-Play[2] (F2P) market, the mobile games market, the VR[3]/AR[4] market and the eSports market. Based on our own information as well as information gained from in-depth interviews with the industry's leading representatives, the main factors influencing the current and future state of the market have been analysed.

Section 2 contains an analysis of the results of the 'Polish Gamers Research 2016' survey, which measured the profile of Polish gamers, both in terms of basic socio-demographic data as well as their gameplay interests, favourite platforms, their interest in eSports, spending habits and preferred payment methods.

Section 3 presents basic information on the condition of Polish video game developers, based on a survey. It includes an analysis – made by the authors of this report in cooperation with the Polish Games Association and the first of its kind on this scale – of salaries within the Polish game development industry. Section 3 also contains descriptions of some of the biggest successes of Polish video game developers, as well as a look at the relevant companies currently listed on the Warsaw Stock Exchange.

[1] **eSports (electronic sports)** – sporting tournaments in which the participants compete using video games. Just as in athletic sports and similar events, teams and individuals compete for big cash prizes, reputation and respect.
[2] **Free-to-Play (F2P or Freemium)** – a business model for releasing games for free, with in-game microtransactions. Players can then choose to purchase various optional enhancements, boosters or unlock new parts of the game. Games released as Free-to-Play can be played entirely free of charge, although often in a limited fashion.
[3] **VR (Virtual Reality)** – presentation of a synthetic reality created using information technology. VR uses multimedia to create a computer vision of objects, spaces and events. It can represent elements of the real world (simulations), as well as completely fictitious ones (such as for video games).
[4] **AR (Augmented Reality)** – a system that combines the real world with a computer-generated one. AR programs and games renders 3D graphics in real time over the view from a camera.

METHODOLOGY

The following sources were used in this report:

Three editions of the 'Polish Gamers Research' report, conducted between 2014–2016 by the Kraków Technology Park, Onet.pl S.A. Group and GRY-OnLine S.A. The latest edition of the study was conducted between October 3rd and December 4th, 2016, using the RTS method. The data was collected using the CAWI method (Internet surveys) and the sample was selected using the RTS method. To better determine the structure of the target group, two waves of an IQS96 survey were conducted in October and November of 2016. The sample encompassed a total of 3,750 internet users in a given age range. Baseline requirements for the respondents were that they play on at least one of the following gaming platforms: consoles, mobile devices (smartphones or tablets), PCs, web browsers or social media platforms. Detailed questions on each of these five platforms were asked of 750 respondents. To obtain more accurate and relevant data, the final results were calculated using weighted values. The studies took into account all of the most significant socio-demographic factors (age, gender, financial situation, motivation, place of residence and education), as well as detailed information on the preferences of the respondents about the games they played.

The research on salaries in the games industry was conducted by the Polish Games Association, in conjunction with Advisory Group TEST Human Resources.
The aim was to research current salaries and remuneration trends in the industry. The report contains the results of a survey of over 1,100 employees, which is a significant percentage (around 22%) of the people employed in the Polish games industry. The salary information was obtained directly from the representatives of the companies taking part in the survey. This means that the information in the report reflects the actual income for the positions and specializations listed. The salary data pertains to 2016 and is shown in gross amounts.

The 'Polish GameDev 2017' study conducted between December 2016 and March 2017. The study was carried out using an online questionnaire sent out to the top decision-makers at Polish game developers and publishers, which meant that it could be verified that it had been properly completed. In total, results were received from 101 of around 311 companies contacted for the study. The Polish GameDev 2017 survey was initially conducted by Polish developers Intermarum, but has been modified for the purposes of this new research.

Polish and foreign industry reports: 'Global Games Market 2016' (Newzoo); '2016 Year in Review' (SuperData Research); 'Prospects for growth of the entertainment and media industries in Poland 2016-2020' (PwC); 'Gaming Spotlight 2016 Review' (App Annie); 'The Mobile Gaming Report' (Business Insider); 'How To Enable Digital Growth in Europe?' (European Games Developers Federation).

A series of structured interviews by the authors of this report with the representatives of the main segments of the market (in alphabetical order), conducted between January and April 2017.

» **Marek Czerniak** (Chairman of the Council of the Indie Games Poland Foundation)
» **Marek Chyrzyński** (CEO of Cenega S.A.)
» **Ewa Czwartacka-Roman** (Head of Key Account Management at Plinga GmbH)
» **Tobias Edl** (Lead Business Development at InnoGames GmbH)
» **Caglar Eger** (Director of App Store Relations/Partnerships at Goodgame Studios GmbH)
» **Tomasz Gawlikowski** (Marketing and PR Director for Poland at Techland Sp. z o.o.)
» **Tomasz Grudziński** (CEO of Artifex Mundi S.A.)
» **Łukasz Hacura** (CEO of Anshar Studios S.A.)
» **Anna Idzikowska** (Head of Growth at Ten Square Games Sp. z o.o.)
» **Radosław Jaroszek** (Editor-in-Chief at gry.onet.pl and gamezilla.pl)
» **Stan Just** (R&D Manager at CD PROJEKT RED S.A., Member of the Board of the Polish Games Association)
» **Konstanty Kalicki** (Co-founder of ThingTrunk)
» **Mikołaj Kamiński** (Sos Sosowski)
» **Jarosław Kędzior** (CEO of Electronic Arts Polska Sp. z o.o.)
» **Mariusz Klamra** (CEO of GRY-OnLine S.A.)
» **Krzysztof Kostowski** (CEO of PlayWay S.A.)
» **Adrian Kostrzębski** (PR Manager at ESL Polska)
» **Igor Khachaturyan** (Director of Global Marketing at Gaijin Entertainment)
» **Artur Kurasiński** (CEO of Muse)
» **Artur Maksara** (Producer at Flying Wild Hog Sp. z o.o.)
» **Jakub Marszałkowski** (Founder and member of the Indie Games Poland Foundation)
» **Marcin Marzęcki** (Founder and Managing Director at Kool Things)
» **Maciej Miąsik** (Founder of Pixel Crow)
» **Paweł Miechowski** (Senior Writer at 11 bit studios S.A.)
» **Jakub Mirski** (Marketing Manager Consumer Devices Sales at Microsoft Sp. z o.o.)
» **Michał Nowakowski** (Member of the Board at CD PROJEKT S.A.)
» **Maciej Nowowiejski** (Marketing Director at Playlink S.A.)
» **Mikołaj Pawłowski** (CEO of Juggler Games)
» **Wojciech Pazdur** (Vice-President of The Farm 51 S.A.)
» **Adam Piesiak** (CEO of QLOC S.A.)
» **Robert Podgórski** (Founder of BlackMoon Design)
» **Bartosz Rozbicki** (CEO of AT Games)
» **Klaus Schmitt** (CEO of Upjers GmbH)
» **Sergey Sholom** (Founder and CEO of Datcroft Games)
» **Michał Staniszewski** (CEO of Plastic S.C.)
» **Łukasz Trybuś** (CEO of the Electronic Sports Association)
» **Jakub Wójcik** (Chairman of the Board at the Indie Games Poland Foundation)
» **Marek Wylon** (Founder and Member of the Board of Gamedesire Sp. z o.o.)
» **Adam Zdrzałek** (CEO of Ubisoft GmbH Sp. z o.o. in Poland)
» **Piotr Żygadło** (Producer at Robot Gentelman)

ABOUT THE AUTHORS

Michał Bobrowski

An enthusiast of the video game market, traveling and opera music, Michał began his adventure with games during the era of 8-bit computers. From 1995-2000, he worked in the outdoor advertising industry. Since 2001, he has combined his passion for virtual entertainment and online advertising with a job at GRY-OnLine S.A., the undisputed leader in the Polish gaming media. He became the company's Managing Director and a Member of the Board in 2011. A frequent speaker at industry conferences, such as Digital Dragons, Games Connection, ChinaJoy and Poznań Game Arena, Michał is a member of the Program Council of Digital Dragons – the game industry's largest business-to-business conference in Poland. He was also a co-author of the first edition of the '2015 State of the Polish Video Game Industry' report, as well as the 'Polish Gamers Research' reports. Michał Bobrowski has an MBA from the Polish Open University.

Patrycja Rodzińska-Szary

Patrycja combines business and product development with a passion for games, and has been involved in the gaming industry and gaming products based on the freemium business model for the past 10 years. Since 2012 she has worked at the Onet Group, a leader among Polish websites with an outreach of 72% of Polish internet users. As the Head of the Paid Products Department, Patrycja is responsible for business strategy and growth in the online and mobile gaming segments within the Group (Onet.pl, nk.pl and other parts of the Ringier Axel Springer Media AG Group). A member of the Program Council of Digital Dragons – the game industry's largest business-to-business conference in Poland. Was a co-author of the first '2015 State of the Polish Video Game Industry' report, as well as the "Polish Gamers Research" reports.

Anna Krampus-Sepielak

A psychologist specializing in human resources and innovation in management, and a graduate of the Jagiellonian University. Anna has many years of experience acquiring and applying grants from the European Union. She has actively worked in supporting the video game industry for the past five years, both on the Polish and foreign markets, including as coordinator of the largest B2B event in Central-Eastern Europe – Digital Dragons 2017, with over 1,500 attendees. As the Council Chairwoman, Anna coordinates the Digital Entertainment Cluster, and has 4 years of experience as the Chairwoman of the Board at the Hemms company. She is authorized to sit on the boards of companies belonging to the National Treasury.

Maciek Śliwiński

A video game enthusiast with over 12 years of experience in the electronic entertainment industry, Maciej is One of the pioneers of eSports in Poland, being part of the first team of professional computer game players, PGS Gaming, from 2006 to 2009. He continued his career at GRY-OnLine S.A. acquiring experience in the online marketing of games, as well as in e-commerce. In 2013, Maciej became Community Manager at Razer, and is responsible for the dynamic growth in their social media channels in Poland. He has also worked with the Kool Things agency and ESL Poland in their online marketing for the video game market. He now organizes the Indie Showcase, a competition for independent games as part of Digital Dragons, the largest conference for game developers in Central Europe.

Seweryn Rudnicki

Scientist and researcher. Seweryn works at the University of Science and Technology, while also lecturing at the Jagiellonian University, Tischner European University, and abroad. He is a co-founder of the Between the Signs firm, where for several years now he has been conducting semiotic research and analysis of cultural context for large business clients. Involved in studies for the past 12 years – first of public opinion and the market, and now also studies of product development and UX, Seweryn has also conducted research projects for clients including PZU, Tesco, VML, S4, Schulz, TNS Polska, Union Investment, The Ministry of Infrastructure and Development, and the Kraków Technology Park. He is the author of dozens of scientific and industry publications. Seweryn Rudnicki is studying the methodology of working on innovative products and putting scientific knowledge into practice.

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SECTION I

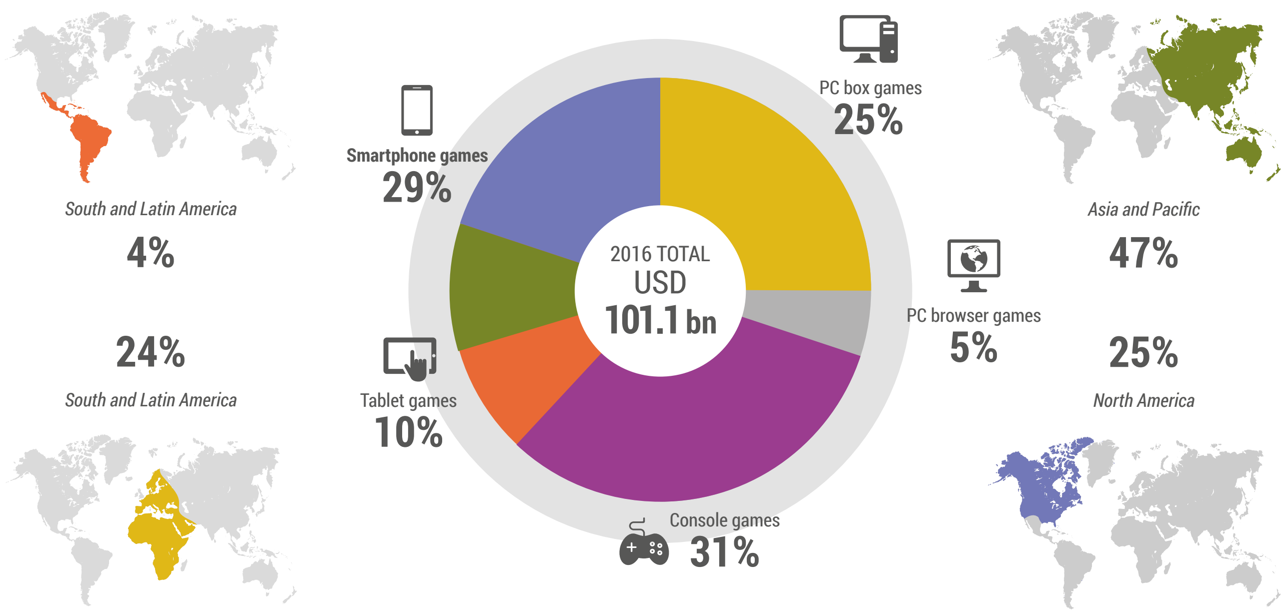
POLAND IN THE CONTEXT OF THE GLOBAL VIDEO GAME MARKET

1.1 GLOBAL VIDEO GAMES MARKET

The video game industry is a branch of the economy that is characterized by spectacular growth and change, as evidenced by the changing market leaders in the space of just a year, from 2015 to 2016.

In 2015, the distribution of revenue between North America, Europe and Asia was uniform, with North American countries generating the most (USD 23.6 bn annually), just ahead of Asia (USD 23.1 bn annually), and Europe, the Middle East and Africa (USD 22.1 bn). But by 2016 the situation had changed, with North America giving way to the Asian market. According to data from analytics company Newzoo, in 2016 Asia and the Pacific generated 47% of global revenue from the video games market, while North America just 25%. Europe, the Middle East and Africa remain the third largest region in the video games market, with South and Latin America's share remaining marginal.

Fig. 1.1 Value of the video games industry in 2016, by region



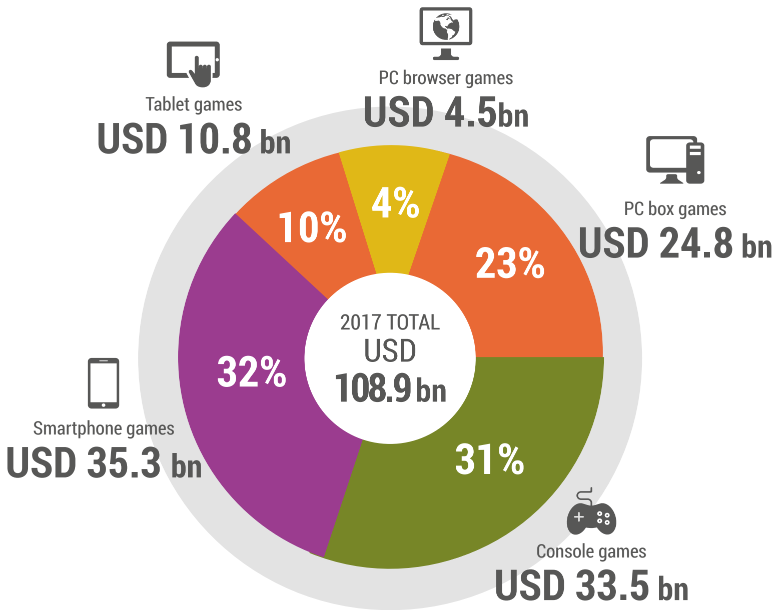
Source: Authors' own research based on data from the Super Data Research

According to Newzoo, the value of the video games industry in 2016 reached USD 101.1 bn. However, according to data provided by SuperData Research, its market value stood at USD 91 bn. The difference between the two figures lies in their methodologies for gathering data, and different market segmentation. It's also worth noting that these kinds of research firms often later correct their own published projections. In Newzoo's case, it had raised its 2016 estimate to 101.1 bn from a projected 99.6 bn. In its breakdown, the mobile segment was responsible for 39% of revenue (USD 39.4 bn).

PC games, including those playable on social media and in web browsers, as well as digital downloads, generated 30.3 billion dollars in revenue. Console games in 2016 were responsible for 32% of the revenue, and with handhelds, USD 32.3 bn total. Newzoo predicts that in 2017, 2.2 billion players should generate revenue of USD 108.9 bn, with 42% of that coming from mobile games. This is the most profitable segment of the industry, and revenue from mobile games is projected to bring in half of all revenue for the entire video game industry by 2020.

The industry will owe this fast rate of growth, especially in the mobile segment, to gamers from Asia and the Pacific region. For example, it is projected that China by itself will generate a quarter of this year's revenue. Players are increasingly more likely to reach for games on their phones than on their tablets, which is partly why tablet sales have dropped.

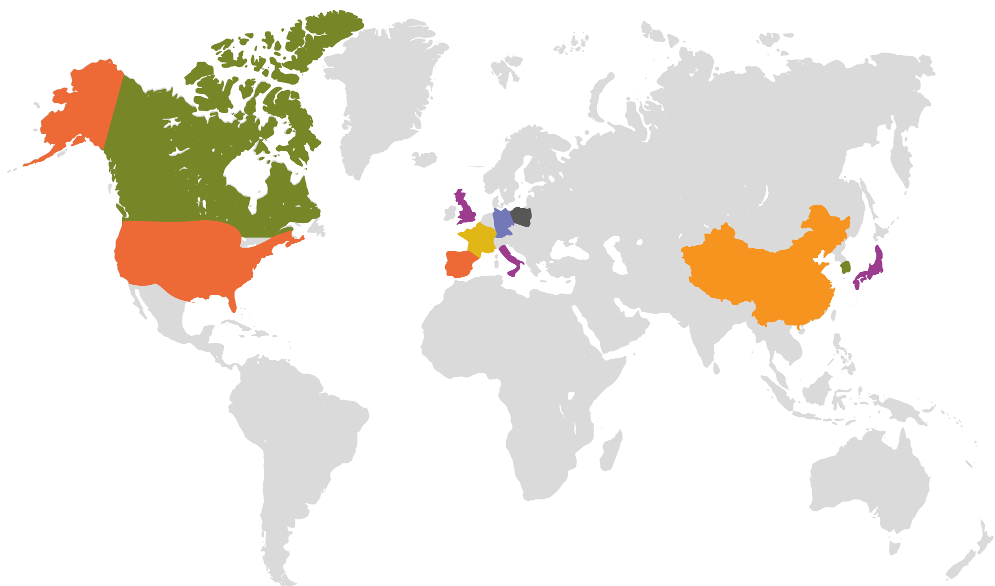
Fig. 1.2 Value of the video games industry in 2017



Source: Authors' own research based on data from the Super Data Research

According to the SuperData Research firm, consumers spent USD 41 bn on mobile games in 2016, thanks in part to the mass popularity of games such as ***Pokémon GO*** and ***Clash Royale***. The mobile games market is now a mature market, and is beginning to resemble certain standard publishing segments. Significant amounts are spent on marketing and promoting mobile games, with well-known titles endorsed by celebrities such as Arnold Schwarzenegger (***Mobile Strike***) and Kate Upton (***Game of War***). Two of the most profitable games are ***Monster Strike*** (USD 1.3 bn) and ***Clash of Clans*** (USD 1.2 bn), with Monthly Active User parameters in excess of 2.6 billion people. According to data from SuperData Research[5], the PC premium segment generated USD 5.4 bn in 2016, while PC MMOGs[6] using the Free-to-Play model generated USD 18.6 bn – 87% of the revenue generated by all MMOGs. The remaining revenue for the PC market came from subscription-based games, with ***World of Warcraft*** making the lion's share. In 2016, the most profitable Free-to-Play PC game was ***League of Legends***, with USD 1.7 bn. According to SuperData Research, the most profitable PC premium game – Blizzard's ***Overwatch*** – earned USD 585.6 bn.

Fig. 1.3 Top 10 countries by revenue from video game sales



1. China - USD 24.27 bn
2. USA - USD 23.46 bn
3. Japan - USD 12.43 bn
4. Germany - USD 4.09 bn
5. South Korea - USD 4.05 bn
6. United Kingdom - USD 3.94 bn
7. France - USD 2.77 bn
8. Canada - USD 1.84 bn
9. Spain - USD 1.78 bn
10. Italy - USD 1.72 bn

...

23. Poland - USD 0.43 bn

Source: Authors' own research based on data from the Super Data Research

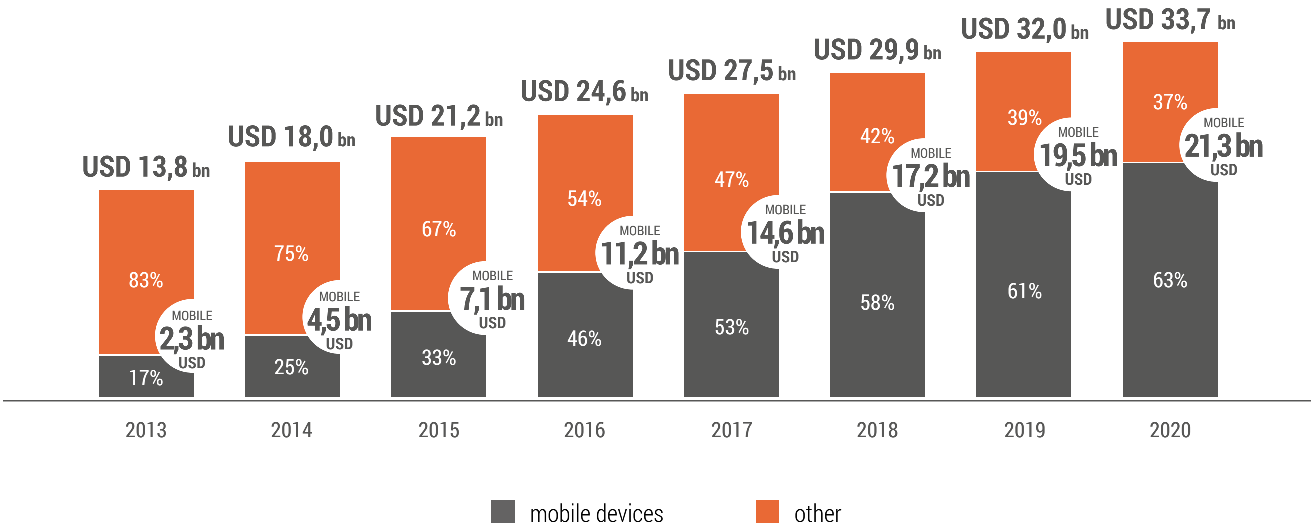
[5] **PC premium** – full-price PC games.

[6] **MMOG** – abbreviation of Massively Multiplayer Online Game, a form of online entertainment (played over the internet), in which large numbers of players connect and play concurrently. Players use chat or VOIP tools to communicate and can influence their virtual world together (such as through trade, combat, and economic and social dealings).

Of the ten countries that generated the most revenue on video games in 2016, first place goes to China, with (USD 24.27 bn), second place to the United States with USD 23.46 bn, and third to Japan, with USD 12.43 bn. Germany, Great Britain and France were fourth, fifth and sixth respectively. It's worth noting that the German video game industry, with its USD 4.09 bn revenue, has surpassed South Korea (USD 4.05 bn), though considering the Asian market share from mobile games, it might be difficult for the Germans to maintain their fourth place in 2017.

Also important is the rapid growth of China's video games market, and its expanding dominance over other countries. According to Newzoo analysts, China's revenue will exceed 33.7 bn in 2020.

Fig. 1.4 The Chinese video game market in 2013-2020



Source: Authors' own research based on data from the Super Data Research

Photo source:
Techland press materials

1.2 THE VALUE OF THE VIDEO GAMES MARKET AND GDP

Table 1.1 Percentage share of the video games market by country, in relation to its GDP

No.	Country	Value of its video games market (data for 04/2017, Newzoo)	GDP according to the International Monetary Fund (estimates for 2017, without taking purchasing power into consideration)	Percentage share of the video games market in GDP
1	China	$ 27 547 039 000,00	$ 11 795 297 000 000,00	0,23%
2	USA	$ 25 059 883 000,00	$ 19 417 144 000 000,00	0,13%
3	Japan	$ 12 545 659 000,00	$ 4 841 221 000 000,00	0,26%
4	Germany	$ 4 378 066 000,00	$ 3 423 287 000 000,00	0,13%
5	United Kingdom	$ 4 217 715 000,00	$ 2 496 757 000 000,00	0,17%
6	South Korea	$ 4 187 711 000,00	$ 1 498 074 000 000,00	0,28%
7	France	$ 2 967 052 000,00	$ 2 420 440 000 000,00	0,12%
8	Canada	$ 1 947 371 000,00	$ 1 600 265 000 000,00	0,12%
9	Spain	$ 1 913 050 000,00	$ 1 232 440 000 000,00	0,16%
10	Italy	$ 1 874 608 000,00	$ 1 807 425 000 000,00	0,10%
11	Russia	$ 1 485 205 000,00	$ 1 560 706 000 000,00	0,10%
12	Mexico	$ 1 427 974 000,00	$ 987 303 000 000,00	0,14%
13	Brazil	$ 1 334 205 000,00	$ 2 140 940 000 000,00	0,06%
14	Australia	$ 1 234 393 000,00	$ 1 359 723 000 000,00	0,09%
15	Taiwan	$ 1 028 511 000,00	$ 566 757 000 000,00	0,18%
16	Indonesia	$ 879 740 000,00	$ 1 020 515 000 000,00	0,09%
17	India	$ 817 819 000,00	$ 2 454 458 000 000,00	0,03%
18	Turkey	$ 773 888 000,00	$ 793 698 000 000,00	0,10%
19	Saudi Arabia	$ 647 424 000,00	$ 707 379 000 000,00	0,09%
20	Thailand	$ 597 173 000,00	$ 432 898 000 000,00	0,14%
21	Malaysia	$ 586 682 000,00	$ 309 860 000 000,00	0,19%
22	Netherlands	$ 567 372 000,00	$ 762 694 000 000,00	0,07%
23	Poland	$ 489 208 000,00	$ 482 920 000 000,00	0,10%
24	Iran	$ 431 917 000,00	$ 368 488 000 000,00	0,12%
25	Argentina	$ 423 405 000,00	$ 628 935 000 000,00	0,07%
26	Switzerland	$ 411 840 000,00	$ 659 368 000 000,00	0,06%
27	Sweden	$ 411 709 000,00	$ 507 046 000 000,00	0,08%
28	Vietnam	$ 364 981 000,00	$ 215 829 000 000,00	0,17%
29	Philippines	$ 354 232 000,00	$ 329 716 000 000,00	0,11%
30	Austria	$ 350 976 000,00	$ 383 509 000 000,00	0,09%
31	Belgium	$ 331 915 000,00	$ 462 715 000 000,00	0,07%
32	Singapore	$ 317 618 000,00	$ 291 860 000 000,00	0,11%
33	Norway	$ 309 618 000,00	$ 391 959 000 000,00	0,08%
34	Colombia	$ 290 518 000,00	$ 306 439 000 000,00	0,09%
35	United Arab Emirates	$ 281 611 000,00	$ 407 210 000 000,00	0,07%
36	Portugal	$ 267 278 000,00	$ 202 770 000 000,00	0,13%

No.	Country	Value of its video games market (data for 04/2017, Newzoo)	GDP according to the International Monetary Fund (estimates for 2017, without taking purchasing power into consideration)	Percentage share of the video games market in GDP
37	China (Hong Kong)	$ 267 151 000,00	$ 332 266 000 000,00	0,08%
38	Denmark	$ 255 444 000,00	$ 304 216 000 000,00	0,08%
39	Ireland	$ 243 618 000,00	$ 294 193 000 000,00	0,08%
40	Finland	$ 224 719 000,00	$ 234 524 000 000,00	0,10%
41	Venezuela	$ 204 311 000,00	$ 251 589 000 000,00	0,08%
42	Egypt	$ 192 559 000,00	$ 332 349 000 000,00	0,06%
43	Ukraine	$ 189 077 000,00	$ 95 934 000 000,00	0,20%
44	Chile	$ 180 887 000,00	$ 251 220 000 000,00	0,07%
45	Kazachstan	$ 174 971 000,00	$ 157 878 000 000,00	0,11%
46	Nigeria	$ 172 971 000,00	$ 400 621 000 000,00	0,04%
47	Romania	$ 153 200 000,00	$ 189 790 000 000,00	0,08%
48	Czech Republic	$ 148 117 000,00	$ 196 068 000 000,00	0,08%
49	Peru	$ 138 305 000,00	$ 207 072 000 000,00	0,07%
50	Greece	$ 135 958 000,00	$ 193 100 000 000,00	0,07%

Source: Authors' own research

Comparing the April 2017 Newzoo data on the value of the 50 largest video game markets in the world with the data on the GDP of those countries (GDP estimates for 2017 from the International Monetary Fund), we can see that it's the Asian economies, not those of North America or Europe, that have the largest share of the video game market in terms of GDP.

In terms of the value of their video game market in comparison to their GDP, the three tigers in 2017 will be China, Japan and South Korea. This is not surprising. In 2016, 40% of the world's gamers were based in Asia. Japan, China, South Korea and countries of the so-called Greater SEA (South East Asia), generated 45% of the video game industry's global revenue (from Newzoo's 'The Asian Games Market: Sizing Opportunities' report), as well as 55% of the revenue from the mobile games market.

The percentage share of the market value in terms of GDP is 0.23% for China, 0.26% for Japan, and 0.28% for Korea. Both in Japan and South Korea, gaming is a significant part of their pop culture and an active branch of their creative industries. After all, it's in South Korea, China and Japan that companies such as Sony, Nintendo, Tencent, NetEase, Nexon, Konami and Square Enix originated. In recent years, Asian companies have also made some spectacular acquisitions of western companies in the video games industry.

Fig. 1.5 Asian countries in the global game market in 2016

China, Japan, Korea		Entire world in 2016
Population: **2,2 bn**	29%	Population: **7,4 bn**
Internet users population: **1,2 bn**	35%	Internet users population: **3,4 bn**
Gamers: **0,9 bn**	40%	Gamers: **2,1 bn**
Game revenues: **USD 44.6 bn**	45%	Game revenues: **USD 99.6 bn**
Mobile game revenues: **USD 20.4 bn**	55%	Mobile game revenues: **USD 36.9 bn**

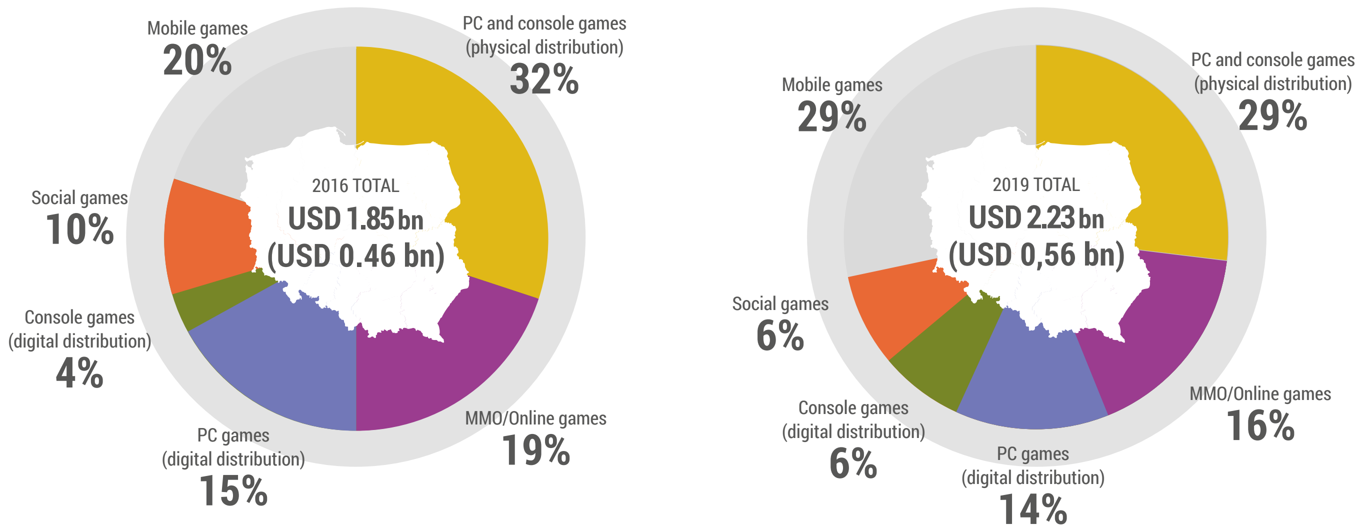
Source: Authors' own research based on data from the Super Data Research

Among the other countries with the highest share of the video game market's overall value, in terms of their GDP, are: Ukraine (0.20%); Malaysia (0.19%); Great Britain and Vietnam with 0.17%; Taiwan (0.18%); Spain (0.16%); Mexico and Thailand (0.14%), and the USA, Portugal and Germany with 0.13%. Poland, with 0.10% revenue from the video game industry in relation to its GDP, is on the same level as Russia and Turkey. Brazil has the lowest percentage share of revenue generated by the video game industry in terms of its GDP, at 0.06%.

1.3 THE VALUE OF THE POLISH VIDEO GAMES MARKET

Comparing the projections made for the first edition of the 'State of the Polish Video Game Industry' report with the actual 2015 and 2016 results clearly shows that the estimations were accurate, though because of various new phenomena, were somewhat conservative in certain areas. As such, the changed values for the Polish video games market presented in graphic 1.6 below have been updated, and the projections extended to 2019. The basis for the compilation of the data is in reports published by the PwC, SuperData Research, DFC Intelligence and Newzoo research companies, supplemented with information gathered during conversations with various representatives of the Polish video games industry. It is the opinion of the authors of this report that attempts at further-reaching projections are burdened with a high risk of error, due to the changing nature of the global video games industry. But according to this data, the value of the Polish video games market at the end of 2016 was over PLN 1.85 billion. By 2019, this is expected to increase by more than 20% to around PLN 2.23 bn. If we look at these numbers in terms of the global data, the results are invariably modest – the revenue generated by Polish gamers forms around 0.5% of the entire market. To avoid confusion, it should be remembered that the analysis presented in the graphic below only shows physical or digital sales to Polish users. The value of sales for Polish game producers (95% of whose revenue is generated by foreign consumers), is presented in Section 3.

Fig. 1.6 2016 value of the Polish video games market, with 2019 projections



Source: SuperData Research, DFC Intelligence, Newzoo, conversations with representatives of the Polish video games industry

1.3.1 The publishing and distribution segment in Poland

The physical games media segment in Poland has proven over the last two years that predictions of the demise of physical distribution were premature. The significant increase of 15% in 2015, up to around PLN 580 m, was generated largely by two factors: hit releases from Polish developers (e.g. ***The Witcher 3: Wild Hunt*** by CD PROJEKT RED, and Techland's ***Dying Light***), and a rapid increase in the number of latest-generation consoles (PlayStation 4 and Xbox One) in Polish households. This in turn contributed to dynamic growth in revenue from sales of games on physical media for these platforms. Interestingly, in 2016, despite a lack of hit Polish releases, physical media sales increased another 3%, surpassing PLN 600 m. Paradoxically, it seems that these increased sales were most influenced by... the Polish football team's positive performance in the European Championships. This created massive interest in that year's instalment of the ***FIFA*** football game series (compared to previous years), from Electronic Arts Poland. "From the point of view of Electronic Arts, this was the best year in our history since we directly entered the Polish market", said Jarosław Kędzior, CEO of Electronic Arts Polska Sp. z o.o. Subsequently, sales of console games on physical media increased once again in 2016, and it is estimated that they made up 65% of all revenue generated from physical distribution.

Meanwhile, the last two years have not seen a change in the distribution model itself. Until the end of the last decade, the dominant model had distribution companies purchasing licenses that gave them exclusive rights to release a game in Poland (or several countries in Central Europe together). Aside from covering the cost of the license, the distributor was also responsible for localizing the product (development of the Polish language version), physical production (pressing discs, printing boxes, etc), marketing and actual distribution, through retailers. Currently though, a significant portion of new games bought by distributors from publishers are finished products, reducing the licensors' role to just the marketing and distribution.

1.3.2 Key players in the publishing and distribution segment in Poland

For the purposes of this report, companies engaged in the publishing and distribution segment have been divided into two groups. These are direct-publishing divisions of global video game publishers, and companies publishing and/or distributing games by other video games companies (so-called third-party publishers). Additionally, the dynamic growth of digital distribution in the last two years has caused a third group to emerge - companies specializing in publishing games by smaller studios exclusively as digital downloads.

Direct-publishing divisions of global video game publishers (in alphabetical order):

- **Electronic Arts Polska Sp. z o.o. -** a division of Electronic Arts based in Warsaw at ul. Domaniewska 34A. EA Polska is responsible for publishing and distributing such titles as ***FIFA***, ***The Sims***, ***Battlefield*** and ***Need for Speed***.
- **Microsoft Sp. z o.o.** - the Warsaw-based Polish division of Microsoft, located at Al. Jerozolimskie 195A. In addition to its most popular products, such as Windows and MS Office, the company is also responsible for Xbox consoles as well as games released directly by Microsoft (notably ***Forza Motorsport*** and ***Gears of War***).
- **Sony Interactive Entertainment Polska Sp. z o.o.** - a division of Sony based in Warsaw at ul. Ogrodowa 58. The company is responsible for distributing consoles from the PlayStation family as well as games released by Sony Interactive Entertainment (including the ***Uncharted*** series, ***Little Big Planet***, ***Horizon: Zero Dawn*** and ***Gran Turismo***).
- **Ubisoft GmbH Sp. z o.o.** - Polish division of the French giant, based in Warsaw at ul. Domaniewska 39A. This is the company responsible for such series as ***Assassin's Creed***, ***Far Cry***, ***Ghost Recon***, ***Just Dance*** and ***Heroes of Might and Magic***.

Companies publishing/distributing games by other video games companies (third party publishers):

- **CDP Sp. z o.o.** - based in Warsaw at ul. Jagiellońska 88, CDP emerged out of the CD PROJEKT group in the autumn of 2014. The most popular title it distributes is ***The Witcher*** series of games. CDP is also responsible for distributing games by Activision-Blizzard (***Call of Duty***, ***Diablo***, ***StarCraft*** and ***World of Warcraft***), as well as several smaller western publishers.
- **Cenega S.A.** - one of the largest game distributors in Poland, based in Warsaw at ul. Krakowiaków 50. Cenega is responsible for publishing games by studios such as Take-Two Interactive (the ***Grand Theft Auto*** series, ***Civilization***, ***BioShock***, ***Borderlands*** and ***Mafia***), Warner Bros. Interactive Entertainment (the ***Batman*** series, ***Mortal Kombat***, ***LEGO*** games), Square Enix (***Tomb Raider***, ***Final Fantasy***, ***Thief***, ***Deus Ex*** and ***Hitman***), and Bethesda Softworks (***Fallout*** and ***The Elder Scrolls***).
- **Techland Sp. z o.o.** - the only company among the key game distributors not based in Warsaw, Techland's home is in Wrocław (at ul. Jana Szczyrki 12). In addition to publishing its own products (the ***Call of Juarez*** series and ***Dying Light***), it also distributes games by several smaller, western publishers.

Photo source:
Farm 51 press materials

Companies publishing games by independent developers (in alphabetical order):

- **11 bit studios S.A.** Based in Warsaw at ul. Brechta 7, listed on the Warsaw Stock Exchange. Although best known for its own products (the ***Anomaly*** series, ***This War of Mine***), its publishing portfolio also includes titles such as ***Spacecom*** by Flow Combine, and ***Beat Cop*** by Pixel Crow.
- **AAG Studios Sp. z o.o.** Based in Kraków at ul. Rzemieślnicza 1/416, AAG are another company that deals mainly in publishing independent titles. Their first published title was ***Nighthaw-X3000*** by N94 Games.
- **Crunching Koalas Sp. z o.o.** Based in Warsaw at ul. Targowa 56, this is a small development studio best known for its own game (***Mousecraft***). In 2016, it expanded into publishing. Crunching Koalas co-produced and published ***Lichtspeer*** by the studio Lichthund, for PlayStation 4 and PlayStation Vita.
- **Dopamine Sp. z o.o.** Dopamine is based in Białystok at ul. Kołłątaja 34/10, and is the youngest of the independent publishers. It is also known as Fat Dog Games. The first title published by the company was ***Inner Voices*** by Sigma Games.
- **Feardemic Sp. z o.o.** Another Kraków firm, this time based at ul. Cystersów 9, Feardemic is a dependent of Bloober Team S.A., which is listed on NewConnect. Its first title, published in May 2017, was ***Perception*** by The Deep End Games.
- **ImagiNation s.c. Łukasz Kubiak, Bartosz Moskała** based in Bielsko-Biała firm, at ul. 1 Maja 15. Known by their brand name IMGN.PRO, the company is an independent developer that also globally publishes games both digitally and on physical media. Their first games were the ***Euro Truck Simulator*** series by the Czech studio SCS Software.
- **IQ Publishing Sp. J. Jacek Mazur, Marzanna Mazur** in Warsaw, at ul. Trakt Lubelski 163/34, was founded in 2004 and is one of the oldest publishing companies in Poland. In the beginning, IQ concentrated on distributing accessories for consoles and PCs. But for the past few years, its main area of business has been publishing independent games. Their latest release was ***Bohemian Killing*** by The Moonwalls in 2016.
- **Klabater** is a publishing company that emerged in June 2016 out of the CDP Group to help publish and promote games from smaller development studios. Their first published game was ***Alice VR***, developed by Carbon Studio.
- **PlayWay S.A.** based in Warsaw at ul. Mińska 69, is another company listed on the Warsaw Stock Exchange. In addition to developing low- and medium-budget titles, the company also publishes games and finances third-party development teams. It has added dozens of titles to its catalogue since 2011, the most prominent of which is the ***Car Mechanic Simulator*** series by Rzeszów-based Red Dot Games.
- **Qubic Games S.A.** Based in Siedlce at ul. Katedralna 16, Qubic is one of the smaller game developers to have been listed on NewConnect in 2017. Aside from developing its own products, the company plans to help smaller game producers from the Far East reach western markets.
- **Techland Publishing** - the publishing division of Techland Sp. z o.o., which separated from its parent structure in June 2016 in order to focus on the global market. Their publishing debut was ***Torment: Tides of Numenera***, developed by inXile Entertainment.

