Working translation from Polish

Information on basic broadcasting issues in 2022

National Broadcasting Council, Warsaw, May 2023

The National Broadcasting Council

RESOLUTION 72/2023

of 10 May 2023

Pursuant to Article 9(1) in conjunction with Article 12(1) and (2) of the Broadcasting Act of 29 December 1992 (Journal of Laws 2022, item 1722) National Broadcasting Council

It has been decided to:

1. Adopt the *Information on basic broadcasting issues in 2022,* which is annexed to the resolution.
2. Present the *Information on basic broadcasting issues in 2022:*
   - to the Sejm of the Republic of Poland,
   - to the Senate of the Republic of Poland,
   - to the President of the Republic of Poland.
3. Present the *Information on basic broadcasting issues in 2022* to the Prime Minister.

Chairman

of the National Broadcasting Council

/ - / Maciej Świrski

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Introduction

Every year, in accordance with the provisions of the Broadcasting Act, the KRRiT, together with the *Report on* its activities, presents the *Information on basic issues of broadcasting* in Poland.

The Information contains data showing the current and projected shape of the media market and the services used to provide it, presents the economic and financial condition of the entities that are engaged in this activity, and illustrates how Poles receive the programme offer which is available to them. This document is based on data from[1] : the Academic Centre for Strategic Communication, Alert Media Communications, Public Opinion Research Centre, Digital Poland, Empemedia, Gemius/PBI-Polish Internet Research, Central Statistical Office, Interaktywnie.com, IFPI, Inquiry and Try Evidence, National Media Institute, iloveradio.pl, Kantar Polska, NASK and Pracownia Badań Społecznych, Nielsen Audience Measurement, PMR, Publicis Groupe, Polskie Badania Czytelnictwa, Reuters Institute, Demagog Association and Instytut Monitorowania Mediów, Urząd Komunikacji Elektronicznej, Wavemaker, Wise Rabbit on behalf of Clue PR and from broadcasters' financial statements.

The most important occurrence of 2022, which also affected the situation of the media in Poland, is Russia's aggression against Ukraine. Already in the first days of the war, the KRRiT removed 7 programmes from the register of programmes distributed on Polish territory: *RT Russia Today, RT Documentary, RTR Planeta, Soyuz TV, Russija 24, Belarus 24* (also known as: *TV Belarus*) and *Pervy channel* (also known as: *Channel 1 Russia, ORT1*) due to content threatening the security and defence of the Republic of Poland.

The Polish media, public and licensed, were quick to respond to the needs of Ukrainian citizens seeking refuge in Poland. With the approval of the KRRiT, new radio programmes were launched with information useful to refugees, especially in the areas near the border with Ukraine. Translations of news services in Ukrainian have been added to television programmes. There were also special programmes created with Ukrainian journalists and broadcast in this language. Pay-TV operators have expanded their offerings with programmes originating from Ukraine and Ukrainian versions of programmes from other

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[1] Academic Centre for Strategic Communication, *Research on susceptibility to disinformation*, January 2022; Alert Media Communications, *Kryzysometr,* November 2022; CBOS, *Using the Internet,* June 2022; Digital Poland *Disinformation through the eyes of Poles,* February 2022; Empemedia, *Internet and Social Media 2022*, *March 2022*; Gemius/PBI, *Media Panel,* Q4 2022; GUS, *Information Society in Poland in 2022, Statistical Analyses of the Central Statistical Office (CSO),* Warsaw, December 2022; CSO, *Use of ICT in public administration units, enterprises and households in 2022,* January 2023; Interaktywnie.com, *Videomarketing for companies,* August 2022, IFPI, *Engaging with Music 2022 Report;* Inquiry in collaboration with Try Evidence, *Esport and gaming in Poland,* September 2022; National Media Institute, *Media services and infrastructure for their reception in households in Poland in 2022. Results of the Foundational Study of the National Media Institute,* April 2023; and *Media services and the infrastructure to receive them in 2022. Polish residents aged 4 and over*. *Results of the Foundational Research of the National Media Institute,* April 2023; iloveradio.pl, *RADIO 2022 summary of listening results;* Kantar Polska SA, *Radio Track*, *Radio in Poland 2022,* March 2023; NASK and PBS, *Safe Choices. Online (dis)information survey*, March/April 2019; Nielsen, *Videonauts. How viewers navigate a world of multiple screens, content, media,* Syndicate Report, January 2022; PMR, *Pay-TV Market and VoD Services in Poland. Market analysis and development forecasts for 2022-2027*, July 2022; Starlink/Starcom reports, Publicis Groupe, *Advertising market in Poland in 2013-2022*; Reuters Institute, *Digital News Report 2022;* Demagog Association and Media Monitoring Institute, *Anti-Ukrainian propaganda in social media,* January 2023; UKE, *Report on the state of the telecommunications market in Poland in 2021,* June 2022; Wavemaker, *Video Track VII, Report from the 7th Edition of the VOD market research in Poland,* December 2022; Wise Rabbit on behalf of CLUE PR, *Generation Z enters the game. Content reception by the young,* September 2022.

Polish and European broadcasters. Taking into account the number of Ukrainian citizens temporarily or permanently residing in Poland, the KRRiT will strive to create appropriate conditions for the development of a programme offer aimed at this group.

The electronic media market is presented with background information on the surrounding markets, i.e. the press (traditional and digital) and cinema, as well as telecommunications services, which are now the main source of access to content.

Analysing the situation of traditional television, it should be noted that in Poland it is still one of the main media types, but is slowly losing its primacy. This is particularly evident among viewers aged 10-24. In 2022, compared to 2021, there was both a decrease in average viewing time on linear TV (by 11 minutes) and a decrease in TV audience (by 0.31 million viewers). Polish viewers continue to be most engaged by programmes created by the main broadcasters: TVP, TVN and Polsat, which together account for ¾ of the audience.

As in previous years, there has been a decline in interest in the programme offer of the so-called Big Four (TVP 1 and TVP 2 as well as TVN and Polsat). Together, these programmes have lost almost 10% of their audience share, i.e. the percentage of viewers who watched the programme in relation to all viewers watching TV at the time, compared to the 2021 results. This is partly offset by an increase in the share of thematic programmes created by these broadcasters. This is due to the further segmentation of audiences, who are dispersing their attention to an increasing number of thematic programmes.

The fragmentation of audiences means that in 2022 the group of programmes with an audience share of more than 1% has decreased from 20 to 18. TVP 1, Polsat and TVN are still the most watched programmes with an audience share of around 7-8%.

There is a further increase in the viewing of news and current affairs programmes (TVN24, TVP Info and Polsat News), which is mainly related to daily viewing of news on events related to Russia's armed attack on Ukrainian territory, as well as increased interest in the current socio-political and economic situation in the country and the world.

Most media sectors saw an increase in advertising spending in 2022. This was not the case for TV advertising budgets. These were around 2 percentage points lower than in 2021. This was influenced by the performance of digital terrestrial television (around 4%). The free-to-air terrestrial TV offer, which has been rolled out since 2013, has quadrupled, resulting in revenues being shared among more players. This does not have a positive impact on the ability of broadcasters to increase the attractiveness of their programme offer.

The decline in advertising revenues does not apply to satellite and cable programmes, which together recorded a slight increase (by around 3%). In this group, as in the overall TV advertising market, programmes distributed by TVP, TVN and Polsat recorded the highest revenues. Most of the advertising revenues of satellite-cable broadcasters went to domestic entities, although the share of programmes of global companies aimed at the Polish market is growing and already accounts for more than 30%.

The TOP 4 and HHI indicators[2] both in the TV audience market and in the advertising revenue market testify to the persistence of a hybrid oligopoly in which there are three groups of dominant

[2] The TOP 4 determines the percentage sum of the shares of the four largest players in a given market. The Herfindhal-Hischman Index (HHI) is the sum of the squares of the shares of all entrepreneurs in a market; it is used in antitrust proceedings and in sectoral regulation. The height of both indices and their changes over time make it possible to

broadcasters and a large number of smaller ones. This is all the more so when one considers the position of the other market players, as the disparity is clear. TVP, which is financed from public funds, and TVN and Polsat, which, by combining the functions of broadcaster and advertising broker and through the practice of so-called bundling of programmes in sales offers to pay-TV operators, have a strong position, taking advantage of the must carry/must offer principle and the presence of many programmes on digital terrestrial television.

This situation is supported by the fact that Polsat and TVN have easy access to their associated satellite platforms Polsat Box and Canal+. Their offer reaches half of the pay-TV audience. The remainder of subscribers use access to TV programmes offered by cable and Internet operators. IPTV's share[3] already amounts to 12% of the pay-TV market, and thanks to its growth, the revenues of the entire market for these services have not fallen recently.

However, the slow shift of viewers away from traditional television does not mean that viewers are reducing their contact with audio-visual media. Their time and attention is being engaged by new services, including the offerings of streaming services. Although they did not achieve the same record results in 2022 as during the pandemic, in which media reception in general increased, both the number of households using paid VoD services and the number of subscribers to these services continue to grow.

It is estimated that 65% of Polish internet users pay for access to on-demand film offerings. This represents an 8% increase from the previous year. The largest increase in those paying for subscriptions is recorded in the 55+ group. Invariably, Netflix is the most popular service, but Disney+, which has been present in Poland for a short time, quickly came second. Polish VoD providers Player and Cda Premium are in the lead. Slightly less popular are tvp.pl and Polsat Box.

Despite another successful year for the VoD services industry, issues have also come to light that could affect its further development in the near future. Chief among these is the issue of the economic model in the context of increasing competition. In the last three months of 2022, one in five e-viewers cancelled any of their paid subscriptions, justifying this by necessary savings. This is all the more so as new players have emerged, namely providers of free streaming TV channels, which could become competitors to paid VoD services in an economic crisis. In addition, there is increasing competition within the paid VoD sector itself, most recently Disney+ and SkyShowtime, who hold rights to works previously unavailable in Poland. In this context, the results of surveys indicating that more than half of households are willing to replace their current service with a new offer, should one appear on the market, become important.

Revenues from paid VoD offerings, mostly from subscriptions, are growing year-on-year by double digits, with Netflix accounting for almost half of this. This market is approaching a saturation point, where users' decisions will be influenced by fierce programme competition.

There is also growing interest in audio and video content available on social networks. Still the undisputed leaders on the Polish market are the global giants, viz: Facebook and Instagram (Meta), YouTube or TikTok. Since last year, social media have gained 1.3 million users, which means that they are used by 27 million Poles**.**

measure the market power of entrepreneurs and to determine in which direction competitive conditions are developing in a given market.

[3] IPTV - Internet Protocol Television is an Internet TV standard that enables the delivery of audio and video signals using a closed, operator-separated broadband network.

This is particularly relevant for the formation of knowledge about reality by younger media users. More than 90 per cent of respondents aged 15-25 cite YouTube and Facebook as their main sources of knowledge about the world, followed by Instagram (82 per cent) and TikTok (74 per cent**).**

The intuitiveness and ease of the way in which videos are posted on social media and the lack of effective oversight mean that illegal and harmful content, including content that threatens the physical, mental or moral development of minors, appears alongside valuable information. In this context, it is important to note that platform providers, while not taking editorial responsibility for the content they post, influence, positively or negatively, the organisation and distribution of this content through algorithmisation. In this situation, they are indirectly responsible for the proliferation of illegal and harmful content.

Despite the high popularity of audio-visual services, radio as a companion medium still plays an important role in the media ecosystem. In 2022, an average of 19.5 million Poles listened to radio each day, devoting an average of 4 hours and 14 minutes to it.

There is a lot of talk about younger generations moving away from radio, but although the largest group of radio listeners (over 67%) are adults aged 40-59, the second largest group (over 63%) are viewers aged 15-24.

The four all-purpose national programmes are the most popular among listeners: RMF FM, Radio Zet and Polish Radio One and Three. Together they achieved a 53% share of listening time, with RMF FM accounting for more than half. Among regional and local stations, in addition to the strong position of Polskie Radio's programmes, Radio Eska plays a significant role, and in some regions also RMF Maxxx, Złote Przeboje and Radio Plus. The most popular typically local programmes include: Muzyczne Radio (Dolnośląskie), Radio Park (Opolskie), Radio Leliwa (Podkarpackie), Radio 5 (Podlaskie), Radio Kaszebe (Pomorskie) and Radio Silesia (Śląskie).

There is a slow increase in the number of people listening to radio via the Internet. Around 5% of listeners use this mode of reception, although the proportion of listeners in the younger audience is significantly higher. In internet radio, listeners appreciate access to specialised music programmes.

While it is true that the audience and daily listening time results for radio in 2022 show further slight declines, this does not directly translate into an alternative way of interacting with audio services offered online. According to the Kantar study, podcasts are used by around 30% of respondents. Similar figures are reported by the National Media Institute. The most frequent users are young people aged 16-24, who declare that they access this medium at least once a month. Almost half of Poles listen to music via video or audio streaming platforms, either in paid or free versions. The most popular music services are eska.pl, interia.pl and Spotify.

Despite the growing interest in this form of access to audio content, however, the authorial role of the radio presenter and journalist and the high level of trust in radio information are still the strength of the medium, and the playback of music or podcasts in the on-demand offering is more a supplement to the listener's needs.

The radio advertising revenue market, which is the main source of revenue for commercial stations, recorded an increase of 4% in 2022 compared to 2021. Its leader is RMF FM with a share of around 24%. As in the case of television, the main radio groups (RMF, Eurozet, Polskie Radio, Eska and Agora) together account for around 80% of radio advertising revenue.

The economic and financial health of local broadcasters not linked to the main broadcasters is stable, but does not indicate a serious capacity to invest in both programme offerings and technical development, which is important in terms of their future participation in analogue-to-digital conversion. A threat to the diverse offer in radio is the high rate of concentration of the sector, in particular the way in which the advertising revenue shares of radio groups and independent broadcasters are distributed. Further progression of the concentration, already increased by Agora's acquisition of Eurozet, will affect local markets, where Agora – using the frequency resources allocated in the concessions owned by Eurozet – may gain a very strong position, also at the expense of independent broadcasters.

The internet is the primary technological platform of modern media. Almost 18 million people used various types of web access in 2021, mostly mobile access. Taking into account all possible ways of mobile internet access (e.g. SIM cards, additional packages to a telephone subscription, other data transmission offers), the penetration of mobile internet services reached almost 199% in relation to the population of Poland, which means first place in the EU. This fact may have an impact on the popularisation of on-demand media services and the further growth of social media in accessing information and entertainment.

Editorial content creators face challenges in finding new business models. The financial situation of the media, after the loss of advertising revenues during the 2021 pandemic, has improved, but the high cost of doing business and the highly competitive advertising market, with online advertising leading the way for the past two years, are becoming an increasing problem. Advertising brokers and online platforms providing their space are dictating terms to content providers. Increasing marketing space, coupled with an increase in the number of content providers, is devaluing the value of advertising. There is a legitimate concern that this may negatively affect both the quality of content and the ability of providers to create quality content and to invest and grow. In Poland, there is no effective system to protect the media market from excessive concentration, even though this is common in most European countries. This concerns not only the advantage resulting from the accumulation of capital and the possession of a significant position in the advertising market or the market for the sale of paid services, but also the risks resulting from cross-ownership in different media segments and in the process of their distribution.

The situation is worrying especially in the context of limiting the sources of information, because although there is a great number of such sources on the Polish market, their choice by the viewer is usually determined by the strength of the brand. This is confirmed by data on TV audience, radio audience and the popularity of VoD and VSP platforms. They show that the leaders include entities with foreign capital at their disposal with the advantage of reach, various forms and channels of distribution, as well as funds for marketing and image campaigns.

In order to counter the dominant position of digital giants such as Google, Amazon, Meta and Apple, the European Union adopted a regulation in 2022 called the *Digital Markets Act*. It is intended to curb the abuse of competitive advantages by these players arising from their technological role as so-called 'gatekeepers', without which the user cannot use many services, including media services. Under the provisions of the *Digital Markets Act,* very large online platforms will not be able to make access to services provided by others conditional on the use of their own applications and systems, or to promote their own content at the expense of that of other providers. It appears that the Digital *Markets Act* will have a positive effect on the development of indigenous services in individual EU countries, but its application will require a great deal of activity by national authorities monitoring its application and a consistent approach by the

European Commission, which has the power to settle disputes between entrepreneurs and impose penalties for violations of the rules established by the act.

Television, which has been covered for many years by the Audio-visual Media Services Directive (and previously by the Television without Frontiers Convention), provides a high level of protection for both minors and the general public. This also applies to the way in which advertising activities are carried out (labelling of advertising, sponsorship or product placement and limits on the time allowed for advertising). In the new media, in particular the so-called social media (including video sharing platforms), this situation is not satisfactory. However, it should improve as a result of the implementation of another European regulation from 2022, the *Digital Services Act,* into the Polish legal order. This regulation provides for an active role of platforms in monitoring and counteracting the presence of illegal content on these platforms, including discriminatory content, incitement to hatred and violence, and content that threatens state security. The national regulator responsible for the application of the *Digital Services Act* will be able to intervene in the event of violations of these rules by both content providers and content distributors. This applies to both domestic and foreign entities, which will make such interventions more effective than before.

For providers in the Polish jurisdiction, last year was the first year in which they had to adapt to the new obligations resulting from amendments to the Broadcasting Act transposing the provisions of the amended Audio-visual Media Services Directive. While foreign platforms were quicker to adapt to the legislative changes, Polish providers had problems implementing all the solutions imposed on them by the legislator. The most common shortcomings concerned information on: rules for posting commercial messages, how to report harmful content or how to file complaints. None of the providers carried out media education activities despite the clear obligation imposed on them by the provisions of the amended Broadcasting Act. In an era of increasing fake news, mainly due to social media, media education is becoming an important direction of both national and EU action. The KRRiT will pay particular attention to this issue.