1.3.3 The participation of major platforms in paid distribution

Seeing the consistently increasing contribution of console games to revenue from sales of physical media, it's important to note that this is happening in a country in which (as evidenced by the data presented in Section 2), PCs are still a much more popular platform for games than in other countries. However, if we look through the prism of paid distribution, it's clear that they are starting to give way to consoles – specifically, the PlayStation 4. Marek Chyrzyński, CEO of Cenega S.A., believes that one factor contributing to this situation is the changing mentality of gamers. "Gamers have switched platforms. I think they're growing up and don't feel like having to deal with configuring their computers, and so on. A person who is 35-40 probably doesn't want to have to worry about whether a game will run on his computer, whether he needs to upgrade his graphics card. He just wants to put in a disc and play. He has work now, he's matured. Of course, he's been guided to this, because Sony's strategy is to convince PC players to switch to the PS4, which is actually happening."

This phenomenon was especially visible in the past two years of big, cross-platform titles that required powerful, well-equipped PCs. And the best example of that is ***The Witcher 3: Wild Hunt*** by CD PROJEKT RED, which due to its high system requirements on PC caused many players to reach for the console version instead. In this way, playing ***The Witcher 3*** required a much smaller investment in hardware. And it was also thanks to the third Witcher game that there was a significant increase in sales in Poland of PS4s.
Over the last 20 years, the PlayStation brand has become a frequent synonym for the word 'console'. Currently, game sales for the latest models (the PlayStation 4 and PlayStation 4 Pro) have significantly surpassed that of their main competitors, the Xbox One and Xbox One S. "The PlayStation won the console war in Poland decisively, and this is now a given", says Tomasz Gawlikowski (Marketing and PR Director for Poland at Techland Sp. z o.o.). "The numbers don't lie. Actual sales depend on the given game, but range from 3:1 to 7:1." Adam Zdrzałek (Ubisoft) sums up the situation quite clearly: "This generation of consoles has already been shaped by one dominant company."

It's important to add that the emergence of the relatively new console market in Poland happened somewhat differently than it did in Western Europe. Nintendo, which typically holds a one-third share in developed markets, never committed to directly distributing its products to Polish gamers, and this has resulted in its presence on our market remaining marginal. Subsequently, the only real competitor to the PlayStation is Microsoft's Xbox family of consoles.

Publishers think that the Polish console market still has a long way to go before consoles are fully embraced by a wide spectrum of consumers. "I'm glad that the increase in the number of consoles in Poland has been so rapid, especially when compared to the previous generation. But considering the size of our country, and in comparison with even the smallest Western European country, such as Belgium or Holland, we should have way over two million [current-gen] consoles in Poland", adds Adam Zdrzałek (Ubisoft). "Whereas, we haven't even reached one million yet."

Photo source:
Artifex Mundi press materials

When discussing the increasing number of new-generation consoles in Polish households, it's also important to look at the quickly-growing method of digital distribution used with these devices, as well as the sale of digital services, such as subscriptions to PlayStation Plus[7] and Xbox Live Gold[8]. According to available data, it can be inferred that Sony, along with its PlayStation Network platform, is the main beneficiary. "In the middle of last year, the situation began to change, mainly in favour of the PlayStation", says Adam Zdrzałek (Ubisoft). "I don't mean the old generation of consoles, since their significance is now marginal, but the Xbox One, which can't keep up with the trend. Meanwhile, Sony has moved far forward with its store, and its share in digital distribution with the PS4 has come very close to the PC's, which once seemed impossible." It is estimated that by 2019, digital distribution for consoles should double from last year's PLN 65 m (around 3.5% of the total value of the Polish market), to over PLN 130 m.

1.3.4 The pricing structure of paid distribution games

One of the factors that will be driving this increase are the changes that have taken place in PC games pricing policy, especially in the past two years. A decade ago in Poland, the retail price of a PC game was half the price of a console game, at around PLN 100-120 for the PC version and around PLN 200-240 for the console version. Currently though, prices in Poland have almost reached Western European levels – EUR 50-60 for a PC game, EUR 60-70 for a PlayStation 4 or Xbox One game. So the falling sales of PC games clearly show that Polish consumers have not fully accepted such huge price changes. Adam Zdrzałek (Ubisoft) confirms this. "Whether we wanted to or not, we have been systematically increasing prices for the past several years and the last price level that we saw was acceptable to the Polish consumer was EUR 50, so around PLN 200 – without going into details about exchange rates. Anything above that is clearly not acceptable to the Polish consumer. I haven't seen a migration to digital distribution for the PC, so customers haven't made their purchases and are waiting for a sale, a discount."

Mariusz Klamra, CEO of GRY-OnLine S.A., mentions another very important aspect. "For the Polish gamer, a console game has re-sale value. So for him, if he buys it for EUR 69, then a month or several months later he re-sells it for EUR 30-40, the game cost him, let's say, an average of EUR 35. A boxed PC game that has been activated is worthless – one could try to sell the game account, but even if that succeeds, there is risk to the buyer and it will return only a fraction of the purchase price. So today, the real cost of a AAA[9] PC game is almost double the price of a PlayStation 4 or Xbox One game. That, plus the high price of PC hardware that meets the parameters of current generation consoles, makes playing AAA titles on PC today the domain of a small, wealthy elite, while the cost-conscious mainstream gamers are increasingly quickly migrating toward consoles."

[7] **PlayStation Plus** – an optional, paid online service for users of the PlayStation 4 console, giving them access to free games, discounts on digital versions of games and an array of social tools.
[8] **Xbox Live Gold** – an optional paid online service for users of the Xbox console, giving them access to free games, discounts on digital versions of games and an array of social tools.
[9] **AAA (Triple-A)** – a term used in the video games industry for games with the highest production and marketing budgets, which are expected to be high quality and perform well commercially.

Photo source:
Bloober Team press materials

It's worth mentioning here one of the key factors behind such drastic change in PC game prices, which is the mass online trading of activation keys for digital versions of games – the so-called grey market. "Most of the big western publishers are deathly afraid of the grey market. Grey imports are often sourced from Russia, India, as well as (in large part) Poland, the Czech Republic and Hungary. Our country's PR suffers greatly because of companies based in Poland that are largely responsible for the grey import of PC keys," explains Tomasz Gawlikowski of Techland. "When a developer or publisher sees a PL key activated in Germany (usually), other Western European countries or the United States, they immediately count it as a loss, because of how cheaply the key was sold for compared to how much it should have been sold for. But the big players on the market don't care about Poland. They don't see a reason to keep prices low here, since the grey market is destroying their business. This is a significant reason for the drastic increase in the prices of PC versions."

Theoretically, this increase above PLN 200 has created a space for the re-introduction of the so-called mid-price range in physical distribution, which a few years ago was still an inevitable part of a product's life cycle. About a year after release, games would be put back on sale in the mid-price range (PLN 49-69 for PC), re-branded in different packaging as part of a budget range, for example 'Premium Games', 'SuperSeller', 'Fine Price', etc. Currently though, publishers have different opinions on the mid-price idea.

"The kind of mid-price that existed 5 years ago, in the form of a budget series, no longer really exists," says Marek Chyrzyński (Cenega).
"What happens now is, during the first year after release, titles go on sale with various smaller and larger discounts, which I wouldn't call mid-price." Jarosław Kędzior at Electronic Arts Polska defines the phenomenon differently. "If you look at the entire cycle, there are definitely still three stages in a product's life, maybe even more. In fact, you can observe something intermediate, between the release price and the mid-price, and between the mid-price and the back-catalogue. So maybe there are even five price ranges now, rather than three."

Tomasz Gawlikowski at Techland has yet another take on the mid-price range. "We've noticed a niche in the market. Where other companies have done away with mid-price, we started publishing good quality games, with great marketing potential but not a lot of hype in Poland behind them. With competitive prices compared to Steam[10] and extra add-ons, we were able to get customers interested in, and used to, games at mid-prices."

Despite various discount policies, a large number of consumers will nevertheless wait a long time until the game they're interested in ends up in the back catalogue[11], where prices are currently PLN 10–20 for PC and PLN 50–70 for console games. As the publishers say, it's that last price range that is the quickest to "go digital."

[10] **Steam** – digital PC games distribution platform owned by Valve.
[11] **Back-catalogue** – a colloquial term for games in the lowest price range.

1.3.5 Opportunities and risks in digital distribution

The global digital PC games market is dominated by the Steam digital distribution platform, run by the Valve Corporation of Washington State in the US. Following Valve's success on the global market, most of the big game publishers have created their own digital platforms, including Electronic Arts (Origin), Ubisoft (Uplay), Activision-Blizzard (Battle.net), Sony (PlayStation Network), Microsoft (Xbox Live) and Poland's own CD PROJEKT (GOG).

After rising prices, digital distribution is the second key factor to have left a mark on physical distribution, especially in terms of PC games. "We are slowly nearing the moment when, for publishers – at least in some segments – especially budget and indie, the logistics of physical media are simply not worth it," predicts Mariusz Klamra (GRY-OnLine S.A.). "This won't happen in the next two years in the AAA segment, but in the lower segments definitely." This opinion is also shared by representatives of the publishers themselves. "Digital distribution has really begun its takeover of the market with budget games, in the back catalogue," says Adam Zdrzałek (Ubisoft). "Easy, cheap, and most importantly quick – these usually aren't huge games size-wise and can be downloaded even with a poor internet connection.
What's more, digital distribution has increasing significance to new games. Of course, physical sales are still somewhere between 80% and 85% of the entire market, but we're talking about a situation where just three years ago digital distribution was only 3-4%."

The real advantage of digital distribution is evident in the lack of risk in manufacturing physical copies of a game, as with digital versions there are no problems with under- or over-estimating demand. A second advantage is being able to react quickly to changing market situations. Adam Zdrzałek, at Ubisoft, says that "When our market analysis shows that we should do something with a given title, we are live with our changes in 30 minutes, in terms of digital distribution. The problem that needs to be solved in traditional distribution is the slow reaction time – we need three hours to get the same effect in traditional distribution."

The growth of digital distribution on the global scale has also significantly influenced the actual paid distribution model. Today, practically every big production on the video games market consists of not only the base game, but also a series of add-ons. These are priced individually, and usually distributed digitally, directly through the publisher's online platforms (Steam, GOG, Xbox Live, PSN etc). These are what is known as DLC[12]. For global publishers, this model is advantageous for many reasons. First and foremost, the extra content is another opportunity to increase revenue from a game. Secondly, thanks to the DLC model publishers can drastically shorten the distribution chain, cutting out not only local publishers and distributors from the profit stream, but the physical retailers as well.

"Traditional retail, and not only in terms of games, must answer one existential question – in today's digital world, what value-added can it offer in the distribution chain to both supplier and consumer, and is it attractive enough that they'd be willing to pay the retailer's mark-up," says Mariusz Klamra of GRY-OnLine S.A. "For now it looks like the problem is better understood by retailers from the world of e-commerce who are experimenting with existing in the bricks-and-mortar space, such as Amazon. Every one of the big retailers that still exists on the market, from Walmart to Empik, usually chooses the simplest path, escaping into e-commerce. With games, this presents a certain problem – when physical products disappear from store shelves because of digital distribution, they won't be available through e-commerce either, unless maybe just as a niche product like a collector's edition. (...) In classic retail, however, I see an opportunity for digital products with a physical form, such as various scratchable subscription cards/top-up cards, etc."

The significance of digital-as-physical products has already been seen by Jakub Mirski, Marketing Manager, Consumer Devices Sales at Microsoft Sp. z o.o., and Adam Zdrzałek (Ubisoft): "We're already speaking with retailers about selling cards with not only codes for DLC, but also for the download of full games. Despite the need for investment that the retailer needs to make in order to connect their system with the online platform of a given console (PlayStation Network or Xbox Live), this form of distribution is beginning to play an increasingly larger and more significant role." That last concept is also an answer to a significant barrier to digital distribution. According to the results of the 'Polish Gamers Research' report, this is the lack of a credit or debit card, or an unwillingness to use it for online payments.

The growth of digital distribution will also continue to be delayed by the limited reach of broadband internet in Poland. This is a particular problem as the latest AAA games often require dozens of gigabytes of data to be downloaded. While in larger cities, such as Warsaw, Poznań or Kraków, this barrier is becoming increasingly smaller thanks to cable TV providers, access to broadband internet is still a significant problem in smaller towns and in the countryside.

It is the opinion of the authors of this report that eliminating these barriers will make this segment of the market, in addition to mobile gaming, the most responsible for overall increases in the entire market's value in the years to come. The combined revenue from digital distribution of PC and console titles is estimated to exceed PLN 450 million by 2019 – a combined 20% of the total market value.

[12] **DLC (downloadable content)** – extras and additions to a game made available by the publisher via the Internet. These typically include various additions to the base game, such as new items and equipment, or even whole new levels, maps or missions. Often, a game will be re-issued later on with all of its DLC bundled with it.

1.3.6 Free-to-Play: browser, social, mobile games

Games using the Free-to-Play ('F2P' or 'freemium') model, have made their home on the video games market for good, having played a big part in speeding up the growth of the video games industry. Online and mobile games that are free to play but that have built-in, optional microtransactions, have changed the definition of what a 'player' is, and have drawn in millions of people who would once have shunned games. Games using the Free-to-Play model began taking off in 2000, as competition to online games using a subscription (Pay-to-Play) model, in which players 'subscribe' for a monthly fee to play the game. The most popular example of this is Activision-Blizzard's World of Warcraft. The freemium model revolutionized the online video games market, but what made this business model so revolutionary? First of all, offering games in digital form via web browsers, social networks, their own dedicated launchers or mobile applications changed the way the product was distributed. In the Free-to-Play model, every internet site or social network that has enough interested users becomes, technically speaking, a distributor of that game. Free-to-Play games formed a symbiotic relationship with their media partners. Aside from the financial aspect, the games offered websites and social networks additional benefits, such as increasing the time spent by users on the site, and the likelihood that they would return soon.

Another innovation of the F2P model was the creation of a monetization scenario, in which players optionally pay real money for additional virtual items and currency in the game. The effectiveness of this monetization depends not only on maintaining a balance in the kinds of items available for purchase, but also on adapting the prices and payment methods to the requirements of each regional market. According to the results of the 'Polish Gamers Research' report, the most common reasons for Polish players not wanting to make microtransactions in a Free-to-Play game are a lack of trust in the payment provider, the lack of an option to pay in their local currency, and the absence of Polish-language explanations of the available payment methods. Additionally, Free-to-Play games have allowed payment providers such as Paymentall, PayPal, Xsolla, Dotpay and PayU to make their mark in the video games industry.

The F2P model has also changed the relationship between game creators and players: producers of F2P games are giving internet users completely free, legal access to fully-functional games with no entry fee or box price, and with built-in optional microtransactions. The need to convince players to make microtransactions (and thus actually recoup their development costs), leads the developers and publishers of Free-to-Play games to maintain regular contact with their players, and to constantly expand their game, encouraging players to return with promotions, bonuses, tournaments and updates.

Another change resulting from the appearance of the Free-to-Play model was a lowering of the technological barrier to playing games, compared to what is usually required by often hardware-intensive boxed or AAA games (which also require up-front payment). Most simple freemium games will easily run on low-spec PCs, smartphones or tablets, often directly within an internet browser and without needing to download large amounts of data. To play, one needs only to register an account to log in to the game each time. So, a low entry barrier – no up-front cost, easy access, low hardware requirements and simple registration – is what has made games from the F2P segment gain popularity. And although projections by Newzoo show that the share of Free-to-Play games in the global market will decrease, the Polish market still looks stable, thanks to its consumer base expanding to include older people. By 2017, the global family of gamers will exceed 2.2 billion people, mainly thanks to the dynamic growth of and access to mobile and online games in the Free-to-Play segment.

The Polish Free-to-Play market specifically is seen as one of the five most promising Eastern European markets in terms of monetization, with Russia, the Czech Republic, Hungary and Romania. Experts, especially from Western

Photo source:
CD Projekt press materials

Europe, consider Poland to be a good market for soft launching[13] games. "It just so happens that the significance of the Polish market is the same as it is for other markets, such as the United States, Great Britain or Germany. This is the reason we usually do soft launches in Poland", adds Caglar Eger (Director of App Store Relations/Partnerships at Goodgame Studios GmbH).

Anna Idzikowska (Ten Square Games) has a similar opinion, in the context of mobile games. "Poland is an important test market for us in terms of mobile games – we always include it in our so-called soft-launch markets, in which we test the retention and engagement of players." In her opinion, the Polish market is also significant in terms of monetization. "The percentage of paying players is still much lower in Poland than it is in Western European markets or in the US, Canada or Australia. The amounts spent are smaller, but the difference between Poland and other countries is decreasing, and we often get similar results in Poland to those from markets such as Italy", she adds. Another benefit of the Polish market is the low cost of acquiring users, compared with Western or Asian markets.

For the German company Upjers, the Polish market is one of the most important in Europe. "The Polish gaming community is still one of the leading ones for Upjers. Our new products are always received well in Poland", says Klaus Schmitt, CEO of Upjers GmbH.
"The Polish gaming community is the third largest for Upjers and is even ahead of the UK. In terms of players using premium services, the percentage is similar to those in other countries: only a few percent of Polish players use premium functionality made available for real money," adds Schmitt.

On these terms, Poland takes second place among Eastern European markets within the video game industry, behind Russia. The Eastern European markets themselves show a higher rate of growth in market value than Western Europe – 7%, as opposed to 4%. But on the other hand, Polish players are rarely willing to pay for online games and it's hard to convince them to make microtransactions. According to Klaus Schmitt (Upjers) "These two segments combined only make up 27.7% of video games revenue for Poland, whereas for Western European markets it's 59%. One possible reason for this is that younger players lack access to a credit card [...]".

Experts estimate that the percentage of the Polish market's revenue from the F2P segment (including mobile, social network, MMOGs and online PC gaming) is 45–50%. Meanwhile, the percentage of paying users by platform and type of game is somewhere between 1.5% and 12%.

And according to estimates prepared for this report, the value of the Polish MMOG segment (both Free-to-Play and subscription-based), social network and mobile games (Free-to-Play and premium), is nearly half of the entire market value at over PLN 900 m of PLN 1.85 m in 2016.

The rise in the popularity of playing on mobile devices is one of the key factors in the future of browser-based games. When it comes to social network gaming, experts agree that players are migrating to mobile devices, while in the case of browser-based games opinions are divided.

Caglar Eger at Goodgame Studios is not afraid of Free-to-Play browser games being ousted in popularity by mobile games, because of the different lifespans of the products. "Both browser and mobile games have positive and negative aspects. Acquiring users for mobile games is very difficult and becoming increasingly more expensive. Among browser-based games, there aren't that many great titles. Unless you're the Supercell company[14], the lifespan of your mobile game won't be longer than 3–4 years, while the situation's quite different for browser games. Browser games can live for 10 years and continue to bring in revenue throughout that time. With mobile games, you need to pay the 30% store fee to the platform you're distributing it through, such as Google Play or the Apple App Store. But in the case of browser-based games, the fee taken by payment operators such as PayPal for handling credit card transactions or bank transfers is between 1% and 3%", Caglar Eger (Goodgame Studios) explains.

Ewa Czwartacka-Roman (Head of Key Account Management at Plinga GmbH) has noticed a migration of players from browser-based F2P games to mobile F2P games, noting that the quickest migration from browser to mobile in Europe is happening in Germany.

In 2016, one of the largest companies in the Free-to-Play segment – Goodgame Studios – laid off 200 people. It was caused, among others, by the company modifying its priorities to match a changing market and the decision to focus on projects connected with mobile games and selected browser-based titles which resulted in abandoning projects connected with AAA games.

[13] **Soft launch** – (in the context of video games) the release of a game to a limited audience (in just one country, for example), before going on general sale. Soft launches are a good way of testing reactions to a game, based on which changes and fixes can be made before its actual premiere on the global market. This form of testing is often used by developers of mobile games.

[14] **Supercell** – a Finnish company that produces mobile games. Its roster includes Clash of Clans, Boom Beach and Clash Royale, which have had enormous success on a global scale and are among the most profitable games in the world. Clash Royale alone earned USD 277.1 m in 2016.

1.3.7 The social games segment

In the previous edition of this report, Ewa Czwartacka-Roman at Plinga warned of a coming decrease in the number of people playing Free-to-Play browser games (including social games), who would be slowly switching to mobile devices. Current data on the values of the global and Polish markets confirms her fears. Players of Free-to-Play social games are migrating to mobile games, which is why the social segment of the market is falling annually at a rate of 11% globally, and 8.9% in Poland.

Facebook is currently the largest online platform for social games in the world, as well as in Poland (the second largest in Poland is nk.pl). Seeing the downward trend in games that are closed-off in social network ecosystems, in selected markets Facebook are introducing their Instant Games functionality, which allows users to run games within the Facebook Messenger app, or Facebook's main mobile app. (This is not yet available in Poland).

In Poland, players of games on social networks tend to be older. The greatest increase in the social games player base can be seen in people aged 35+. 57% of players in the social segment are women. 28% of players reach for social games on a daily basis, to relax and relieve stress (63% of those surveyed), kill some free time (55%) or engage with others socially (19%). Players of social games prefer to pay using SMS Premium, while their favourite games are logic games, card games, farm simulators, adventures and arcade games. According to those surveyed for the 'Polish Gamers Research' report, the popularity of social games has fallen from 2015 by 2 percentage points, from 36% to 34%.

1.3.8 The mobile games segment

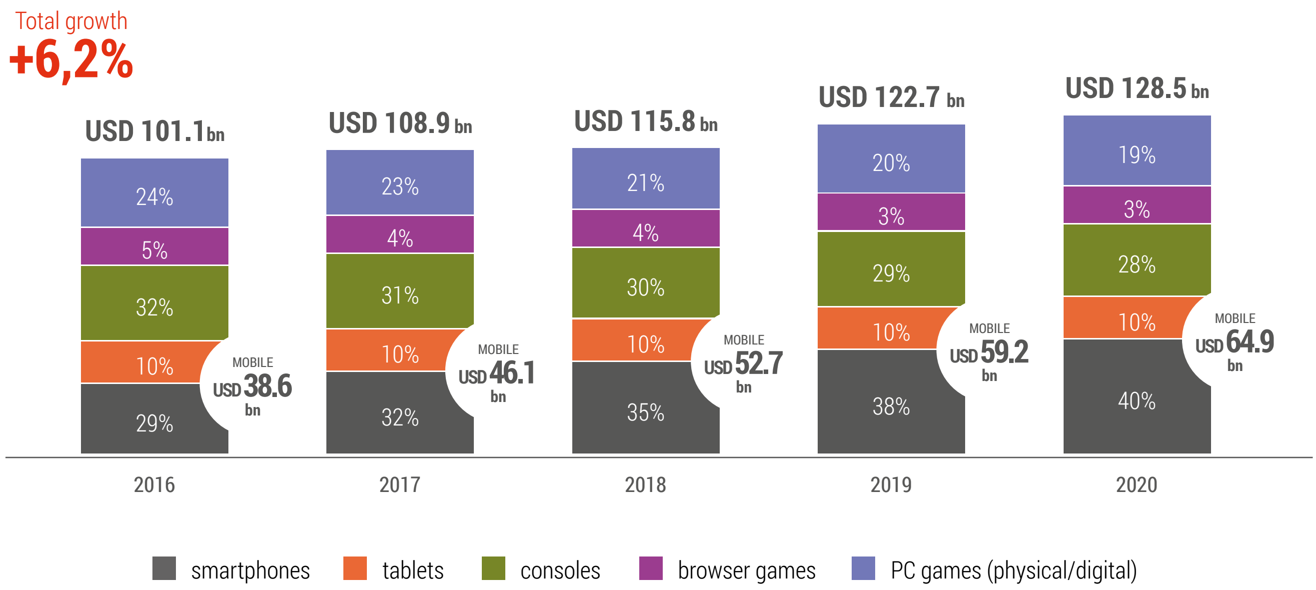
The mobile games market is currently the most rapidly-growing segment of the industry, having expanded drastically over the last few years. This is why it is currently at the top in terms of size and revenue for applications. It's taken just eight years – which is how long smartphones have been dominating the electronics market – for games to become the most downloaded product from the various app stores.

According to AppsFlyer, an Israeli platform that monitors the applications market, in March 2016 20% of all applications on the Apple App Store were games. That's over twice as much as the next most popular category, business apps. According to the American firm, App Annie[15], in 2015 85% of the USD 34.8 bn generated by the applications market came from mobile games.

Considering the progress being made in smartphone technology and their constant popularity, both in developed and developing countries, the mobile games market has plenty of room for growth.

American research agency eMarketer state that in the United States alone 180,4,000 people played games on their phones in 2016, which is 70% of all mobile owners and 56% of the country's population. That number is likely to increase to 213 million by 2020.

Fig. 1.7 Projections for the value of the global video game market in the years 2016-2020



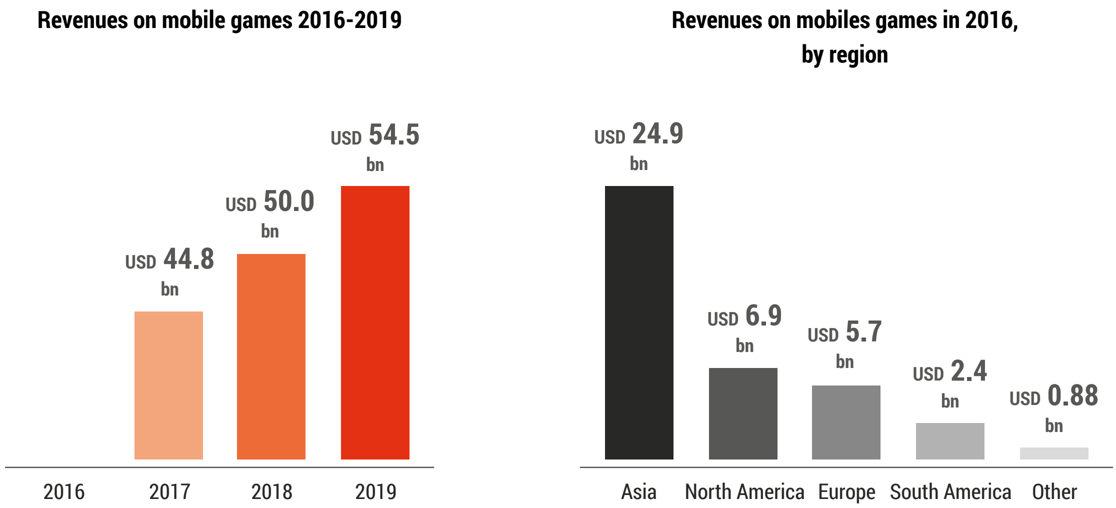
Source: Authors' own research based on data from the Super Data Research

[15] **App Annie** – an American company dealing in developing reports and tools for analysing applications and other products from the digital sector.

According to Newzoo, mobile games are the most profitable segment of the industry, and revenue from them is projected to make up half of the revenue from the entire video game industry by 2020. The industry owes this fast rate of growth, especially in the mobile segment, to gamers from the Asia and Pacific region. It is projected that China alone will generate a quarter of the revenue from mobile games in 2017. Meanwhile, back in Poland, the value of the mobile games market has exceeded PLN 350 m.

According to the SuperData Research company, consumers spent USD 41 bn on mobile games in 2016, thanks in part to the mass popularity of games like ***Pokémon GO*** and ***Clash Royale***. The mobile games market is now a mature market, and is beginning to resemble certain standard publishing segments. Significant amounts are spent on marketing mobile games, promoting them with well-known celebrities such as Arnold Schwarzenegger (***Mobile Strike***) and Kate Upton (***Game of War***).

Fig. 1.8 The value of the global mobile games segment in 2016



Source: SuperData Research

While mobile games do offer a myriad of opportunities, the huge amount of available mobile applications generally has forced developers to change their monetization strategy. With many games switching to the Free-to-Play model, most revenue now comes from microtransactions and in-game advertising. Around 1-3% of gamers playing on mobile devices do make purchases in games, with 60% of all revenue being generated by 0.23% percent of the players. Paying players are usually divided into three groups, by the amounts they spend in-game. These are minnows, dolphins and whales ('Premium' or 'VIP' players). Companies compete with each other for paying players, which means that the budgets being spent on marketing have been at a very high level for some time. In February 2016, the cost of promoting a game was, on average, USD 1.78 for each download of the game onto iOS devices. That was the second highest CPI (Cost Per Install) in the history of the system. But maintaining all three player groups is important to game developers. Studies show that VIP players don't spend large amounts of money right away. Getting to that point takes the longest time. This means that the publisher needs to reach the largest possible audience, thus increasing the probability that some of the players will stick around long enough to become 'whales'. Even users who play the game without spending a penny still contribute to its success, by increasing the number of views and downloads of the game, causing it to appear on the featured lists of the most popular apps in that store. Still, the game needs to be attractive to players playing for free as well. Running a game with an in-game 'cash shop' that is perceived to be fair and well-balanced helps minimize the migration of users away from the game, and by extension, the cost of having to acquire new players. The developer or publisher's monetization strategy for the game affects the rate at which that migration occurs.

Game mechanics that gate progress behind a need for earnable and purchasable items, including currencies and 'energy', (occasionally rewarded to the player in small quantities for watching a video, or referring a friend), are all essential parts of a game's monetization scenario.

To avoid competing on an overcrowded, paid application market, and to bring in as many potential users as possible, a significant portion of mobile game publishers have decided to embrace the Free-to-Play model. As discussed above, in the previously dominant premium model users paid for the game up-front, before installing or downloading it. But the F2P model allows the player to play the game free of charge, and make optional microtransactions or watch in-game video adverts which generate revenue for the game's creators. The F2P model now dominates the market. A survey conducted at the end of 2015 by InMobi shows that only 20% of application publishers released paid versions of their mobile games.

One interesting way for mobile games to expand is into mobile eSports – ***Clash Royale*** and ***Hearthstone*** are both already capitalising on its popularity.

Caglar Eger (Goodgame Studios) adds that "***Clash Royale*** is an example that will raise eSports to the next level. What Supercell is doing will help many developers enter the world of eSports." Klaus Schmitt (Upjers) points to the significance that certain elements of eSports have for the mobile games segment in China: "Mobile games are becoming increasingly important and popular in eSports, mainly thanks to the influence of the Chinese video game market, in which 24 of the 100 most profitable games for Android place great emphasis on competition. For iOS, it's 19 out of 100 games."

According to Ewa Czwartacka-Roman (Plinga), eSports will definitely increase its share of the video games market in 2017. "We're seeing more and more products and brands already connected with eSports, or being created just for that type of gaming. I think the increasing popularity of services like Twitch, e-sporting events and even the players and teams themselves, will all continue to bring in more and more capital and known brands in the future (...). In the case of casual Free-to-Play games, eSports are still an open subject – for most of the current eSports audience, they would definitely not be interesting or exciting enough. But I can imagine a scenario in which it reaches a different type of user, maybe one not familiar with the Free-to-Play model, or directs the more casual eSports fans through various channels to those types of games."

According to experts, one of the biggest failures on the mobile market was the recent ***Super Mario Run*** by Nintendo. "Nintendo didn't understand the rules of monetizing mobile games. They ensured that the game was promoted and visible in the App Store, promoted in every newspaper, magazine and on every TV channel, but according to data from App Annie, though the game had 124 million downloads, it only earned 38 million dollars. I consider that a failure and a serious misstep. If a better Free-to-Play monetization strategy had been devised for the game, it would have been a hit not only gameplay-wise, but in terms of earnings as well," says Caglar Eger (Goodgame Studios).

1.3.9 So who are the Polish players playing mobile games?

54% of Polish gamers have declared that they play mobile games. 49% are women. Fans of mobile games are usually young people between the ages of 15 and 24 with a primary or secondary school education, living in smaller towns and in the countryside – much like players from other segments. 64% of mobile game players go to primary or secondary school. 74% play to kill some free time, 56% to relax and relieve stress, and 20% to learn new skills. Mobile game players prefer logic games, arcade games, racing simulators, card games, strategy and adventure games. 37% of those surveyed play mobile games daily, with the games that engage them on a daily basis being farm simulators, strategy and adventure games. 92% of mobile game players get their games from Google Play or the Apple App Store, while 16% play the games pre-installed on their phones. Of all of those surveyed, players of mobile games are the least likely to pay, which represents a challenge for developers. According to the survey, only 13% of mobile players have ever bought a mobile game or made an in-game microtransaction. According to Anna Idzikowska (Ten Square Games), the demographics for Polish gamers are not that different from the demographics for players on Ten Square Games Sp. z o.o.'s other markets, though she does note a surprising fact about female gamers.

"From the perspective of our games, we don't see that the Polish market is characterized by a different group than, say, in the United States or Germany. This is, of course, because of our games – their target audience are males aged 18+, with an emphasis on the 25+ group, even 35+. However, we often see that the best players in both our browser and mobile games are women. This is true all over the world. There are few of them, but if they do play then they tend to be VIP players," she explains.

Photo source:
Plastic press materials

1.3.10 Polish companies on the Free-to-Play games market

The Free-to-Play games market is fundamentally a global market, and Polish Free-to-Play game developers who wish to succeed need to release their games globally too. Often in interviews, Polish developers emphasize the fact that the Polish market has become secondary to them. (Some of the Polish mobile and social developers and publishers operating on a global level include Gamedesire, Ten Square Games, Netinus, Picadilla, Fuero Games and Artifex Mundi). For example, Artifex Mundi's Polish sales are 12th on their list of revenue streams, generating only 1.5% of the company's revenue. "The Polish market plays only a small part in our sales. We care for our Polish players more out of ideological reasons", says Artifex CEO Tomasz Grudziński.

As with traditional boxed games, in the Free-to-Play segment the country from which the game originates does not influence whether it succeeds or fails. In the case of games that are localized well and meet the needs of the given market, players are often unaware of whether they're playing a Polish, German or Russian game, for example. For this reason, Polish companies in the Free-to-Play segment cannot count on a monetization advantage on their own market just because the game is home-grown. Ultimately, the product still needs to be competitive. Nevertheless, knowledge of the Polish market's peculiarities, payment methods and players' preferences can be an advantage over foreign game producers and distributors, especially those from Asia.

1.3.11 Chinese, German and Russian companies on the Free-to-Play market in Poland

As in 2015, the Polish Free-to-Play games market in 2016 was dominated by German companies that hire specialists in Germany, maybe of Polish descent, rather than creating divisions in Poland. None of the big players on the Free-to-Play market, such as Goodgame Studios, Gameforge, Bigpoint/ Youzu, Plinga, Wargaming and Gaijn, have a physical presence in Poland. But the tastes of German and Polish players are quite similar, so for companies from the German market – the cradle of F2P gaming in Europe – it's easier to understand the needs of their Polish players. Experts explain that the fact these companies don't need to hire Poles or create company divisions in Poland results from the ease of communication in English.
"Operating on the Polish market, as well as most of the Central European markets, we haven't encountered communication problems. However, there are countries such as Spain, Portugal and France where the level of understanding of English is not satisfactory, and so native employees who speak the local language are needed", says Igor Khachaturyan (Director of Global Marketing at Gaijin Entertainment).

The dominance of German companies is being contested by companies from Asia, especially China, partly thanks to their acquisition of European companies. The most spectacular example is the acquisition of the German Bigpoint GmbH by the Chinese company Youzu for EUR 80 m in 2016.
According to Maciej Nowowiejski (Playlink), it's the success of Asian companies that allows for the rapid expansion, so we should expect more acquisitions. "The Asian game markets generate the largest revenue in the world, even twice that of Europe or North America. As a result, companies like Youzu are able to grow to a size that allows them to buy even largest European game developers, which Bigpoint is. It's important to note that the expansion of companies from Asia is taking place on many markets. I think these two factors lead to the fact that we will see more activity from Asian companies in the coming years on the European markets and beyond."

Caglar Eger at Goodgame Studios believes that Youzu buying Bigpoint is only the beginning of the acquisitions by Asian giants: "Kabam was recently sold to the Korean giant, Netmarble. This is a trend we have been observing for the past 1.5 years. Asian companies acquire western companies that produce games, for example, Tencent bought Supercell, but earlier GonHo had bought Tencent. I am convinced that in the next few years we will see more western developers and publishers being taken over by Asian companies, or making significant investments in western companies."

Nowowiejski doesn't see this as a threat to Polish game producers, but as a benefit to players, thanks to the increased competition among game providers. "I don't think Polish developers have anything to worry about. Of course, we need to take the growing competition seriously, but Poles are known for very good games and ideas, so it can only get more interesting on the games market." Who will benefit most from this situation? "The players, for sure," he adds.

Igor Khachaturyan (Gaijin Entertainment), expresses a similar opinion, but about the danger posed by Chinese companies: "Game developers should work even harder to deliver better products to their consumers. Although they have a lot of money, Chinese companies face many challenges entering western markets without a local publisher, due to cultural differences. Most Asian companies also have little knowledge of how to properly advertise a Free-to-Play title in Europe."

Tobias Edl (Lead Business Development at InnoGames GmbH) has noticed that the entire video game market is moving in the direction of consolidation. "If we look at the best mobile games of recent months, most of them were created by large companies, like Tencent or Supercell. But for many European game developers, revenue is a worry, and they have to cut their budgets as a consequence. At the same time, there are more and more Asian companies with huge financial resources wanting to enter the western markets. As a result, I think a scenario in which more Asian companies start taking over western developers is very probable."

It's not only game producers from Asia that are interested in European F2P developers' games, but investors as well, some of which have not yet dealt with video games. In October 2016, the Swedish media conglomerate Modern Times Group bought 35% of the shares of InnoGames for EUR 240 m, following their earlier purchase of a 74% stake in Turtle Entertainment GmbH, owner of the ESL. It's quite possible that media companies will begin investing more in the video game market. "The entire gaming business is a lucrative business, and is of great interest to large investors," says Tobias Edl of InnoGames.

There also successful Russian, Ukrainian and Belarusian companies on the Polish market, who also have no problems understanding the mentality of Polish consumers. Additionally, game developers in Eastern Europe often communicate with each other on local and regional social platforms based on the shared Open Social technology, which is also used in social networks in Russia and the Ukraine.

The table below lists some of the more important companies from the Free--to-Play segment that distribute online, social and mobile games with Polish localizations on our market, as well as examples of their games.

Table 1.2 Selected companies from the Free-to-Play segment present on the Polish market

Country of origin	Company name	Notable titles published/distributed by the company
Belarus	Wargaming	World of Tanks, World of Warships
	XS Software	Khan Wars, Arena mody, Ragewar
Bulgaria	XS Software	Khan Wars, Fashion Arena, Ragewar
Bulgaria	Imperia Online	Imperia Online
China	Salegame	Dragon Knight, Dragon 2
China	Oasis Games	Legend Online
China	Bigpoint/Youzu	DarkOrbit, Seafight, Drakensang Online, Farmerama, League of Angels 2
China	Elex	Happy Harvest
Czech Republic	Allodium	Infinitum: Battle for Europe
France	Ubisoft EM (owner of Owlient)	The Settlers Online, Might & Magic Heroes Online, Howrse
Netherlands	Gamovation	Fishao
Israel	Plarium	Sparta
South Korea	Nexon	United Eleven, Combat Arms
South Korea	WebzenInc	Rappelz
Germany	Goodgame Studios	Goodgame Empire, Big Farm, Empire: Four Kingdoms
Germany	Xyrality	DarkOrbit, Seafight, Drakensang Online, Farmerama
Germany	Gameforge	Ogame, Ikariam, Metin 2, Hex, Aion,
Germany	InnoGames	Forge of Empires
Germany	Travian	Rail Nation, Travian
Germany	Plinga	Klondike, Farm Days
Germany	Gamigo	Wargame 1942, Desert Operations
Germany	Bytro Labs	Supremacy 1914, Wargame 1942
Germany	Upjers	My Free Zoo, My Little Farmies
Germany	European Games Group	Hero Zero, Big Bang Empire
Germany	Whow Games	Jackpot
Germany	sMeet Communications	Smeet
Poland	Playlink	Zombie Hunter: Apocalypse
Poland	Ganymede	Bingo, Mahjong, Bilard
Poland	Ten Square Games	Let's Fish, Let's Hunt, Let's Farm, Mushroom Hunt
Poland	Fuero Games	Age of Cavemen
United Kingdom	Netinus	Arcade Saloon
Poland	Picadilla	New Rock City
Russia	My.com	Armored Warfare

Country of origin	Company name	Notable titles published/distributed by the company
Russia	Crazy Panda	The Household
Russia	101 XP	Call of Gods, Avataria
Russia	Overmobile	Happy Tower
Russia	Datcroft Games	Fragoria
USA	Electronic Arts	Star Wars: The Old Republic, Command & Conquer: Tiberium Alliances
USA	Riot Games	League of Legends
USA	Activision-Blizzard	Heroes of the Storm, Overwatch, Hearthstone: Heroes of Warcraft
USA	Valve	Dota 2, Team Fortress 2
Sweden	Star Stable	Star Stable

Source: Authors' own research

1.3.12 Opportunities and risks for game developers and trends in 2017 and 2018

In our interviews with representatives of the video game industry, the challenges that game developers most often cited as having to face in 2017 and 2018 lay in technology, tax law, changes in the way games are promoted, as well as the difficulty hiring properly-qualified employees.

According to Ewa Czwartacka-Roman (Plinga), 2017 will be a decisive year for Flash and HTML5 technology, the year webGL will expand, games in messengers will be monetized, gaming video content becomes even more high profile, and the year in which games marketed based on trendsetters and influencers will become increasingly important.

"The most important challenge right now is Flash – we're actively encouraging users to do things that will allow us to continue using the Flash plug-in, which is something that wasn't even an issue a year or two ago. The Flash problem has created a need for additional development on our end. HTML5, on the other hand, is still not a strong alternative, especially when it comes to more robust F2P content. There are currently many interesting titles in HTML5, also ported from Flash, but the technology does not allow for experience gain in the traditional, big browser-based Free-to-Play games."

Caglar Eger (Goodgame Studios) agrees. "Ever since we've known that Flash would die this year, I've been convinced that HTML technology will become an important issue for game developers who were used to working in Flash, like us. I'm sure many browser game developers have worked out a strategy for 'Flexit' [a pun on 'Brexit'], and that's why it will be a significant challenge in 2017."

According to the experts interviewed, brand marketing will become an important tool for acquiring users in 2017 and 2018, on the level of using the power of influencers to distinguish a game from similar, competing products.

"I'm not saying that traditional performance marketing will die, but nowadays when you have so many similar games, you have to create a strong and recognizable brand so that it's your game users download", Eger adds.

Photo source:
Techland press materials

1.3.13 Opportunities and risks arising from piracy

When discussing the video games industry, its greatest threat should be mentioned too – piracy. Interestingly, the situation differs depending on the segment.