Chairman

of the National Broadcasting Council

/ - / Maciej Świrski

1. Media reception

1.1 The audience market for audio-visual content

1.1.1. Time and habits of audio-visual content's reception

Regardless of the device and viewing method, 96.2% of the Polish population, on an annual basis, had contact with TV 'broadcast by programme'. Television reception, i.e. declared contact with any TV programme during the year (January 2022 to December 2022), is highest in the age groups 50-64 (98.3%) and 65+ (98.2%), and lowest in the age group 16-29 (94.2%).[4]

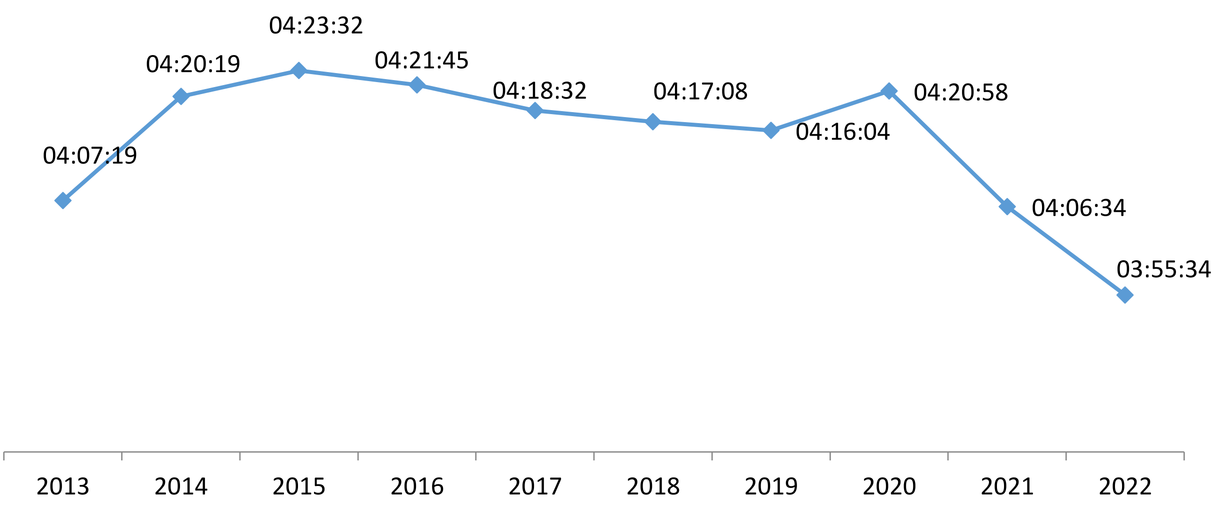
Polish residents with tertiary education are less likely to report watching TV (93.4%) than those with primary/vocational education (97.2%)[5] .

Average TV viewing time in 2022 decreased by 11 minutes, to 3 hours 55 minutes 34 seconds. After an exceptional year in 2020, in which viewers sought important information and entertainment from traditional media as a result of the pandemic and movement restrictions, there was a marked decline in average TV viewing time in 2021, which deepened in 2022.

Television is watched less often by people from cities with more than 500,000 inhabitants (93.9%) compared to rural residents (97.2%)[6] .

The alternative way of accessing audio-visual content via on-demand audio-visual media services (VoD) and video sharing platforms (VSP) is firmly embedded in the landscape. Broadcasters competing with each other and with new content access services are finding it increasingly difficult to defend their position.

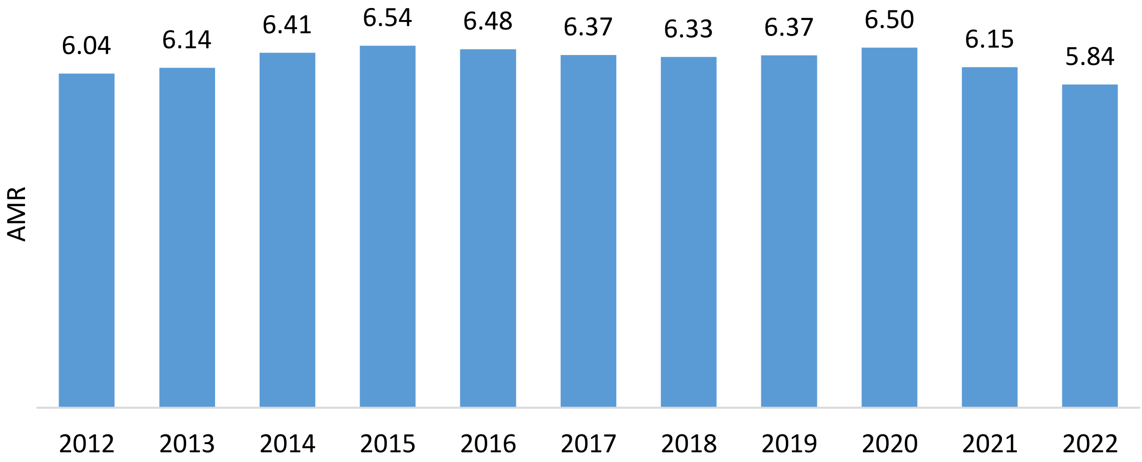
Figure No 1. Average time spent watching linear TV (hh:mm:ss)



Source: KRRiT Bureau compilation based on Nielsen Audience Measurement data

[4] *Media services and the infrastructure to receive them in 2022. Polish residents aged 4 and over*. Results of the Foundational Survey of the National Media Institute, April 2023.
[5] Ibid.
[6] Ibid.

Figure No 2. Average audience for linear television between 2012 and 2022 (in millions of viewers)



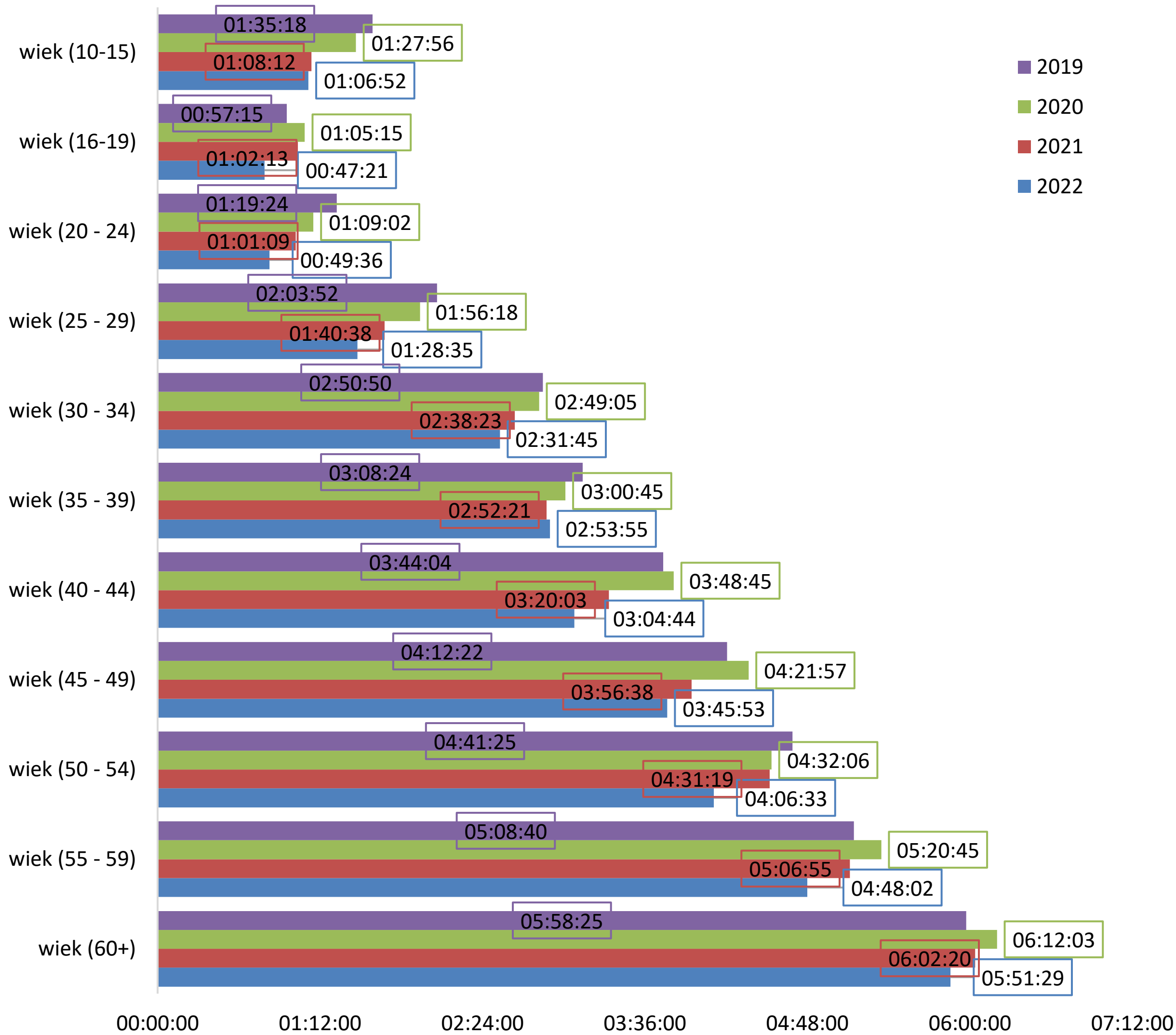
AMR (Average Minute Rating) – average minute viewership; the number of people watching television in one minute, averaged over consecutive years.

Source: Study by the KRRiT Bureau based on AGB Nielsen Media Research survey data.

The decline of 0.66 million TV viewers by 2020 marks the lowest number of linear TV viewers in years (even lower than in 2012 - 6.04 million). The trend of audience exodus to non-linear services, in particular to the internet, seems to be accelerating, which is certainly influenced by the increasingly attractive and diversified offer of on-demand audio-visual media services (VoD) and video sharing platforms (so-called VSP). For more information on these services, see subsections: On-demand viewing - VoD and Social networks, video sharing platforms.

Time spent watching TV has clearly decreased for every age group, not only compared to the record year 2020, but also to the pre-pandemic results. The largest decreases can be seen in the 10-15 and 20-24 age groups. These groups devoted around 1 hour a day to TV. The longest TV watching is done by seniors (60+ group), who spend on average almost 6 hours a day in front of the TV.

Figure No 3. Daily TV viewing time from 2019 to 2022 between 6am and 11.00 p.m. (hg.mm.ss)



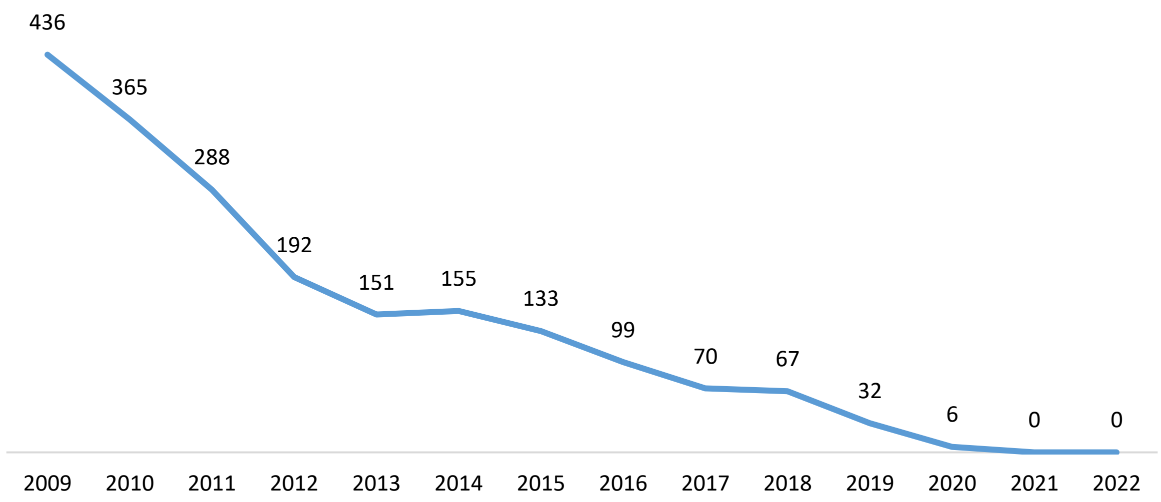
Source: Compiled by the KRRiT Bureau on the basis of data from the Nielsen Audience Measurement TV audience survey in Poland.

Over the past year, the list of Polish and Polish-language programmes extended from 452 to 460 items, and if foreign programmes offered by operators in Poland are included, viewers had a total of 687 TV stations to choose from (this figure includes programmes duplicated in HD).[7]

With the development of the programme offer, audience fragmentation continues. In 2022, as in 2021, the audience of not a single programme on TV stations exceeded the limit of five million viewers (in 2009 there were 436 such programmes, in 2019 32 and in 2020 only six).

[7] https:/www.akpa.pl/stacje.php

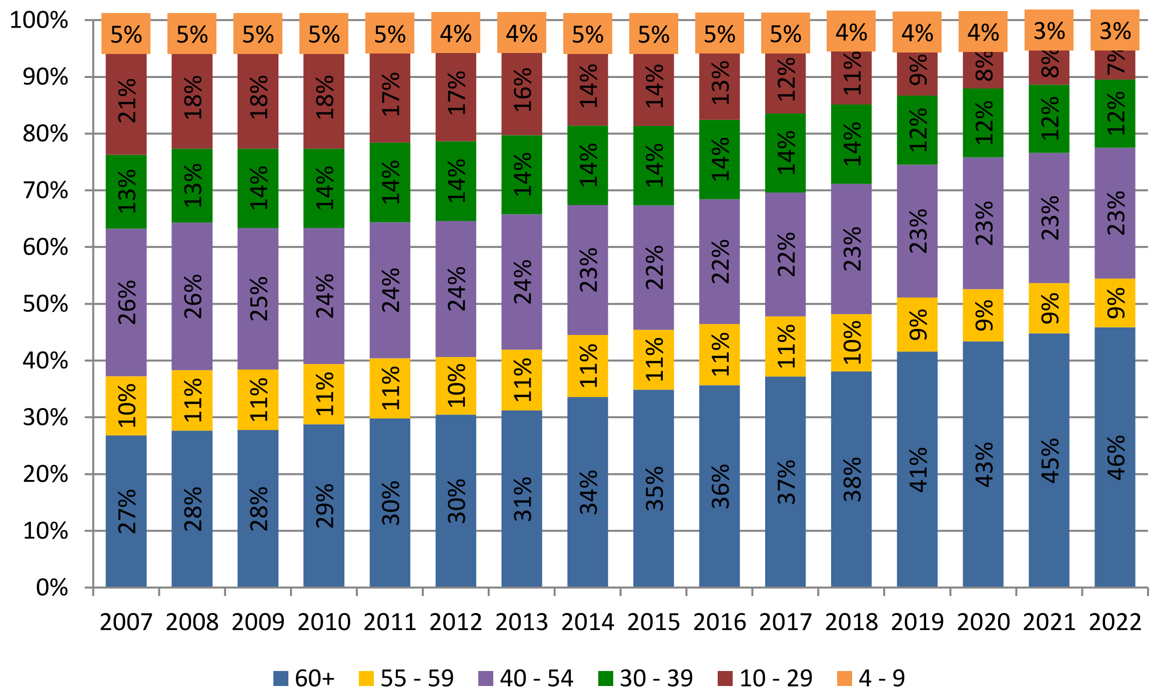
Figure No 4. Audience fragmentation. Number of programmes with an audience exceeding 5 million



Source: Based on Nielsen Audience Measurement data.

The data shown in the chart below shows that audiences aged between 10 and 29 represent a decreasing proportion. In 2022, they already accounted for a total of only 7% of the audience. This is influenced by demographic changes as well as changes related to the development of digital technology and widespread internet access. In the other age ranges, with the exception of the oldest audience (the 60+ group), the audience remains almost constant (+/-1 pp.) The over 60s represent the largest proportion of the audience, which is increasing significantly year on year. In 2022, they accounted for 46% of all TV viewers.

Figure No 5. Age structure of TV audiences between 6.00 a.m. and 11.00 p.m.

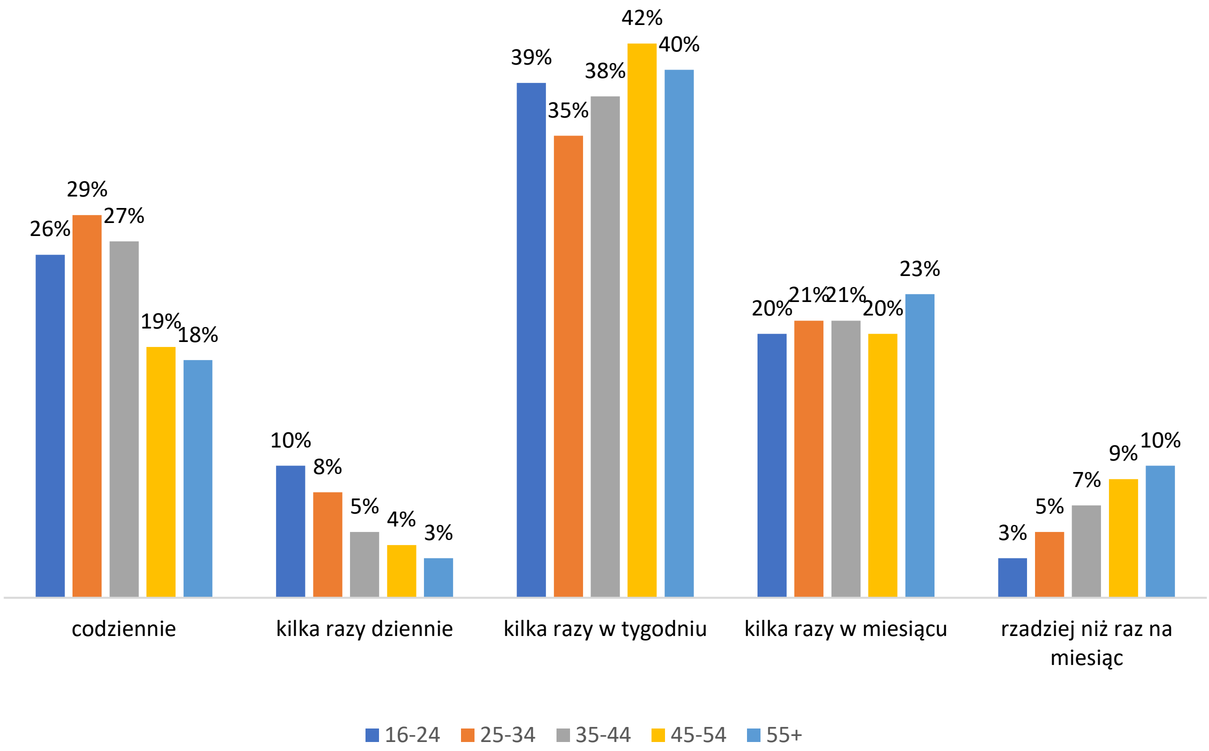


Source: Compiled by the KRRiT Bureau on the basis of data from the Nielsen Audience Measurement TV audience survey in Poland.

Irrespective of the regularity of VoD/streaming content use, 48.8% of people aged 4+ reported using paid VoD services in the last 12 months[8] .

VideoTrack VII, Wavemaker's study shows that 24 million Poles aged 16+ actively use video-on-demand services. Almost 30% of 16-44 year olds use online video daily. Those aged 16-34 use online video most frequently (daily, several times a day, several times a week). Among those aged 45+, the frequency of watching online video content is slightly lower.

Figure No 6. Frequency of VoD use in 2022, by age (% of internet users)



Source: Compiled by the KRRiT Bureau on the basis of data from VideoTrack VII, Wavemaker, Report from the 7th edition of the VOD market research in Poland, December 2022.

Compared to 2021, there is a noticeable decline in daily viewing on VoD services in every age group.[9] Although more and more people are spending 2 to 3 hours watching films and series, the frequency of use is decreasing. Compared to the beginning of 2022 at the end of 2022, the proportion reaching for VoD daily or several times a day has decreased by 4 pp. – from 32% to 28%.[10]

[8] *Media services and the infrastructure to receive them in 2022. Polish residents aged 4 and over*. Results of the Foundational Survey of the National Media Institute, April 2023.
[9] Wavemaker, *Video Track VII, Report on the 7th Edition of the VOD market research in Poland*, December 2022.
[10] Ibid.