According to the 'Polish Gamers Research' report, trends in piracy among Polish gamers actually look quite optimistic – the number of people officially admitting to acquiring games from illegal sources is decreasing each year. It's important to remember, however, that the disproportion between legal and pirated versions of games being played is still significantly in favour of the latter. Adam Zdrzałek (Ubisoft) admits that "(…) once 20-30% of games are bought legally, then we'll have a reason to be happy." Krzysztof Kostowski (CEO of PlayWay S.A.) confirms this. "Piracy of our games is at a constant level of 80–90%. A consumer used to piracy is often not used to paying, so it's usually just two different categories of consumers."

However, Polish consumers' increasing buying power means an increasing number of legal versions are being sold, on top of which the whole process of pirating games is becoming more complicated. This latter phenomenon is most evident on the console market. The previous generation of consoles, especially the Xbox 360, had to deal with the widespread problem of illegal modifications to the actual consoles, which allowed them to run pirated versions of games. Piracy on a similar scale was also seen on the handheld Nintendo DS and PlayStation Portable (PSP).

Fortunately for Sony, the problem of piracy had much less impact on the PlayStation 3. Having said that, according to interviews with game distributors, while household penetration of PS3s was similar to the Xbox 360's, sales of legal versions of games available for both platforms were significantly lower on the Microsoft console. Interestingly, the number of Xbox 360 games sold rose sharply once titles dedicated to the Kinect motion controller started appearing. At the same time, this was clear proof that so-called casual players[16] were much less likely to break the law and pirate their games. Current-generation consoles (PlayStation 4 and Xbox One) are much better protected against illegal versions of their games, and for now it can be said that piracy on those platforms has been almost completely eliminated.

It's relatively harder now than it was even several years ago to play illegal versions of games on Pcs. "A symbolic end of an era, for me, was the closing of the site torrenty.org in 2016,"
says Mariusz Klamra (GRY-OnLine S.A.). New games are increasingly better protected, the awareness of the risk of installing software from an unreliable source more widespread, and pirating older titles when they can be bought during digital sales for literally just a few zloty no longer makes financial sense. In terms of value, this decrease in the price of pirated games also marginalizes piracy.

The disappearance of 'traditional' piracy is also largely thanks to Valve's previously discussed Steam platform. The security offered by Valve's platform have encouraged some game publishers to forego built-in DRM[17] protection, such as SafeDisc or SecuRom. Even so, some still use extra safeguards, such as Denuvo, which shows that the fight with piracy is not quite over. "I think piracy will continue to exist as it does now, but will die out as games become more online in their formula," suggests Michał Nowakowski (Management Board Member at CD PROJEKT S.A.).

It's important to note, however, that with the growth of digital platforms, a relatively new phenomenon has appeared that could also be classified as a form of piracy – the unauthorised exchange of Steam accounts (for PC games), or PlayStation Network accounts (on the PlayStation 4). A visit to a popular auction site shows that despite regular interventions by the police, this practice is still happening.

Interestingly, Polish company CD PROJEKT's GOG.com website and digital distribution platform, GOG Galaxy, have made the fact that they lack any kind of safeguards a part of their image. "Piracy is still a widespread phenomenon, but it is often not the result of a person not being wealthy, but rather of certain habits, or even a form of rebellion against the policies of certain publishers," explains Michał Nowakowski of CD PROJEKT. "Our company believes that at least some percentage of pirates are badly-treated consumers, so we're convinced that with time, we're able to encourage many of them to buy their games from legal sources. We'll never know for sure, but the many emails we receive from 'reformed' pirates seem to confirm this theory."

In the opinion of Paweł Miechowski (Senior Writer at 11 bit studios S.A.), "Piracy existed, exists and will continue to exist – it most often happens in developing countries where people have PCs but no money for games. This is very evident in Poland, where the scale of piracy decreased significantly as the populace became wealthier – it can now afford to simply buy games. That's why the leading countries in piracy are currently China and India, where there are a total of 2.5 billion people who don't really have money, so they pirate in droves. We don't really do anything to fight it, since piracy can also be seen as free marketing."

This attitude is supported by Piotr Żygadło (Producer at Robot Gentleman). "Piracy has always been a form of advertising and there have been games that were too well protected against pirates, and as a result no one ever really heard of them. To me, the most logical method to fight it is with the 'service' approach. And I don't just mean the 'Game as a Service'[18] attitude, but the creation of a service environment for the game, which would give the player certain benefits from owning a full, legal version of it."

Piracy also exists on a large scale in the mobile market as well, and is particularly evident on smartphones and tablets that run the Android operating system. The studio Ustwo, creator of the acclaimed game Monument Valley, revealed in 2015 that only 5% of Android users paid for the game. Among iOS owners, legal purchases of the game were 40%. Considering the fact that phones and tablets using Android vastly outnumber other systems in Poland (84% of the market, acc. to the 'Polish Gamers Research' report cited in Section 2), this phenomenon greatly affects the Polish mobile market as well.

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[16] **Casual player** – a player who does not follow video games news or trends, and their use of electronic entertainment is either incidental or limited to one or two favourite games. Note that this term doesn't really have a good counterpart in Polish, as phrases such as 'weekend gamer' or 'occasional player' suggest that casual players play rarely and poorly, which is often not the case. This is best evidenced by games like FIFA or The Sims, which some players play often and intensively, albeit that these are often the only games they are interested in.

[17] **DRM** – abbreviation of Digital Rights Management, a term indicating a built-in system to secure games and software from being copied and re-distributed among users, or otherwise used contrary to the publisher's intentions. DRM includes various types of anti-piracy safeguards, such as physical disc checks, call-backs to publishers' servers and activation keys.

[18] **Game as a Service (GaaS)** – a game treated by its developer/publisher as a service, with a long-term consumer relationship, rather than as a one-off purchase. The GaaS approach is designed to create long-term bonds between the gamer and the game.

Źródło fotografii:
materiały prasowe firmy Bloober Team

Mariusz Marzęcki, CEO of KoolThings, shares his experience with mobile piracy. “Unfortunately, it’s quite sad. I suspect every developer is affected by this. It takes an average of one or two days for our games to appear in a hacked form on pirate sites. [...] It’s very possible that terrible sales numbers are the result of large-scale mobile piracy. These people use Android for a reason – it’s easy to pirate.”

Piracy can take very unconventional forms. Robert Podgórski (Founder of BlackMoon Design) explains that “The problem is with various intermediaries and companies that pretend to be official stores. They get our game then sell it for cash. This is problematic because here we have a paying customer, who is able to get the game cheaper... (...)

We also have many browser-based games, where often someone hosts them illegally on their sites, and sells them or makes money off of them from advertising.” Unfortunately, there are often cases of more brazen theft – criminals, most often from China or India, steal the entire source code of a game, then put it up for sale under a different name in official stores, like the Windows Store or Google Play. Small development studios are very limited in how they can deal with such crimes.

It’s important to note that Free-to-Play games are not free from piracy either. As Ewa Czwartacka-Roman (Plinga) points out, – “Depending on the game, it’s a greater or lesser problem, but it’s always there. Unfortunately, Polish users are also often at the forefront of the effort to circumvent official sales channels. We have to assume that many instances are undetectable, and that the most spectacular methods are the most visible and can be blocked most effectively, as they often even influence the internal economy of the game”.

1.4 NEW TRENDS ON THE VIDEO GAMES MARKET - VIRTUAL REALITY (VR) AND AUGMENTED REALITY (AR)

Virtual Reality and Augmented Reality have been quite popular in the last few years. Virtual Reality is different from Augmented Reality on many levels, such as applications, technology used and market opportunities.

- VR immerses the user in a wholly computer-generated world, remade for the purposes of the software running it. Typical examples are games and flight simulators. VR games are designed to make the user feel as though they’re in a totally different place or time, for example, spectating at a football match. The main driving forces behind the current crop of commercial VR equipment are Oculus, Sony PlayStation VR, HTC Vive and Samsung Gear VR.
- In contrast, AR overlays a layer of digital information on to the real world, usually through telephones or glasses. Here, the dominant technologies are the Microsoft HoloLens, Google Glass and Magic Leap.

The most visible difference between VR and AR is that Virtual Reality uses headsets to completely blinker the user to reality, while Augmented Reality does not cut the user off reality - you can see the world as usual, with the addition of the software layer.
Virtual Reality and Augmented Reality technologies have the potential to soon become another important hardware platform.

Going shopping or spectating at a football match are not the only real-life situations that could change with the rise in popularity of VR and AR. VR and AR may become industry sector worth billions of dollars and change the market as much as the first personal computers did, if their costs decrease to a more affordable level.

But because both VR and AR are just infants on the market, three possible scenarios are projected for their development over the next decade.
In the first scenario, the value of the VR and AR market grows to USD 80 bn by 2025, of which 45 billion comes from hardware and the other 35 from software. The second scenario sees the popularity of this technology spread much faster, causing its market value to reach USD 182 bn (110 from hardware, 72 from software), thus transitioning it from niche gadgets to a fully-fledged hardware platform. The third scenario is slow growth that only reaches USD 23 bn, caused by such things as challenges due to delays in introducing and applying the technology, limiting it mostly to games, as well as the actual physical safety of using it and data security issues. In comparison, the current value of the hardware market for notebooks is USD 111 bn; for PCs it's USD 62 bn and for consoles USD 14 bn[19].
In the case of VR and AR, there are nine areas in which the technology can be applied: video games, live broadcasts, multimedia entertainment, medicine, property, retail, education, engineering and the military.

According to Ewa Czwartacka-Roman (Plinga), other opportunities for using VR commercially include product placement and supporting the processes of the gamification used by large, global brands.

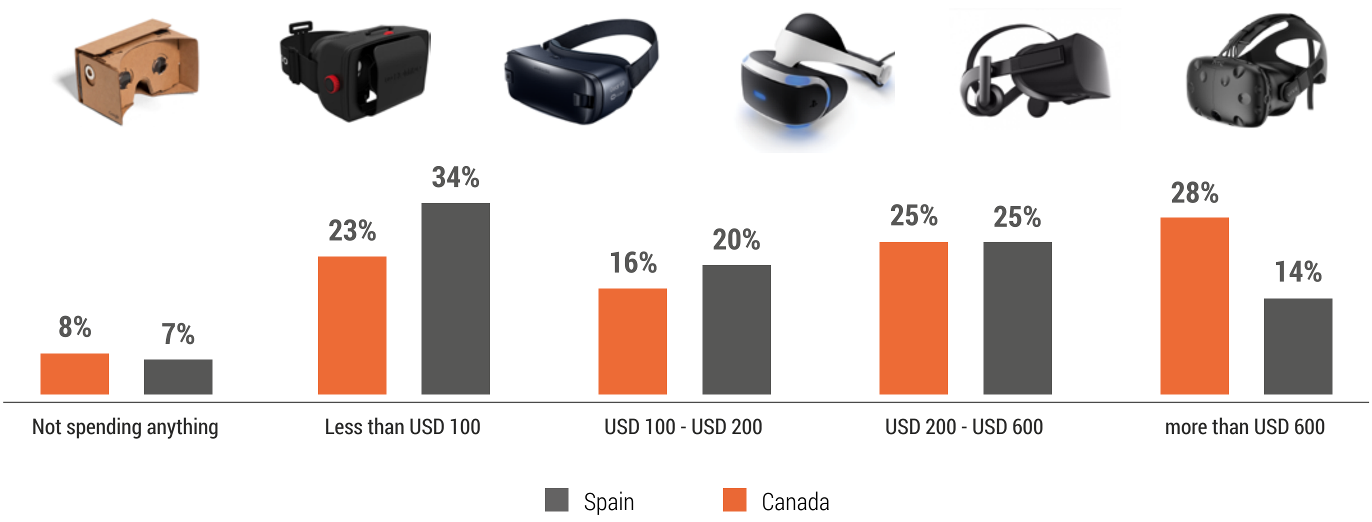
But apart from video games, AR and VR may first impact property business, retail and medicine. They could also change whole business models or methods of conducting financial transactions. The New York auction house Sotheby's has introduced a new service, giving virtual tours to potential buyers of their luxury apartments using VR, which can affect the property market.

In retail, the American DIY chain Lowe's has equipped six of its stores with special rooms in which customers can digitally place available products over a view of their apartment. VR and AR technologies can also help decrease the need for physical display space for products in stores, and subsequently even affect the need for the stores themselves. In May 2016, the Australian eBay site introduced the first online store in Virtual Reality, while over in China Alibaba is also exploring the commercial use of VR technology. In the United Kingdom, VR technology is being used for therapeutic means for terminal patients in hospital.
The main challenges in introducing AR and VR technology to mainstream use are the user experience, technological limitations, development of content and applications, as well as the price. Serious obstacles are so-called cybersickness, an ailment that resembles motion sickness, as well as the very limited range of movement in virtual reality. Solving these problems could help increase the popularity of VR technology. In terms of content and applications, the market is unfortunately going in circles – developers are not willing to spend time and effort on technology that does not yet have a clear target audience, while individual consumers and enterprises are not willing to buy hardware for which the available software is so limited. The price also constitutes a significant problem because it is too high for the technology to become popular.

To Newzoo research, the public's declared acceptable price for VR hardware below USD 600 is much lower than actual prices while the current costs of VR hardware and a computer with the required parameters exceed the amount of USD 600.

An important question is whether the prices of the video headsets needed to use VR technology will go down at a similar rate as the prices of PCs did, i.e. between 5% and 10% annually. Expensive components of the VR sets, such as 3D lenses and the movement tracking system, are the reason for high prices. In order to popularise the hardware, such companies as Sony, HTC or Oculus would have to sell the VR sets with prices similar to their manufacturing costs.

Fig. 1.9 Consumers' acceptable price ranges for VR devices



Source: Newzoo

[19] Goldman Sachs report

As a result, there are fears that VR will go the way of 3D TVs. But according to Artur Kurasiński (CEO at Muse) these fears are unfounded. “It won't happen, since that's a completely different technology, with completely different applications. This isn't just changing the quality of the image, but rather – perhaps most importantly – a revolution in how we interact with the computer, a change in the interface paradigm from web-based to graphically advanced. This temporary fad is changing education, events, the military and many, many other industries.”

Radosław Jaroszek (Editor-in-Chief at gry.onet.pl and gamezilla.pl) has other concerns about the future of VR. “The first generation of VR goggles is dealing with a lot of technical issues, and there isn't a next generation on the horizon. HTC has confirmed that it will be a while before we see the next generation of Vive, while Facebook has announced that the Oculus Rift will not even appear at E3 this year. The publishing roadmaps of the largest developers also show a lack of strong VR titles that could interest users.”

According to Jaroszek (Onet.pl), it's Augmented Reality that has greater potential, thanks to its use of smartphones. “But I wouldn't rule out VR technology. It's recently been said that it could go the way of 3D TV, which has disappeared from the market. I don't think that will happen. There's a strong argument in favour of VR's growth in the fact that companies from outside the video games industry – architecture, medicine, defence – are also interested in the technology and are already actively starting to use it.”

According to Marek Wylon (founder and Member of the Management Board at GameDesire Sp. z o.o.), the biggest problem concerning the VR technology is the lack of a communication vocabulary similar to the movie sector, connected with standardised, broad methods of presenting specific approaches generally understood and accepted by the recipients.

1.4.1 The current VR/AR market situation

While the popularity of Virtual Reality can seem to be something new, the technology has been available since the 1990s, when studios began using 3D graphics in games. There is also some precedent with early VR consoles, such as the ***Virtuality*** or Nintendo's ***Virtual Boy***, neither of which ended up meeting consumer expectations of the technology.

In 2014, Facebook caused a stir when it bought the Oculus VR company for USD 2 bn, prompting investments in VR and AR technology. Since the failure of VR in the 90s, the technology changed and the companies listed in the table below joined the competition for a new market segment.

Table 1.3 Initiatives by recognised gaming industry companies in the VR sector in 2014-2016

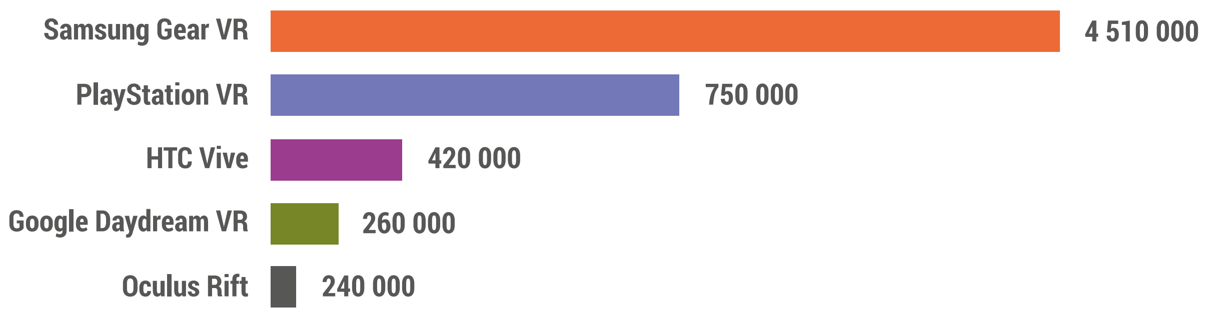
Activities of selected, recognised companies in the VR sector		
Sony	2014	Announcement of project Morpheus (PlayStation VR)
Facebook	2014	Purchase of Oculus for USD 2 bn
Samsung	2014	Premiere of the Samsung Gear VR (developed in partnership with Oculus)
Google	2014	Investment of USD 542 bn in the start-up company, Magic Leap
Microsoft	2015	Purchase of the Havok 3D game engine from Intel
Time Warner	2015	Co-financing of NextVR project (USD 30.5 m), which can broadcast live in virtual reality
Alibaba	2016	Investment in the start-up company, Magic Leap

Source: Authors' own research

One of the things we asked the experts during our in-depth interviews for this report was to identify a significant failure within the video games industry in 2016.

According to Radosław Jaroszek (Onet.pl), one of the biggest disappointments of 2016 was VR headset sales. "Many analysts projected that the Oculus Rift alone would sell at least 16 million units over the course of the year. We now know how much they overestimated consumer interest – the HTC Vive and Oculus Rift together sold only 400,000 units, while Sony's PlayStation VR goggles fared quite well, closing the year with over 2.5 million units sold," he explains. "VR solutions using smartphones had the best results. Samsung's Google Gear VR sold to over 5 million consumers, which proves that currently, price is a very significant barrier. I've tested all of the VR headsets available on the market now, and unfortunately the hardware itself is still in its infancy. The quality of the image leaves a lot to be desired, while some titles also have the unpleasant effect of causing VR sickness. Another problem is the lack of ideas for VR games. Most of the available titles look more like short tech demos rather than full-fledged games," Jaroszek concludes.

Fig. 1.10 Sales of VR headsets in 2016



Source: Authors' own research based on data from the Super Data Research

Many sector experts assume that currently, the VR development leaves a lot of room for improvement. One of the barriers is the headset price which is still high, so only a very low percentage of the consumers decide to buy the device and games designated for VR. VR has a few other restrictions to overcome - Paweł Miechowski (11 bit studios) mentions the biological restriction connected with the impact of three-dimensional view on the brain functioning, the technological requirement to simplify the headset design and remove the wires, as well as the financial constraints - which would require lowering the costs of the device and games to the level affordable for an average gamer.

The nature of the VR technology is currently experimental - its capacity and new functionalities are still being tested. It is much more important in designing training programs, for example for the public service, than in commercial uses. The experts suggest that a few more years are needed before the virtual reality becomes as important on the market as games designated for PCs, consoles or mobile devices.

1.5 NEW TRENDS ON THE VIDEO GAMES MARKET - ESPORTS

One of the most popular trends in recent years, both on the Polish and global video games markets, is eSports (electronic sports). This is a form of electronic entertainment based on competitive computer gaming. Although the first tournaments and competitions were already being held back in the 1980s, it's only in the last 5 years that eSports went mainstream. In that time, they've gained popularity not only with gamers, but also the media and companies in the industry interested in the growth of competitive gaming. Polish trends seem to match the global data too. According to a report by SuperData, the value of the global eSports market will reach USD 1.24 bn in 2017. Currently, the most popular games in eSports include ***Counter Strike Global Offensive*** – a tactical FPS[20] produced by Valve, and ***League of Legends*** – a MOBA game[21] by Riot Games. Other important titles in competitive gaming that should be mentioned here include ***World of Tanks*** by the Belarussian-Cypriot studio Wargaming, Blizzard's ***StarCraft II***, ***Heroes of the Storm*** and their most recent effort, ***Overwatch***, as well as EA Sports' ***FIFA*** games. Their long-running football series is once again being seen favourably after recent years, mainly thanks to actual football clubs around the world taking an interest in eSports. A good example here is the partnership between Legia Warsaw and the Electronic Sports League, the largest and longest-running company organising professional competitions for gamers. "Seeing Legia's dedication to the joint projects, I think this is a long-term project for them. They have invested in players who play virtual football wearing their colours, and now they're organising tournaments for the community and fans", says Adrian Kostrzębski, PR Manager at ESL Poland.

[20] **FPS (First Person Shooter)** – a type of action game in which the world is displayed from a first-person perspective, with the main goal being to eliminate enemies using firearms or thrown weapons. The game Wolfenstein 3D (1992) by id Software is considered to have set the mould for the FPS genre.

[21] **MOBA (Multiplayer online battle arena)** – a type of team-based multiplayer game in which players control individual characters, brawling for supremacy on specially-designed maps.

It's important to note that Poland has had some spectacular success in eSports, both as competitors and organisers. Virtus.pro, a Polish team that plays ***Counter Strike: Global Offensive*** has been official ***CS:GO*** world champion five times, maintaining their place among the top players for over 10 years. In the past, Poles have also won medals at the World Cyber Games (which in the eSports world was an Olympic-level event), as well as at other prestigious tournaments. It is in Poland that the Intel Extreme Masters finals have been held for the past 3 years. This is one of the largest current professional tournaments in the world, drawing gamers from around the globe to the Spodek arena in Katowice to both compete and spectate. In 2016, the ESL broke another record with the IEM finals, which was the biggest event of its kind in the world in terms of number of attendees – the competition was attended by 173,000 people over 7 days, while 46 million unique users tuned in to its live online broadcast. Łukasz Trybuś (president of the Electronic Sports Association) says it was quite a phenomenon. "It's like filling the National Stadium in Warsaw with fans 34 times. This type of event shows the great potential of the video games industry, and, subsequently, eSports."
The development of platforms for broadcasting live gameplay is one of the reasons for the rising popularity of eSports. With the Free-to-Play and microtransaction-based business models in games, it has greatly contributed to the dynamic growth in popularity of organised, competitive gaming. The importance of different forms of broadcasting is confirmed by the previously mentioned SuperData report, which projects the number of people interested in watching gamers compete with each other online as reaching 330 million by 2019. That trend is still developing in Poland, 14% of the respondents in the Polish Gamers Research declared interest in watching video transmissions of eSports, with 50% watching them live during the competitions. It should be noted, however, that the group is rather closed and the percentage may be even higher.

Right now, though, developers, players and eSports organizers are looking for the next springboard that will allow them to make the next leap forward. Everything points to the possibility that this could be VR technology, which is already being tested for broadcasting competitions as well as creating competitive games. According to Kostrzębski (ESL Polska), the industry will be ready for Virtual Reality eSports in the next 2-3 years:
"Currently, I don't think it's possible to play CS:GO or LoL using VR. But there will be more titles like that. Attempts have already been made, there are games on the console market that could be used in competitions. And VR has one big advantage – it eliminates the lack of physicality in eSports, and this could make it hugely popular." Companies that have heretofore concentrated on single-player games are now also showing an interest in electronic sports. But creating games for professional players is not easy, and requires the use of many techniques and game mechanics that have no use in games for other audiences. For example, 'spectator mode', which facilitates watching of the gameplay by connected viewers. Nevertheless, more and more companies are realizing the potential of electronic sports: - "E-sports are a huge matter market-wise, I don't think anyone is skeptical of that anymore. For CD PROJEKT RED, it's another thing we want to get involved in, which is why we're organising the Gwent Challenger tournament. Will we invest more in eSports? Everything depends on the players, who decide whether our game becomes popular among the professionals", says Michał Nowakowski (CD PROJEKT).

When speaking with industry specialists, it becomes evident that creating this type of game is not for everyone, and despite the size of the potential market, developers need to be in a strong position to invest in an eSports project. Paweł Miechowski (11 bit studios), one of the most popular Polish development studios, admits that they currently have no plans for eSports: "We sell a somewhat different experience, but I think both of these worlds will continue to grow dynamically and in several years eSports will grow into a huge phenomenon."

Its increasing popularity among players certainly creates a need for qualified staff running the competitions. The two largest companies in Poland, ESL Polska and Fantasy Expo, are still looking for employees. "I think we can use an eSports education not only to create great, well-rounded competitors, but also to prepare them for jobs around eSports, such as talent scouts, journalists, graphic designers, movie makers, analysts, trainers, managers, competition organisers, administrators, etc", says Łukasz Trybuś (Electronic Sports Association).

The development can be seen using the example of Polish companies engaged in eSports which are continuously recruiting. It should also be noted that eSports have to deal with a problem which is well-known to the entire gaming industry in Poland - lack of qualified employees.

Photo source:
Plastic press materials

SECTION 2

PROFILE OF THE POLISH GAMER

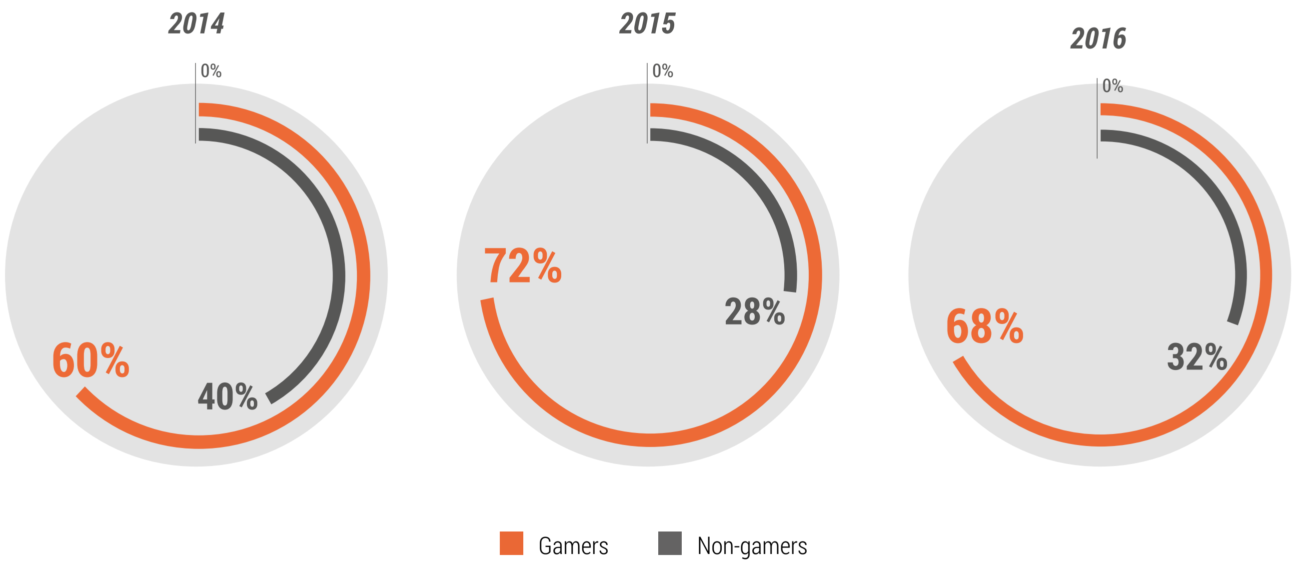
When comparing the image of the average gamer from several years ago with how electronic entertainment enthusiasts are perceived today, it's not hard to notice how greatly their public perception has changed. What used to be seen as a children's activity has now greatly broadened its reach and become an integral part of popular culture.

The change in how gamers are perceived is due to several factors, among them the marketing efforts of game producers, huge events dedicated to gaming entertainment, and the popularisation of game consoles and hardware. This led to greater societal acceptance of this type of entertainment, while the rising popularity of mobile devices means that nearly everyone has access to games, whether they were 'gamers' before or not.

But that doesn't mean that gamers are a uniform group – the fact that it's continuing to expand makes identification of gamers' preferences in various categories more important now than ever before, from a business and development standpoint. This is the goal of the annual 'Polish Gamers Research' report, jointly conducted since 2014 by the Kraków Technology Park, the Onet.pl Group and GRY-OnLine.

2.1 HOW MANY POLISH INTERNET USERS ARE ALSO GAMERS?

Fig. 2.1 Number of gamers among the Polish internet users



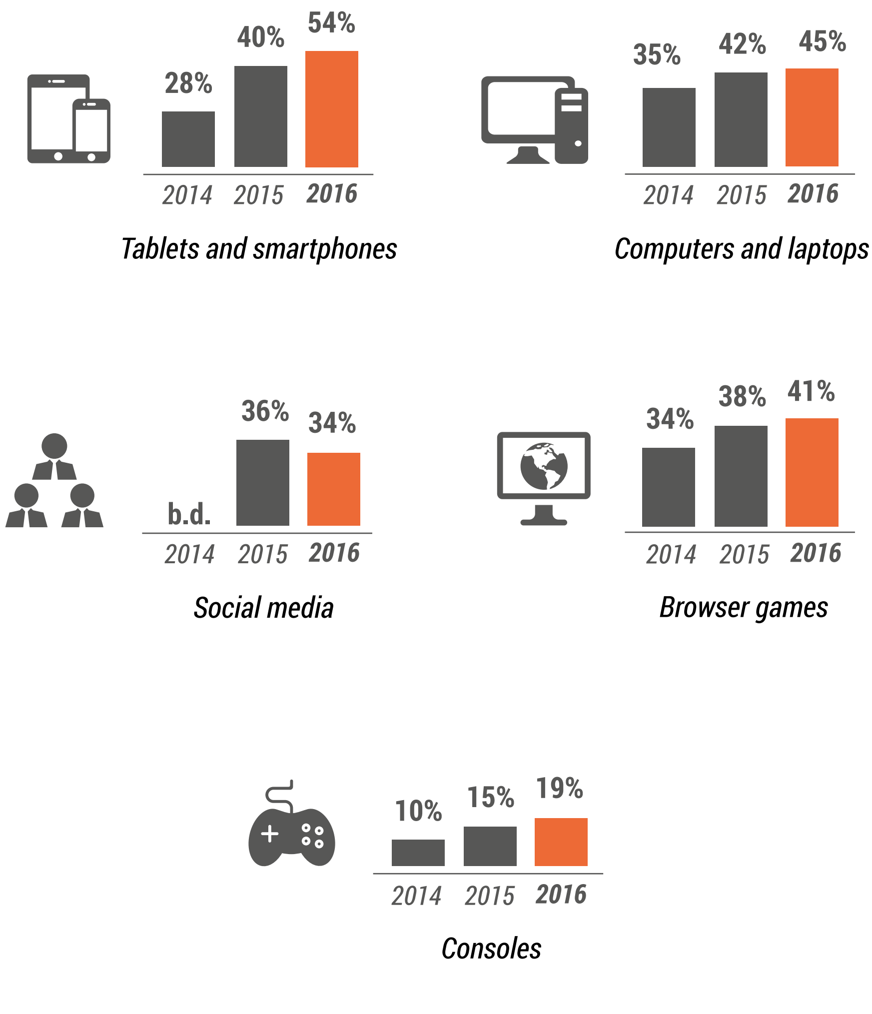
Source: The 'Polish Gamers Research' report, 2014-2016

According to studies conducted in 2016, 68% of Polish internet users between the ages of 15–55 had played a video game at least once in the last month. Compared to 2015, this was a 4% drop, but also an 8% increase on 2014. This drop could have been the result of a greater awareness of gaming, or of its treatment as a 'neutral' entertainment, in the vein of social media or YouTube, especially on mobile devices. 2015 was an extraordinary year for the Polish video games industry, due to the success of home-grown releases such as ***The Witcher 3: Wild Hunt*** and ***Dying Light***. In comparison, 2016 did not have such spectacular successes in the industry that riveted popular opinion as much.

2.2 WHICH PLATFORMS DO POLISH GAMERS PREFER?

2016 saw a new leader emerge as the most popular platform for gaming. In sync with global trends, mobile devices such as smartphones and tablets were named the most popular devices for gaming (54%, which is a 14% increase on 2015). It's worth noting that this result is largely thanks to the youngest respondents (15-24 years old), 54% of whom play on mobile devices. Despite no longer being the leader, PCs remained near the top with 45% of those surveyed playing installed games, and 41% playing browser-based games. This year's survey also confirms the consistent growth of the console base among Polish gamers – the number of people playing on consoles has increased from 10% to 19% in the last two years. However, 2016 saw a drop in the popularity of social network games (from 36% to 34%). It is expected that this trend will continue in the coming years. In the previous edition of this report, Ewa Czwartacka-Roman (Plinga) warned of an impending decrease in the number of people playing Free-to-Play browser games (including social network games). She predicted that they would slowly switch to gaming on mobile devices. Current data on both the global and Polish markets confirms this. Players of Free-to-Play social network games are migrating to mobile games, with the social market falling at an annual rate of 11% globally, and 8.9% in Poland.

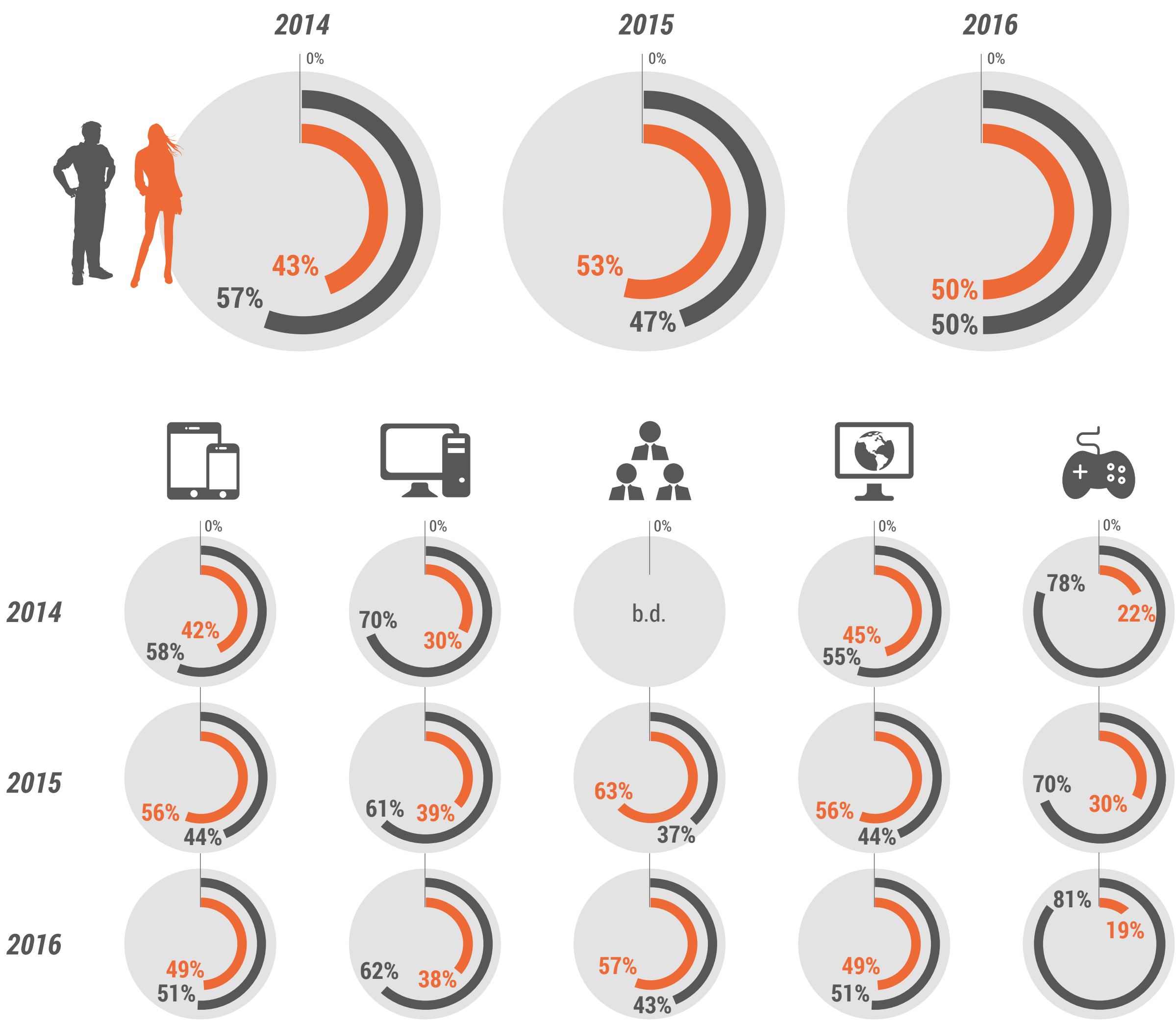
Fig. 2.2 Number of gamers depending on the platform



Source: The 'Polish Gamers Research' report, 2014-2016

2.3 THE GENDER OF POLISH GAMERS. WHAT ARE WOMEN PLAYING, WHAT ARE MEN PLAYING?

Fig. 2.3 The gender of Polish gamers



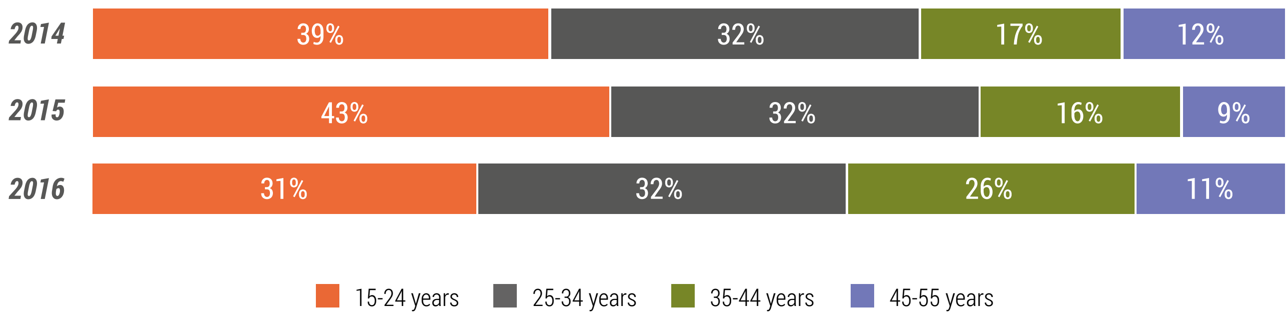
Source: The 'Polish Gamers Research' report, 2014-2016

Slowly, the stereotype of the male gamer is fading into the past – this can be seen in the inclusion of games played on social networks in the surveys conducted. While in 2015 the dominant gender was female (53%), in 2016 the genders of those surveyed were equally divided. This was the result of the decline in popularity of social network gaming, which was dominated by women, and the increase in popularity of console gaming, dominated by men. Nevertheless, compared to 2014 (57% male, 43% female), this is still a significant change, which brings Polish gamers closer to the global statistics for gender. But in 2016, female gamers were still dominant in games played on social networks, such as Facebook and nk.pl, where they made up 57% of the player base (although this was still a drop from the 63% reported in 2015). In the remaining categories, trends have clearly shifted in the direction of male gamers. In 2016, there was a significant change in the console category on 2015, with the number of female gamers dropping from 30% to 19%, and the number of male gamers increasing from 70% to 81%. The significant growth of the latter group among console gamers could largely be the result of the increased number of current-generation consoles (PlayStation 4 and Xbox One) in Polish homes. These machines feature some of the most popular series in their line-up, such as ***FIFA***, and various FPS games (the ***Battlefield*** and ***Call of Duty*** series).

There is also a small disproportion in the browser and mobile categories. In both, the 2016 results showed 51% of players as male and 49% female, while in 2015 44% of players were male and 56% female. Gender data in terms of games installed on PC have remained relatively stable over the last few years – 62% male in 2016, 61% in 2015, and 70% in 2014.

2.4 THE AGE OF POLISH GAMERS

Fig. 2.4 The age of Polish gamers

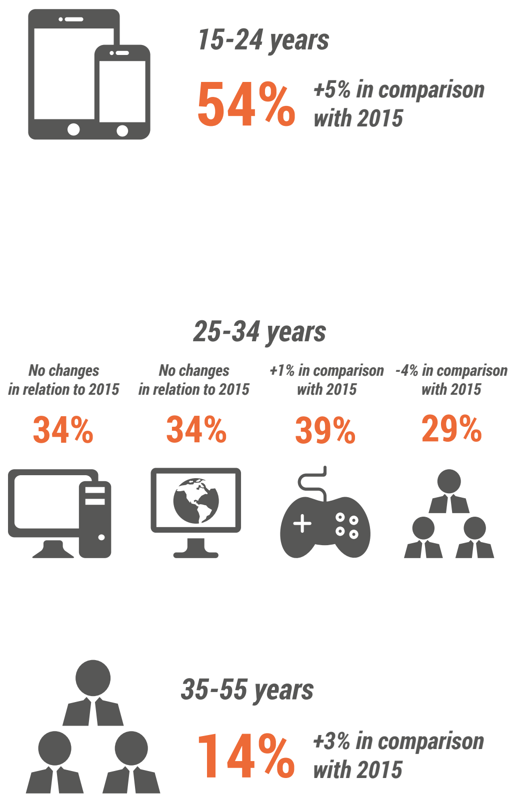


Source: The 'Polish Gamers Research' report, 2014-2016

The average results of the age of gamers can initially be surprising. There has been a significant decrease since the last edition of the study in the number of players within the 15-24 age group, down from 43% in 2015 to 31% in 2016. We can deduce the reason for this by breaking down gamer ages by gaming platform. When we do this, we see that this decrease is largely caused by the migration of the youngest age group from social network gaming (from 41% to 29%) and PC gaming, both installed and browser-based (from 42% to 36%), to mobile games (a 5% increase from 54%). In the past three years, it is only in console gaming that the number of players in this youngest group (15-24) has been stable (42% in 2016 compared to 44% in 2015 and 2014).

The second youngest age group, 25-34, has been relatively stable over the past 3 editions of the report. The number of players hasn't significantly changed on any platform, save for social network gaming, where the percentage of players decreased from 33% in 2015 to 29%.

On the other hand, gaming on social networks is gaining increased popularity among the two oldest age groups surveyed. There was a significant increase in the 35-44 group of 12% (from 15% to 27%), and 3% in the 45-55 group (from 11% to 14%). Both of the two oldest age groups have also gained players from browser gaming, and it's this change that has so strongly influenced the final average age results.