1.1.2. Television programme audiences[11]

Considering the reach, accessibility and content of TV programmes, they can be divided into the following groups:

- The so-called Big Four - national universal television programmes (TVP1, TVP2, Polsat and TVN);
- other universal and specialised programmes available on terrestrial television (TVP3, TVP Info, TTV, TV4, TVN7, TV Puls, TV Puls2, TVP Kultura, TVP Historia, TVP ABC, TVP Sport, TVP Kobieta, TV6, Eska TV, Polo TV, Super Polsat, TV Trwam, Stopklatka TV, Fokus TV, Zoom TV, Nowa TV, Metro, WP, Antena HD);
- specialised programmes, available on satellite platforms and cable networks, among which programmes belonging to the three main TV groups (TVP, Polsat and TVN) and Polish-language programmes of foreign broadcasters predominate.

TVP TELEWIZJA POLSKA tvn Discovery polsat

In 2022, the leading programmes of the main TV groups saw a decline in audience share, as in previous years. The so-called Big Four (TVP 1 and 2 as well as TVN and Polsat) lost a total of 3.26 percentage points (pp.), i.e. 9.83% compared to the 2021 results. This is due to the further fragmentation of the audience, which is being distracted by an increasing number of specialised programmes, and the increasing interest in VoD and VSP offerings.

Last year, TVP1 was in first place in terms of TV audience share, with a decrease of 1.06 pp, or 10.86%. Polsat was second in the ranking (down 0.91 pp; 11.11%). It was followed by TVP2 (down 0.83pp; 10.55%) and TVN (down 0.46pp; 6.27%).

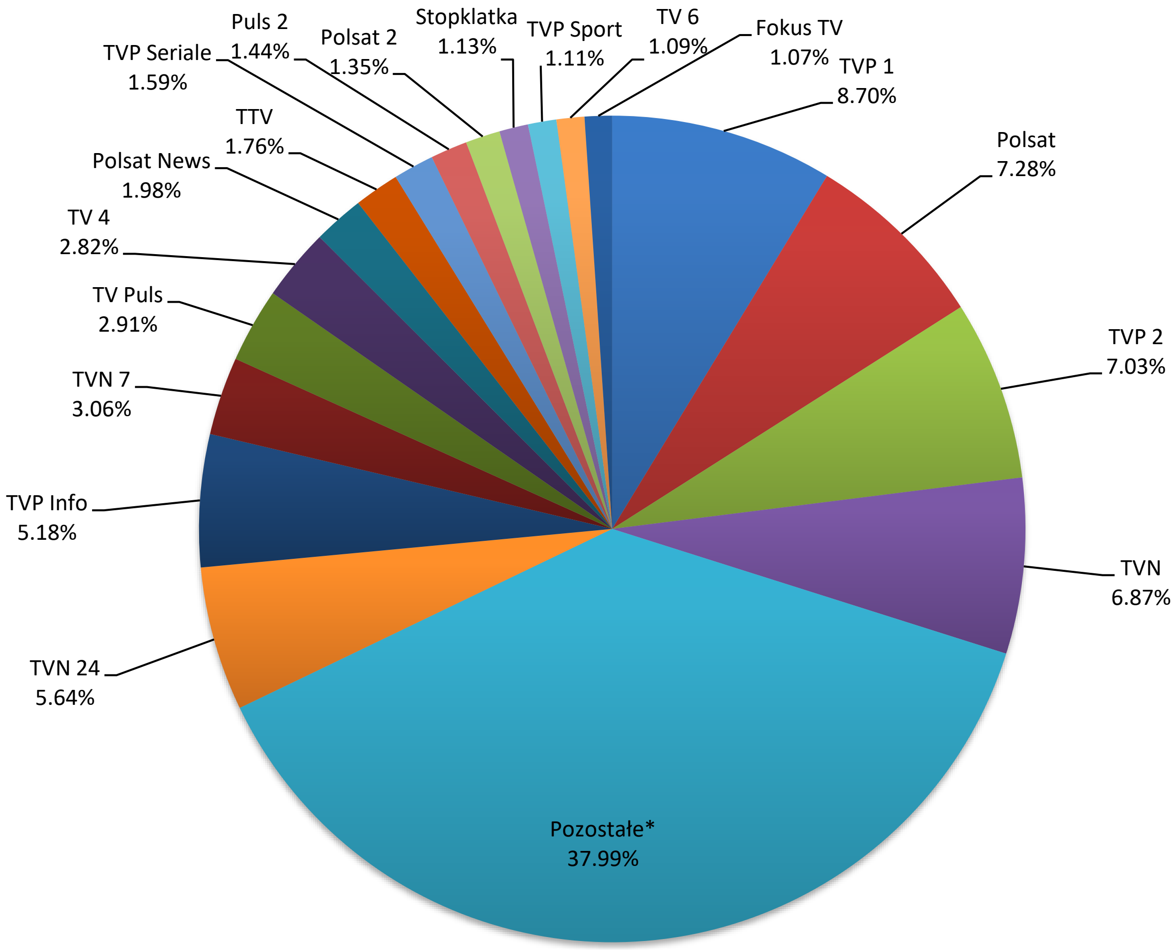
In 2022, the group of programmes with an audience share of more than 1 per cent has decreased from 20 to 18. TVP 3 and Super Polsat programmes have disappeared from this group. Consequently, the group of programmes that did not reach the one per cent threshold increased. They accounted for a total of 37.99% of the audience (up 5.98 percentage points on 2021, or 18.68%).

Shares lower than 1%, in the 0.9-0.5% range, were recorded for fifteen programmes (TVP 3, Super Polsat, TVN 24 Bis, Events 24, Eurosport 1, TVP Historia, TVN Turbo, TVP HD, Polsat Sport, Polsat Play, WP,

[11] The information was prepared on the basis of data from a survey conducted by AGB Nielsen Media Research on a sample of the Polish population over 4 years old. This survey is currently the only continuous telemetric measurement of television available on the Polish market. The structure of the research panel is constructed on the basis of data from the Central Statistical Office (GUS) and the results of the so-called foundation survey carried out in two waves on a total sample of 8,000 households. As of 1 January 2022, the research panel consists of 3,500 households (more than 9,000 people over 4 years old) located in: 1104 villages, 164 cities with up to 10,000 inhabitants, 129 cities with 10,000 to 19,000 inhabitants, 122 cities with 20,000 to 49,000 inhabitants, 46 cities with 50,000 to 99,000 inhabitants, 23 cities with 100,000 to 199,000 inhabitants, 9 cities with 200,000 to 499,000 inhabitants and five cities with more than 500,000 inhabitants. The number defining the current size of the survey panel was created by gradually increasing it due to changes in the market.

FOX, TVP ABC, Zoom TV, Polsat Film). In contrast, the most numerous group below the 0.5% threshold is over 100 programmes.

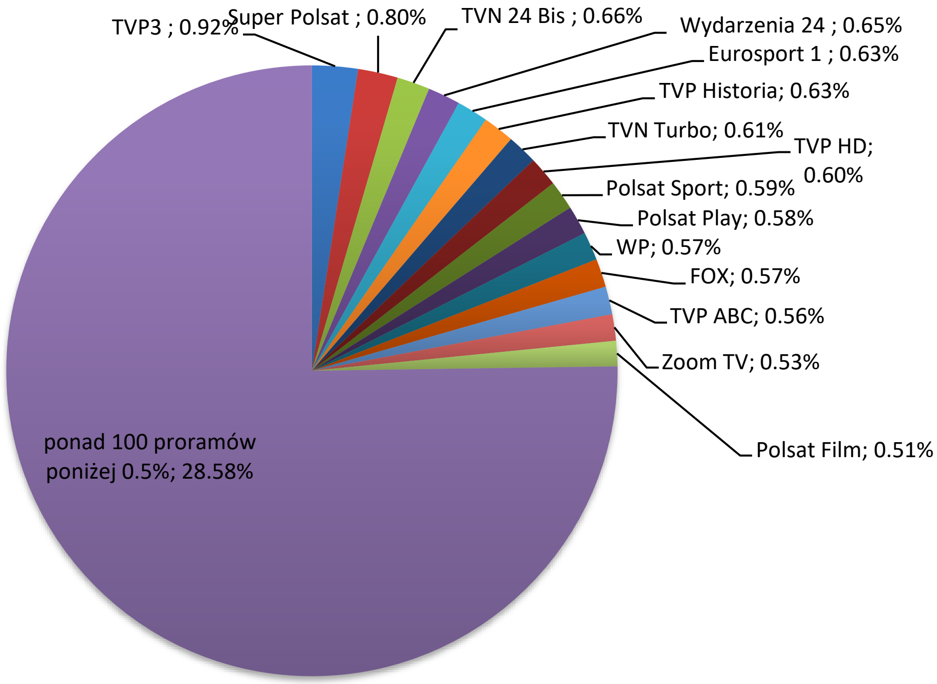
Figure No 7. Structure of the TV market in 2022 – audience shares



**the category 'other' contains programmes with a share of less than 1%.*

Source: KRRiT Bureau compilation based on Nielsen Audience Measurement

Figure No 8. TV programmes with an audience share of less than 1% [12]



Source: KRRiT Bureau compilation based on Nielsen Audience Measurement

[12] Together, these programmes account for almost 38% of the market.

Table No 1. Ranking of TV programmes in 2022 with a market share of more than 0.3% (indicating the direction of change compared to 2021)[13]

Lp.	Program	Widownia	Zmiana	Udział	Zmiana (pp.)	NTC
1.	TVP 1	507 847	-92 148	8,70%	-1,06	MUX 3
2.	Polsat	425 059	-78 623	7,28%	-0,91	MUX 2
3.	TVP 2	410 395	-72 801	7,03%	-0,83	MUX 3
4.	TVN	400 669	-50 127	6,87%	-0,46	MUX 2
5.	TVN 24	329 075	24 794	5,64%	0,69	
6.	TVP Info	302 193	56 749	5,18%	1,19	MUX 3
7.	TVN 7	178 838	-41 567	3,06%	-0,52	MUX 2
8.	TV Puls	169 542	-52 140	2,91%	-0,69	MUX 2
9.	TV 4	164 343	-34 082	2,82%	-0,41	MUX 2
10.	Polsat News	115 261	6 685	1,98%	0,21	
11.	TTV	102 478	-25 167	1,76%	-0,32	MUX 1
12.	TVP Seriale	92 555	2 435	1,59%	0,12	
13.	Puls 2	83 929	-19 964	1,44%	-0,25	MUX 2
14.	Polsat 2	78 912	-10 453	1,35%	-0,10	
15.	Stopklatka	65 857	-14 756	1,13%	-0,18	MUX 1
16.	TVP Sport	65 041	-2 253	1,11%	0,02	MUX 3
17.	TV 6	63 675	-17 897	1,09%	-0,24	MUX 2
18.	Fokus TV	62 551	-15 470	1,07%	-0,20	MUX 1
19.	TVP 3	53 705	-8 190	0,92%	-0,09	MUX 3
20.	Super Polsat	46 875	-16 354	0,80%	-0,23	MUX 2
21.	TVN 24 Bis	38 669	12 850	0,66%	0,24	
22.	Wydarzenia 24	37 831	29 242	0,65%	0,51	MUX 4
23.	Eurosport 1	36 994	-783	0,63%	0,02	
24.	TVP Historia	36 560	-5 400	0,63%	-0,05	MUX 3
25.	TVN Turbo	35 602	-1 602	0,61%	0,01	
26.	TVP HD	35 070	6 949	0,60%	0,14	
27.	Polsat Sport	34 660	3 188	0,59%	0,08	
28.	Polsat Play	33 851	-4 154	0,58%	-0,04	
29.	WP	33 380	-385	0,57%	0,02	MUX 8
30.	FOX	33 315	-143	0,57%	0,03	
31.	TVP ABC	32 398	-17 419	0,56%	-0,25	MUX 1
32.	Zoom TV	30 976	971	0,53%	0,04	MUX 8
33.	Polsat Film	29 699	-4 049	0,51%	-0,04	
34.	Polsat Cafe	27 814	3 293	0,48%	0,08	
35.	TVP Rozrywka	26 686	-71	0,46%	0,02	
36.	TVN Style	25 409	-3 244	0,44%	-0,03	
37.	TV Trwam	24 732	-7 399	0,42%	-0,10	MUX 1
38.	Kino Polska	23 767	-3 644	0,41%	-0,04	
39.	Nick Jr	23 735	-12 092	0,41%	-0,17	
40.	Polsat Seriale	22 117	5 939	0,38%	0,12	
41.	Discovery	21 882	-7 643	0,37%	-0,11	
42.	TVP Kultura	21 784	355	0,37%	0,02	MUX 8
43.	Nowa TV	21 325	3 738	0,37%	0,08	MUX 8
44.	Paramount Network	20 437	3 077	0,35%	0,07	
45.	TVN Fabuła	19 893	-1 599	0,34%	-0,01	
46.	Polo TV	18 947	-12 161	0,32%	-0,19	MUX 1
47.	Romance TV	18 574	-167	0,32%	0,02	
48.	Antena HD	18 544	5 923	0,32%	0,11	MUX 1
49.	Metro	18 510	1 735	0,32%	0,05	MUX 8
50.	TVP Kobieta	18 149	8 785	0,31%	0,16	MUX 8
51.	HGTV	18 009	-5 839	0,31%	-0,08	
52.	National Geographic	17 994	-1 100	0,31%	0,00	

NTC - digital terrestrial television.

Source: KRRiT Bureau compilation based on Nielsen Audience Measurement

[13] Yellow indicates programmes available on terrestrial television.

All the programmes at the top of the above list experienced audience declines. However, some programmes available on digital terrestrial television and satellite specialised programmes gained.

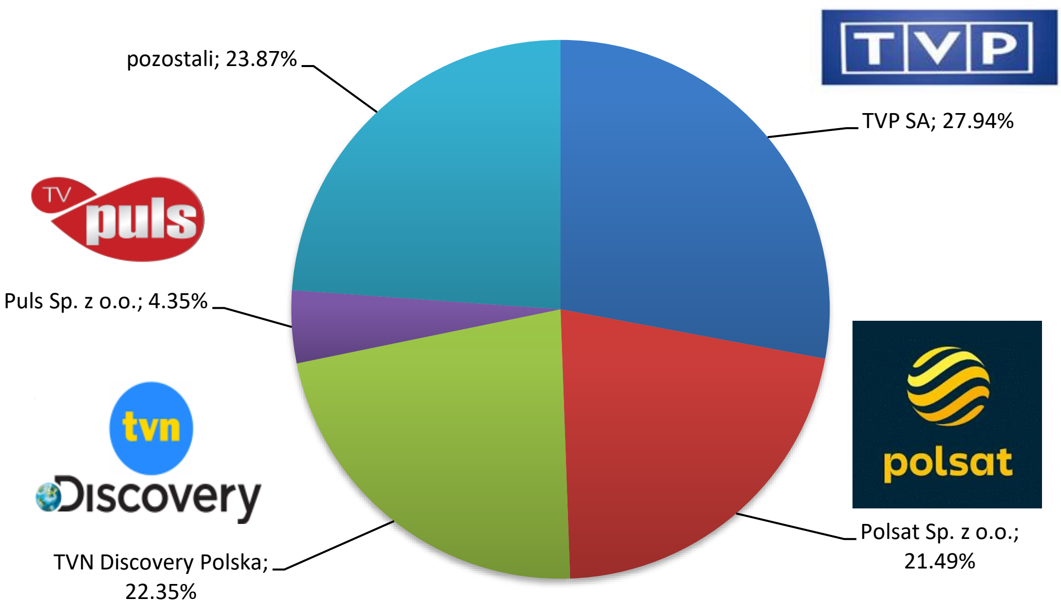
Among the top ten most-watched programmes in 2022, there was an increase in viewership of news programmes of the main broadcasting groups: TVN24 (by 0.69 pp, or 13.93%), TVP Info (by 1.19 pp, or 29.82%) and Polsat News (by 0.19 pp, or 11.86%).

In 2022, still more than ¾ of the Polish audience market was divided between three TV groups. Almost 28% of the shares were gained by the public broadcaster's TV programmes altogether (TVP 1, TVP 2, TV Polonia, TVP Info, TVP 3, TVP Entertainment, TVP Culture, TVP Seriale, TVP Sport, TVP HD, TVP Historia, TVP ABC, TVP Kobieta, TVP Dokumentacja, TVP 4K and TVP Nauka), more than 22% of this market belonged to Discovery Polska's TVN programmes,[14] and just under 21.5% to the Polsat Group.[15]

A smaller audience than in the previous year was gathered by TV Puls programmes (around 4.3% in total), while the shares of the other broadcasters, which together gathered almost 24% of viewers, increased significantly.

The chart below shows the breakdown of the TV market, taking into account the audience shares of the main broadcasting groups.

Figure No 9. Audience shares by major broadcaster group in 2022.



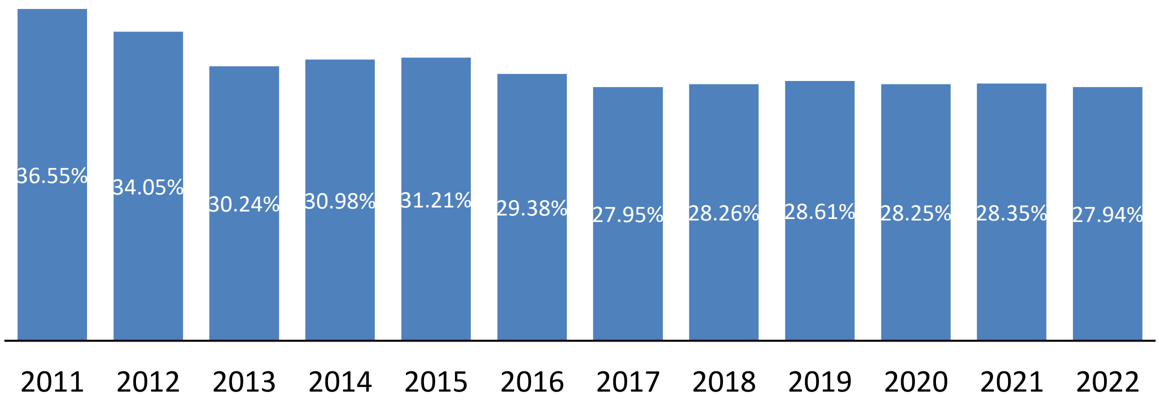
Source: KRRiT Bureau compilation based on Nielsen Audience Measurement

[14] TVN Discovery Poland: TVN, TVN 24, TVN 7, TTV, TVN 24 Bis, Eurosport 1, TVN Turbo, TVN Style, Discovery, TVN Fabuła, Metro, HGTV, TLC, Investigation Discovery, Discovery Science, Food Network, Eurosport 2, DTX, Travel Channel, Discovery Historia, Discovery Life, Animal Planet HD.

[15] Polsat Group: Polsat, TV 4, Polsat News, Polsat 2, TV 6, Fokus TV, Super Polsat, Events 24, Polsat Sport, Polsat Play, Polsat Film, Polsat Cafe, Polsat Seriale, Nowa TV, Polo TV, Eska TV, Eleven Sports 1, Polsat Sport Extra, Polsat Dock, Polsat News 2, Disco Polo Music, Polsat Family, Polsat Sport News HD, Polsat Games, Polsat Sport Fight, Eleven Sports 2, Eska TV Extra, Polsat Music HD, Vox Music TV, Eska Rock TV.