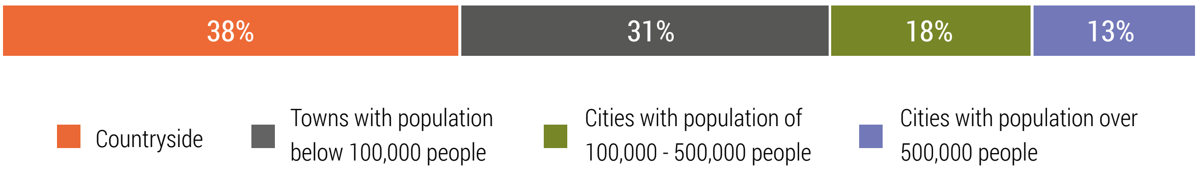
Source: The 'Polish Gamers Research 2016' report

2.5 WHERE DO POLISH GAMERS LIVE?

Analysing where Polish gamers live, we see a significant increase in the dominant group – those living in the countryside – who make up 38% of those surveyed. This is an 8% increase from 2015. Among the other categories, the differences are much smaller, often only 1-2%, which indicates great stability. The second most populous source of Polish gamers are the largest cities, with populations over 500,000. Currently, 13% of these gamers are also internet users (a 1% decrease from 2015). The third most populous source are medium-large cities – those with populations between 20,000-49,000 and 200,000-500,000 (12% each).
Next in line are gamers from small-medium cities with populations between 50,000-99,000 (10%), and up to 20,000 people (9%). Finally, just as the year before, the smallest number of gamers live in large towns, with populations between 100,000-199,999 people. These account for just 6% of gamers – a 3% decrease from the 9% in 2015.

From the data we can see that video games are a form of entertainment chosen most often by people living in the countryside and in smaller towns. This is true of all gaming platforms. In conclusion, it's interesting to note that this distribution of gamers is almost identical to the overall distribution of internet users in Poland within the 15-55 age group.

Fig. 2.5 The place of residence of Polish gamers



Source: The 'Polish Gamers Research 2016' report

2.6 WHAT IS THE LEVEL OF POLISH GAMERS' EDUCATION?

There have been significant changes in the level of education of Polish gamers on all gaming platforms. Essentially, digital entertainment is no longer solely the domain of school children and young students. However, except for those gamers with a higher education, all other groups have seen growth. Just as in previous years, the dominant group are those in secondary education (45% – a 1% increase on 2016), while the second most dominant is gamers with primary education (an increase from 30% to 35%). The number of gamers surveyed holding degrees or higher education diplomas has decreased by 6% compared to 2015.

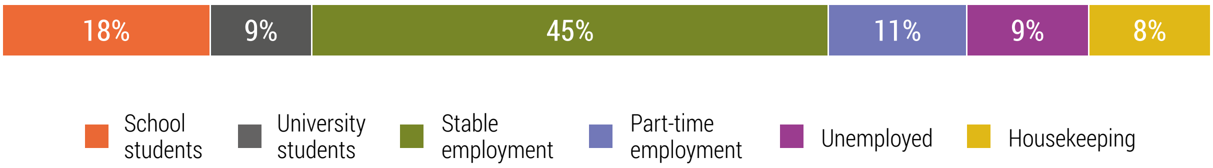
In 2016, only 20% of gamers had a higher education.

Fig. 2.6 Education of Polish gamers

Source: The 'Polish Gamers Research 2016' report

2.7 WHAT IS THE OCCUPATIONAL STATUS OF POLISH GAMERS?

Fig. 2.7 The occupational status of Polish gamers



Source: The 'Polish Gamers Research 2016' report

The latest results of the 'Polish Gamers Research' report confirmed a trend that became visible the year before – that games have slowly become a popular pastime for working people and college/university students. Among the gamers surveyed, those with stable employment are in the majority, at 45%. This is a 3% increase on 2016, which is a good sign for the industry considering this group's buying power. 18% are primary and secondary students (down from 25% in 2016 to 18%). Part-time workers make up 11% of players, college students and the unemployed 9%, and those staying at home to run the household just 8%. This latter group has seen an increase since 2015.

2.8 WHAT IS THE FINANCIAL SITUATION OF POLISH GAMERS?

Fig. 2.8 The financial situation of Polish gamers

Source: The 'Polish Gamers Research 2016' report

In terms of how well-financed Polish gamers are, the results of the latest report are similar to those of 2015. Many of those surveyed for the report described their financial situation as average (38% – a 1% decrease), and these form the largest group. The second largest group goes to people describing their financial situation as good (35% – a 2% decrease). There has been an increase among those surveyed who describe their financial situation as poor. However, this is only a small increase of 1%, making them 13% of those surveyed. Breaking the data down by gaming platform, the best financial situation is reported by console gamers, while the worst by those playing on social networks.

2.9 MOTIVATIONS TO PLAY

Among those Polish gamers playing full, installed games on PCs, the reason most often cited for doing so is to relax after their day's responsibilities. 68% of those surveyed indicated this answer. Subsequently, many gamers have stopped considering playing video games the best method of killing time and fighting boredom – 45% of those surveyed chose this answer, which is a 5% decrease on 2015. Other significant motivations for playing include the excitement and adrenaline (37%) of action titles, and the need to learn something new or develop one's skills (31%). Thanks to games with increasingly well-developed stories, the ability to take on a new role or to inhabit a character has also become a significant motivation, and this answer was chosen by 31% of those surveyed. This is a slightly lower response rate than in 2015.

In terms of browser-based games, a stable trend can be observed in players choosing this platform most often to pass time and deal with boredom. This motivation is still dominant, having been chosen by 59% of those surveyed in 2016, which is a 3% increase on 2015. Another important reason is simply relaxation after everyday responsibilities, which 55% of those surveyed chose as their answer. The smallest group of players – just 14% – are motivated by the idea of inhabiting new characters. Motivations such as feeling excitement and adrenaline (21%), playing socially (24%) and a need to develop skills (18%) remain relatively stable in numbers of responses. The reason for such relatively low numbers for these motivations could be the specificity of browser-based games – they're a good escape from everyday life, but don't offer much in terms of specific, long-term goals. However, the increased attention that full-size, installed PC games require, might catch players of browser-based games unawares.

Console players, much like PC players, also cite wanting to relax at the end of the day as their main reason for playing – 59% of those surveyed for the 2016 report gave that answer, which is a 4% increase on the 2015 results. This group also often plays multiplayer games for the excitement, adrenaline and need for competition, according to 43% of those surveyed. Considering the intense action and play time offered by some console titles, just 36% of console gamers pointed to boredom and wanting to pass time as a motivation for playing, compared to 41% the year before. A big difference when compared to other platforms is that console gamers often play with their family and

Fig. 2.9 Why do we play?

Relaxing after work, stress relief	68%	55%	59%	56%	63%
Killing time and boredom	45%	59%	36%	74%	55%
Killing time and boredom	37%	21%	43%	14%	12%
Seeing new games and productions	27%	24%	34%	10%	19%
The need to develop new skills	31%	18%	22%	20%	13%
Impersonating new characters	35%	14%	33%	9%	8%
None of the above	5%	5%	6%	4%	5%

Significantly more when compared to other platforms

Significantly less when compared to other platforms

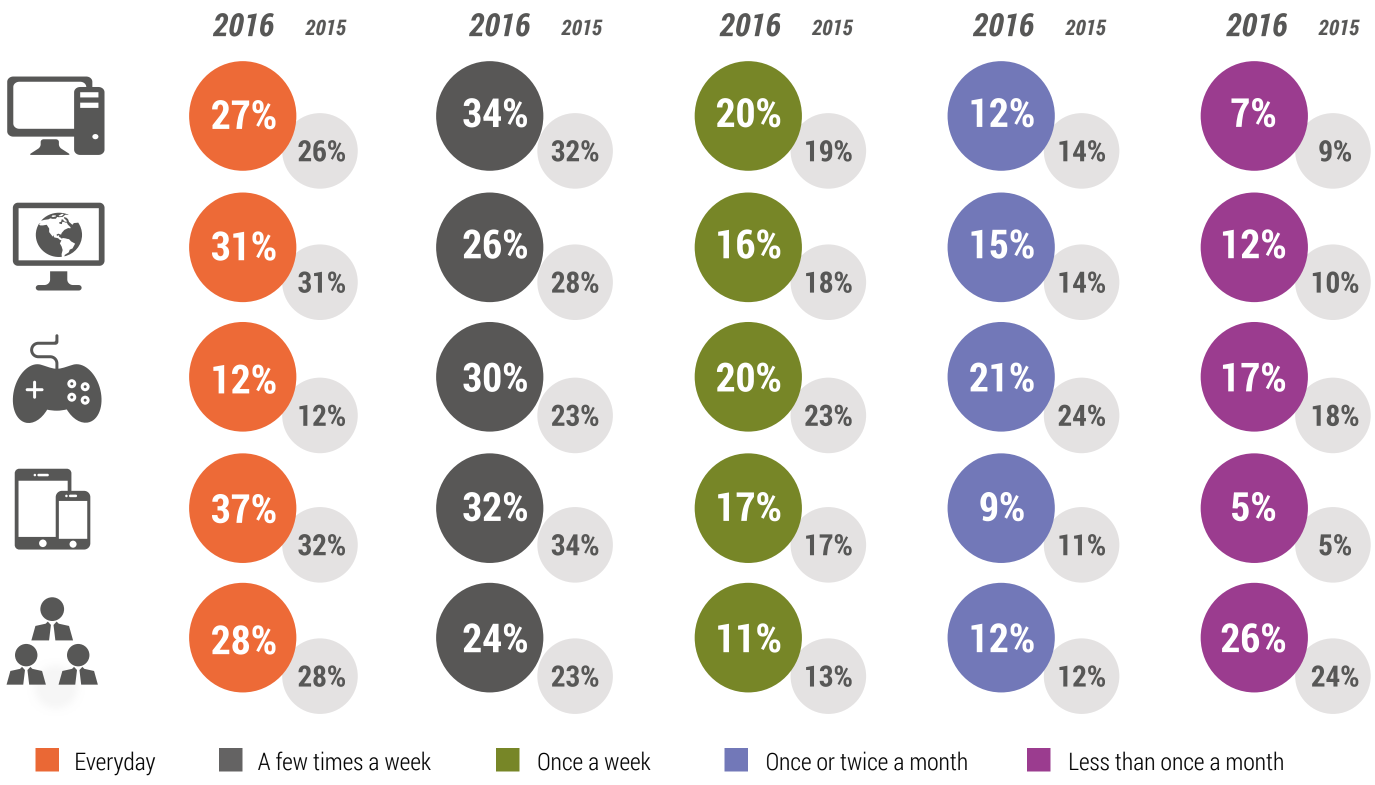
Source: The 'Polish Gamers Research 2016' report

friends, with 34% of those surveyed citing the desire to have fun together as the main reason for playing, largely thanks to the 'party' and family-oriented nature of some console titles. The ability to become a new character started to play a more significant role in 2016 compared to 2015 – 33% of players stated this as their motivation, which is a 4% increase. Developing skills or learning something new turned out to be the least significant motivation for Polish gamers, at just 22%.

When it comes to smartphones and tablets, the reasons for playing are somewhat different. One of the main reasons for their popularity is their portability, as well as the gamer lifestyle and the fact that tablets and smartphones are constantly with us for most of the day. They're also the first choice when gamers want to pass time or are bored commuting, or at school, which is the main motivation (74% of those surveyed). The ease and speed of gameplay typically found in mobile/tablet games means that the people who play them point to relaxation after everyday responsibilities as the second most important motivation for playing them (56% – a 9% increase on 2015). The other motivations listed in the survey, including competitiveness, sociability or the desire to become a character, fall within the 10-20% range, which is quite different from the main motivations. The most important reason for playing games on social networks is the need to relax at the end of the day. This is facilitated not only by the type of gameplay they offer, but also by the fact that players don't need to be quick or constantly on top of what's happening in the game. 63% of those surveyed chose this answer, a 13% increase from 2015. This is undeniably connected with the desire to pass time (53% of players surveyed), which is possible with many different kinds of games available on social networks. A much smaller role is attributed to feeding excitement and adrenaline (12%), or the need to impersonate a character (8%).

2.10 FREQUENCY OF USE OF GAMING PLATFORMS

Fig. 2.10 Frequency of use of gaming platforms



Source: The 'Polish Gamers Research' report, 2015–2016

In 2016, the greatest increase in the frequency of use of a particular gaming platform occurred in mobile games (smartphones and tablets). Increasingly more users stated that they played mobile games every day. This could be attributed to the aforementioned portability of these devices, and the fact that users have them about their person all the time. In 2016, 37% of those surveyed played mobile games every day (a 5% increase on 2015). There was also a significant increase in the number of gamers playing console games several times a week – 30% of those surveyed stated this, 7% more than in 2015.

The frequency at which games are being played has remained at a stable level since 2015 – there have been no sudden surges in trends. The results are largely dependent on the type of gameplay offered by the given platform: mobile and browser games can be played every day thanks to their accessibility and ease of use, hence the high numbers in these subgroups. Games installed on PCs are most often played from a few times a week (34% in 2016), to every day (27%). Games for consoles are usually played a few times a week (30% in 2016), similarly as in the case of installed games.

2.11 GAMEPLAY PREFERENCES – SINGLE OR MULTIPLAYER

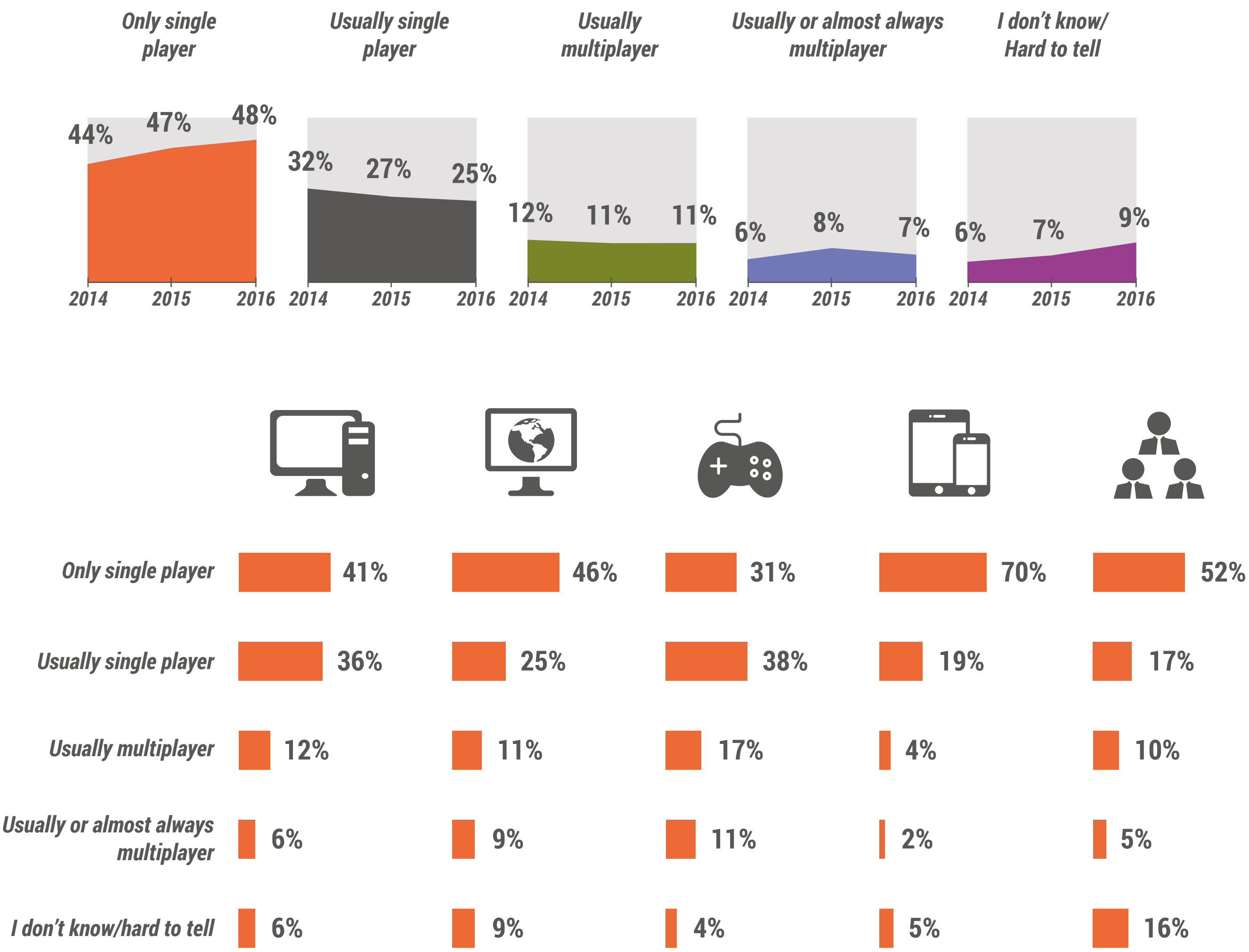
The 2014, 2015 and 2016 reports all indicate that players prefer playing alone, in so-called Single player mode – 48% of those surveyed gave this answer in 2016.

The only decrease that can be noted is in gamers playing Single player with occasional Multiplayer as well. Compared with 2015 (27%), only 25% of those surveyed gave this answer.

Preference for a given gameplay style depends largely on the gaming platform the player most often uses. Single player is decidedly more popular among those who play PC games, due to the PC's preponderance of strategy and RPG titles, which naturally focus on that type of gameplay. Console and browser-based games, on the other hand, are better suited to Multiplayer due to their short, dynamic gameplay. And although many players are also unable to indicate what their real preference is, nearly half of them treat console games as a way to spend time with friends or family.

The data collected for the most recent 'Polish Gamers Research' reports presents gameplay preferences by individual platform, in terms of the presence or absence of other players. What is shows is that a significant majority of mobile players prefer playing alone (89% most of the time), which is not surprising considering the cost and difficulties of participating in multiplayer mobile games. Playing alone only requires a charged battery, while multiplayer games also need an internet connection, which results in either consistent use of one's data plan or a Wi-Fi connection, which then greatly reduces the device's mobility. If Polish gamers are playing with others they are more likely doing it on consoles (28% most of the time), or PCs, in both installed games and browser-based games. It's also worth taking a look here at gaming on social networks, for which almost 70% of those surveyed always or very often play alone. One might think that the main goal of these networks – connecting with friends – would also facilitate playing games together, but there seems to be no such correlation.

Fig. 2.11 Gameplay preferences of Polish gamers



Source: The 'Polish Gamers Research' report, 2014-2016

2.12 WHICH GAMING GENRES ARE POPULAR WITH POLISH GAMERS?

As the original gaming platforms, PCs and consoles offer the most variety in terms of game genres. Of the 14 different genres included in the survey, 9 received over 20% recognition for games installed on PC, and 7 on consoles. This indicates slightly less variation on platforms such as the Xbox or PlayStation, where the most popular games are all about action, fast reflexes and tons of excitement. First-Person-Shooters, racing and sports games have always rated higher on consoles than on PCs (53% as opposed to 38% for shooters, 50% compared to 31% for racing games, and 53% to barely 19% for sports games). Among the popular PC game genres, those that rate higher over their console counterparts are strategy games (40% compared to 26%), which often require the precision of both a mouse and keyboard. MMOG enthusiasts play installed games (24%) or browser-based games (20%), which in both cases mean a PC. MMOGs are played on consoles by only 14% of those surveyed.

Logic games are the most popular choice both in browsers (52%) and on social networks (46%), while the next three choices in terms of popularity are card games, adventure games and action games. When it comes to gaming on social networks, it's worth noting the clear dominance of logic/puzzle games over every other genre. On one hand, this shows that many logic and puzzle games are developed to be integrated with sites like Facebook. On the other hand, it tells us the genre preferred by gamers who only play from time to time, while also using their social media. For these gamers, playing a game is not the primary goal they have when logging into their social network, but they can end up spending some time doing so anyway. As evidenced by the low numbers cited for generally more complex genres (RPGs, MMOGs, FPSs – each at 6-7%), social networking platforms are not really suited to those types of games.

One very specific genre of game that was singled out from the broader strategy/simulation genre, is the so-called virtual farm (such as Farmville). 20% of those surveyed claimed to play virtual farm games in their browsers, with only a few less doing so on social networks (16%). When compared with other platforms, it's in their web browsers that Polish gamers most often tend to their virtual homes and gardens. They also often pick up digital versions of board games (20%), which can be considered a niche market on consoles and PCs.

The most popular game genre on mobile platforms are logic/puzzle games, played by 56% of those surveyed. The next most popular, at 35%, are arcade games, which require fast reflexes and nimble fingers. Third most popular, at 23%, are card games (but not 'casino' games in the traditional sense, which only 5% of those surveyed claimed to play). It's hard not to notice the differences in popularity of certain genres between platforms. While the most popular games on PCs and consoles are RPGs, sports games and shooters, they make up only a small percentage on other gaming platforms. The reasons for this can be found in the specificity of the gameplay - RPGs and FPSs require highly precise control of a kind that smartphones and smaller tablets simply can't provide. This is because in these genres, players often need to pick available dialogue options, sort through their character's inventory, select spells and items or quickly aim at fast-moving enemies. The smaller screens and lack of a full set of controls, such as a keyboard or mouse, make gameplay not only much more difficult but simply tedious. Attempts to design around this fundamental flaw usually end using a lot of the device's resources and inadequately render a legible interface anyway, thus sealing the fate of more complex games on mobile platforms. But, these kinds of problems don't exist in the case of simple logic and puzzle games.

Photo source:
CD Projekt press materials

Fig. 2.12 Popular gaming genres

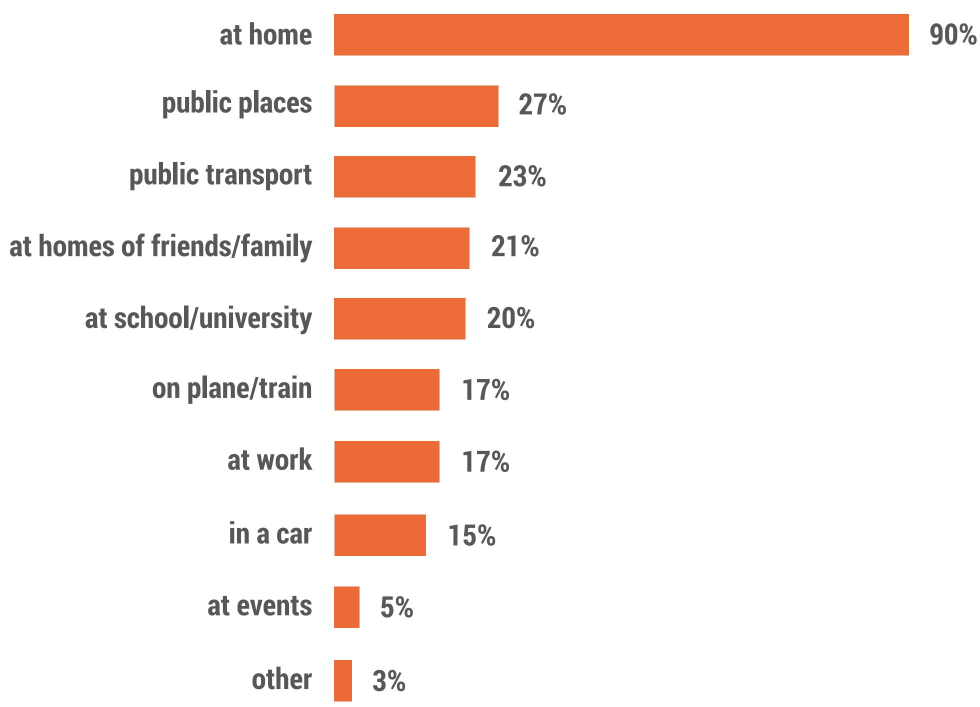
logic games	33%	52%	19%	56%	46%
arcade games	41%	32%	53%	35%	18%
card games	28%	35%	7%	23%	20%
strategy games	40%	25%	26%	21%	14%
racing games/simulators	31%	21%	50%	19%	11%
adventure games	35%	29%	46%	19%	22%
digital board games	17%	20%	5%	14%	14%
farming simulators	16%	20%	9%	11%	16%
sports games	19%	13%	53%	11%	11%
RPG	42%	19%	42%	8%	6%
MMO	24%	20%	14%	5%	7%
FPS, shooters	38%	12%	53%	5%	7%
other	5%	6%	5%	6%	5%

Source: The 'Polish Gamers Research 2016' report

2.13 WHERE DO WE PLAY?

For Polish gamers, home remains the most popular place for playing games. With a 90% result, this shows how strongly the activity of playing video games is tied into the private lives of Poles, and with the place universally associated with rest, where one can indulge in one's entertainment with a minimum of fuss. Although there is no reason to suspect that this will change in the near future, we also need to look at the myriad of other places in which Polish gamers like to play. For many people, travelling around in cars or on public transport is an integral part of their daily life. On these journeys, there are periods of waiting for the journey to begin or end, and these are a great excuse to play, regardless of whether we're in a car (15%), on public transport (23%), or on planes and trains (17%). Bear in mind, too, that different places allow for different kinds of games to be played. At home we can play big, full games on a PC or console, in our web-browsers on dedicated game sites or on our social networks. But when waiting at the doctor's or dentist's surgery, or at a bus stop or in a long line at the supermarket, we're more likely reach to for games and apps on our smartphones or other mobile devices. The role that availability plays when consuming electronic entertainment explains the dominance of the home as the preferred place to play, because that's where the largest selection of gaming platforms are available. On the other hand, it also shows that games are becoming increasingly more important outside of the home, especially at school and work.

Fig. 2.13 Where do we play?

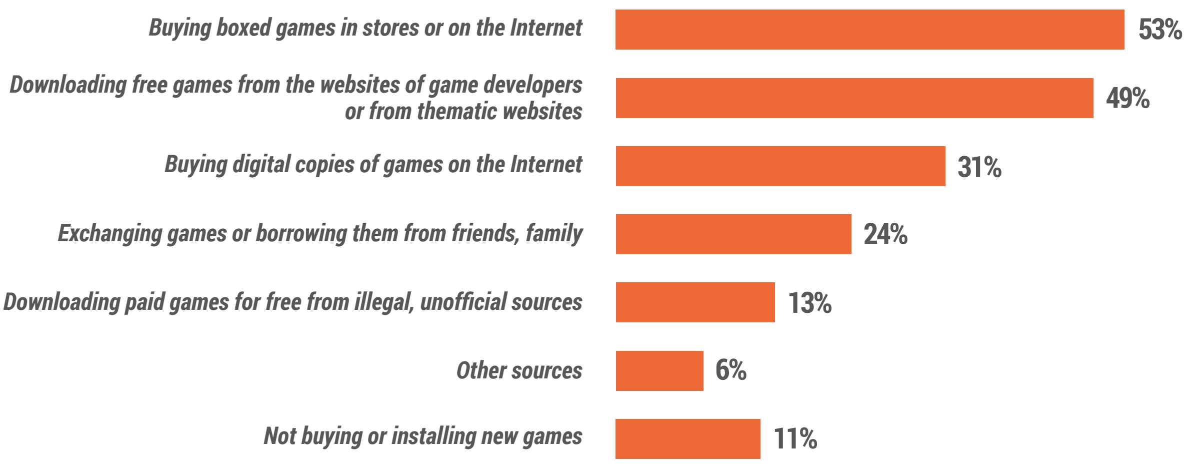


Source: The 'Polish Gamers Research 2016' report

2.14 HOW DO POLISH GAMERS GET NEW GAMES?

In the case of games installed on PCs as well as console games, a little over half of those surveyed like to buy physical (boxed) copies of their games. In contrast, 49% of those surveyed prefer downloading free games, while one in three Polish gamers buy digital versions of games online. One in every four gamers trades games, or borrows them from friends or family. 13% of those surveyed admitted to pirating games (downloading them for free, from unofficial sources). Only 6% cited other ways of acquiring new games, while 11% don't buy new games at all.

Fig. 2.14 How do Polish gamers get new games?



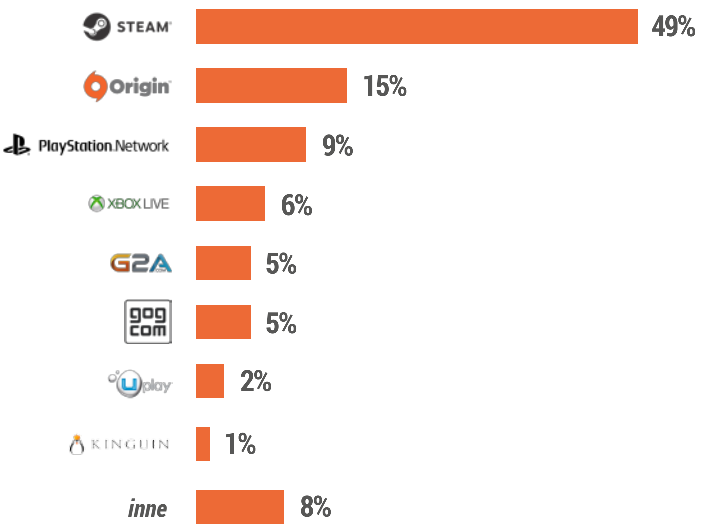
Source: The 'Polish Gamers Research 2016' report

2.15 THE POPULARITY OF DIGITAL DISTRIBUTION PLATFORMS WITH POLISH GAMERS

The sources chosen by Polish gamers for purchasing digital versions of new games, on PC and consoles, are tied to the number and availability of titles on the platform. The hardware preferences of the Polish gamer also count, and here the PC is decidedly dominant. Nearly half (49%) of those surveyed cite Steam as the platform from which they most often buy games digitally. Steam's popularity is due to the long history it already has on the Polish market, as well as its frequent sales.

Electronic Arts' Origin is the next most popular digital distribution service with Polish gamers, albeit with a much lower response rate of 15%. Next, the PlayStation Network was named by 9% of those surveyed and Xbox Live by 6%, which reflects the numbers of these consoles sold on the Polish market. Much less popular are certain independent, controversial digital re-sellers. 5% named G2A, while only 1% used Kinguin, which had the lowest response rate, just after Ubisoft's Uplay (2%).

Fig. 2.15 Digital distribution platforms

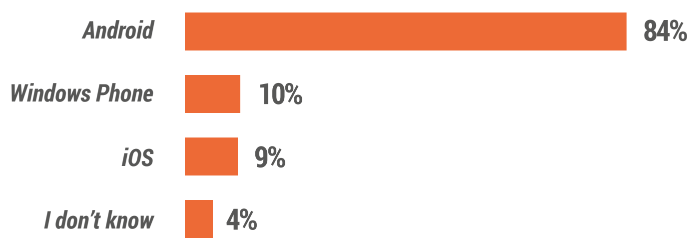


Source: The 'Polish Gamers Research 2016' report

2.16 THE POPULARITY OF MOBILE PLATFORMS WITH POLISH GAMERS

Most of those surveyed (84%) cite Android as their default mobile platform. The popularity of the Windows Phone and iOS systems is at a similar level, with 10% for the Microsoft system and 9% for Apple's own OS. A small percentage of those surveyed (4%), did not know which operating system they had on their mobile. This result isn't really surprising as it correlates with the percentage of phones with these operating systems pre-installed on them that are available on the Polish market.

Fig. 2.16 The popularity of mobile platforms



Source: The 'Polish Gamers Research 2016' report

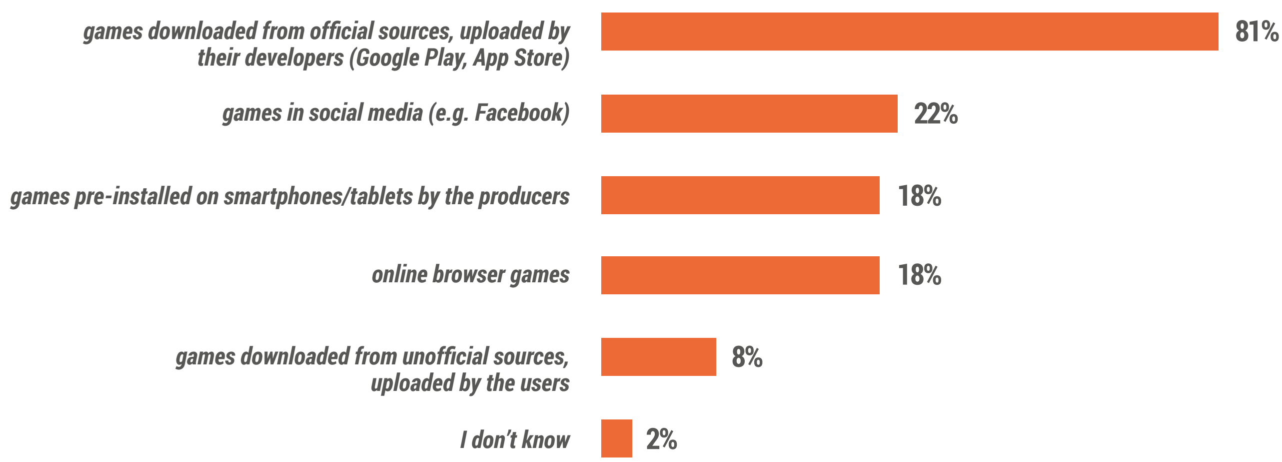
2.17 THE POPULARITY OF GAMES ON MOBILE DEVICES

81% of players downloads mobile games from application stores, such as Google Play and the Apple App Store. Only 18% of mobile game players surveyed stated that they play the games pre-installed on their phone by their carrier, while 8% further admitted to acquiring mobile games illegally.

22% of respondents play games on their social networking sites, via their mobile devices. This trend among Polish gamers corresponds with the global trend of gamers on social networking sites migrating to mobile devices.

What's interesting here is the profile of the average mobile gamer, and the challenge of monetization. Mobile gamers come from the youngest age group surveyed, 15-24, with a primary and secondary education (66%), both from the countryside and larger cities, with gender representation being fairly equal – 51% male, 49% female. 87% of mobile game players on the Android operating system. Only 13% of mobile gamers have ever bought a premium game or made a microtransaction.

Fig. 2.17 The popularity of mobile games in the context of their sources

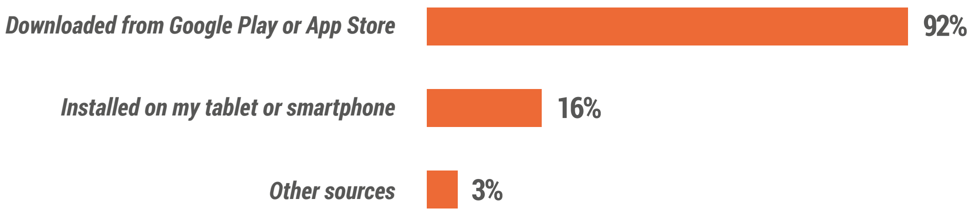


Source: The 'Polish Gamers Research 2016' report

2.18 SOURCES OF NEW GAMES ON MOBILE DEVICES

When it comes to acquiring new titles for smartphones and tablets, the majority of Polish consumers state that they download them, depending on the operating system, from Google Play or the Apple App Store (92%). Only 16% play titles pre-installed on their device, while 3% use other sources entirely.

Fig. 2.18 Sources of new games on mobile devices

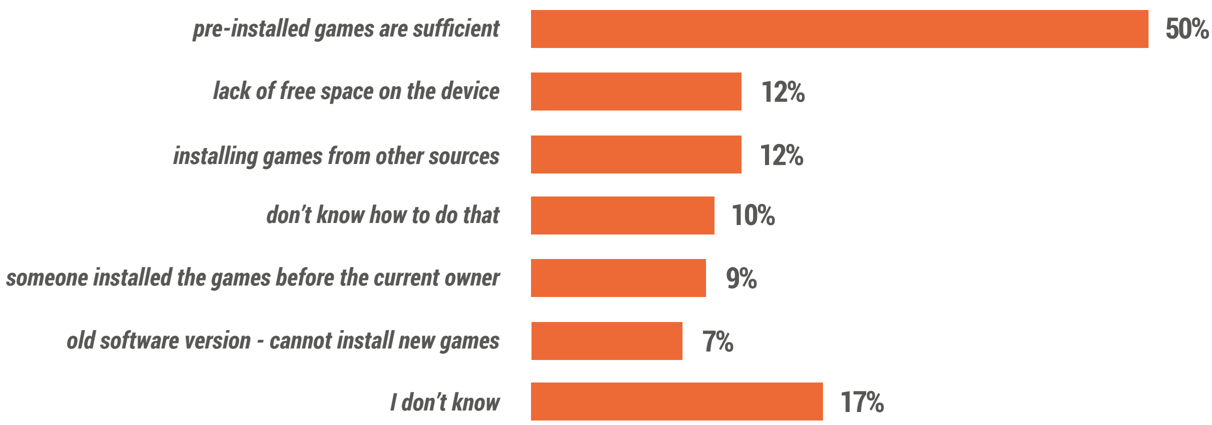


Source: The 'Polish Gamers Research 2016' report

2.19 REASONS FOR UNWILLINGNESS TO INSTALL MOBILE GAMES FROM MOBILE PLATFORMS

Although 92% of players declare that they install games from Google Play or the App Store, there is a small group of gamers that do not use digital platforms or mobile game stores. There are many reasons for this, but the main one (indicated by 50% of respondents) is a complete lack of the need to do so, while claiming that pre-installed games are perfectly sufficient. The remaining players cite the lack of free space on their devices (12% of those surveyed), or that they have other sources for acquiring new games (12% of players). One in ten players does not know how to install new games on their phone or tablet. 9% of those surveyed prefer for someone else to install them. On the other hand, 7% of Polish gamers admit that their device is too old to be able to handle the latest games.

Fig. 2.19 Reasons for unwillingness to install mobile games from mobile platforms



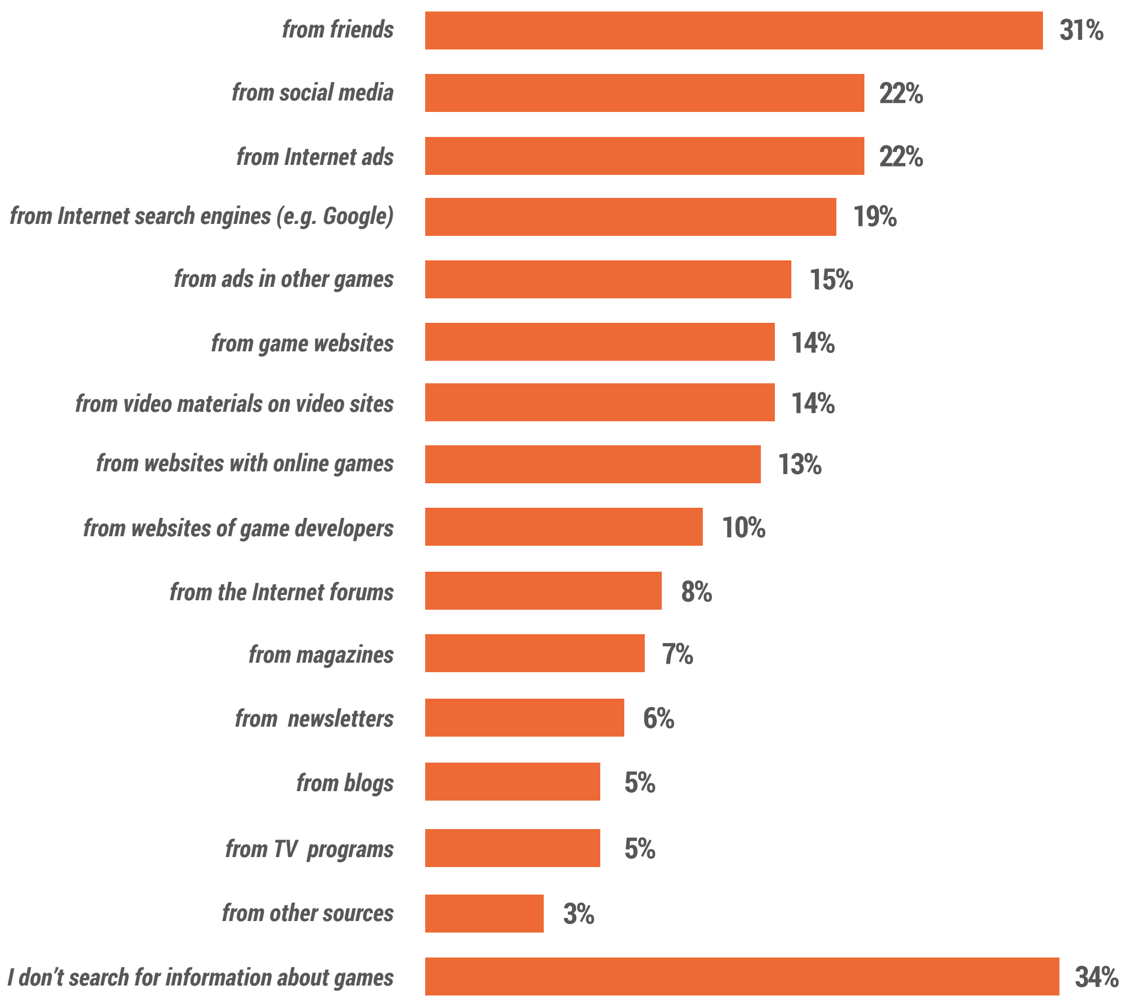
Source: The 'Polish Gamers Research 2016' report

2.20 WHERE DO POLISH GAMERS GET INFORMATION ABOUT NEW GAMES?

Although nowadays there is an absolutely huge amount of information about video games, including upcoming releases, many Polish gamers still learn about games first and foremost from friends and family (31%). Aside from the human factor, the internet dominates as the source of game news. Most of those surveyed (22%) said that they learn of upcoming games from social media and online ads. 19% of those surveyed stated that they get this information directly from the internet, such as through Google searches. Others indicate that they learn about new games thanks to in-game advertising, which is surprising considering the low popularity of this type of communication about new releases. 14% of those surveyed learn about new games from gaming websites, or video sites. A similar number of gamers get this information from sites hosting online games. One in ten surveyed learn about new games by visiting the websites of their favourite game companies, while 8% learn about them from internet forum discussions. Only 6% of those surveyed learn about games from email newsletters. The lowest score stated for the various internet sources was for blogs which are a source of information for 5% of those surveyed.

Of the traditional news sources, the most popular are video game magazines (7%), which is undoubtedly thanks to 'CD-Action', one of the oldest gaming publications in Poland. 5% of those surveyed get their video game news from gaming/tech television programmes. It's worth noting that in the latest survey, a 34% majority indicated that they don't seek out gaming news at all, and this figure correlates with the large percentage of casual gamers.

Fig. 2.20 Where do Polish gamers get information about new games?