Public service television, compared to the previous year, lost little overall, just 0.4 pp. Data showing this trend is shown in the graph below.

Figure No 10. Total audience market shares of public television between 2011 and 2022



Source: KRRiT Bureau compilation based on Nielsen Audience Measurement

Among public service television programmes, the largest increase took place in the case of TVP Info (by 1.19 pp.). Increases in audience share were also recorded by the lifestyle programme TVP Kobieta (by 0.16 pp.) and the film programme TVP Seriale (by 0.12 pp.). Decreases in audience were recorded for both main universal programmes TVP 1 and TVP 2 (by 1.06 and 0.83 pp. respectively). Detailed figures for all public service programmes, together with an indication of the change from 2021, are summarised in Table 2.

Table No 2. Average audience and shares of public television programmes in 2022

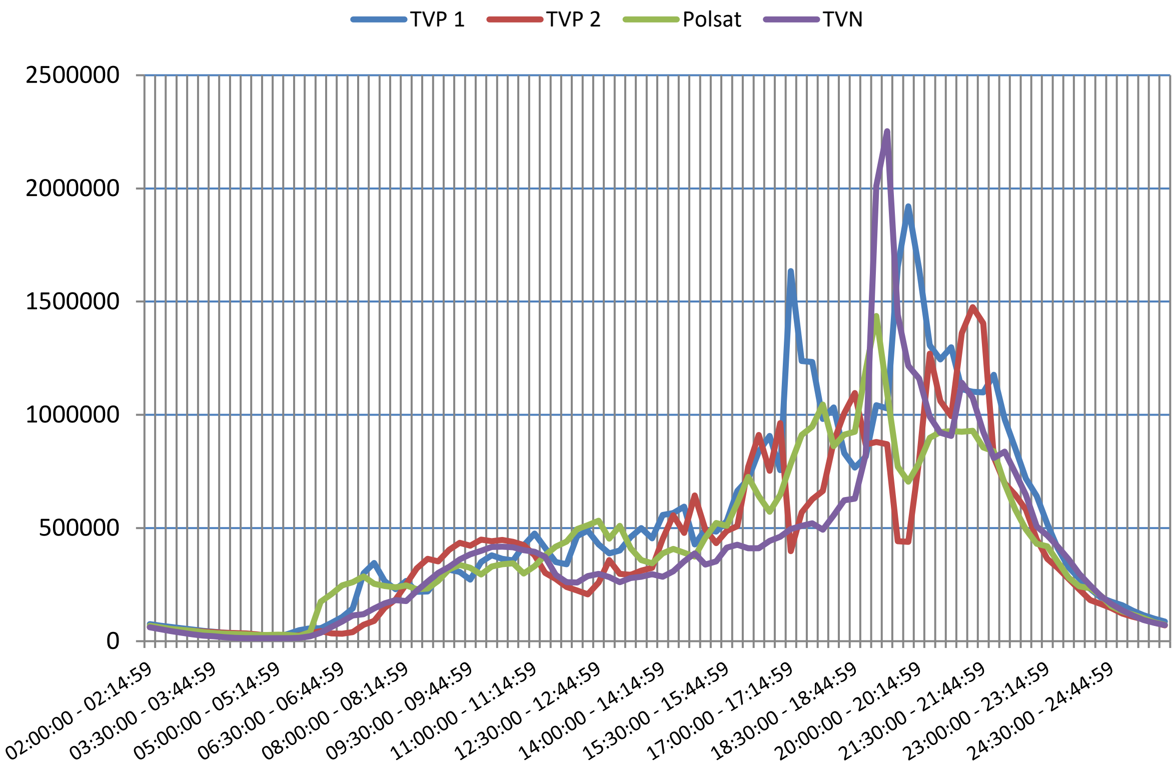
Lp	Program	AMR	SHR %	Widownia	Zmiana	Udział	Zmiana pp.	NTC
1.	TVP 1	599995	9,76%	507 847	-92 148	8,70%	-1,06	MUX 3
2.	TVP 2	483196	7,86%	410 395	-72 801	7,03%	-0,83	MUX 3
3.	TVP Info	245444	3,99%	302 193	56 749	5,18%	1,19	MUX 3
4.	TVP Seriale	90120	1,47%	92 555	2 435	1,59%	0,12	
5.	TVP Sport	67294	1,09%	65 041	-2 253	1,11%	0,02	MUX 3
6.	TVP 3	61895	1,01%	53 705	-8 190	0,92%	-0,09	MUX 3
7.	TVP Historia	41960	0,68%	36 560	-5 400	0,63%	-0,05	MUX 3
8.	TVP HD	28121	0,46%	35 070	6 949	0,60%	0,14	
9.	TVP ABC	49817	0,81%	32 398	-17 419	0,56%	-0,25	MUX 1
10.	TVP Rozrywka	26757	0,44%	26 686	-71	0,46%	0,02	
11.	TVP Kultura	21429	0,35%	21 784	355	0,37%	0,02	MUX 8
12.	TVP Kobieta	9364	0,15%	18 149	8 785	0,31%	0,16	MUX 8
13.	TVP Polonia	11580	0,19%	13 863	2 283	0,24%	0,05	
14.	TVP Dokument	5160	0,08%	8 776	3 616	0,15%	0,07	
15.	TVP 4K*	771	0,01%	2 698	1 927	0,05%	0,04	
16.	TVP Nauka	0	0,00%	2 073	2 073	0,04%	0,04	
	Ogółem	1 742 903	28,35%	1 629 793	-113 110	27,94%	-0,41	

AMR - average minute viewership; an indicator describing the average size of the audience watching a particular programme or TV show.
SHR - audience share, i.e. the proportion of viewers who have watched a programme or program in relation to all viewers watching television at that time.
NTC - digital terrestrial television.
*4K quality programming available on a test multiplex and from some pay-TV operators, broadcasting during periods of major sporting events, most recently in connection with the World Cup, Qatar 2022.

Source: KRRiT Bureau compilation based on Nielsen Audience Measurement

The peak viewing times for the Big Four programmes (TVP1, TVP2, Polsat and TVN) remained between 18:00 and 23:00, although the peak viewing times for individual programmes shifted individually.

Figure No 11. Daily viewing figures for TVP1, TVP2, Polsat and TVN in 2022



Source: Compilation by the KRRiT Bureau based on Nielsen Audience Measurement

As in previous years, TVP1 recorded its highest increases in viewing figures at 5:00 p.m. and 7:30 p.m. (*Teleexpres* and *News*), and TVP2 between 8:00 p.m. and 10:00 p.m. (the TV series channel). Also in the case of TVN and Polsat, the highest average daily viewing figures were observed at the times of broadcasting news programmes at 18:50 (*Events in Polsat*) and 19:00 (*Fakty in TVN*), as well as after 20:00 (film band in Polsat) and after 21:00 (series and films in TVN).

1.1.3. Content reception devices

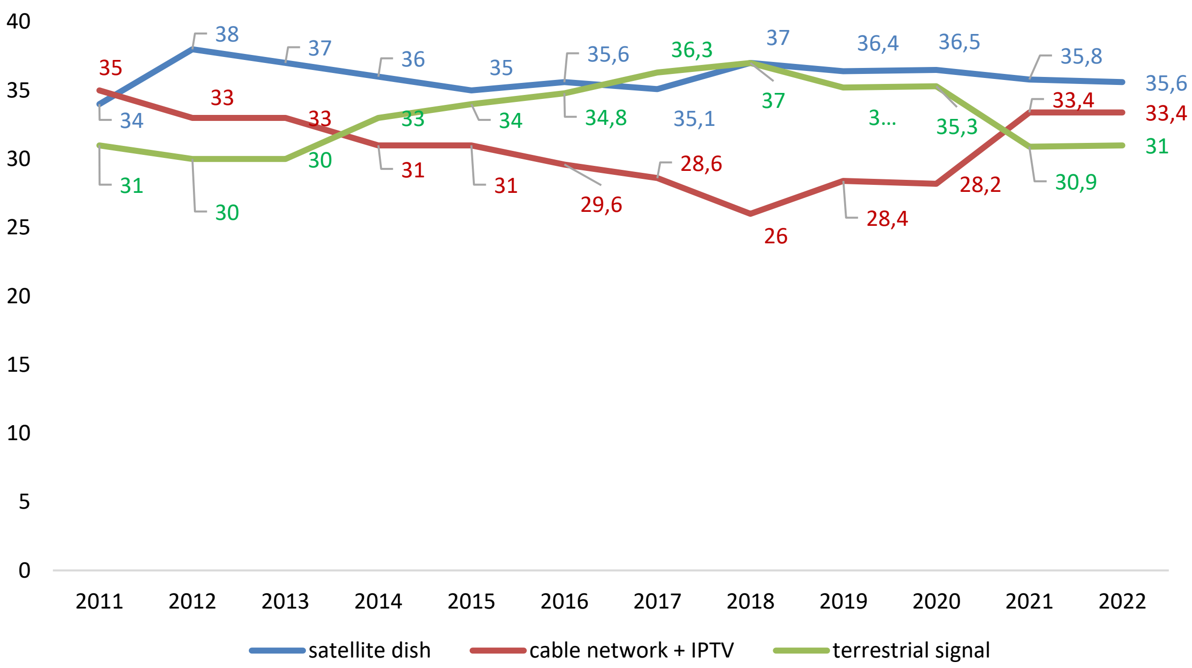
According to information provided by the National Media Institute, 94.7% of households in Poland have access to a TV set. 77.1% of households have access to one TV at home, and 17.6% of households have access to two or more. Two TVs or more are more likely to be owned by households with four or more people at home - 34.7%, households with children under 15 years of age - 27.6% and those living in rural areas - 23.4%. Smart TV sets or TVs with a Smart TV attachment are owned by 50.6% of households in Poland. Smart TVs or TVs with a set-top box are more often found in households where the household leader has a university degree (66.4%), as well as in large households (four-person households and larger) - 67.1%.[16]

[16] *Media services and infrastructure for their reception in households in Poland in 2022.* Results of the Foundational Survey of the National Media Institute, April 2023.