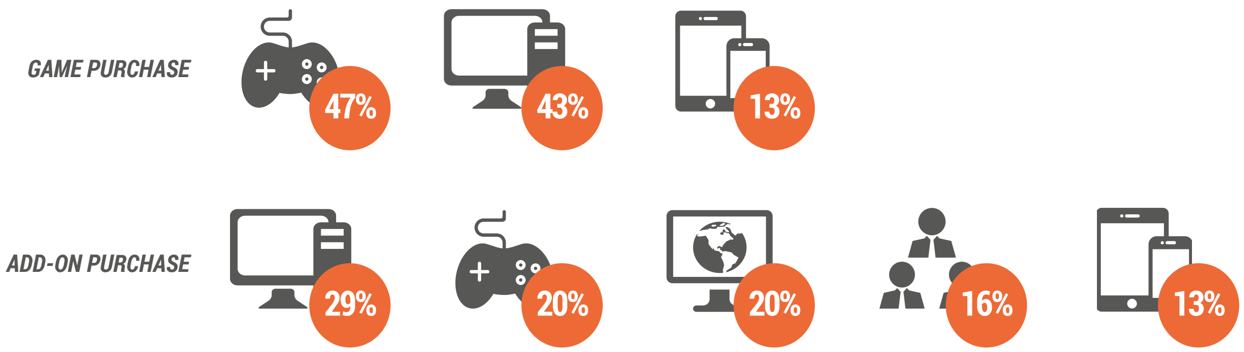


Source: The 'Polish Gamers Research 2016' report

2.21 HOW MANY GAMERS HAVE EVER SPENT MONEY ON A GAME OR ADD-ONS FOR A GAME?

According to the research for the 2016 report, 47% of those surveyed have bought a new game or paid for access to a game on a console. A little less, 43%, have bought an installable game for a desktop PC or laptop. Only 13% have ever paid for a game on a phone or a tablet.
Even fewer players admitted to ever buying add-ons for games, or making microtransactions in Free-to-Play games. 29% have bought add-ons for a PC game, 20% for a console game. 20% of those surveyed have made a microtransaction in a browser-based game, and 16% have done so in games on social networking sites. Only 13% of those surveyed have ever bought an add-on or decided to make a microtransaction in a mobile game.

Fig. 2.21 How many gamers have ever spent money on a game or add-ons?



Source: The 'Polish Gamers Research 2016' report

Photo source:
CD Projekt press materials

2.22 POLISH GAMERS' FAVOURITE PAYMENT METHODS

The favourite payment method of Polish gamers when purchasing PC and console games is with cash or credit/debit card (58% for PC games and 61% for console games) in a physical bricks-and-mortar store. The next most popular method is by bank transfer, over the internet, stated by 54% of surveyed PC gamers and 43% of console gamers. Using a credit/debit card seems to be more popular with console owners – over 40%, compared to 34% of PC users. Among the less popular methods of payment, 25% of those surveyed use scratch cards or make pre-payments on their Xbox Live or PlayStation Network accounts. Survey responses about payments in browser-based and social networking games are drastically different. In both these cases, the most popular payment method is by SMS Premium, which forms the basis for 58% of browser-based games and 53% of social network games. According to all the data, online bank transfers, credit cards and PayPal are less favoured by Polish gamers, though they are used by some.

Fig. 2.22 Favourite payment methods

credit/debit card or cash	58%	61%
online bank transfer	54%	43%
credit or debit card	34%	40%
scratch card with acceptance	9%	n.d.
Xbox Live/PSN prepayment	n.d.	25%
other	12%	10%
I don't remember	3%	2%

payment with SMS	58%	53%
online bank transfer	34%	26%
credit or debit card	27%	20%
PayPal	24%	29%
dedicated payment site (e.g. Euro-sponges[22])	n.d.	16%
other	8%	n.d.
I don't remember	2%	7%

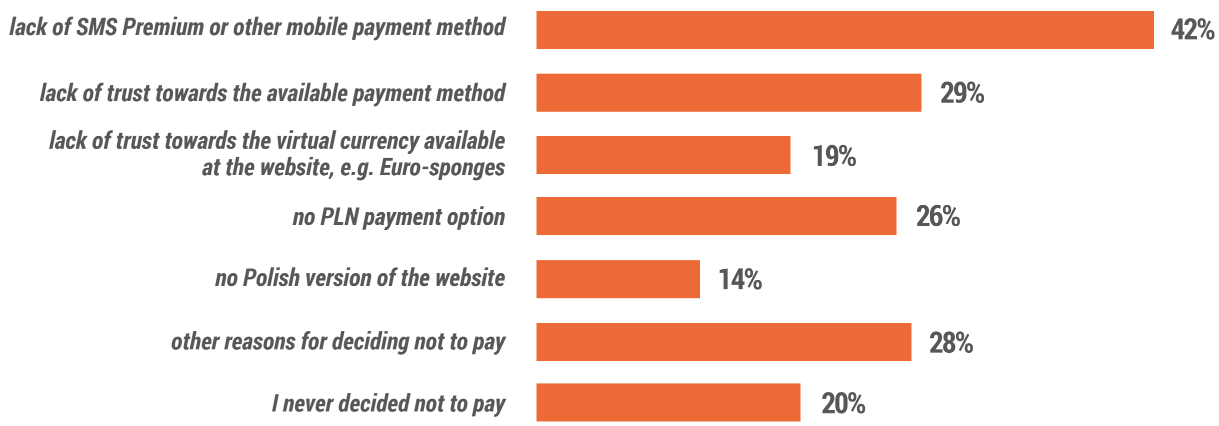
Source: The 'Polish Gamers Research 2016' report

[22] **Euro-sponges or EGB** – a virtual currency used to purchase paid options in games and other paid products, among others, at NK.pl and Gameplanet.onet.pl

2.23 WHY DO GAMERS NOT PAY FOR THEIR GAMES?

80% of all gamers surveyed who thought about spending money in an online game eventually decided not to. There are three main reasons for this decision. The most common is that their game lacked their preferred payment method (42%), usually SMS Premium. The next reason is a lack of trust in the payment methods that were available (29%), or the publisher's own/in-game currency (19%). The last factor is poor Polish localization of the transaction process, i.e. the lack of a Polish zloty option, or poor/missing Polish translation of the payment terms. These are the same reasons that were stated for games on social networking sites too. The lack of an SMS Premium option (36%) or other familiar, trusted payment methods (28%), is the main reason players decide not to make in-game payment options. As above, a lack of trust and inadequate localization of the relevant financial information all led to lower profits than could have been made: 7 out of 10 Polish gamers surveyed ultimately made the decision to not go through with their microtransactions.

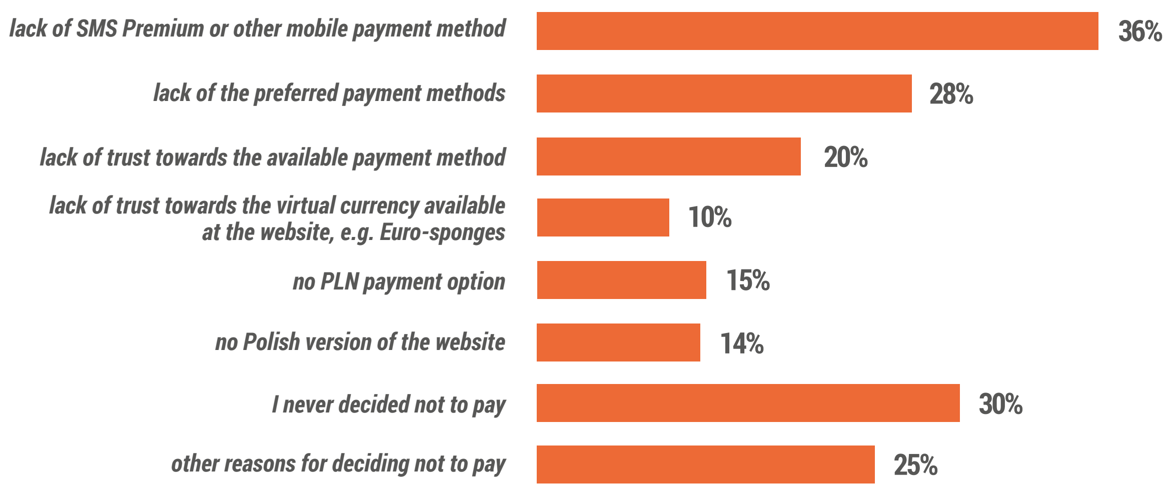
Fig. 2.23 The reasons for deciding not to make payments online



Source: The 'Polish Gamers Research 2016' report

2.24 THE REASONS FOR DECIDING NOT TO MAKE PAYMENTS ONLINE IN SOCIAL MEDIA

Fig. 2.24 The reasons for deciding not to make payments online in social media



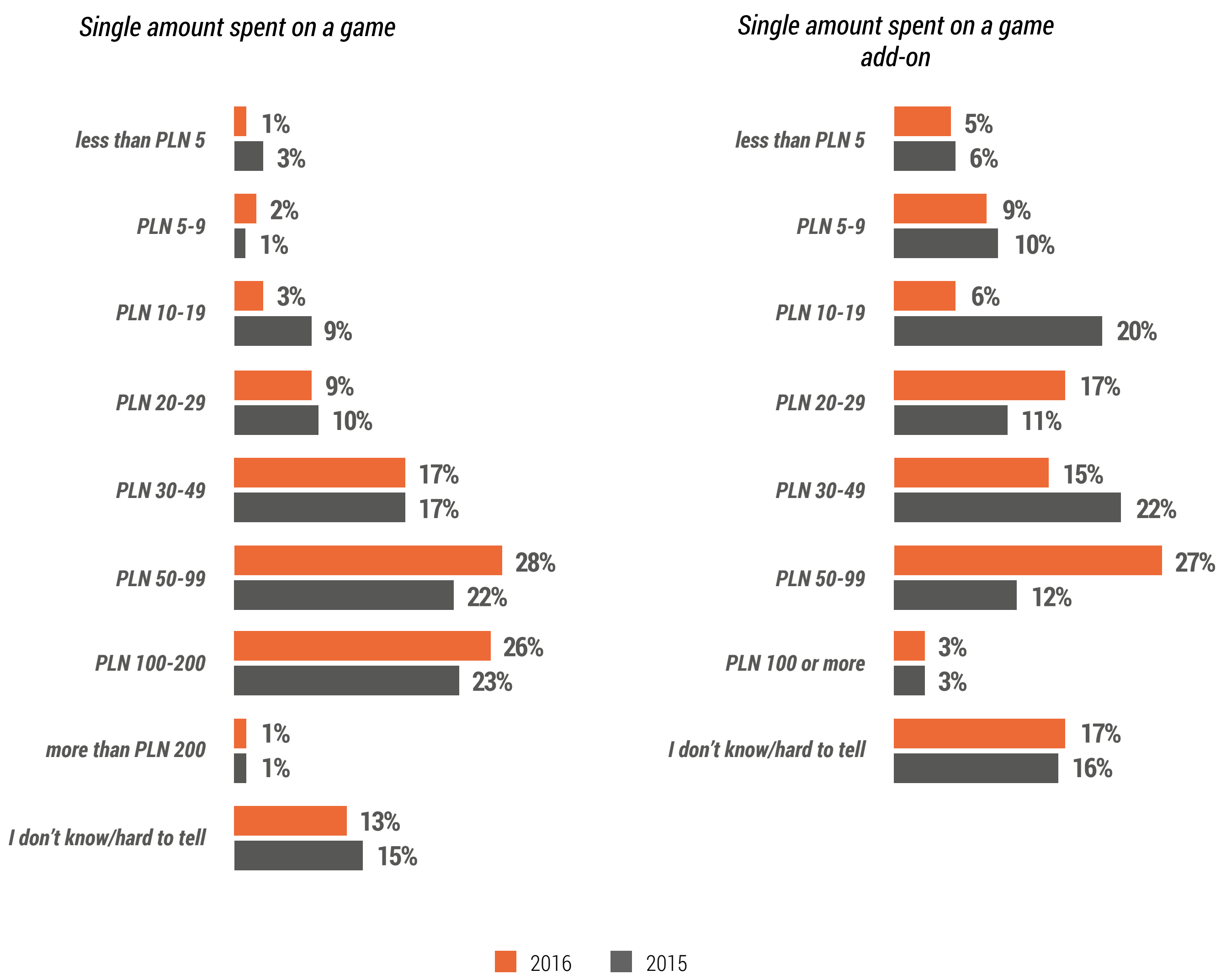
Source: The 'Polish Gamers Research 2016' report

2.25 AVERAGE AMOUNTS SPENT ON FULL GAMES INSTALLED ON PC

There has been a significant drop in the money Polish gamers spend on games costing PLN 10-19. Those surveyed spent more of their money on games priced PLN 50 to 99, as well as in the PLN 100-200 price range. This could indicate that Polish gamers are able to actually spend increasingly more on games.

A similar trend can be observed when it comes to DLC and add-ons – interest in game expansions costing PLN 10-20 and PLN 30-49 has visibly dropped, with a clear increase in favour of those in the PLN 50-99 price range. We can assume that this is also connected with the increasing retail prices of DLC, game expansions and add-ons.

Fig. 2.25 Average amounts spent on full games installed on PC



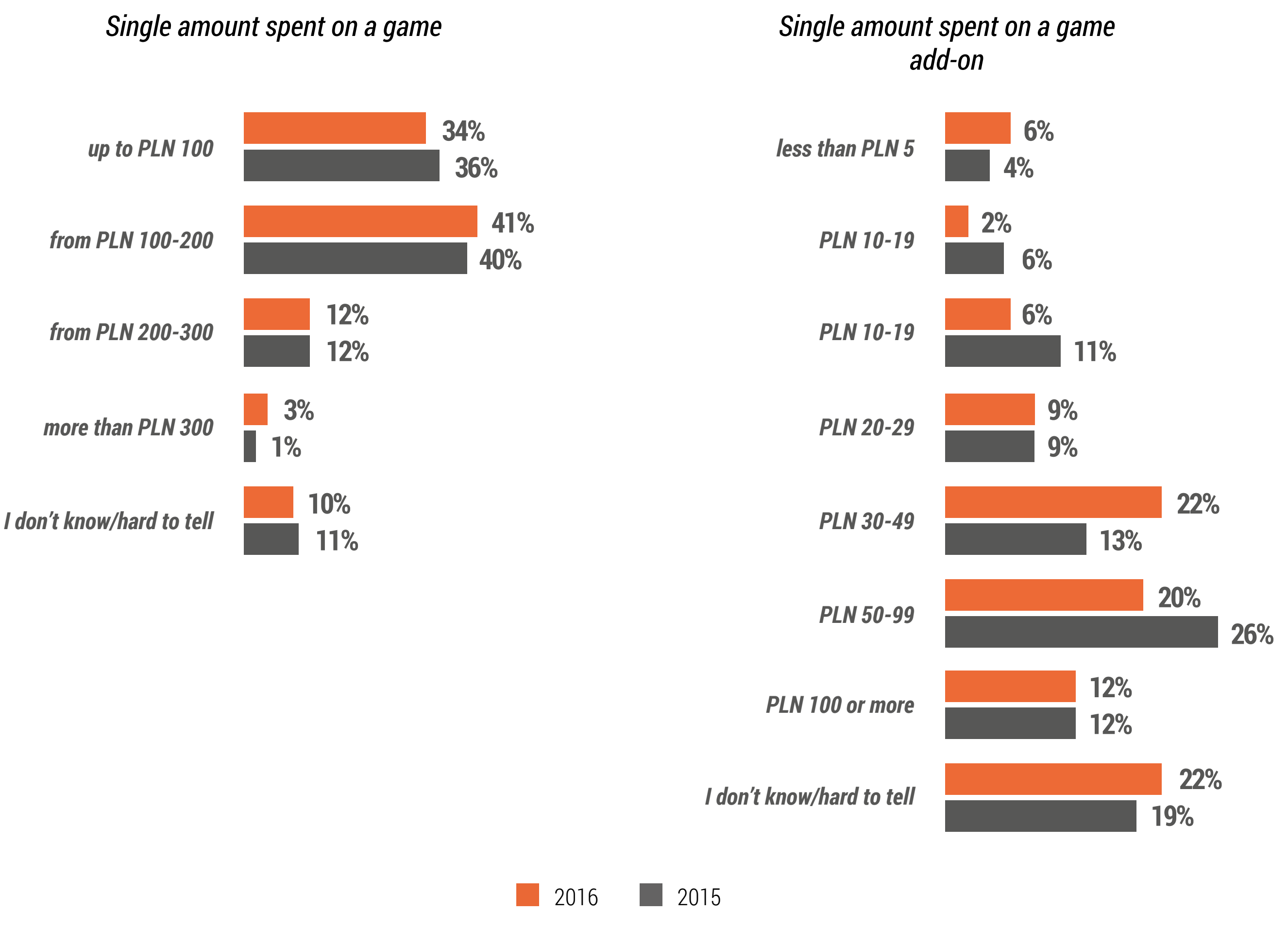
Source: The 'Polish Gamers Research' report, 2015–2016

2.26 AVERAGE AMOUNTS SPENT ON CONSOLE GAMES

In terms of one-time payments, not much has changed here, with the latest trends being similar to those of 2015. The price of console games hasn't changed in recent years, and neither has the number of games released every year.

However, significant changes can be observed in the purchase of DLC and add-ons for console games, for which there has been a 7% increase in the PLN 30-49 price range. Meanwhile, the opposite trend is visible in the PLN 50-99 add-ons price range – a 6% decrease compared to 2015. This indicates the tendency of those surveyed to spend money on game add-ons more often, but in smaller amounts. It's worth noting that DLC for console games usually falls within the PLN 30-49 price range, which means that Polish gamers seem willing to pay for them more often – that price point seems to be an easier psychological barrier to overcome than the PLN 50-99 range.

Fig. 2.26 Average amounts spent on console games



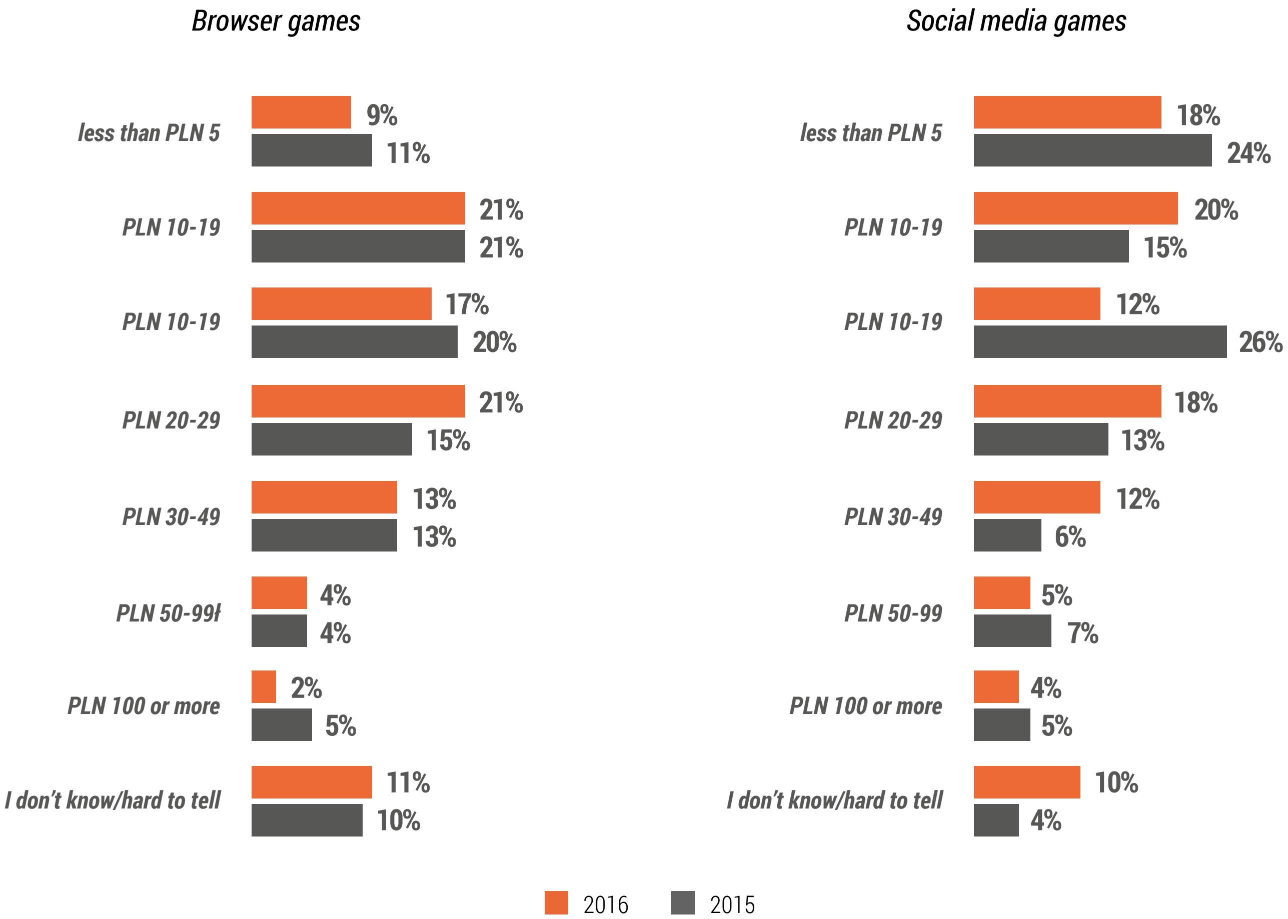
Source: The 'Polish Gamers Research' report, 2015–2016

2.27 AVERAGE AMOUNTS SPENT ON BROWSER AND SOCIAL MEDIA GAMES

In 2016, those surveyed spent the most money in the PLN 5-9 and PLN 20-29 price ranges. In the latter case, this represents a significant increase of 6% on the preceding year. In contrast, a small decrease of 3% can be seen in the PLN 10-19 range. Similarly, the PLN 100+ category also experienced a 3% decrease. This could indicate that players of browser games also prefer to spend smaller amounts, but more often.

An opposite trend is observable in games hosted on social networking sites, for which there has been a 14% drop in money spent within the PLN 10-19 price range and a 6% decrease in payments over PLN 5. However, there has been a visible increase in payments within the PLN 20-29 and PLN 30-49 price ranges. This could be because of the rising prices of microtransactions in these types of games.

Fig. 2.27 Average amounts spent on browser and social media games



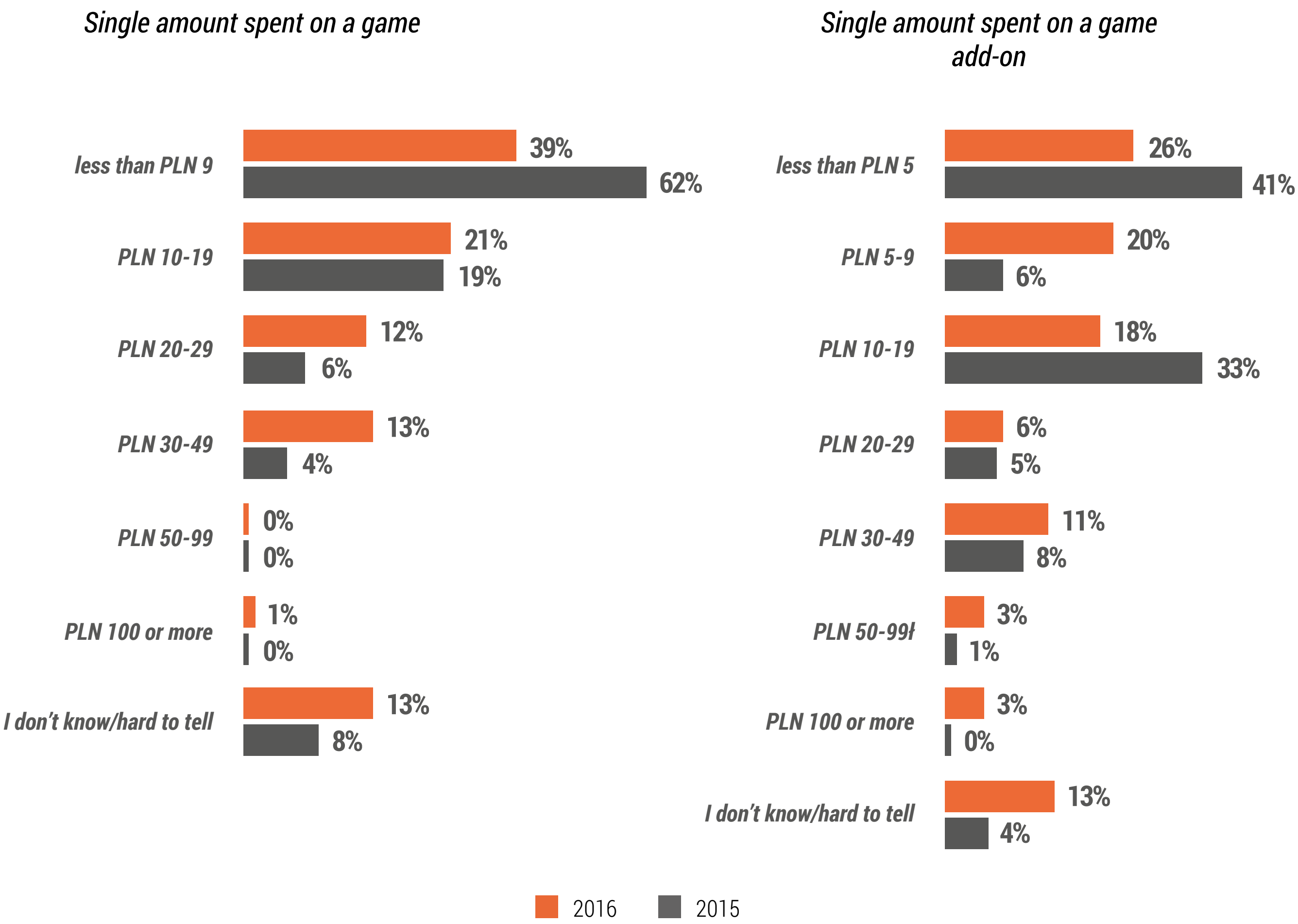
Source: The 'Polish Gamers Research' report, 2015–2016

2.28 AVERAGE AMOUNTS SPENT ON MOBILE GAMES

In 2016, 39% of the Polish gamers surveyed stated that they had spent less than PLN 9 in one transaction. A year earlier, in 2015, that number was 62%. Increases in the PLN 10-19, PLN 20-29 and PLN 30-49 price ranges clearly indicate that players are spending more and more in their mobile games.

Trends have greatly changed in terms of add-ons and DLC for mobile games, with Visible drops each year are visible in the PLN 10–19 price range, as well as below PLN 5. The 20% of players paying PLN 5–9 represents a 14% increase on 2015.

Fig. 2.28 Average amounts spent on mobile games

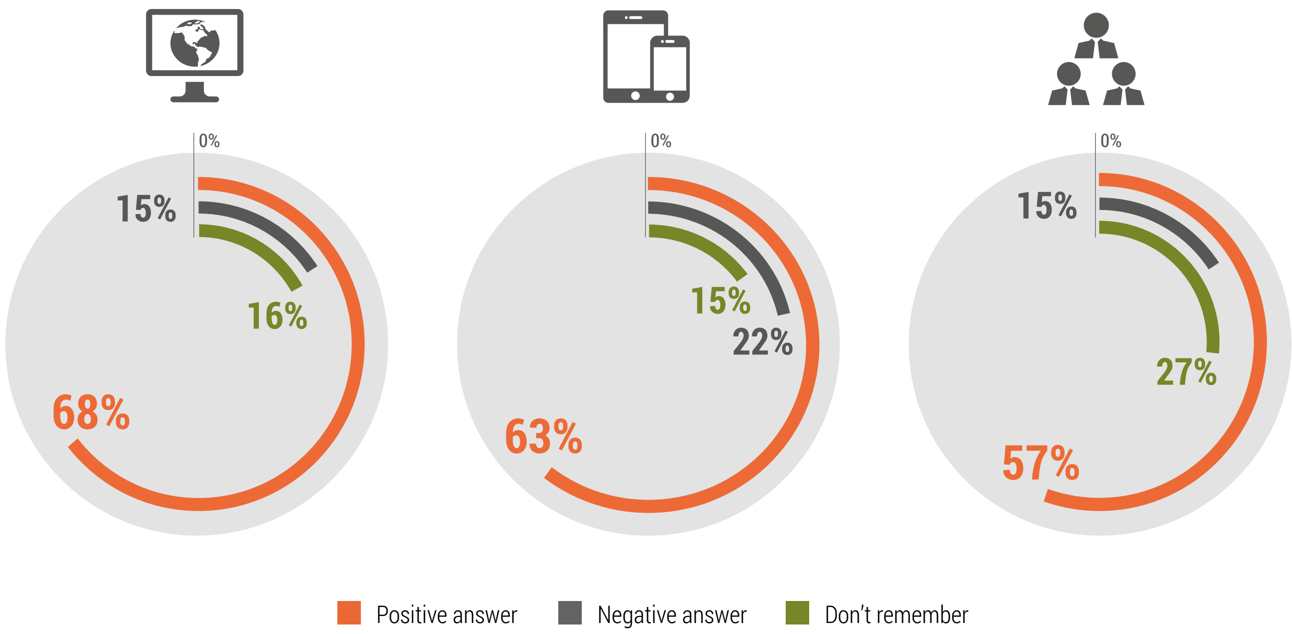


Source: The 'Polish Gamers Research' report, 2015–2016

2.29 WHY DON'T POLISH GAMERS REGISTER ACCOUNTS FOR THEIR GAMES?

Browser games are dealing with a conversion problem – 68% of those surveyed never registered an account for their games. Only 15% said that they had. This shows how important it is to have easily accessible information, localised for Polish gamers, so as not to scare off new, potential players. This is also true of games on mobile devices and social media, though to a lesser extent (63% and 57% respectively). This could be the result of the fact that accounts for these kinds of games can be made through existing accounts – Google Play, Facebook, Twitter and so on. In these cases, however, there is an additional issue of privacy – which data does the game get in the process, and how is it used?

Fig. 2.29 What is the percentage of gamers who ever decided not to register in a game?



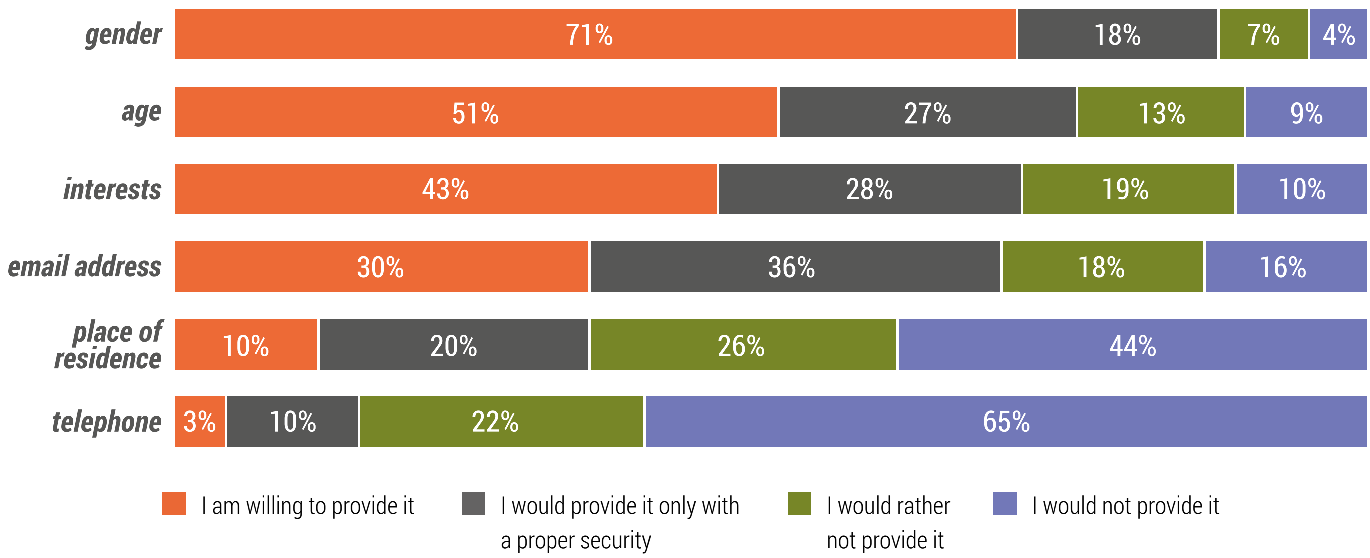
Source: The 'Polish Gamers Research 2016' report

2.30 WHAT INFORMATION WILL PLAYERS WILLINGLY PROVIDE WHEN REGISTERING GAME ACCOUNTS?

Gamers value their privacy and protection their personal data very closely. Their most highly-guarded information is their phone number – 87% of those surveyed would not provide this information, of which 65% said they would never divulge it. Meanwhile, sex, age, personal interests and email address are not as closely guarded – 71% of those surveyed would willingly reveal their sex, 51% their age and 43% their interests. 30% would provide their email address, while 36% would provide it given a strong enough motivation to play.

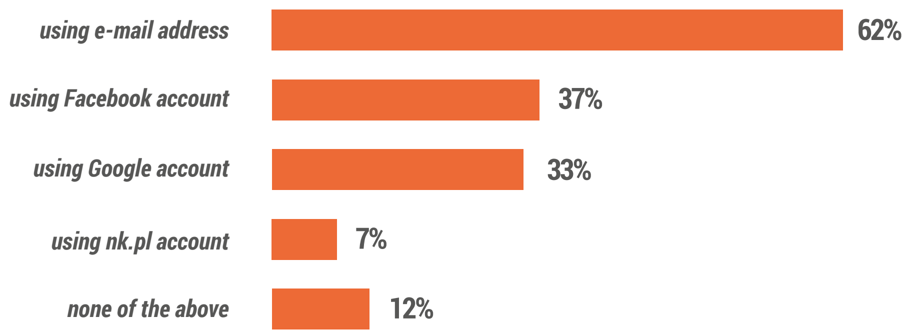
The most commonly accepted means of registration is the email address – 62% of those surveyed use theirs to register accounts for their games. 37% of users are happy registering through their Facebook account, and 33% are willing to use their Google account. Only 7% would use their nk.pl account. Interestingly, over 10% of people surveyed would not use any of the given registration options.

Fig. 2.30 Data provided by the gamers during registration



Source: The 'Polish Gamers Research 2016' report

Fig. 2.31 Acceptable registration methods in online games

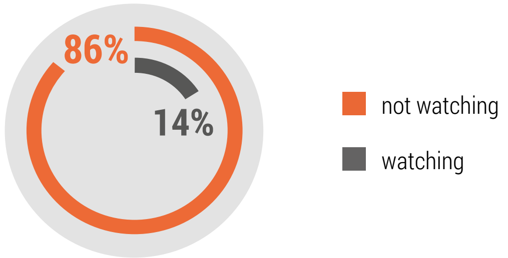


Source: The 'Polish Gamers Research 2016' report

2.31 ARE POLISH GAMERS INTERESTED IN ESPORTS?

Among Polish gamers, only 14% confirmed watching eSports. Half of these 14% enjoy watching live eSports broadcasts. The other half make use of so--called Video on Demand websites to watch eSports matches. eSports are a new trend on the Polish market, and we can expect awareness of them to spread among Polish gamers in the coming years.

Fig. 2.32 Interest of gamers in eSports

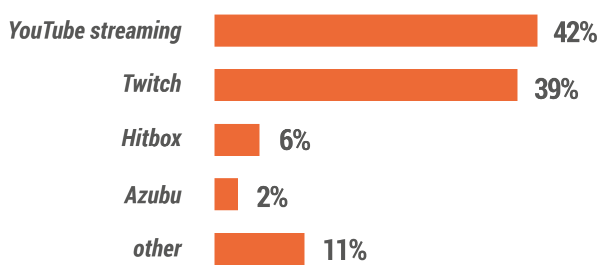


Source: The 'Polish Gamers Research 2016' report

2.32 THE POPULARITY OF THE DIFFERENT MEANS OF WATCHING ESPORTS

Live streaming is dominated by two platforms – YouTube and Twitch. In 2016, YouTube surpassed Twitch in popularity by 3% (42% to 39%). Other services, such as Hitbox (6%) and Azubu (2%), remain a niche, although it should be said that at the time of this report's writing, Hitbox had been shut down. Hitbox was acquired by Azubu in January of 2017, and since May traffic to the site was being re-directed to smashcast.tv. But when the research was being conducted in 2016, Hitbox still existed on the market and gamers were citing it in their responses.

Fig. 2.33 Popular platforms



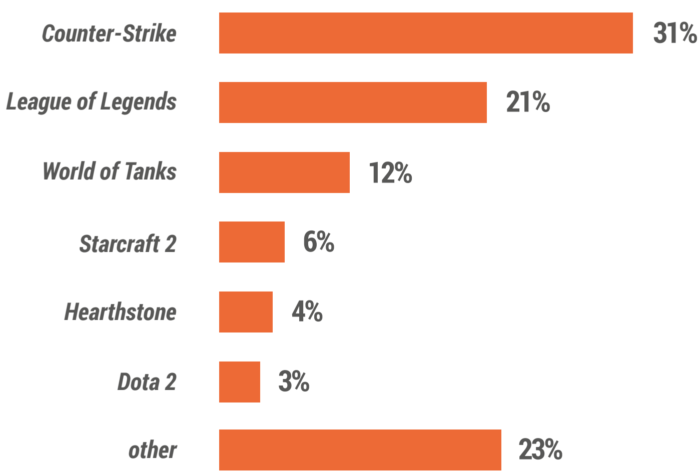
Source: The 'Polish Gamers Research 2016' report

2.33 THE MOST POPULAR ESPORTS GAMES IN POLAND

The most popular eSports game according to the respondents from 2016 was ***Counter-Strike: Global Offensive*** (game genre: First Person Shooter), developed by Valve. It was followed by ***League of Legends*** (game genre: Multiplayer Online Battle Arena) developed by Riot Games.

Online multi-player tank simulator ***World of Tanks***, by Belarusian studio Wargaming.net, is the third most popular eSports game with Polish gamers. This happens to correlate with the level of involvement and number of Polish players in the game.

Fig. 2.34 The most popular eSports games in Poland



Source: The 'Polish Gamers Research 2016' report

SECTION 3
PROFILE OF THE POLISH GAMEDEV

3.1 BUSINESS CHARACTERISTICS

Although the Polish video game industry has its beginnings as far back as the last few decades of the 20th century, it is only in the last few years that it's really bloomed – the European Games Developer Federation estimates Poland's 2016 video game sales at around EUR 300 m. Poland has begun seeing success in nearly every segment of the market, from small independent titles to big-budget releases. The most well-known Polish brand to have gained unprecedented popularity abroad is, of course, the ***Witcher*** series. All three instalments in this series, based on Andrzej Sapkowski's books, have garnered very good reviews and have met great commercial success. Together, the three titles have sold a total of 25 million copies, with the most spectacular success being the third instalment, 2015's ***The Witcher 3: Wild Hunt.*** The game, developed by CD PROJEKT RED, has received more than 250 Game of the Year awards, becoming one of the most highly-awarded productions in the history of interactive entertainment.

Nevertheless, the Polish video game industry isn't relying on ***The Witcher*** alone. In addition to other popular big-budget titles, such as Techland's ***Dying Light***, we should also mention some of the independent successes, such as ***This War of Mine***, ***SUPERHOT*** and ***60 seconds***. Polish developers are also doing well on the casual and mobile markets, where the number of copies that need to be sold to make back development costs is much lower than with AAA titles. Moreover, Polish studios are not afraid to experiment with new forms of advertising or distribution (such as crowdfunding sites or early access programs), as well as the latest technology, such as virtual reality or photogrammetry. According to a list compiled by the Indie Games Poland association, there are currently 311 companies developing video games in Poland (as of 11/05/2017), representing firms that are still-developing and those whose productions are regularly acclaimed around the world.

3.1.1 The beginnings of the Polish video game industry

Although the fact that Poland was part of the Eastern bloc significantly delayed our acquisition of the latest technology, games were being produced in Poland even before the fall of Communism – ***Pandora's Box*** from 1986 is usually considered the first 'proper' Polish game, a text adventure developed by Marcin Borkowski. However, a lot of time still needed to pass before the more modern situation of gamers around the world being interested in Polish games. During the first few years following the fall of Communism, the hardware required for playing was very expensive for the average Pole, and software piracy became a widespread problem. Under such circumstances, it was difficult to think about developing a product that could generate interest abroad without also having to produce a huge number of copies.
Then, a breakthrough came in the first few years of the 21st century when Polish studio Techland began making a name for itself. Their self-produced 2003 game ***Chrome*** drew the attention of the western gaming press. Three years later, the Wroclaw-based developer scored an international hit again with well-made cowboy-themed shooter, ***Call of Juarez***. In the meantime, another Polish studio, People Can Fly, made a splash with a well-received FPS entitled ***Painkiller***, which was acclaimed for its fast-paced, intense gameplay and fun online multiplayer. A few years later, in 2007, two significant RPGs were released in Poland: ***Two Worlds*** by Reality Pump, and ***The Witcher*** by CD PROJEKT RED. The latter received an even better sequel four years later, with the series itself coming to represent Poland in the world of interactive entertainment, where it remains as one of the Polish industry's best ambassadors today.

3.1.2 Big-budget games

Compared to 2015, 2016 might have looked a bit empty when it comes to big-budget games. None of the big three companies underpinning this segment in Poland – CD PROJEKT RED, Techland and CI Games – released any big, new titles. Instead, the first two opted to expand their existing hit games with new content, while the third moved the release date of its highly anticipated ***Sniper: Ghost Warrior 3*** to 2017. Fortunately, Poland's 2016 AAA efforts were well represented by the Warsaw-based studio Flying Wild Hog and its largest project to date, ***Shadow Warrior 2***, which was well received by both players and critics. CD Projekt RED and Techland's expansions for their 2015 ***The Witcher 3*** and ***Dying Light*** also met with critical and commercial enthusiasm.

Among Polish developers of big-budget games, Wroclaw-based Techland has the most experience. Thanks to its successes in recent years, in addition to offices in several Polish cities, the company also set up an office in Vancouver in 2013. Techland first made a name for itself on the international scene in 2003, thanks to its FPS ***Chrome***, developed using its own proprietary engine. The company then found even greater success three years later with its western-themed shooter, ***Call of Juarez.*** That game transformed into a series, the four instalments of which have sold a total of 3 million copies. The next franchise created by Techland did even better. Released in 2011, ***Dead Island*** and ***Dead Island Riptide***, despite mixed reviews, were a commercial success, selling 7.5 million copies between them.

Photo source:
Techland press materials

Building on the experience of the ***Dead Island*** titles, which focused on fighting the living dead from a first-person perspective, the studio released ***Dying Light*** in 2015. The game received good reviews (earning an average rating on Metacritic, an international website with reviews from all around the world, at the level of 74/100), which translated into spectacular sales numbers with over 5 million copies sold. At the beginning of 2016, Techland released a meaty expansion for ***Dying Light***, entitled ***The Following***. With around 10 hours of gameplay, a large new area and the ability to drive vehicles, the expansion was also well received by critics, earning an average rating of 78/100).

CD PROJEKT RED holds a smaller but undeniably very high-quality portfolio. The studio began its venture into big-budget productions with its first project, the RPG ***The Witcher***, released in 2007. They reached a wider audience with the release of the sequel, ***Assassins of Kings***, which was nominated for various prestigious awards. But CDP RED showed what it could really do with the third instalment in the series. This last game in the trilogy, entitled ***Wild Hunt***, dominated game-of-the-year lists around the world thanks to its multi-layered story, interesting characters and phenomenally well-created world (average rating for the PC version: 93/100). CD PROJEKT RED also received acclaim for two expansions to ***The Witcher 3: Hearts of Stone*** (average rating for the PC version: 89/100), and ***Blood and Wine*** (average rating for the PC version: 92/100). ***Blood and Wine***, released in May 2016, offers dozens of additional hours of gameplay. This wealth of content resulted in it receiving an award for the best RPG of the year at the prestigious Video Game Awards, despite the fact that it was 'just' an expansion. CD PROJEKT RED also spent 2016 polishing its first free-to-play release, ***Gwent: The Witcher Card Game***, which at the time of writing is in closed beta testing.

Another Polish company developing AAA games is Warsaw-based CI Games. In 2016, the studio was focused on developing ***Sniper: Ghost Warrior 3***. Although the first two games in the series weren't particularly well received by the press (with average ratings of 55/100 and 52/100 respectively), but they were a commercial success, selling over 5.5 million copies. The third instalment is set to be the largest project in the studio's history: PLN 60 million has been allocated for its development and marketing. CI's previous hit, ***Lords of the Fallen***, a Third-Person Action RPG inspired by the popular ***Dark Souls*** series, was created with only two-thirds of that budget, but sold over 900,000 copies.

In 2016, Warsaw-based studio Flying Wild Hog joined the ranks of Polish developers producing big-budget games, with the October release of their ***Shadow Warrior 2***, a humorous FPS
drawing on both the classic titles of the genre as well as newer productions. This proved to be a winning combination, with the game garnering decent reviews (an average rating of 78/100). These positive reviews were followed by solid sales numbers: within a week of its release, ***Shadow Warrior 2*** had surpassed its predecessor by selling four times as many copies. Its commercial success and constant growth (the studio opened a second office, in Kraków, in 2015) suggest that Flying Wild Hog will remain on the big-budget game market for some time.

3.1.3 Low-budget and independent games

The decreased activity of the usual AAA studios in 2016 allowed some of the more talented independent developers to shine. Although none had such spectacular success as the Warsaw-based 11 bit studios, which won the hearts of the global media in 2014 with its moving ***This War of Mine*** (which increased the studio's earnings tenfold, to PLN 9.7 m), there are still several others worth mentioning. The beginning of the year was the most fruitful in this regard. February saw the release of ***Layers of Fear***, an intriguing horror by the Kraków-based Bloober Team, in which the player assumes the role of a painter who is going insane. The game was especially praised for its dark atmosphere and interesting artistic direction. Its creators admitted that the project has brought them record earnings, having sold a total of PLN 11.1 m, and the studio's share value rose significantly.

An innovative FPS titled ***SUPERHOT*** released several days later by independent devs Superhot Team also proved to be a great success. A prototype of the game, created in a few days for the 7DFPS competition, was so well received by players that the developers received a quarter of a million dollars on Kickstarter to create a full version. As a result, on Steam alone, the game has sold nearly half a million copies. ***60 Seconds*** from the studio Robot Gentleman continued its success on the PC market in 2016, and was also released in September on iOS.

In addition, an expansion for the aforementioned ***This War of Mine***, entitled ***The Little Ones***, was released at the beginning of 2016. Its parent game by has also been ported to the PlayStation 4 and Xbox One consoles. Another game that made its way to the PS4 console was the fascinating exploration game ***Kholat***, by IMGN.PRO. Meanwhile, development studio The Astronauts began its venture into ***Virtual Reality***. In March of 2016 it released ***The Vanishing of Ethan Carter VR***, a piece of DLC for its acclaimed 2014 adventure game of the same name.

When discussing last year's successful independent games, one should also mention ***Bound*** by the studio Plastic, created for the PlayStation 4 system. Its creator, Michał Staniszewski, won the prestigious Polityka Passport award in the digital culture category for 2016.

3.1.4 Mobile and casual games

Mobile and casual titles are generally much simpler and less technologically advanced than big-budget hits or ambitious independent projects. Nevertheless, this segment is still very popular among Polish game developers, even if the studios are not necessarily as well known by most players. For years, the dominant company here has been Artifex Mundi. Artifex Mundi has been creating games for the PC and mobile platforms for over ten years, and is considered an expert in the ***HOPA*** (***Hidden Object Puzzle Adventure***) genre. The company has dozens of titles of this type in its catalogue, though it also released the well-received RPG ***Bladebound*** for smartphones last year.

Another developer worth mentioning is Vivid Games, a studio that creates games that are visually very well done and technologically advanced. Vivid had no new releases last year, but its current portfolio, with ***Real Boxing*** at the forefront, and its recently-started publishing venture, have both helped it reach over PLN 3 m in net profit. But the most spectacular success among smartphone titles in recent years goes to T-Bull. This Wroclaw-based studio has released over 150 games in the last few years, mostly using the free-to-play model, which have been downloaded 215 million times. Currently, the developer's games attract over 300,000 players every day. The reach of T-Bull's games has translated into great profit, with T-Bull earning over PLN 4.8 m in 2016.

Titles released by Digital Melody are also popular: their biggest hit in 2014, ***Timberman***, has been downloaded over 35 million times. Other titles, including ***Soccer Hit*** and ***Surfingers*** are also doing well, with both having been downloaded several hundred thousand times from Google Play alone. Other Polish mobile games that have proved to be global hits are the logic game ***Blocks***, the strategy game ***Crush Your Enemies***, the humorous ***60 seconds***, and ***Oh… Sir! The Insult Simulator***. The latter two games have also made their way to the PC via Steam. It's important to note that many of the Polish developers in this segment release their games for free, earning money mainly through microtransactions or in-game ads.

3.1.5 Summary

Over the course of a dozen years, Poland has transformed from a country in which games were just being discovered, into a small hit factory – and not only for big-budget games, but also smaller hits that find popularity in niche markets. The Polish video games industry is now enjoying a time of prosperity, with 311 companies producing games and success achieved by many more than just the two or three largest companies. It can also be seen that Polish developers are unafraid to experiment with the latest technology, such as virtual reality. They also seem to understand the expectations of players, and can use this knowledge to create positive PR. Examples of this include CDP RED's decision not to use anti-piracy measures in ***The Witcher 3***, 11 bit studios' work with charity organizations on ***This War of Mine***, and Techland and CDP RED's policy of releasing large expansions rich in new content.

Moreover, Polish developers are well aware of the value of the brands they are creating, and are able to capitalise on them. The success and recognition of games such as ***SUPERHOT*** and ***This War of Mine*** raised money on Kickstarter for follow-up projects, such as a card game based on the former and a board game based on the latter. Meanwhile, CD PROJEKT RED is close to finishing development on ***Gwent: The Witcher Card Game***, a free-to-play ***Collectible Card Game*** based on the ***Witcher*** series. So the largest studios are building their brands on solid foundations, showing that they know their market well. The smaller companies, on the other hand, are still experimenting, searching for areas to specialize in. Even so, these low-budget, independent made-in-Poland projects are becoming increasingly popular abroad. As such, Polish developers are succeeding in all segments of the video game industry, and for now there are no signs that this period of growth will be ending any time soon.

One clear success for the Polish game development community as a whole has been the creation of industry associations working in its best interests. These include the Polish Games Association and the Indie Games Poland Foundation, both created in 2015.

The Polish Games Association brings together the biggest video game developers in Poland, including CD PROJEKT, Techland, CI Games, Vivid Games, The Farm 51, Artifex Mundi, People Can Fly, 11 bit studios and Flying Wild Hog. Working closely with the National Center for Research and Development, it coordinates the work of the GameINN Sector Programme, which stimulates research and development in video game production. The Association's goals include developing the Polish video games sector and increasing its competitiveness in the global arena.

The Indie Games Poland Foundation, on the other hand, works for the benefit of the most numerous Polish game developers, i.e. the micro and small companies, which have great growth potential. Working with the Ministry of Foreign Affairs, the Ministry of Culture and National Heritage as well as the Ministry of Development, the foundation actively promotes Polish companies at the largest events in Poland, including the Poznań Game Arena and the Game Industry Conference, and abroad at PAX, Gamescom, etc. The foundation also organizes conferences and seminars to broaden the knowledge of both game developers as well as various entities promoting video games as a fully-fledged part of cultural life.

It's important to note that in May 2016, both institutions agreed on a set of common rules for representing Polish game developers to third-party organizations. In November 2016, they also determined and published a uniform codex of Good Practice for rating video games in Poland.

Photo source:
CD Projekt press materials

3.2 POLISH GAME DEVELOPERS ON THE WARSAW STOCK EXCHANGE

The Polish video games industry has been growing systematically in recent years. The achievements – both financial and artistic – of studios such as CD PROJEKT RED, Techland and 11 bit studios, have introduced Polish developers to the whole world. Some of these are companies currently listed on the Warsaw Stock Exchange (WSE). Of the largest Polish companies, only Techland and Flying Wild Hog are not traded. The combined worth of the listed companies is nearly PLN 9.5 bn, with their combined earnings for last year reaching PLN 270 m.

There are thirteen listed companies in total, from CD Projekt, the capitalization of which exceeded PLN 7 bn in February 2017, to several start-up studios. The trends are optimistic too: of all the listed companies described in this report, only Artifex Mundi saw a decrease in its market value last year. These successes also translate into profit for the country – in 2016 alone, Polish developers on the WSE brought in over PLN 67 m in taxes for the Polish treasury. It's important to remember, however, that the value of the companies is decided by many factors, any of which can suddenly change the value of the shares, or the attitude of the company's investors. One new release, whether successful or not, can greatly affect a company's position on the stock market. A great example here is ***Sniper: Ghost Warrior 3***, the premiere of which in April 2017 shook the entire video games segment on the stock market for several days.

Table 3.1 Selected financial data of Polish video game developers listed on the Warsaw Stock Exchange (in PLN m)

	2016 earnings	2015 earnings	% change	2016 profits	2015 profits	% change
CD PROJEKT	583,903	798,014	-26,83	250,514	342,430	-26,84
11 bit studios	27,016	23,170	16,60	12,929	11,566	11,78
CI Games	24,231	25,019	-3,15	-16,240	-7,860	-106,62
Artifex Mundi	22,696	17,480	29,84	5,587	7,044	-20,68
Bloober Team	16,688	11,657	43,16	7,707	3,318	132,28
Vivid Games	22,753	17,316	31,40	2,996	7,587	-60,51
PlayWay	12,578	10,381	21,16	5,415	5,927	-8,64
T-Bull	13,596	6,818	99,41	4,995	1,398	257,30
The Farm 51 Group	6,587	4,916	33,99	-4,415	-3,467	-27,34
iFun4all	0,957	0,422	126,78	-0,252	-0,025	-908,00
QubicGames	0,808	0,804	0,50	-0,794	0,085	-1034,12
Jujubee	0,664	0,806	-17,62	-0,352	0,118	-398,31
Forever Entertainment	1,270	0,918	38,34	-0,976	-0,460	-112,17
TOTAL	**733,747**	**917,721**	**-20,05**	**267,114**	**367,661**	**-27,35**

Source: own study based on the annual financial accounts of the companies

3.2.1 CD PROJEKT

Although the best known Polish developer's only 2016 release was their ***Blood and Wine*** expansion for ***The Witcher 3: Wild Hunt***, it still did well financially. The company saw revenue of PLN 584 m, and a quarter of a million in net profit. These results are not as impressive as they were in 2015, when The Witcher 3 was released and the reviews were very favourable – CD PROJEKT earned nearly PLN 800 m then, and 342 m in net profit. However, the lower numbers are understandable considering the fact that the company's only 2016 release was the aforementioned ***Wild Hunt*** expansion.

In 2016, the studio spent PLN 56 m developing other projects – most importantly, ***Gwent: The Witcher Card Game,*** and ***Cyberpunk 2077***, which doesn't yet have a release date. CD PROJEKT significantly surpasses other video game companies traded on the stock exchange in terms of value, with the Warsaw-based studio being worth PLN 5 bn in December. This is mainly thanks to the success of its ***Witcher*** series, which has sold 25 million copies so far. But the company has other projects as well, including the GOG.com digital game distribution platform.

Results in numbers:

» **Market value in December 2016: PLN 5,017.5 m**
» **Market value in December 2015: PLN 2,103.1 m**
» **Revenue from sales in 2016: PLN 583.9 m**
» **Revenue from sales in 2015: PLN 798 m**
» **Profits in 2016: PLN 250 m**
» **Profits in 2015: PLN 342.4 m**

3.2.2 11 bit studios

The breakthrough moment for the Warsaw-based 11 bit studios was the release of a game that combined strategy with survival, ***This War of Mine***, in October 2014. The game received very good reviews in the press, and the company's shares rose by several hundred percent in just a few weeks. Two years have passed since then, but the studio is still doing well on the stock exchange. In 2016, it saw PLN 27 m in earnings from sales, and nearly PLN 13 m in net profit, an improvement on its 2015 numbers (23 m and 11.5 m respectively). This might seem surprising, since the company did not release any new games in that period and even closed a failed distribution platform, GamesRepublic. Meanwhile, 11 bit studios is still being bolstered financially by the sales of ***This War of Mine***, which reached the Chinese market in 2016 and was ported to two new platforms, PlayStation 4 and Xbox One. The company is currently the second largest Polish video game developer in terms of market value, surpassed only by CD PROJEKT. In December 2016, 11 bit studios was valued at PLN 325.5 m, and last year allocated PLN 5.4 m to the development of new projects.

Results in numbers:

» **Market value in December 2016: PLN 325.5 m**
» **Market value in December 2015: PLN 156.5 m**
» **Revenue from sales in 2016: PLN 27 m**
» **Revenue from sales in 2015: PLN 23.2 m**
» **Profits in 2016: PLN 12.9 m**
» **Profits in 2015: PLN 11.6 m**

3.2.3 CI Games

In December 2016, CI Games was valued at PLN 390.2 m. Until the end of last year, it was the second most important Polish video games developer in terms of market value, despite not having made a profit for the last two years. In 2015, CI Games lost nearly PLN 8 m, increasing to 16.2 m in 2016. This is explained by the fact that in that time, the company did not release any new titles, but was instead hard at work on ***Sniper: Ghost Warrior 3,*** which had a budget of PLN 60 m – the largest in CI Games' history.

Results in numbers:

» **Market value in December 2016: PLN 390.2 m**
» **Market value in December 2015: PLN 287.9 m**
» **Revenue from sales in 2016: PLN 24.2 m**
» **Revenue from sales in 2015: PLN 25 m**
» **Profits in 2016: PLN -16.2 m**
» **Profits in 2015: PLN -7.9 m**

3.2.4 PlayWay

The Warsaw-based company PlayWay mainly produces simulators, which are very popular with casual players, with ***Car Mechanic Simulator*** at the forefront. In December 2016, PlayWay was the fourth most highly-valued Polish video game developer, estimated to be worth PLN 396 million – not much less than the slightly higher-valued CI Games. In 2016, it achieved greater sales revenue than in 2015 (PLN 12.6 m compared to 10.4 m), but with decreasing profits – 5.4 m in 2016 compared to 5.9 m the year before.

Results in numbers:

» **Market value in December 2016: PLN 327.7 m**
» **Market value in December 2015: no data**
» **Revenue from sales in 2016: PLN 12.6 m**
» **Revenue from sales in 2015: PLN 10.4 m**
» **Profits in 2016: PLN 5.4 m**
» **Profits in 2015: PLN 5.9 m**

3.2.5 Artifex Mundi

Katowice-based Artifex Mundi is one of the largest Polish developers, and specialises in casual games that generate less revenue but are also less financially demanding. It entered the stock exchange in November, and since then its stock has steadily declined. Its market value in December stood at PLN 215 m. In 2016, the company's revenue increased to PLN 22 million, thanks to the release of 16 new games, but net profit for the period decreased from 2015's 7 m to 5.6 m. Still, Artifex Mundi has over 40 titles in its portfolio, which guarantee it a steady flow of income.

Results in numbers:

» **Market value in December 2016: PLN 236.3 m**
» **Market value in December 2015: no data**
» **Revenue from sales in 2016: PLN 22.7 m**
» **Revenue from sales in 2015: PLN 17.5 m**
» **Profits in 2016: PLN 5.6 m**
» **Profits in 2015: PLN 7 m**

3.2.6 T-Bull

The Wroclaw-based T-Bull specializes in mobile games. It already has over 150 smartphone titles in its portfolio, mainly racing simulators and action games. These are all free-to-play games, with optional microtransactions available in-game. The developer also gains revenue from ads. By the end of last year, T-Bull's games had been downloaded 200 million times. As a result, the company's revenue reached PLN 13.6 m in 2016, more than doubling its 2015 earnings of 3.9 m. Its net profit also increased to 4.8 m. In December of last year, T-bull was valued at PLN 187.8 m.

Results in numbers:

» **Market value in December 2016: PLN 187.8 m**
» **Market value in December 2015: no data**
» **Revenue from sales in 2016: PLN 13.6 m**
» **Revenue from sales in 2015: PLN 6.8 m**
» **Profits in 2016: PLN 4.9 m**
» **Profits in 2015: PLN 1.4 m**

3.2.7 Bloober Team

This Kraków-based studio changed its publishing policy in 2015, and this move yielded good financial results. In December 2016, the company was estimated to be worth over PLN 140 m, while in December of 2015 it had been valued at almost a third of that, at 50.4 m. This increase is mainly thanks to the success of its horror game, ***Layers of Fear***, which gained acclaim in the foreign media and brought in record earnings for the developer, even before the game's official release, in its Early Access stage. Bloober Team's total earnings in 2016 reached PLN 16.7 m, compared to 11.7 m in 2015. They also saw PLN 7.7 m in net profit in 2016 – twice as much as in 2015. Moreover, Bloober Team went on to create its own publishing subsidiary, Feardemic, at the end of 2016.

Results in numbers:

» **Market value in December 2016: PLN 140.3 m**
» **Market value in December 2015: PLN 50.4 m**
» **Revenue from sales in 2016: PLN 16.7 m**
» **Revenue from sales in 2015: PLN 11.7 m**
» **Profits in 2016: PLN 7.7 m**
» **Profits in 2015: PLN 3.3 m**

3.2.8 Vivid Games

In 2016, Vivid Games saw a significant decrease in its market value, from 156 m in December 2015 to 106 m a year later. In 2016, its sales revenue stood at 22.8 m, compared to 17.3 m in 2015. The difference in its profits is much more visible – PLN 7.6 m in 2015, and just PLN 3 m one year later. 96% of its revenue is generated by games from the ***Real Boxing*** series, which have been downloaded 40 million times since the franchise's debut in 2012. A publishing venture started in 2015 is set to become an additional source of revenue.

Results in numbers:

» **Market value in December 2016: PLN 106.4 m**
» **Market value in December 2015: PLN 156.2 m**
» **Revenue from sales in 2016: PLN 22.8 m**
» **Revenue from sales in 2015: PLN 17.3 m**
» **Profits in 2016: PLN 3 m**
» **Profits in 2015: PLN 7.6 m**

3.2.9 The Farm 51

Although the market value of The Farm 51 is constantly on the rise (currently sitting at PLN 110 m), the company incurred losses in both 2015 and 2016. In 2015, it lost a total of PLN 3.5 m, with profits decreasing by an additional 900,000 in 2016. During this time, the company was investing in forthcoming games – *Get Even* and *World War 3*. Their financial situation was also a result of the fact that the Gliwice-based studio is engaged in projects using the latest technology, which requires significant investment capital. But it is one of the first European companies to have its own studio for photogrammetric scanning, and it is also experimenting with virtual reality.

Results in numbers:

» **Market value in December 2016: PLN 70.6 m**
» **Market value in December 2015: PLN 65.5 m**
» **Revenue from sales in 2016: PLN 6.6 m**
» **Revenue from sales in 2015: PLN 4.9 m**
» **Profits in 2016: PLN -4.4 m**
» **Profits in 2015: PLN -3.5 m**

3.2.10 Jujubee

The Katowice-based studio Jujubee lost PLN 352,000 in 2016. The reasons for this loss are the studio's preparations for two big releases – ***Realpolitiks***, and ***Kursk***. According to the CEO of Jujubee, great interest already generated around the latter could translate into record profits for the company in 2017. For now though, the studio has been generating steady revenue for the past two years (664,000 in 2016, 806,000 in 2015). Despite its losses, the market value of Jujubee is constantly rising – PLN 60 m last year and 31.7 m the year before.

Results in numbers:

» **Market value in December 2016: PLN 59.6 m**
» **Market value in December 2015: PLN 31.7 m**
» **Revenue from sales in 2016: PLN 0.7 m**
» **Revenue from sales in 2015: PLN 0.8 m**
» **Profits in 2016: PLN -0.4 m**
» **Profits in 2015: PLN 0.1 m**

3.2.11 Forever Entertainment

Last year, Forever Entertainment's market value nearly doubled. In December 2015, the company was worth PLN 11.4 m, while at the end of last year it was estimated at PLN 20.4 m. This is due to the company's effective publishing work, which currently includes plans for the release of Polish game ***Hollow***, as well as the American title ***Shadow Over Isolation***. For now though, its revenue is quite low (918,000 in 2015), and it hasn't made a profit in for the past two years.

Results in numbers:

» **Market value in December 2016: PLN 20.4 m**
» **Market value in December 2015: PLN 11.4 m**
» **Revenue from sales in 2016: PLN 1.3 m**
» **Revenue from sales in 2015: PLN 0.9 m**
» **Profits in 2016: PLN -1.0 m**
» **Profits in 2015: PLN -0.5 m**

3.2.12 iFun4All

After its debut on the WSE last year, iFun4all, sister company of the Kraków-based studio Bloober Team, has seen its shares consistently drop in price. The company has not made a profit so far, allocating its resources to develop the game ***Serial Cleaner***, which is planned for release in H2 2017, and is currently available in Early Access on Steam. Last year, Early Access sales brought the company revenue of PLN 1 m, which was three times as much as the year before. In December of 2016, the company was estimated to be worth PLN 17.1 m, despite some losses.

Results in numbers:

» **Market value in December 2016: PLN 20.4 m**
» **Market value in December 2016: PLN 17.1 m**
» **Market value in December 2015: no data**
» **Revenue from sales in 2016: PLN 1.0 m**
» **Revenue from sales in 2015: PLN 0.4 m**
» **Profits in 2016: PLN -0.3 m**
» **Profits in 2015: PLN 0.0 m**

3.2.13 QubicGames

QubicGames is currently one of the smallest Polish developers trading on the stock exchange, with a market value of just PLN 18.5 m in December of last year. In 2016, it released several small games that generated PLN 808,000 in revenue, thus closing the year at PLN -793,000. But during that time, QubicGames signed an agreement with Circle Entertainment to distribute games in North America, and has also invested in its main project, ***Robonauts***, planned for release in 2017.

Results in numbers:

» **Market value in December 2016: PLN 18.5 m**
» **Market value in December 2015: no data**
» **Revenue from sales in 2016: PLN 0.8 m**
» **Revenue from sales in 2015: PLN 0.8 m**
» **Profits in 2016: PLN -0.8 m**
» **Profits in 2015: PLN 0.1 m**

3.3 SURVEY OF POLISH VIDEO GAME DEVELOPERS THE "POLISH GAMEDEV 2017 SURVEY"

In Section 3, the authors of this report described the video game development sector in Poland, concentrating on aspects of the business specifics, human capital in the companies, factors affecting company growth, as well as the expectations of these companies in terms of public institutions. Most of those surveyed stated that they maintained offices in the Masovian, Lesser Poland and Silesian voivodeships. The most numerous group was made up of companies that employed less than 5 people (60%), while there were only a few larger companies employing more than 100 people (4%). Over 70% of the companies surveyed have been on the market for over 3 years.

3.3.1 Research methodology

The results discussed below are based on a new survey conducted using a sample of 101 developers, a significant improvement over previous years, in which 26 companies were surveyed in 2013, 32 companies in 2014, and 41 in 2015. The entire population is estimated to consist of 330 companies, so a sample of 101 of these represents a significant portion (30%). The Polish GameDev 2017 survey was initially conducted by Polish developers Intermarum, but has been modified for the purposes of this new research. On one hand, existing concepts were rendered more precisely, and on the other, new ones were added, leading to a research tool of 32 questions. A favourable test run of this new survey on several companies allowed it to be further deployed more effectively.

The survey was carried out among video game companies of varying sizes, creating games for different devices – PC, consoles, Mobile, Web – using various business models (including Premium and F2P). The questions covered different aspects of the company's activities, such as financing game development, types of games produced, hiring employees, the budgets of projects, as well as funding received from grants. The research did not include companies that only dealt in developing games for clients, outsourcing, services, distribution, organizing e-sports or any other activity within the game sector that did not include game production. As such, the terms game industry and computer game sector used later in the chapter will refer only to the sector of game developers.

The research presented in Section 3, conducted by Krakow Technology Park, is supplemented by the research on salaries in the games industry conducted by the Polish Games Association, in conjunction with Advisory Group TEST Human Resources. The aim was to research current salaries and remuneration trends in the industry. The salary data pertains to 2016 and is shown in gross amounts:

» Base monthly salary: 30 November 2016
» Annual fixed bonuses: December 2015 – November 2016
» Annual variable bonuses: December 2015 – November 2016

The research project was based on the methodology of the Salary Report developed by AG TEST HR, which was adjusted to the video game industry. The matrix was categorised according to:

» 6 paths corresponding to the management level in the organisation structure: general director, functional director, manager, producer, team leader, specialist
» 10 levels (from 3 to 13) corresponding to experience and competences required for the position (different variables were assigned depending on the path). In the case of specialists, the advancement levels were distinguished: junior, regular, senior, lead
» 6 specialisations corresponding to the domains in the industry:
Design, Art, Audio, Production, Programming, QA
» 41 positions assigned to the appropriate paths and specialisations. The companies participating in the survey have their registered offices in a few large Polish cities, mainly Warsaw and Kraków. The majority of the surveyed companies holds a stable position on the market and an extensive portfolio. The companies participating in the survey employ staff with relatively high average age, providing transparent remuneration rules and focusing on long-term cooperation. The survey participants included various companies, from indie studies employing less than 10 people to large organisations employing over 100 people.

The research was supplemented by in-depth interviews with representatives of companies from the aforementioned category as well as representatives from industry organizations which allowed for the analysis of the aspects covered.

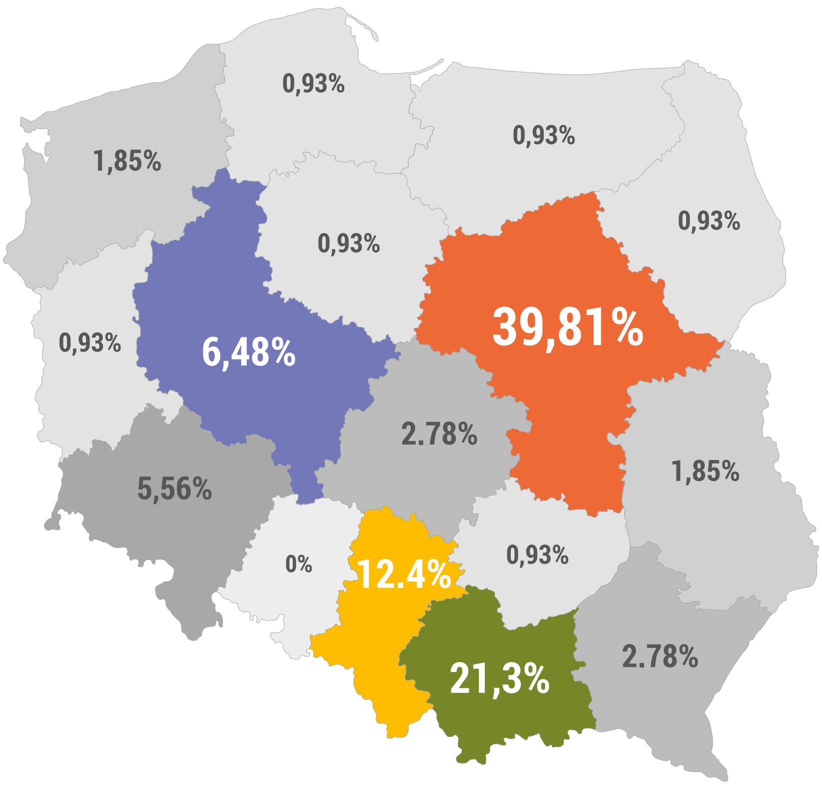
Photo source:
Juggler Games press materials

3.4 BUSINESS CHARACTERISTICS

3.4.1 Voivodeships where the company has an office

The results of the survey confirm the general opinion about the four main areas where the video games industry is concentrated in Poland: the Masovian, Lesser Poland, Greater Poland and Silesian voivodeships. Having said that, within those first three areas it's really just companies concentrated in Warsaw, Cracow and Wroclaw. Analysing only the answers provided by companies that have been around less than 3 years, one can indicate the main regions in which the industry is growing: Lesser Poland is home to 31% of these younger companies, Masovia 25%, and Greater Poland 9.4%. Having said that, within those first three areas it's really just companies concentrated in Warsaw, Cracow, Śląsk agglomeration and Wroclaw.

Fig. 3.1 Voivodeships where the company has an office or a branch



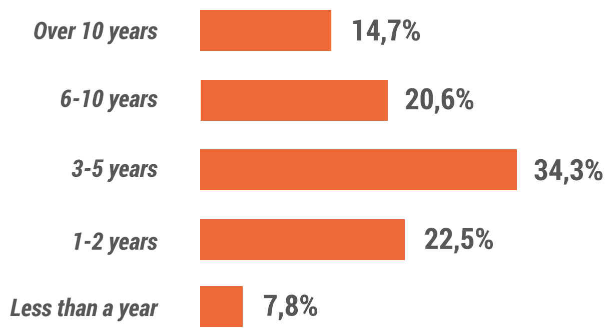
Source: compiled based on the results of the "Polish GameDev 2017"

The reason why the companies choose these locations is most probably tied to their access to advanced technology centres, employee populations, and so on. These results correlate with national statistical data on the concentration of companies in the following individual voivodeships: Silesian, Greater Poland, Lesser Poland, and Lesser Silesian.

We estimate that as of 27/06/2017 there are more than 330 companies are active in the industry, based on a list compiled by the Indie Games Poland Foundation of 331 companies. But according to Jakub Marszałkowski at the IGP, there are more than that. "It's very difficult to convince representatives of smaller companies to take part in the survey, because it takes up their time", he explains. "But I think there are more than 400 studios. I'm basing this on the constant rate at which we find out about new ones, at every event in the country, during every Indie Games Poland foundation recruitment for show stands abroad. Though it's also a matter of how we actually count them, what we consider to be a studio." Based on the interviews, one could conclude that many game developers do not actually have a registered company, and would not want to be included when companies in the industry are being discussed. As such, and because the survey was anonymous, there is a probability that the micro and small businesses are underrepresented in the sample. This does not change the fact, however, that according to many respondents the video games industry is one of the fastest-growing and most promising industries in Poland. Bartłomiej Rozbicki (chairman of AT Games) thinks that "...the games industry is maturing in Poland, and it's clear that more and more companies are treating game development as a business, working on processes within their own companies. "The market is taking shape (...) we have a stronger business structure and it's the same when it comes to institutions, for example, the Polish Games Association was created because it allows for control and oversight as well as influence on public institutions, so that they see computer games as a significant segment of the market – a leading segment when it comes to entertainment."

3.4.2 Market structure and business continuity

Fig. 3.2 Market structure by the length of a company's existence



Source: compiled based on the results of the "Polish GameDev 2017"

Over 70% of the surveyed companies have been active on the market for more than 3 years. It can be inferred that they have already released at least one PC game, or perhaps several mobile games. Over 35% of the studios have been active for more than 5 years and it can be assumed they have already established a stable business model. Nearly 30% of the studios have been active less than 3 years, which proves that the number of entities is continuously growing and the entire sector is developing quickly. These results correlate with global market trends (seen in research by EFL), in which comparing companies based on how long they have been active it can be surmised that around two-thirds have been active more than 5 years. These means that these companies are stable financially. The longest-established companies on the market, with 10 years or more of life, employ the most people, have an average of 11-30 employees, develop 3-5 games concurrently and have budgets of over PLN 10 m per project. The above does not include CD PROJEKT RED which currently employs 500 people and Techland - about 300 people. It should also be noted that the companies last the longest in the Mazowian and Lesser Poland voivodeships.

3.4.3 Number of projects worked on in the past year

Fig. 3.3 Premium (PC)

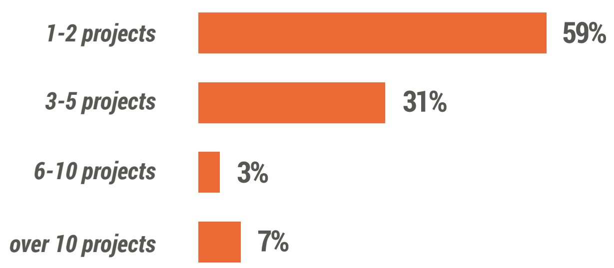
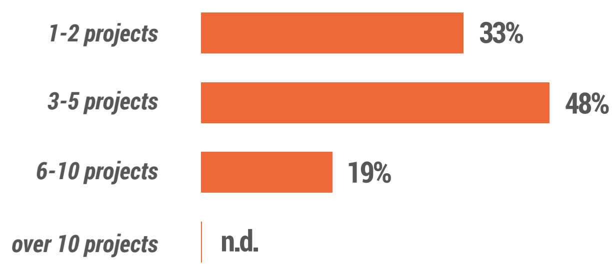


Fig. 3.4 F2P (mobile)



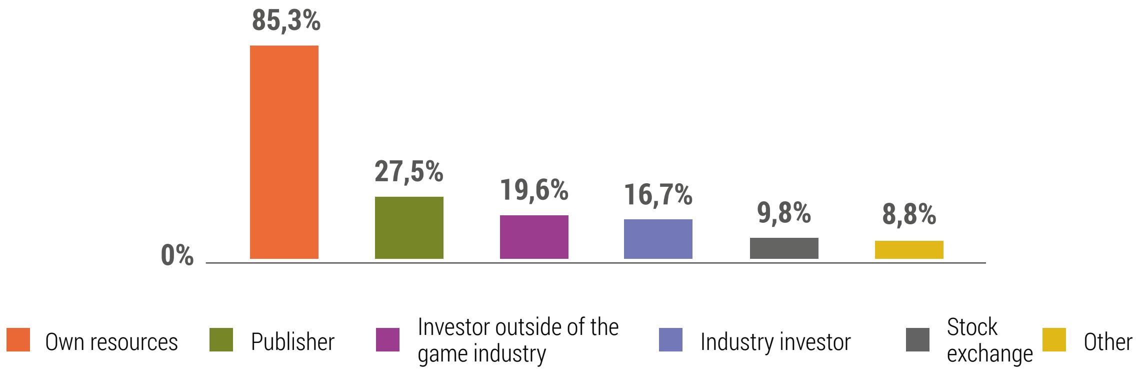
Source: compiled based on the results of the "Polish GameDev 2017"

Over 59% of the companies surveyed have declared that they are currently working on no more than 2 projects. One-third of the companies have the capacity to develop 3 to 5 projects simultaneously. Only 7% of the companies surveyed can work on over 10 projects concurrently. Developing several projects at once seems to be typical practise for developers of F2P, mobile and casual games.

The results from survey questions about their business models confirms what the industry has been observing as a whole. What's clear is that when it comes to premium games, companies will most often concentrate on a maximum of two projects at once (59% of those surveyed). This is true of both the biggest companies on the market, working on big-budget titles, as well as the independent studios, whose resources allow them to work on only a limited number of concurrent projects. 48% of companies releasing F2P games work on 3-5 projects at once.

3.4.4 Company financing sources (the respondents could mark more than one answer)

Fig. 3.5 Current source of funding for the company



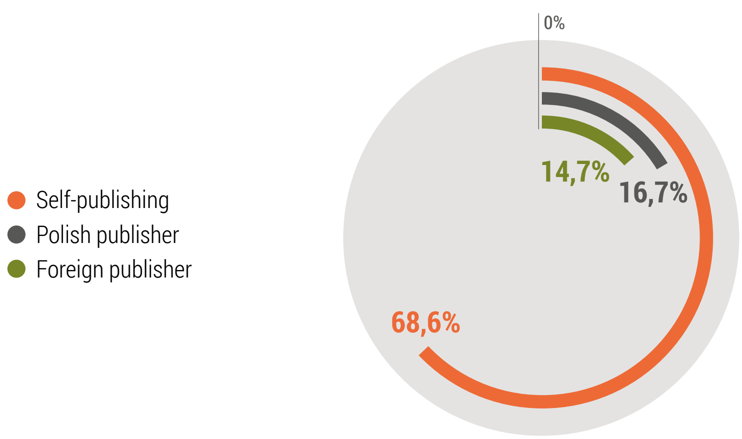
Source: compiled based on the results of the "Polish GameDev 2017"

Specific to the sampled group is the main source of funding – nearly 85% of the companies surveyed use their own resources. This is the continuation of a trend from previous years. Moreover, over 40% of the companies indicated their own financial resources as their sole source of funding. Most of these are companies that have been around more than 3 years, which means they have had success with their previous titles, the sales of which have allowed them to finance subsequent productions. This 'self-publishing' model is risky, but it does help generate much higher profits in the event of a game scoring a success. It's worth emphasizing that Polish companies are becoming increasingly more competitive on the global market, and are taking greater risks, concentrating on very creative solutions and producing high-quality products. According to Mikołaj Pawłowski (CEO of Juggler Games), "the result is the renown that the biggest Polish gamedev companies have gained on the global market, which raises the bar very high for their competitors."
The second most popular source of funding is from publishers, though the percentage is much smaller (28%). In around two-thirds of cases, the publishers are also from Poland. Another significant factor is a company's investors, both from within the industry as well as outside. Nearly 10% of the entire group are studios that have been active for less than 3 years, and these have indicated their own resources as their sole source of funding. One can infer that these are mainly young studios that are having trouble finding funding at this early stage of their history.

For the answer 'Other', 5% indicated funding sourced from commissions for clients, or from outsourcing. Conversations within the industry would suggest that this method of financing a company's own productions is actually more widespread, but that those surveyed probably thought it fell under the umbrella of one's own resources. Only one company surveyed indicated a bank loan under "Other". It's important to emphasize that this method of financing is extremely unpopular among game producers.

3.4.5 Game publishing model used by the company

Fig. 3.6 The dominant model of publishing games

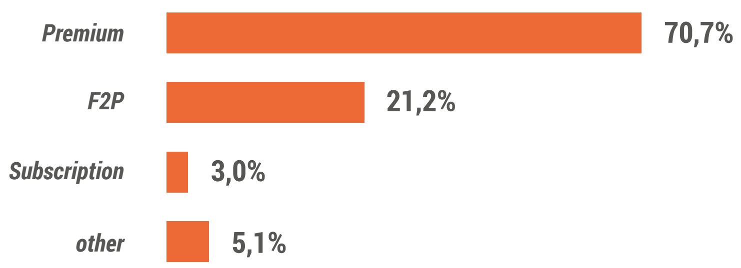


Source: compiled based on the results of the "Polish GameDev 2017"

Over 68% of the studios declared self-publishing as their main publishing model. This group definitely includes companies that have decided it would be more beneficial not to depend on a publisher, not to divide profits, and also not to risk having a publisher interfere in their games' development and marketing. But the group must also include studios that were simply unable to find a suitable publisher. Partnerships with Polish publishers (16.7%) are only slightly more prevalent than with foreign publishers (14.7%). Nearly 11% of those surveyed indicated that they use the services of a publisher when releasing a game, but did not cite them as a source of funding. In the majority of these cases, financing came wholly from the studio's own resources. Nevertheless, these companies do see the benefit of working with a publisher. Although both Polish and foreign publishers are represented almost equally throughout the entire sample, the division is very different depending on the age of the company. 80% of companies that have existed for more than 5 years work with a foreign publisher. Meanwhile, 25% of companies that have been around 3-5 years have a foreign publisher, while only 18% of companies younger than 3 years do. Two conclusions can be drawn from this, which seem to confirm what can be seen elsewhere in the industry. First of all, the Polish publishing sector is still relatively young, and still developing, which is why it attracts these younger companies. Secondly, one can also infer that despite all of the events and delegations organized by the Indie Games Poland Foundation, the Kraków Technology Park and the Game Industry Conference since 2015, Polish game developers still have limited access to business partners, and so require more support in this area.

3.4.6 Project revenues and business model

Fig. 3.7 Which business model generates the most revenue from the company's projects?



Source: compiled based on the results of the "Polish GameDev 2017"

The business model most often used by companies is the Premium model (nearly 71%), which seems to be the clearest and easiest to adapt to the video games industry. 3% of those surveyed stated that they use the subscription model for their releases, while last year 5% of respondents had declared an interest in the subscription model.

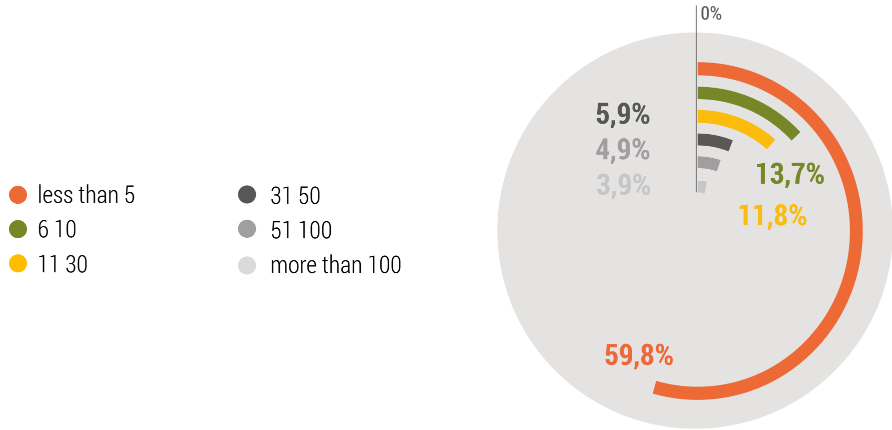
According to Jakub Marszałkowski (Indie Games Poland Foundation), "The production of premium games is constantly increasing, in both number and quality. More studios are popping up, and teams are expanding, so somehow they're finding a way to finance themselves. It's getting easier and easier to find funding, investors. There's always someone new who wants to invest, so there's always going to be growth in this case." One significant challenge to developers is the Free2Play model, under which games are released for free and costs recouped using optional, in-game microtransactions. Michał Nowakowski from CD PROJEKT talked a bit about the F2P model. "We've spent a lot of time to make sure that the game is not 'greedy' from a business standpoint, but would still make money, because without that revenue the game would have to die."

Paweł Miechowski (11 bit studios) indicates a different problem: "I don't agree that 'mobile is dead' – I just see great polarization. The F2P market is dominated by giants, while the small and medium companies are not able to break through and so are doomed to fail. The money that needs to be spent on player acquisition and retaining players is not within their reach," he explains. "I believe F2P will become monopolized by a small group of giant companies. On the other hand, the premium market is doing very well, it's growing nicely, though a strong brand is important, you can't just jump onto the mobile platform without something original. And the last few years show that it can be done, by example of ***This War of Mine*** or the great ***Monument Valley***. "There's a trend for casual players to move into being hardcore gamers, but it's slower than the general growth, so it's seen incorrectly – if you look at the entirety of the mobile market, the premium segment is around 10% – and could be 9% next year – but the whole scale of the 'pie', the general increase of players, will cause the absolute value of this segment to grow. Because clearly, people who discover the gaming experience eventually go from being casual to hardcore. The question is how long this will last? When will the whole world be saturated with phones and tablets powerful enough to play hardcore games, since that will eventually happen. It's very possible that then, F2P games will begin losing in favour of [desktop] computer games. That's a very prophetic vision."

3.5 HUMAN RESOURCES IN THE COMPANIES

3.5.1 Number of employees at the company

Fig. 3.8 Number of people employed (full-time)



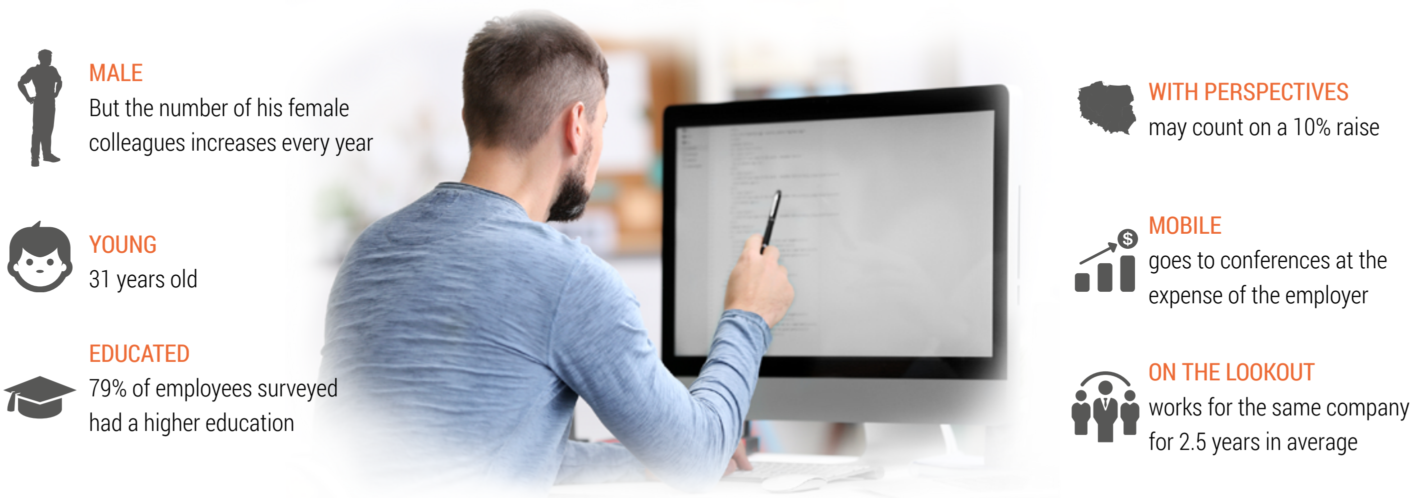
Source: compiled based on the results of the "Polish GameDev 2017"

Looking at the size of companies within the industry, just as in the country's general economy, micro and small businesses are the most numerous, with 74% of studios having up to 10 employees and 18% between 10 and 50. However, the majority of companies (60%) only employ up to 5 people. Only 8% of the companies surveyed employ more than 50 people, but judging by the compiled data it can be estimated that around half of all those employed in the sector work in companies of this size. It's important to note here that it's very hard to determine the number of people working in game development, as the interviews conducted reveal that only ¾ of employees in the industry have legally-binding employment contracts.

According to data gathered by the Polish Games Association in the Salary Survey, there are no differences in employment between cities or specializations. The average length of employment is 2.6 years (at the time of surveying).

3.5.2 Typical example of a gamedev employee

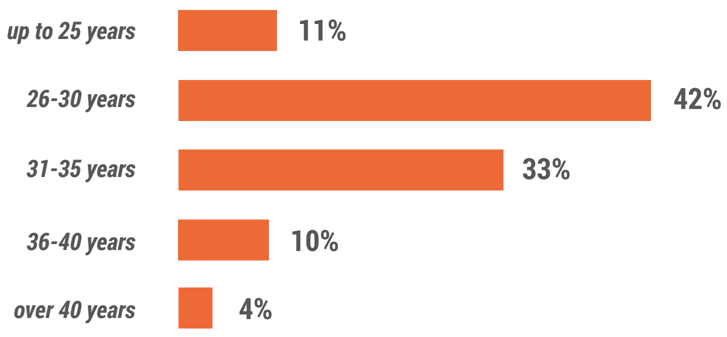
Fig. 3.9 Characteristics of an average gamedev employee



Source: compiled based on the Salary Survey by Polish Games Association

3.5.3 Age of the employees working in gamedev

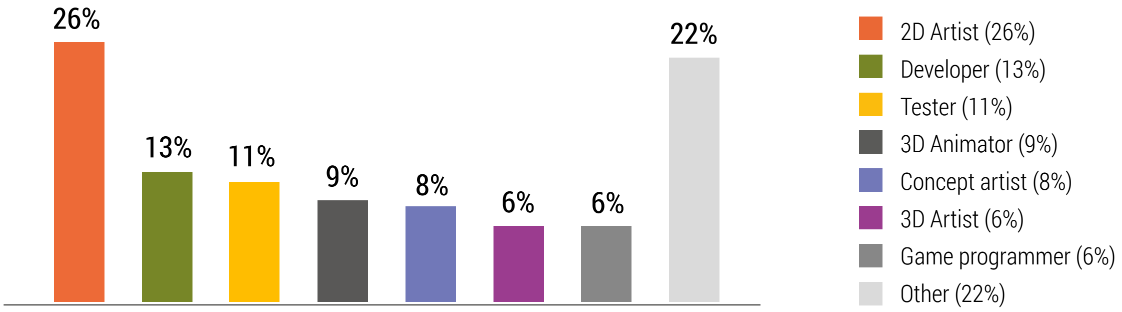
Fig. 3.10 Average age of the gamedev employees



Source: compiled based on the Salary Survey by Polish Games Association

3.5.4 Women in the video game industry

Fig. 3.11 Positions occupied by women in the Polish gamedev



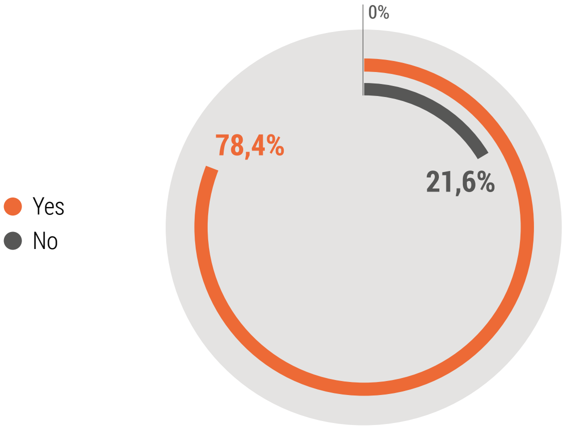
Source: compiled based on the Salary Survey by Polish Games Association

In accordance with the results of the Salary Survey conducted by Polish Games Association, women constitute only 15% of the gamedev employees. Over 50% of women in the surveyed group were employed on artistic positions with 2D Artist being the most common job. Other positions popular among women are connected with production and quality assurance.

The lowest number of women is employed on programming positions, while the highest number on development positions include juniors and specialists. The above suggests that the majority of women just recently entered the video game industry.

3.5.5 Recruitment

Fig. 3.12 Does the company plan to hire more employees within the next year?

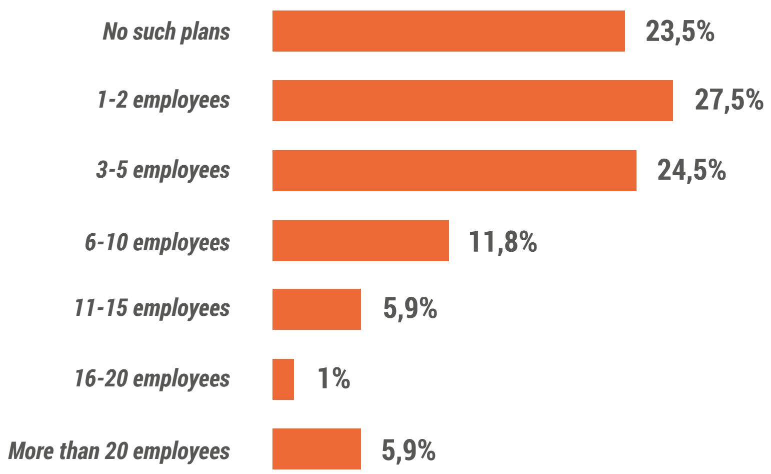


Source: compiled based on the results of the "Polish GameDev 2017"

Interestingly, according to statistics based on the research, most companies are planning to hire new employees. Bartłomiej Rozbicki (AT Games) says that, "Poland has a reputation for having talented people in this field, and I think the PR that ***The Witcher***, ***SuperHot*** and 11 bit studios have created will translate into Poles being highly sought after on the market. On one hand, this won't be good because that will draw the good employees away from the country, but on the other the fight for good employees is not limited by borders, so it's a positive thing that Poland has become recognized as the producer of ***The Witcher***, ***Dying Light***, ***SuperHot*** and ***This War of Mine***."

3.5.6 Demand for employees in the gamedev sector

Fig. 3.13 Number of employees planned for hiring in the coming year

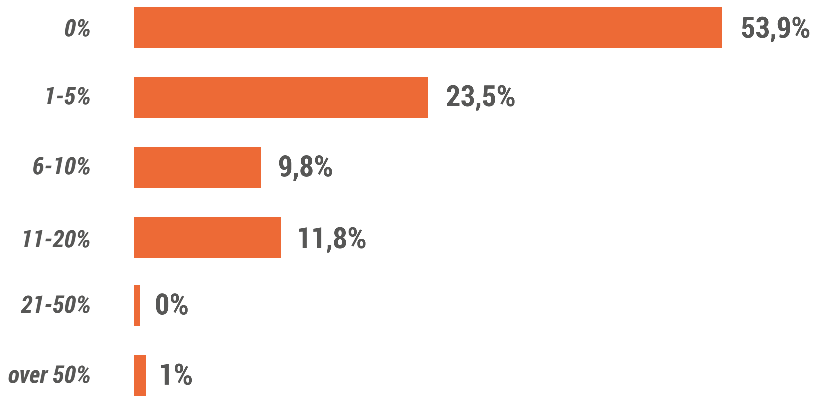


Source: compiled based on the results of the "Polish GameDev 2017"

Over half of the respondents are looking for between 1 and 5 new employees. The desire to hire new employees was declared by both small studios and those already employing more than 30. The most sought after specialists are programmers, as well as graphic artists and animators. Paweł Miechowski (11 bit studios) says that companies have varying needs depending on the production cycle. "Our estimate for this year is that we need around 15 new people. Next year, however, it'll depend on our production and publishing plans. It's very hard to predict." 9% of surveyed companies declared that, within a year, they planned to hire more employees than they currently have. 17% of companies plan to double the number of their employees. This means that over a quarter of the industry is in a phase of very rapid growth.

3.5.7 Fluctuation of employees

Fig. 3.14 What percentage of employees left the company in 2016?



Source: compiled based on the results of the "Polish GameDev 2017"

Currently, the job market is moving in favour of the employee. Employers are trying to retain employees using various benefits, which resulted in over half of the companies surveyed reporting that no one had left in 2016. 23% of respondents indicated that 5% of their employees had left. The only company that reported losing more than 20% of their employees was very small, with less than 5 people. Among the studios from which more than 10% of their employees left, only one had more than 30 people to begin with and another had just over 10, with the rest being, again, much smaller. This shows that in terms of absolute numbers, there isn't much movement on the job market for video game development. It should be remembered, however, that employment in video game companies is very dependent on the projects currently being working on.

There are various ways of acquiring new employees. Even so, in 2015 a lack of qualified workers was a problem for the Gamedesire company. Marek Wylon explains that "The lack of qualified employees was a big problem for us two years ago, when we were expanding from 40 to 90 people. That was when we created an event we called The Gamedesire Academy. This was a place where interested individuals could enter the game development environment and learn how games are made. That solved our shortage of programmers. Today, I don't think we have a big problem acquiring qualified employees. There are currently 80 people employed in our Kraków office."

In comparison, the German company InnoGames invests in extra benefits, to help retain its employees. "There has always been a lot of competition when it comes to hiring new people in the video games business. InnoGames solved this problem for ourselves by ensuring that we have an attractive working environment. We operate modern offices in good neighbourhoods, with gyms, cafés, bicycles and other amenities, so that our employees become our best recruiters," explains adds Tobias Edl (Innogames).

Within the video game industry, employee rotation is around 15.54%. For all positions, regardless of department, the decision to leave is usually made by the employee. The most rotation occurs among employees who have been at the company the shortest amount of time (up to one year). The most likely to leave are specialists and producers. There is also a correlation between employees having been with a company for a long time, and their employer being less likely to ask them to leave.

3.5.8 Salaries in the game industry on the basis of the salary survey by the Polish Games Association

In average, the variable part of salary constitutes less than 1% of the entire salary in the gamedev sector. The above may be caused by the fact that bigger bonuses granted after completion of projects and profit sharing systems are not included in the survey because they largely depend on seasonal production and success of specific products, which is difficult to predict.

In the generally understood IT branch, raises are more regulated than in gamedev (they are often subject to corporate regulations and granted in a regulated manner). In the case of gamedev, raises are more irregular and their amounts are often discretionary. Sometimes raises are related to long service or completion of projects. However, over a half of the survey participants had their salaries increased in 2016 and the average raise was at the level of 10%. In that context, one can assume that gamedev is trying to reach the salary level of the generally understood IT branch where an average raise amounted to 4.4% in the same period but the average salary was higher.

Table 3.2 Salaries in the video game industry

Position level (all specialisations in average)	Employment contract	Specific task contract	Self-employment
Producer	7 449	7 376	11 573
Team Leader	8 206	9 565	12 832
Lead Specialist	9 805	11 213	14 993
Senior Specialist	8 715	7 230	9 976
Regular Specialist	5 917	5 963	8 118
Junior Specialist	3 745	3 915	6 083

Source: compiled based on the Salary Survey by Polish Games Association

The Salary Report confirmed that growing competences and experience of the Polish gamedev employees are accompanied by growing salaries. For example, an average junior salary amounts to PLN 3,000, regular specialist salary - to PLN 5,000, senior salary - PLN 7,000 and lead - PLN 9,000 (gross amounts). It is interesting that team leaders receive lower salaries than leads, contrary to other sectors. The above may be caused by more extensive requirements towards leads (they have more unique skills which are less available on the market, they are responsible for bigger parts of projects, for example Principal Artist) than towards team leaders whose work is mainly focused on operating management and coordination of team work. The survey proved that salaries of developers and senior specialists are similar although the management responsibility of developers is much more extensive. However, it should be noted that the skills of senior specialists are usually more difficult to replace. Thus, specialists with experience, knowledge and skills are extremely valuable on the market. In average, the variable part of salary constitutes less than 1% of the entire salary in the gamedev sector. The above may be caused by the fact that bigger bonuses granted after completion of projects and profit sharing systems are not included in the survey because they largely depend on seasonal production and success of specific products, which is difficult to predict.

3.5.9 Average salaries of specialists depending on the location

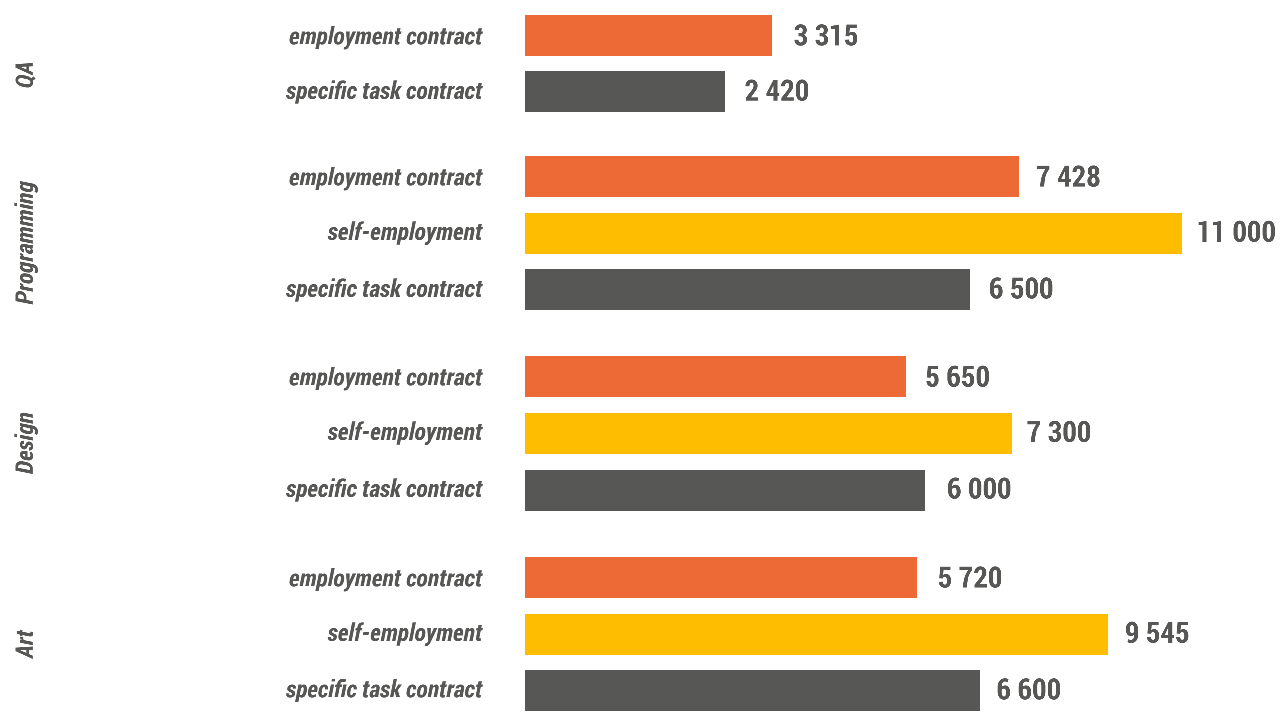
Fig. 3.15 Total gross monthly salary of specialists

Source: compiled based on the Salary Survey by Polish Games Association

Considering salaries in all specialisations, the highest salary is offered to specialists in Warsaw. The biggest differences have been observed in the case of self-employment (+31%) and specific task contract (+41%). A similar trend can be observed in the case of other industries, where the difference amounts to about 20%.

3.5.10 The most common salaries of specialists, by employment type

Fig. 3.16 Total gross monthly salary of the employees at the level of specialist



Source: compiled based on the Salary Survey by Polish Games Association

The report confirmed the trend which is also visible in other sectors - programmers receive the highest salaries, while testers - the lowest. The above is presumably caused by low requirements for the initial testing positions which results in easy access to testers on the market. Testers are usually young and beginning their careers on that position. Apart from programmers, also artists receive high salaries, which may be connected with the fact that they usually have very narrowly specialised jobs (for example weapon artist). It should also be noted that the above information refers only to specialised positions. Salaries are relatively higher in every specialisation in the case of more advanced jobs like seniors, leaders, directors etc.

3.5.11 Benefits

Nearly all surveyed employees received non-salary benefits. The highest value of such packages was noted for specialists, in particular those with the most extensive experience. Those persons are very valuable for the companies and the employers wish to motivate them to stay not only by their salaries, but also additional incentives. 73% of the respondents have access to health care services. In average, health care services in gamedev are financed by the employer in 90%. In the case of juniors, they are often financed in 100%, presumably because the companies wish to attract new employees. Usually, health care is also available to the employee's family but it is rarely financed by the employer.

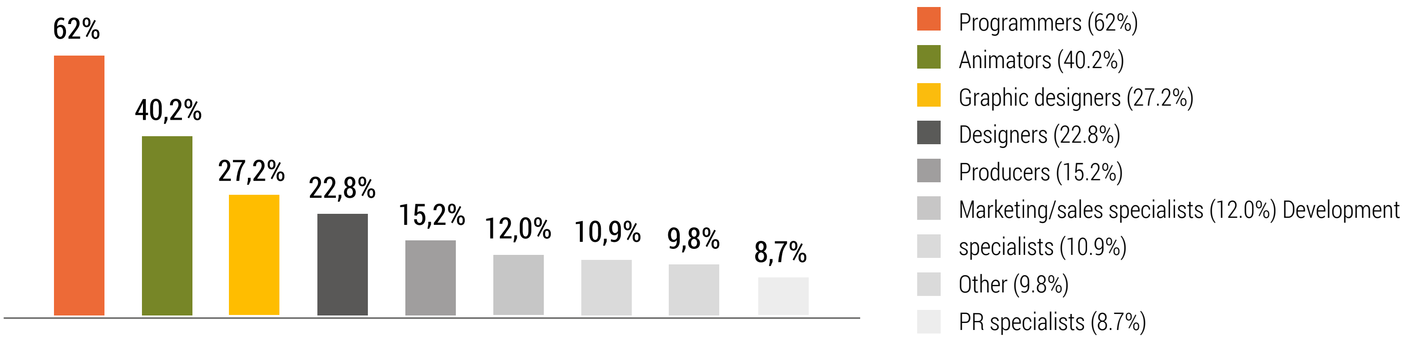
Training is usually available to the supporting employees (HR, finances), which may be a result of job specifics and necessity, for example following amendments of laws and regulations. The employees on development positions usually participate in Polish and foreign conferences, being more expensive than training and more related to the nature of their work. Such conferences are often treated as a form of training. The training offer for gamedev is more limited than for other industries (for example supporting jobs such as sales > sales representatives). Participation in training is usually suggested by the employer, while studies are usually initiated by the employee and funded by the employer to a low extent, also mainly in the case of supporting positions.

The costs of participation in Polish conferences are mainly financed by the employer and it is even more so in the case of participation in foreign conferences. The above may be connected with foreign conferences being more attractive from the point of view of speakers, business development and general prestige. Usually, the employees suggest their participation in local and foreign conferences.

3.5.12 Who can be employed in the industry?

Analyzing the data on finding employees as a barrier to company growth, it appears that programmers are currently the specialisation that is hardest to find. Nearly 60% of respondents believe that there is a huge shortage of people with the right education, and more importantly, experience. The situation has not changed since 2013. A shortage of programmers increases with the size of the company. Studios with more than 10 employees already report more than 77% shortages, and those with more than 30 employees, an 86% shortage. There is also a shortage of animators (over 40%), graphic artists (27%), and designers (23%). Here, the shortages are reported equally, regardless of the company's size. Artur Maksara (Flying Wild Hog) says the same thing: "The only problem is the shortage of people. And it is a significant shortage – we lack graphic artists, we lack programmers." However, there has been a change in terms of producers being sought, compared to 2015. According to Mikołaj Pawłowski (Juggler Games), "It's a weakness that we have very few schools that can educate the specialists needed in this area. I'm not only talking about programmers, graphic artists and animators, though there are still not enough of them and the skills of graduates in this field are still quite generalised, but also – and in my opinion this is the biggest problem – designers and level designers, whom the company depends on to do a lot of different things. Usually it's creating levels, scripting them, designing exactly what they will contain. No school in Poland, at least from what I know, teaches students these skills. I think this is the biggest challenge faced by Polish education in terms of the video games industry." The largest companies are often searching for employees for practically every position, but they're interested only in those who have lots of experience in the industry, which is hard to come by in Poland. In this segment, the shortage of marketing and PR specialists is more pronounced, with 22% of companies employing more than 50 people declaring this a problem. German companies experience similar problems. "According to the recognised GamesWirtschaft magazine, the German video game industry currently employs 12,000 people. 510 companies are engaged in development and distribution of video games. (...) Professionals in the industry are very hard to find because the demand for IT specialists is very high while the supply is relatively limited. Our strategy is to provide new employees with flexible work time, incentive system and good working atmosphere. Such offer seems to be attractive for the candidates applying for work at Upjers," says Klaus Schmitt (Upjers).

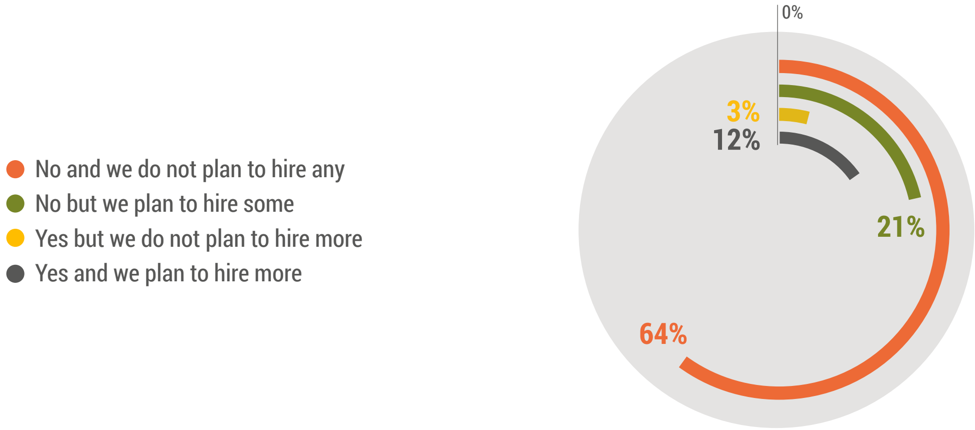
Fig. 3.17 Which employees are currently the hardest to find?



Source: compiled based on the results of the "Polish GameDev 2017"

3.5.13 Do foreigners work at the company?

Fig. 3.18 Less than 5 employees



Source: compiled based on the results of the "Polish GameDev 2017"

The employment of foreigners cannot be determined by looking at the industry as a whole. It is clear that the situation is quite different depending on the size of the company. Companies with fewer than 5 employees generally do not hire foreigners. Only 15% of those micro and small companies do, while another 21% don't currently, but are planning to. It can be assumed that such small teams are usually not prepared to accommodate employees from abroad, if only for logistical reasons. Of the companies with more than 10 employees, 61% do employ foreigners, and another 22% plan to. Among companies with more than 30 employees, only a handful have not yet hired any foreigners and do not plan to.

Fig. 3.19 More than 10 employees

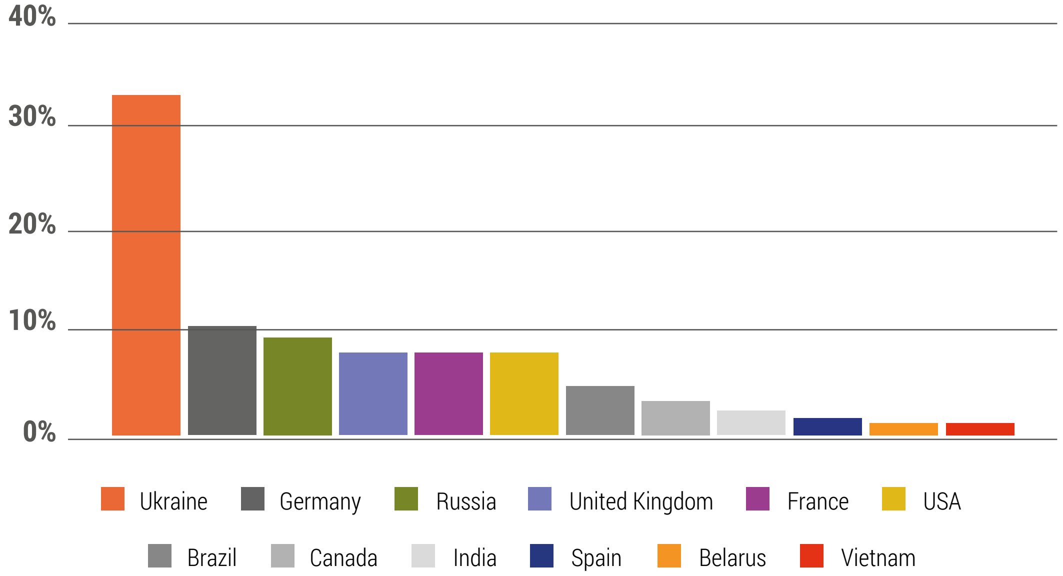
Source: compiled based on the results of the "Polish GameDev 2017"

Overall, more than 90% of employees in the video games industry in Poland are Poles. There is also a correlation between a foreigner's length of employment and their presence in the industry in Poland – most foreign employers have been working in their current position for up to a year. This means that the trend in searching for and employing workers from outside Poland has already begun, and for now is in its early stages. The above is confirmed by the survey stating that among the companies that already employ foreigners but do not plan to hire any more, all but one are still looking for more employees. This could indicate difficulties involved in hiring foreigners. These difficulties also affect companies seeking to hire more foreign workers, as Artur Maksara (Flying Wild Hog) describes: "We have very badly written laws, and if we want to hire someone legally, it's simply very complicated and burdensome. The laws are written to favour Poles, even if they are less qualified for a given position. The lack of legislative solutions when it comes to hiring foreigners could cause serious problems for the industry in the future."
Marek Wylon (Gamedesire) admits that he had considered hiring employees from the Ukraine, for example, but abandoned that idea. "We considered it once, but we eventually decided against it. If were to have done so, programmers from the Ukraine would have had to move to the company's Polish offices on the eastern border, in Lublin, for example."

Meanwhile, Goodgame Studios, when hiring employees from outside Germany, including Poland, uses a special team to help new workers find a place to live in Hamburg, open a bank account, and settle in, etc. "That was a good tool for acquiring employees from abroad, especially as relocation was a significant problem for the new employees in the past," explains Caglar Eger (Goodgame Studios).

3.5.14 Expats in Polish companies

Fig. 3.20 Countries from which foreign employees are sourced



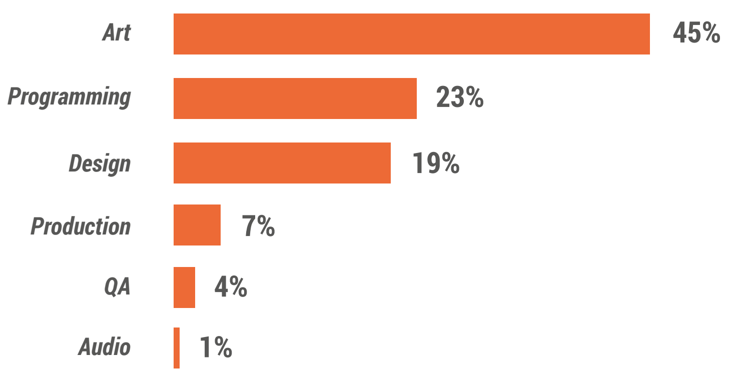
Source: compiled based on the results of the "Polish GameDev 2017"

Most of the foreign specialists hired by Polish game development studios come from our eastern neighbours. 32% of companies declared that they have at least one employee from the Ukraine, and another 7% at least one from Russia. Belarus was also stated as a popular place for sourcing foreign employees. Western Europe is another popular region, with the U.S., Canada and Brazil coming next, and finally India. Only individual companies have employees from countries afield.

Companies like Qloc, that work in an international environment, are no strangers to hiring employees from Ukraine and other countries. Adam Piesiak (CEO at QLOC S.A.) indicates the problems he faces when hiring employees from abroad. "Speaking about accommodating people from Ukraine, for example. For one, it's hard for those people to relocate. It takes several months. In the media it's presented somewhat differently – that we're open to the Ukraine, that we're able to employ them quickly. But if you want to do it legally, and our company wants to, and does, it simply takes time. We're not able to get the employee right away, like we can with Poles. The process takes time and even requires someone who specializes in handling this process, and is able to navigate the legal labyrinth to get it done effectively."

45% of foreigners employed in the video games industry in Poland are artists (referred to as ART in the Salary Survey results). 14% of all 3D Animators are foreigners. Aside from 3D Animators, foreigners are most often hired as 2D Artists and Environment Artists. Outside the art department, employees from abroad are usually programmers (Engine Developer, Gameplay/Game Programmer). Interestingly, the specializations for which foreigners are hired most often are also those for which we've seen the highest salaries (Programming, ART).

Fig. 3.21 Specialisations of foreigners working for the Polish gamedev



Source: compiled based on the results of the "Polish GameDev 2017"

3.5.15 Employment requirements

Working in the game industry is, for most people, the object of their dreams. As Ewa Czwartacka-Roman (Plinga) says, "In Berlin, where we have our office, the problem is that we get showered with job applications from candidates that don't even meet the most basic requirements." Most Polish companies have been in the same situation. The requirements are very specific.

A high level of skill is still a key determining factor in choosing a new team member, indicated by nearly 93% of those surveyed. Next is previous industry experience (47%), as well as how well the interview goes (42%). The other important factor is whether the candidate has previously worked on a completed and released game (28%). The least important thing to those surveyed was experience outside of the industry (1%), level of education (2%), or even whether that education was industry-related (3%). Ewa Czwartacka-Roman (Plinga) says: "I don't think education plays a role in the recruitment process. Currently we have it very standardized – consisting of two stages with practical tests." She also confirms that the interview itself is a very significant element. Krzysztof Koskowski (PlayWay) emphasizes that "We're not necessarily looking for people who have completed studies related to the industry. We're much more interested in people who have worked 6 months in a team, rather than having studied something for 5 years. We assume that, rather than 5 years of education, 6 months working as part of our team will imbue that person with much more relevant knowledge."

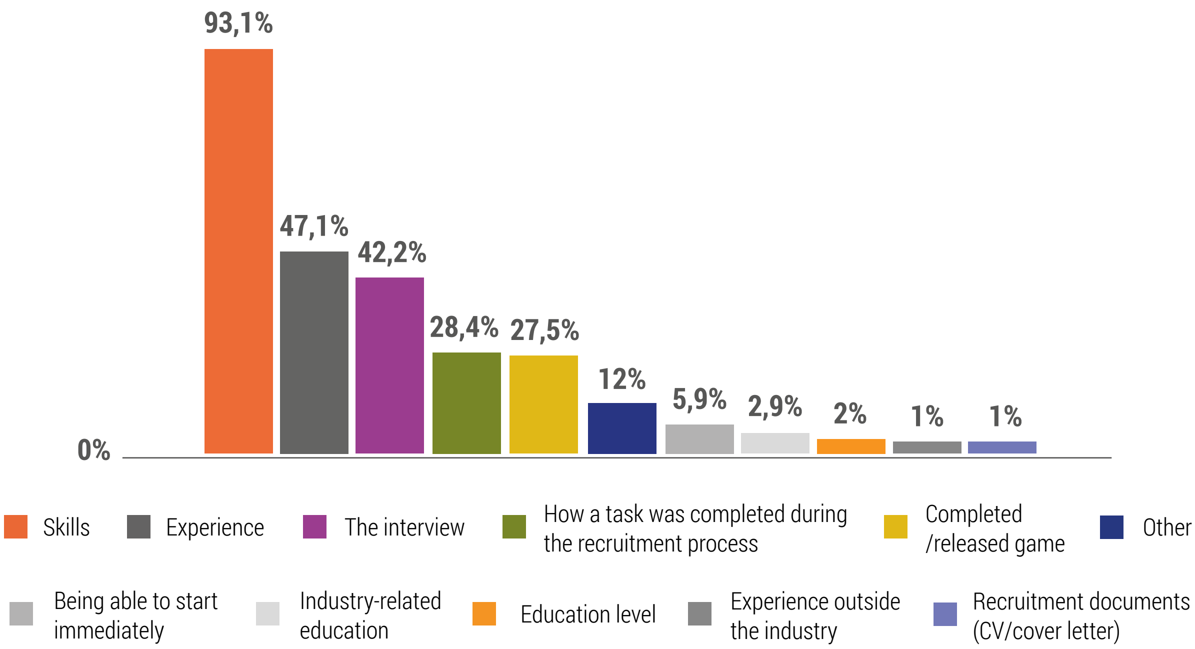
Employers in the industry also emphasize the role of social skills during recruitment.

Marek Wylon (Gamedesire) adds that "Today, we don't only look at programming skills anymore. Being able to work as part of a team is very important. The candidate needs to meet with the team, and they need to be accepted by the team's Product Owner. The recruitment process doesn't consist of just writing a few lines of code and doing it well. In the past few years, we've had several instances of cooperation within the team being bad, due to that individual's personal traits, which resulted in us letting them go. Now we take great care to ensure that the team functions well."

Similar trends can be observed in the industry outside Poland. Aside from the candidate's skills, Tobias Edl (InnoGames) also looks at their ability to adapt to the company's culture. "When we recruit, skills and experience are undoubtedly important. But it's also critical to see if the candidate will adapt to our company's culture and will believe in our values."

According to Sergey Sholom (CEO at Datcroft Games), passion is more important than skill. Klaus Schmitt (Upjers) notes that: "An academic degree is a definite plus, since one can assume that the candidate has learned their 'trade' and knows what they're doing. People with experience in their field are naturally welcome. But in contrast to other companies, we at Upjers also hire people who have just graduated, as well as people who are working on careers not related to their education."

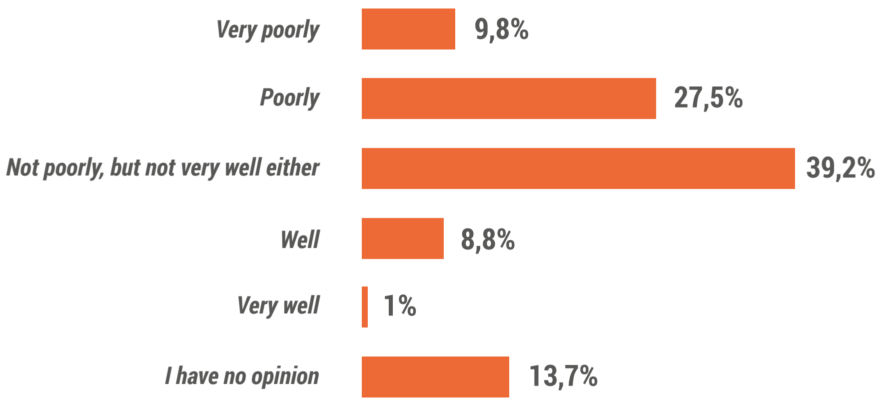
Fig. 3.22 What is most important when hiring employees?



Source: compiled based on the results of the "Polish GameDev 2017"

3.5.16 Which graduates would be hired?

Fig. 3.23 How prepared are university graduates who find work in the game industry?



Source: compiled based on the results of the "Polish GameDev 2017"

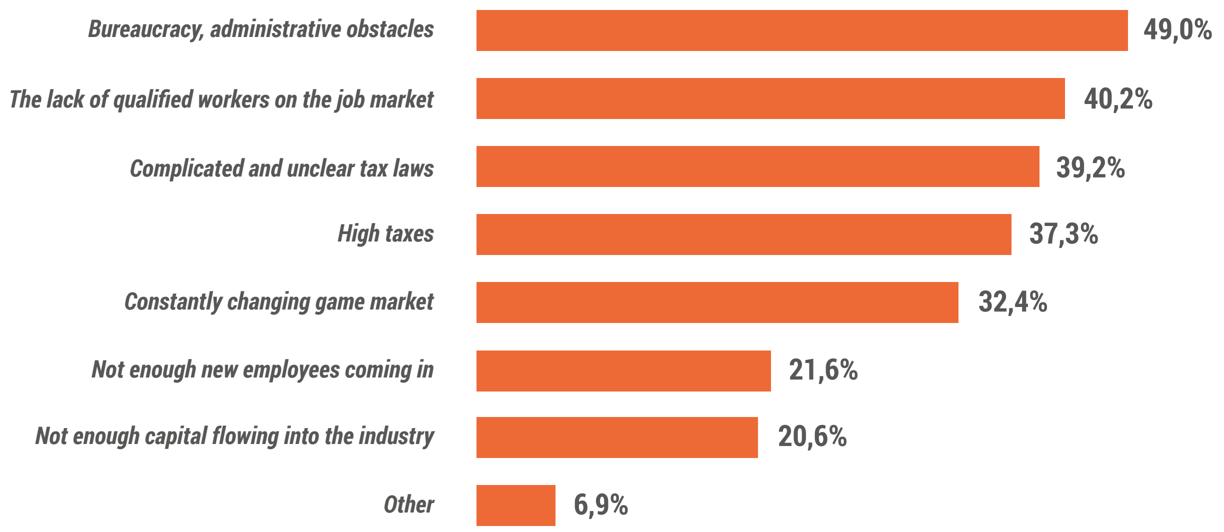
For most respondents (40%), it's hard to determine how prepared recent graduates are for work in the industry. On one hand, they think that the level of preparedness is not low, but on the other hand, it's not insufficient to immediately begin working. 37% think the education is poor or very poor. Only 10% of those surveyed were satisfied with graduates' preparedness. On this point, Jakub Marszałkowski (Indie Games Poland Foundation) has a lot to say. "I work at the University of Technology, where we educate programmers. I know how we educate them, which is very well, and they get to a very good level – the general opinion about Polish programmers is no accident. But the problem with a gamedev education is two-fold. One is quite global, in that no one really knows how to do it. Game design happens on more of an instinctive level than a knowledge-based one. I could make a list of 10 things – do this, don't do that, but would that really have any value in teaching design? There is the idea of teaching by actually making games – studies in which students create two games every year. Then, the second problem is typically Polish. There's no budget for it. Games are not an academic subject. Programming a PLC driver can be taught having read 3 books about it and preparing a series of lectures, but you can't do that with game design. To teach that, you need a large group of people who really know what they're doing. The industry keeps saying 'teaching by practitioners'. This is probably important everywhere at some level, but especially in gamedev. But universities don't have the money for practitioners from outside. Gamedev doesn't pay as well as IT, but schools pay even less."

79% of employees surveyed had a higher education. Those with specializations in Audio had the most in this regard, although everyone surveyed in this small group had some kind of higher education. The second most educated group are programmers, of whom 9 out of 10 have a higher education. The lowest percentage was recorded in QA, in which only 57% of employees had a higher education. This could be because some people began their careers in gamedev as testers, so it's not unlikely that some of the surveyed QA employees were still in school. Finally, the difference in education between men and women was only 2%.

3.6 COMPANY GROWTH

3.6.1 Factors negatively impacting company growth

Fig. 3.24 What factors negatively impacted company growth in 2016?



Source: compiled based on the results of the "Polish GameDev 2017"

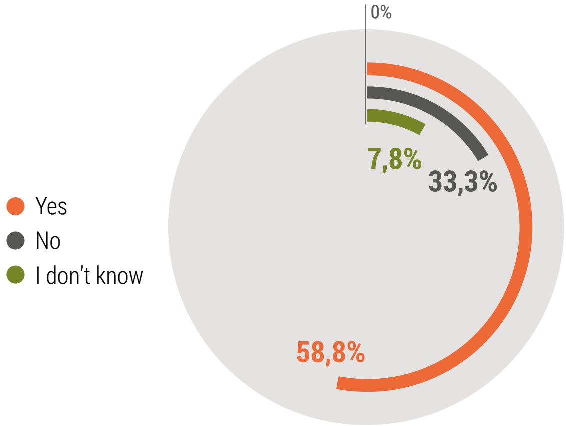
The research indicates that the most frequently-cited factors limiting company growth were bureaucracy and administrative obstacles (49%), a shortage of qualified workers (40%), complicated and unclear tax laws (39%), and high taxes (37%). So one can conclude that dynamic growth for companies in the industry is hindered mainly by outside factors. Robert Podgórski (founder of BlackMoon Design) commented on the situation: "There is a shortage of employees and people who, at least on a basic level, are able to push these games along."

Looking at the average results across the entire industry, one cannot conclude that the lack of capital inflow is an insignificant problem. While only 4% of companies with more than 10 employees indicated this as being a problem, 28% of smaller companies also cited this as a problem. For small studios, this is even more of a hindering factor than the lack of qualified employees, and is cited right after bureaucracy and taxes.

Certain problems are also noted by foreign companies. "What could the Polish government do for the industry? Create more studies for programmers. There is a serious deficiency in that scope," adds Klaus Schmitt (Upjers).

3.6.2 Preparation for working in the industry

Fig. 3.25 Does the company support, plan to support, or run workshops/lectures preparing people for work in the game industry?

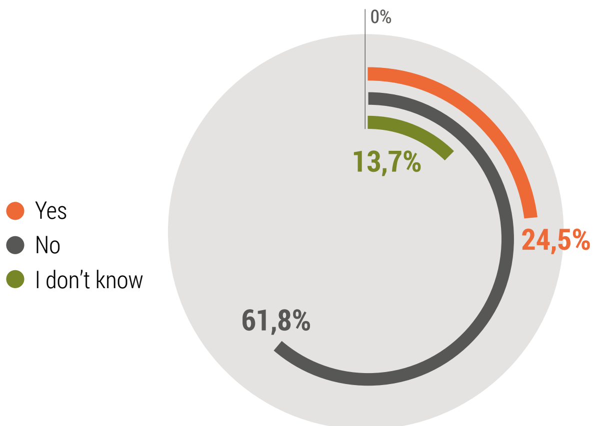


Source: compiled based on the results of the "Polish GameDev 2017"

The research conducted indicates that 58% of the companies surveyed do make some effort to help prepare people for work in the industry. In addition to initiatives such as the Game Academy and the Indie Booster organized by Polish video game institutions, the burden of running these kinds of events is mainly shouldered by those who have a vested interest in the endeavour. The percentage of companies taking part in these efforts is drastically increasing, along with their capability to do so. Of the companies with more than 10 employees, it's 79%, while for those with over 30, it's nearly all of them. Artur Maksara (Flying Wild Hog) describes another phenomenon. "There is a gathering of people around the industry who want to learn. There's the Polygon science club at the Warsaw University of Technology, there are a lot of events like Pogradajmy, or those run by schools and companies, such as the Huuuge Game Days in Bydgoszcz. Artifex Mundi is also organizing introductory workshops to get people interested in game development." But one thing is important, as Maksara points out: "Unfortunately, this is an industry in which you must learn a lot yourself and from the people you work with." So it can be seen, then, that it's very important that the industry itself helps people prepare for working in the industry.

3.6.3 Publishing

Fig. 3.26 Do you plan on publishing games by other developers in the near future?

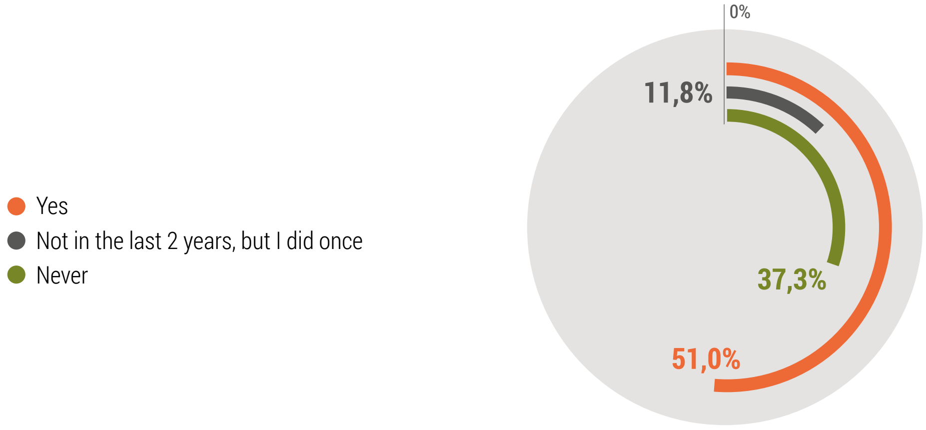


Source: compiled based on the results of the "Polish GameDev 2017"

62% of companies surveyed are not interested in publishing games by other developers, and this correlates with the most frequently declared model of self-publishing. Meanwhile, 25% plan to either begin publishing games by other developers, or will continue doing so.

3.6.4 Services of third-party publishers

Fig. 3.27 Have you used the services of a third-party publisher within the last two years?



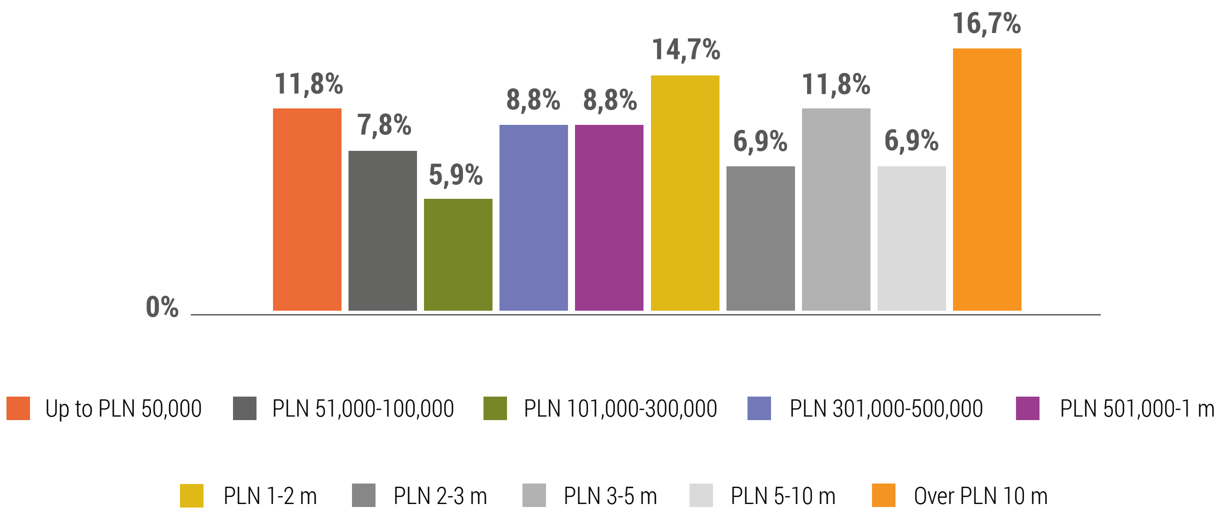
Source: compiled based on the results of the "Polish GameDev 2017"

Over 62% of those surveyed had used an outside publisher at some point during their company's lifetime. 51% had used publishing services within the last two years. 37% of respondents have never used a third-party publisher. Interestingly, 54% had worked with a foreign publisher, while only 26% with a Polish one. Comparing these results with the currently dominant model of self-publishing games, the only logical explanation is that companies that have worked with a foreign publisher are several times more likely to switch to self-publishing than those that have worked with a Polish publisher.

Most companies use or have used the services of distributors and publishers of computer, console and mobile games. Publishers are responsible, among other things, for distributing the product to stores, often for localizing the game into Polish, and for providing marketing and technical support. For 47% of respondents, these services are very important. According to Paweł Miechowski at 11 bit studios, Poland has strong publishers who are able to take independent developers under their wing – "I'm talking here about 11 bit studios, Techland, PlayWay, maybe even Artifex Mundi and others."

3.6.5 The budget for games planned for the next 3 years

Fig. 3.28 The total estimated budget for games planned for the next 3 years is...

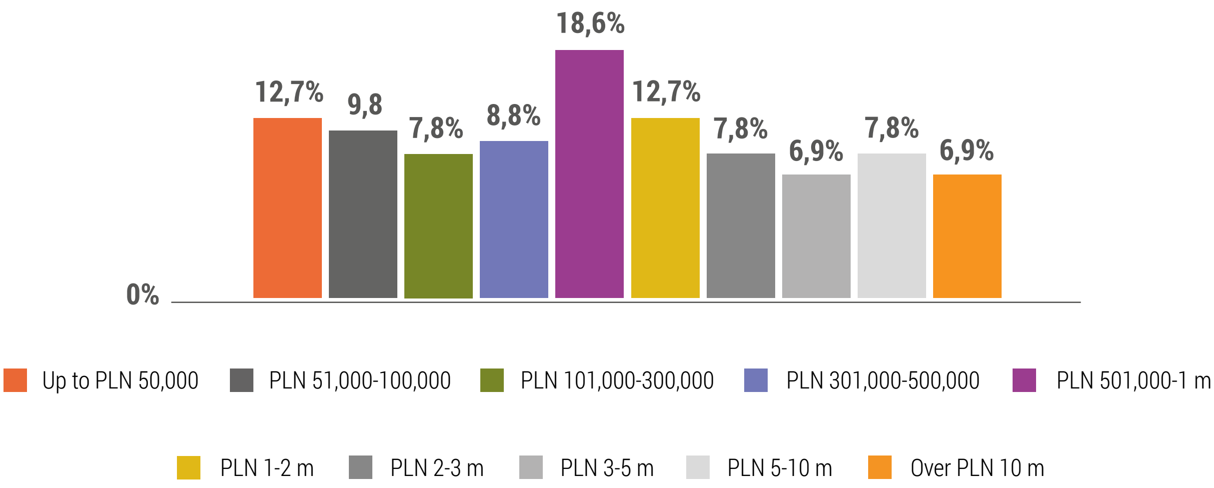


Source: compiled based on the results of the "Polish GameDev 2017"

17% of those surveyed declared a project budget of over PLN 10 m – the biggest group, which has doubled in size since 2015. The next most frequent response was PLN 1-2 m (15%). The next most frequent response was PLN 1-2 m (15%). The remaining financing levels for planned new games remain at the same level.

3.6.6 Budget for your biggest release in the next 3 years

Fig. 3.29 Planned budget for your biggest release in the next 3 years

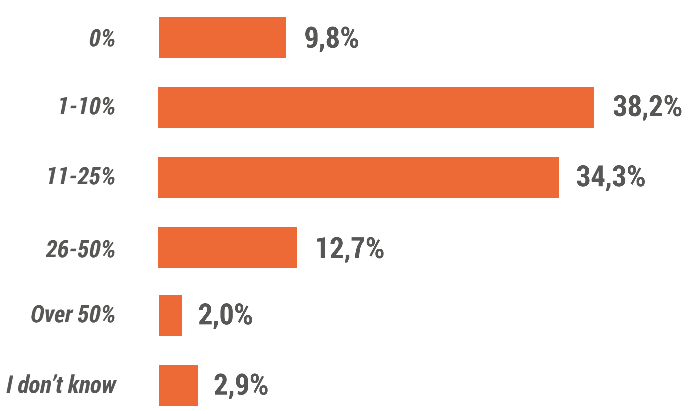


Source: compiled based on the results of the "Polish GameDev 2017"

The planned budget for the biggest release in the next 3 years declared by over 18% of the companies surveyed will be between PLN 501,000 and PLN 1 m. Budgets of hundreds of millions can practically be afforded only by two companies in Poland: Techland and CD Projekt RED. As a comparison, a game of another developer held in high regard in the West, 11 bit studios, ***This War of Mine*** cost about PLN 2 m. The above trend is visible in the surveys - companies without budgets allowing development of AAA games are quite efficient in creating high quality games with lower budgets - nearly 25% of the companies surveyed declares budget for the incoming productions between PLN 1 m and 10 m.

3.6.7 Outsourcing costs for a single project

Fig. 3.30 What percentage of the costs of one project are allocated to outsourcing?



Source: compiled based on the results of the "Polish GameDev 2017"

87% of respondents stated that they outsource parts of their projects, with 72% of them outsourcing about 25% of the work. 10% of companies don't use outside services, developing their games wholly from their own resources.

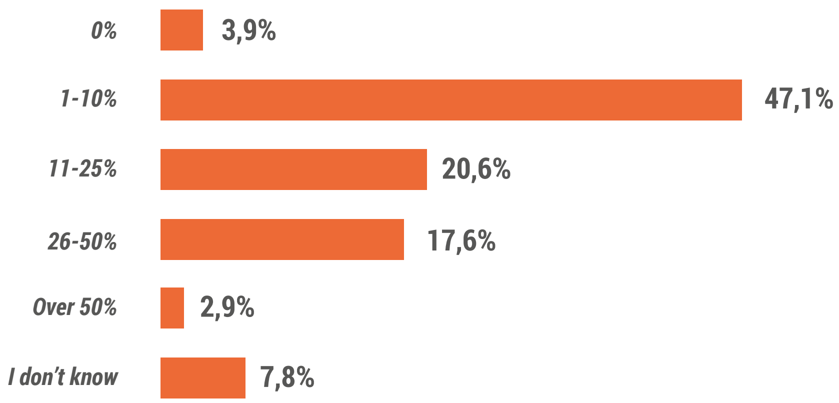
The significance of outsourcing for independent game developers is expressed by Jakub Marszałkowski (Indie Games Poland Foundation): "Their teams are too small, so they have to outsource some of their needs. Usually it's the music, or even all of the audio. Almost always localization as well.

But I also know of cases where companies have outsourced every possible part of the game. This rarely happens with design and coding, but very often does with graphics. I don't know if the smallest companies don't outsource even more, due to the size of their team." Marcin Marzęcki (Kool2Play) sheds more light on the handing over of game development work to outside specialists: "We do outsource some of the work, especially translation of the text, as well as some of the graphics, audio and music." This trend can be seen in the data from companies with more than 10 employees, in which 55% declared outsourcing of more than 1/10 of a project's budget, and 19% of 1/4 of the budget. For companies with over 50 employees, these figures are 33% and 11% respectively. The segment of the industry that doesn't outsource at all is represented by Robert Podgórski (founder of BlackMoon Design), who says that "Practically nothing is done on the outside. We try to do everything ourselves, believing that, okay, maybe we don't have the skill in certain areas, but because our team is small, by continuing to polish it, we'll get better at it soon enough. Two areas in which we do consider outsourcing are QA and the creation of video content, such as trailers, gameplay videos, Let's Play and so on."

From the perspective of a service provider, though, Adam Piesiak (QLOC S.A.) suggests that the most sought-after services are in localization, translation and language testing. "This is what Polish developers are interested in, first and foremost. The second is some development, mainly porting for other platforms, since the studios often concentrate on one given platform, then look to expand their revenue through porting. But here in Poland, that rarely happens since we're a top-shelf global provider ourselves, so it's difficult if we're just talking with a Polish developer, not with their foreign publisher, to render this kind of service. So we mostly provide translations and testing. But sometimes testing of functionality as well, not just language."

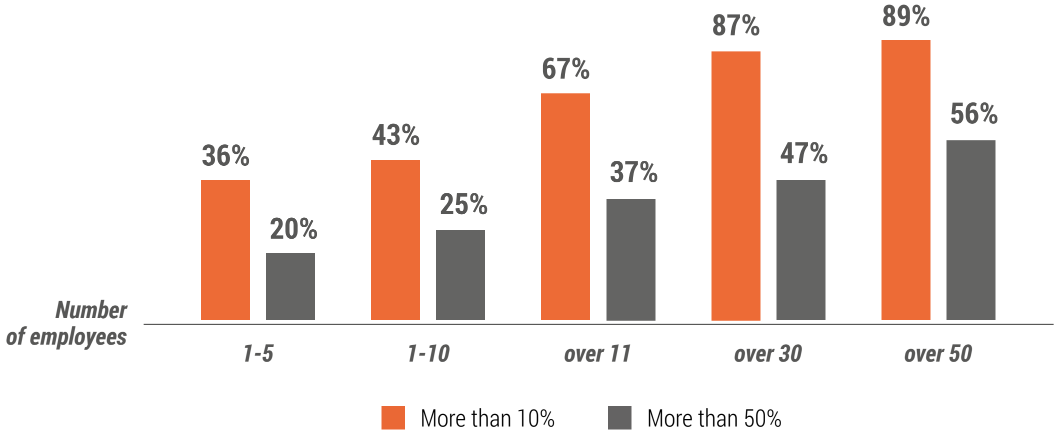
3.6.8 Marketing costs for a single project

Fig. 3.31 Within one project, what percentage of the costs are given to marketing?



Source: compiled based on the results of the "Polish GameDev 2017"

Fig. 3.32 Within one project, what percentage of the costs are given to marketing, considering the number of the company's employees?



Source: compiled based on the results of the "Polish GameDev 2017"

47% of those surveyed spend up to a maximum of 10% of an entire project's budget on marketing. Marketing budgets clearly increase with the company's size. A little over one-third of the smaller companies spend more than 25% of the budget on marketing, while 90% of the largest companies spend that much. Marketing budgets are also significantly bigger at companies using the F2P model, over 40% of which declare that they use a quarter of the budget, while only 25% of companies selling through the Premium model do the same.

This is confirmed by Mikołaj Pawłowski (Juggler Games), who says that around 3% of a Premium title's budget goes to promoting it. Krzysztof Kostowski (PlayWay) indicates an interesting marketing method:

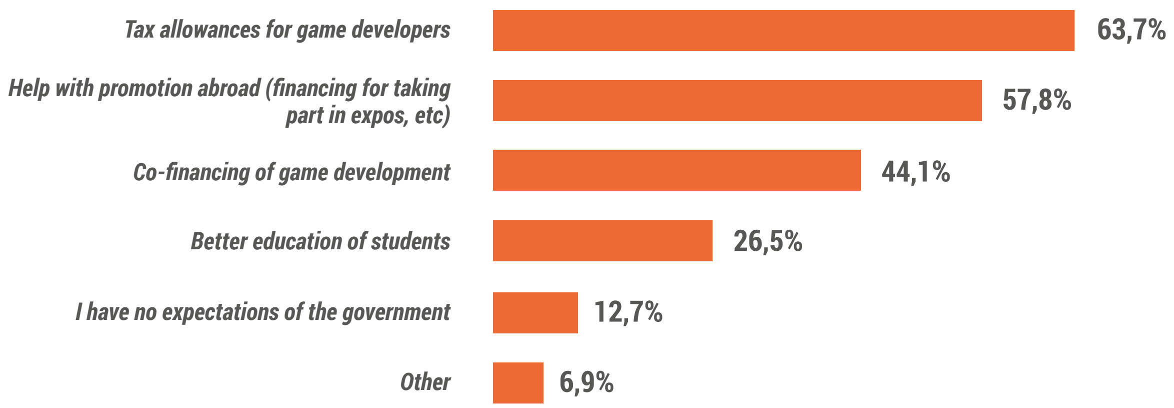
"We do clever marketing: we have 2,400 YouTubers, and we're in constant contact with them. A good example of what we do here is Agony, where we released a few trailers, and the trailers were then propagated by other, much bigger YouTube sites. And I think it reached 5 million."

According to Caglar Eger (Goodgame Studios), using the freemium model, marketing costs may even reach 70% of the game budget. "It happens that for us, the division of budget between game and marketing means 30% for game development. The remaining part of the budget is spent on marketing. Marketing is sometimes more important than the game itself. There are no players. There is no game."

3.7 SUPPORT FROM PUBLIC INSTITUTIONS FOR THE VIDEO GAMES SECTOR

3.7.1 Forms of support from government and municipal institutions

Fig. 3.33 Which forms of support does the company expect from government and municipal institutions?

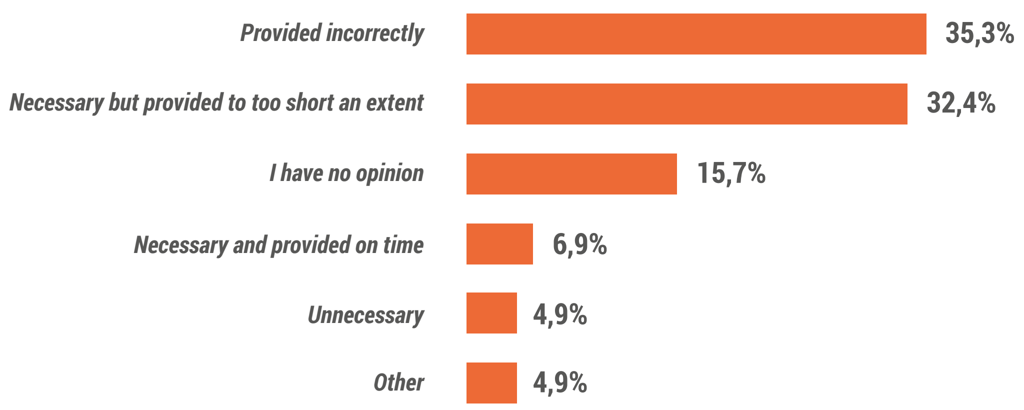


Source: compiled based on the results of the "Polish GameDev 2017"

64% of the video games companies taking part in the survey agreed that tax breaks for game developers would be the most important form of state help. The question remains of whether the answer for this need (which as of the writing of this report is in the consultation phase), is a research-development allowance for employment contracts, dedicated in part to the video games sector. This problem has come to the forefront in the search for support with promoting Polish games abroad (financing for taking part in expos and cons, etc), which is an important factor for 58% of those surveyed. The priority of these expectations has changed since 2015, too, with co-financing of game development becoming a factor that the government should support.

3.7.2 The current support for the industry's growth offered by the government and municipal institutions

Fig. 3.34 Rate the current support for the industry's growth offered by the government and municipal institutions



Source: compiled based on the results of the "Polish GameDev 2017"

Support from government and municipal institutions for the industry's growth was deemed necessary by 80% of those surveyed, and unnecessary by only 5%. Nearly 68% of respondents believe that the current support is too narrow in scope (32%), or is rendered incorrectly (36%).

According to Marek Czernik (Indie Games Poland Foundation), "The main problem is the lack of the inflow of capital for smaller companies. This is not because there is no money on the market, because there is, but it's hard for people from large funds to actually meet the representatives of new video games companies, because small companies don't have such big needs, if we look at it realistically. On the other hand, funds want to invest in companies that can rescale their business into something much bigger, and small companies are not interested in that. We need a middleman here as well as support so that the 'big' money can meet with the smaller studios that need investments of several thousand, or half a million, up to a million max. That's how Gambitious works on the investment side – we have a platform, a company that, in consideration of this barrier brings together these smaller investment projects, requiring small sums, and invites investors to come in and put money into them."

But there are also some positive opinions about the current condition of state aid, as Artur Maksara (Flying Wild Hog) says: "I highly value the people from the Ministry of Culture and National Heritage, the Ministry of Development and the Ministry of Foreign Affairs." Paweł Miechowski (11 bit studios) also praises the work of the government: "It's important for the Polish market that the industry has been deemed a strategic one by the current government, and this is evident in the number of programmes being promoted by Poland – whether it's EU programmes, like Go To Brand and Creative Europe, or domestic ones like the grants from the Ministry of Culture for game prototypes. There are more and more programs like this, and they have increasingly longer reach. I also know that there will be even more, so it looks like the industry has a very good working relationship with the government. And I don't see this as being political, it's more important than that, because every country in the world is doing similar things and we would be in a much worse situation otherwise, so I happen to like what's going on." However, there is a justified fear that if the government allocates too many resources to the currently popular video games sector, the number of studios will increase significantly but the games being made won't necessarily represent the high level of quality that the Polish industry is currently associated with.

Another risk associated with government grants was pointed out by Mikołaj Kamiński, (Sos Sosowski) – "the risk of companies that simply want to get the money, so they declare that they want to create a game and get the grant. It's not like it's not happening. It's happening. 'I want to make a game', they say, so they get a loan, 500,000, say they have an investor, because it's always half/half. They put in 500,000, the EU puts in another 500,000, and the game gets made. Of course, it's terrible, because no one knows what they're doing, and they only hire students who never worked on a game before so they don't have to pay them too much and then just release anything, since you need to release something to get the EU propaganda on. Boom, the sticker goes on, job's done, project signed, money in the pocket – and there's no game. Just some crap. And that's a shame. It's a shame because the money could've gone to someone who could've actually done something good with it."

Stan Just (CD PROJEKT RED) adds: "We have to admit that the support is significant and covers various domains. Accelerators are being created, there are programmes financing the co-financers, seed programmes, for example NCRD Alfa, which fund venture investments of financers who, in turn, invest in small entrepreneurs. There are programmes funding economic missions. There are micrograints from the Ministry of Culture which finance economic missions and prototypes. There is also Creative Europe, co-financing prototypes in narrative games. One should also mention GameInn. This is the current largest targeted financing of the sector. PLN 116 m last year, PLN 100 m this year, and dozens of co-funded projects. We are considering development of tax allowances for culture games."

3.8 LIST OF INDUSTRY EVENTS

Table 3.3 List of industry events

City	Event
Kraków	Digital Dragons
Poznań	Poznań Game Arena
Warszawa	Mastering the Game
Poznań	Game Industry Conference
Kraków	Game Academy
Łódź	Group Computer Game Development
various	Game Creator School
Warszawa	Game Dev Fest
Warszawa	Academy of Games and Postproduction
Warszawa	Warsaw Games Week
Katowice	Intel Extreme Masters
Warszawa	Good Game Expo
Warszawa	Pixel Heaven

Source: compiled based on the results of the "Polish GameDev 2017"

Apart from the above, there are numerous local gamejam-type events taking place, such as KrakJam in Kraków, and the Global Game Jam – competitions are organized at universities as well as at other events or conventions, such as P-Jam at the Pyrkon in Poznań.

Fans also organize 'talks' – series of meetings with employees of development studios, and other industry experts.

In Kraków there's also lvl.up, Grakademia in Łódź and the poGRAdajmy events all over Poland.

The development studios themselves also organize various events, mainly with the aim of hiring young, talented individuals – Techland's Game Creator Academy is one good example. However, these tend not to be regularly recurring events.

Photo source:
CD Projekt press materials

3.9 LIST OF NGOS

Table 3.4 List of NGOs

City	NGO	Website
Kraków	Digital Entertainment Cluster	http://dec-cluster.com/
	Polskie Towarzystwo Badania Gier	http://www.ptbg.org.pl
	Europejskie Centrum Gier	
Łódź	Łódzki Klaster Gamedev	http://gamedev.lodz.pl/
Warszawa	Fundacja Indie Games Polska	https://igp.org.pl
	Stowarzyszenie Polskie Gry	http://polskiegry.eu/
Wrocław	Zielone Gry	http://zielonegry.crs.org.pl/pl/
Poznań	Poznańska Gildia Graczy	

Source: Authors' own research

3.10 LIST OF PROGRAMMES SUPPORTING THE GAMEDEV INDUSTRY

Table 3.5 List of programmes supporting the gamedev industry

Programme		
GameINN	National Center for Research and Development	http://www.ncbr.gov.pl/fundusze-europejskie/poir/konkursy/kon-kurs3122016gameinn/
Go to Brand	Polish Agency of Industry Development	https://poir.parp.gov.pl/wsparcie-msp-w-promocji-marek-produkto-wych-go-to-brand-pl/poddzialanie-3-3-3-wsparcie-msp-w-promocji--marek-produktowych-go-to-brand
INNOTECH	National Center for Research and Development	http://www.ncbr.gov.pl/programy-krajowe/innotech/
Creative Europe	EU aid (creative industry)	http://kreatywna-europa.eu/
Development of creative sectors	Ministry of Culture and National Heritage	http://www.mkidn.gov.pl/pages/strona-glowna/finansowanie-i-me-cenat/programy-ministra/programy-mkidn-2017/rozwoj-sektorow--kreatywnych.php

Source: Authors' own research

In 2016, the foundations were laid for a government programme, pro{gra}muj http://programuj.gov.pl/, supported by the Ministries of Digital Affairs, Science and Higher Education, as well as the Ministry of Development.

3.11 LIST OF UNIVERSITY COURSES IN VIDEO GAME CREATION

Table 3.6 List of university courses in video game creation

University	Department/Institute	Degree/Specialisation	Type
Kraków			
Jagellonian University	Department of Physics, Astronomy and Applied Computer Science	Applied computer science/Video game production	full-time
Jagellonian University	Department of Physics, Astronomy and Applied Computer Science	Applied computer science/Video game production	part-time
Higher School of Economics and Computer Science		Computer science and econometrics/Computer game design and production	
AGH University of Science and Technology	Department of Computer Science, Electronics and Telecommunications	Computer game creation	post-graduate
AGH University of Science and Technology		Modern computer graphics	post-graduate
Pedagogic University		Digital Design	full-time
Pedagogic University	Institute of History and Archive Studies	Historical didactic games – creation of computer and board games	post-graduate
Cracow University of Technology	Department of Physics, Mathematics and Computer Science	Computer science/Computer graphics and multimedia	
Andrzej Frycz Modrzewski Krakow University		Computer science and econometrics/Computer graphics and internet techniques	
Warsaw			
Polish-Japanese Academy of Information Technology		Multimedia - Programming games	
Polish-Japanese Academy of Information Technology		AnimaTricks - School of 3D Animation	
Warsaw Film School		Directing and producing video games	
Video Game Creation High School			
Warsaw University of Technology	Department of Electronics and Computer Science Techniques, Computer Science Institute	Computer graphics - methods and tools	post-graduate
Łódź			
University of Łódź	Department of Mathematics and Computer Science	Computer graphics and game design	full-time
University of Łódź	Department of Mathematics and Computer Science	Computer graphics and game design	part-time
University of Łódź		New media and digital culture	full-time
Łódź University of Technology	Department of Technical Physics, Computer Science and Applied Mathematics	Computer science/Computer graphics and multimedia	full-time
Łódź University of Technology	Department of Technical Physics, Computer Science and Applied Mathematics	Computer science/Computer game and simulation technologies	full-time

University	Department/Institute	Degree/Specialisation	Type
Łódź University of Tech-nology	Department of Technical Physics, Computer Science and Applied Mathematics	Computer science/Computer graphics and multimedia	part-time
Łódź University of Tech-nology	Department of Technical Physics, Computer Science and Applied Mathematics	Computer science/Computer graphics and multimedia	full-time
Łódź University of Tech-nology	Department of Technical Physics, Computer Science and Applied Mathematics	Computer science/Interactive game and system technologies	full-time
Łódź University of Tech-nology	Department of Technical Physics, Computer Science and Applied Mathematics	Computer science/Computer graphics and multimedia	part-time
Łódź University of Tech-nology	Department of Technical Physics, Computer Science and Applied Mathematics	Computer science/Interactive game and system technologies	part-time
Poznań			
Adam Mickiewicz Uni-versity	Department of Physics	Computer technologies/Designing computer games	full-time
Poznań University of Technology		Computer science/Games and internet technologies	full-time
Katowice			
Katowice Institute of Information Technologies		Graphics/Designing games and virtual reality	full-time
Katowice Institute of Information Technologies		Multimedia	
University of Economics Department of Computer Science and Communi-cations		Programming games and mobile applica-tions	full-time
University of Economics	Department of Computer Science and Com-munications	Mobile games and applications	full-time
University of Silesia	Computer Science Institute	Computer science/Computer game program-mer	major by request
University of Silesia	Institute of English-language Cultures and Literature	English studies/Designing interactive entertainment and localization of games and software	full-time
Cieszyn			
University of Silesia	Art Department in Cieszyn	Designing games and virtual spaces/sound in games	full-time
University of Silesia	Art Department in Cieszyn	Designing games and virtual spaces/ computer graphics	full-time
Gliwice			
Silesian University of Technology	Department of Automatics, Electronics and Computer Science, Computer Science Institute	Interactive 3D graphics	full-time
Częstochowa			
Częstochowa University of Technology	Electric Department	Computer Science/image engineering and computer graphics	full-time
Częstochowa University of Technology	Electric Department	Computer Science/image engineering and computer graphics	part-time
Częstochowa University of Technology	Department of Mechanical Engineering and Computer Science	Computer Science/visualization and graphics modelling techniques	full-time

University	Department/Institute	Degree/Specialisation	Type
Lublin			
Maria Curie-Skłodowska University in Lublin	Department of Humanities	Cyberculture studies	
Koszalin			
Koszalin University of Technology	Department of Electronics and Computer Science	Computer Science/Internet and Mobile Technologies	full-time
Szczecin			
West Pomeranian Business School in Szczecin	Department of Economics and Computer Science Game design		
West Pomeranian University of Technology		Computer science/Computer graphics and multimedia systems	
Kielce			
Kielce University of Technology		Computer science/Computer graphics	full-time
Kielce University of Technology		Computer science/Computer graphics	part-time
Nysa			
University of Applied Sciences in Nysa	Computer Science Institute	Computer games and multimedia	
Bydgoszcz			
Kazimierz Wielki University in Bydgoszcz		Game design and research	full-time
Białystok			
University of Białystok	Department of Physics	Physics of computer games and robots	
Zielona Góra			
University of Zielona Góra		Popular literature and game world creation	

Source: Authors' own research

There are also various courses available in Poland preparing the participants for jobs in the computer game industry, such as the Game Dev School in Warsaw.

3.12 LIST OF POLISH GAME DEVELOPERS

Table 3.7 List of Polish game developers

Names in alphabetical order			
11 bit studios	Black Torch Studio	Digital Melody	Grey Skies
11th dimension	BlackMoon Design	DigitalPurr	Gspot
4EVOLVE Games	Bloober Team	Doji Educational Innovations	hamstercube
Acid Wizard Studio	Bloomga	Drago Entertainment	Honeti Games
Acram Digital	Blue Sunset Games	Dragwa Games	Huckleberry Games S.A.
Action Games Lab	Bob Games	Dravisoft	Huuuge Games
Ahoy Games	Bravasoft	Dreamgrit	Hyperstrange
Aidem Media	Bulbware	Duckie Deck	HyperVR
AK84C	Byss Mobile	ECC Games	Ice Code Games
Alchemy Arts	Can Explode	Eccentricity Games	iFun4all
Aliasing Games	Caped Koala Studios	Efektpol VR	IMGN.PRO
Alien Worm	Carbon Studio	Emilus IT Solutions	In Images
Alrauna Studio	CD PROJEKT RED	Empyrean	Indago
AndCreations	ChaosForge	Enclave Games	Indievision
Anshar Studios	CherryPick Games	Ende Games	Infinite Dreams
Appendix Games	Chicken in the corn	ENTERi	Insane Code
appSide Down	CHV'OK Studio	EVERYDAYiPLAY Sp z o.o.	Insecure Shark
Artifex Mundi	CI Games	Evil Indie Games	Intermarum
Artists Entertainment Poland	Cmoar Studio	Exor Studios	IQ Publishing
Artur Mandas	Code Miners	Fabryka Gier	Jet Toast
AT Games	CodeMagic	Flying Wild Hog	Juggler Games
Atomic Jelly	Concepto	Fool's Theory	Jujubee S.A.
Awesome Game Studio	Confused Paladin	Forever Entertainment	Junkhive
Awesome Industries	Cookie Unit	fragOut Studio	Jutsu Games
b-interaktive	Crazy Goat Games	Frozen District	King Zebra Studio
BAAD Games	Creative Forge Games	Fuero Games	Kivano
BackStab Game Studio	Crimson Pine	FunVenture	Kool2Play
Baked Games	Crunching Koalas	G2A Dev Studio	Kurki Collective
Baltoro Games	Cublo Games	Galante Games	LabLike
BasementVR	Curious Element	Game Factory	Layopi Games
Best Toilet Games	Dardanele Studio	GameDesire	Levitating Frog
Big Daddy's Creations	Deadbit	gameDNA	Liberty Games Interactive
Big Top Games	Deep Water Studio	GAMEFILLED	Lichthund
Bit Golem	Demonual Studios	Gamestone Studio	light echo
Black Eye Games	Destructive Creations	Gamesture	LivinThing Studio
Black Mirror	Dev4play	Garmory	Low Poly Dreams

Names in alphabetical order			
Low Poly Wolf	People Can Fly	REZONER	The House of Fables
Machine Sharks	Picadilla	Robot Gentleman	The Knights of Unity
Madmind Studio	Pigmentum Game Studio	Semtex Studio	The Moonwalls
Mageeks	Pixartfoxes Team	Sigma	The Oak Team
MGP Studios	Pixel Crow	Silden	themorfeus
MH Games	Pixel Flipper	Silesia Games	Thing Trunk
Mighty Dragon Studios	Pixelated Milk	Silver Lemur Games	TK Games
mindhelix.pl	Plastic	SkyKan	Toka Team
MoaCube	Play Cool Zombie Sport Games	SlazinStudio	Tomasz Wacławek
Mogila Games	Playsoft	Sleepless Clinic	Toucan Studio
Monster Couch	PlayWay	Sodigital	Transhuman Design
Moonlit Games Studio	PolyAmorous	Solar Ocelot	TwoMammoths
MoonWolf Studio	Polyslash	SOS	Unbound Creations
MuHa Games / Eerie Forest Studio	Positiv8	SoulFire	Univcoda
My Next Games	Postpunk Games	Space Boat Studios	University of Games
MythicOwl	Potato Incorporation	Spectral Games	ux dreams
N94 Games	Power Up Game Studio	Star Drifters	Viking Potatoes
Nano Titans	PrimeBit Studio	SteamDragon Games	Vile Monarch
Nawia Games	Puzzling Dream	Strange New Things	VIVID GAMES
NeatWare	Pyramid Lab	Suicide Penguin	VR VISIO Group
Nitreal Games	Quantized Bit	SUPERHOT Team	Vrizzmo
Noble Fox Games	QubicGames	Tabasco Interactive	Warappa
NowaHutaGames	Raba Games	Tate Interactive	WarSo.ninja
Nuclear Studios	Rainbow Train	Techland	Wastelands Interactive
OhNoo Studio	Rapid Games Studio	Telehorse	Werewolf Team
One More Level	Ratsquare	Telepaths' Tree	WHITEMOON
OnionMilk	Raving Bots	Ten Square Games	Woodland Games
Orchid Games	Rebel Twins	Tenkai	World-LooM Games
Ovid Works	Red Dot Games	Teyon	Wulo Games
p1x	Red Limb Studio	The Astronauts	
Peaceful Games	Reikon Games	The Code Horizon	
Pentacle	Revolt and Rebel	The Farm 51	

Source: compiled based on data from the Indie Games Poland Foundation

3.13 LIST OF POLISH VIDEO GAMES WEBSITES

Table 3.8 List of Polish video games websites

No.	Website name	Users[23] (real users)	Visits[24]	Time spent[25] [hours]	Average time spent per user[26] [h:m:s]	Reach among internet users[27]
1	gry-online.pl	2 564 810	23 968 472	337 113	00:07:53	9,31%
2	gry.onet.pl	1 175 677	3 149 355	171 303	00:08:45	4,27%
3	eurogamer.pl	676 856	2 093 624	53 964	00:04:47	2,46%
4	gry.interia.pl	568 544	1 388 107	27 326	00:02:53	2,06%
5	gram.pl	503 619	2 104 374	34 508	00:04:07	1,83%
6	cdaction.pl	454 928	3 175 011	55 187	00:07:17	1,65%
7	ign.com	353 708	1 328 887	22 652	00:03:51	1,28%
8	miastogier.pl	273 336	1 029 647	13 148	00:02:53	0,99%
9	gry.wp.pl	233 844	669 169	22 317	00:05:44	0,85%
10	gamezilla.pl	204 394	795 846	11 881	00:03:29	0,74%
11	ppe.pl	127 459	574 629	4 091	00:01:56	0,46%
12	pssite.com	118 663	1 932 881	40 076	0	0
13	polygamia.pl	111 127	242 239	2 737	0	0
14	planetagracza.pl	78 918	189 040	2 119	0	0

Source: Research by Megapanel Gemius PBI December 2016

[23] **Users (real users)** mean internet users in a given target group who visited (generated at least one website visit) in the defined period. The indicator refers to the actual number of people and not machines, cookies or IP addresses.
[24] **Visits** mean the number of the site being displayed in an Internet browser or new contents in the internet application by the users in the defined period.
[25] **Time** the time spent by the users from a given target group at the selected node(s) in the defined period. The indicator is expressed in hours.
[26] **Average time spent per user** the time spent by a user from a given target group at the selected node(s) in the defined period.
[27] **Reach among internet users** the ratio of users in a given target group who visited the selected node(s) in the defined period to the number of all internet users in a given target group in a specific month. The indicator is expressed as percentage.

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