The National Media Institute's Founder's Survey shows that 27.7% of 'TV only' households have access to digital terrestrial TV. A satellite dish as the only source of signal is used by 34.4% of households, and access via cable (together with IPTV, Web TV, collective satellite dish) as the only access is used by 37.9%.

The Nielsen Audience Measurement study shows that the proportions are almost equally distributed between the three reception methods. The slight differences may be due to the fact that some households are equipped with several signal sources and household members use them according to their needs.

Figure No. 12. Polish TV households by source of linear TV signal (in % of households)



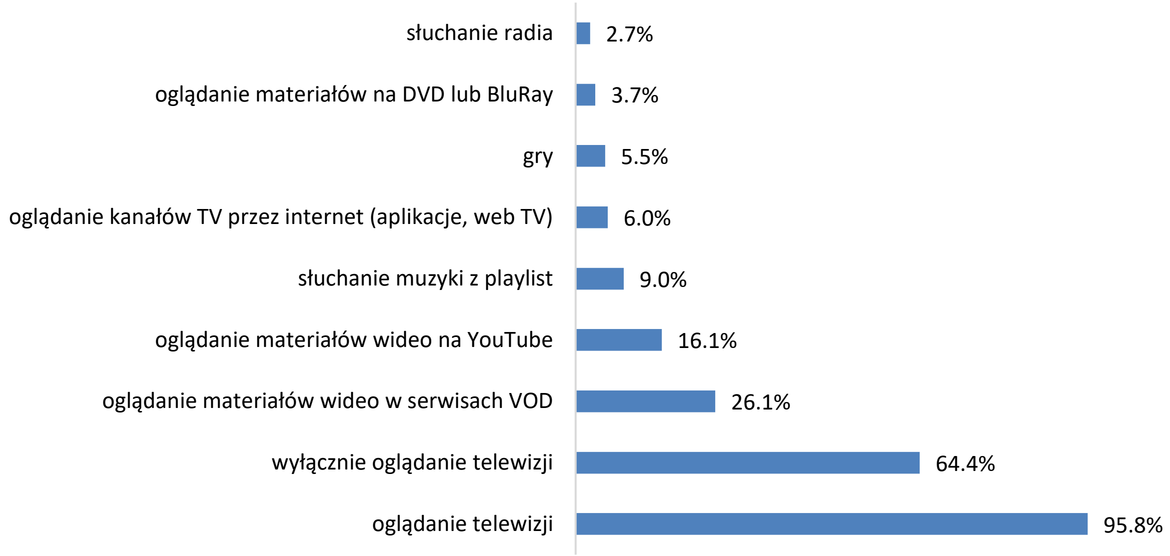
Source: KRRiT Bureau compilation based on Nielsen Audience Measurement data

Access to digital terrestrial TV only is more often declared by households living in rural communities (37.0% vs 22.8% in urban areas), households without children (30.7% vs 19.2% with children) and single-person households (38.5% vs 21.6% in households of size 4+).

A study by the National Media Institute shows that 14.4% of households have a TV less than a year old, while 41% have a 2-4 year old TV. Receivers 5-10 years old are owned by 46.7% of households in Poland, while 10% use even older sets.

The purposes for which the TV set is used go beyond watching programmes. In 26.1 per cent of households with a TV set, it is used to watch films and video content via apps and VoD services (use of Smart TV features and internet connection).

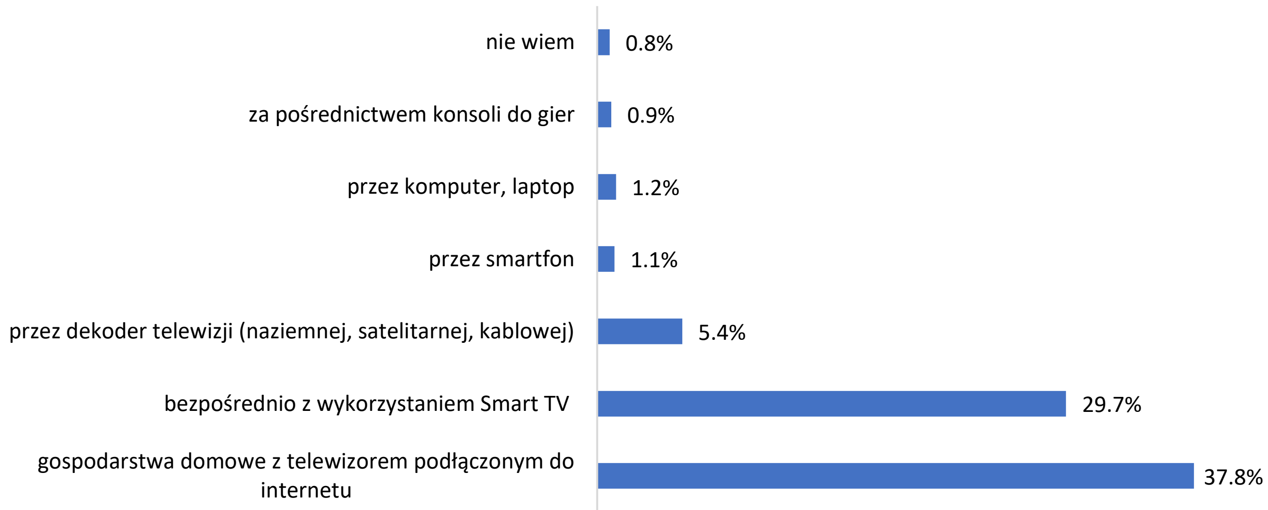
Figure No 13. Purposes of TV use in households



Source: compiled by the KRRiT Bureau on the basis of data from the report Media services and reception infrastructure in households in 2022. Results of the National Media Institute Foundational Survey, April 2023.

37.8% of households with a TV set have a TV connected to the internet. Among the methods of connection, the use of Smart TV dominates (almost 30%).

Figure No 14. Devices connecting the TV to the Internet



Source: compiled by the KRRiT Bureau on the basis of data from the report Media services and reception infrastructure in households in 2022. Results of the National Media Institute Foundational Survey, April 2023.

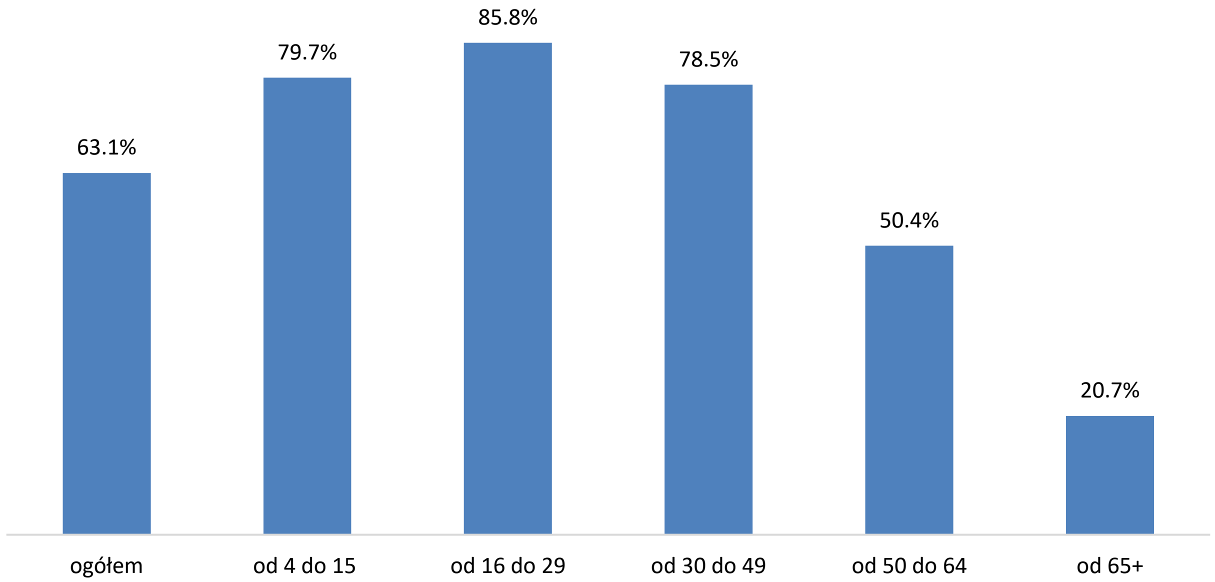
GfK data shows that the last quarter of 2022 saw a marked, almost 20% drop in TV sales in Poland, following an earlier increase in interest in buying DVB-T2 (HEVC) receivers due to the transition to this standard. For 2022 as a whole, although the average prices of TVs decreased by around 2%, both the number of sets sold and the value of sales fell.[17]

1.1.4. Watching on demand - VoD

According to the Foundation Study of the National Media Institute,[18] 68.6% of households in Poland have the potential to receive audio-visual media services on demand (VoD) and streaming, in the form of the necessary infrastructure (i.e. access to home Internet, fixed or mobile, or a TV set connected to the Internet). This potential increases with household size – the highest percentage is observed in households with four or more persons (88.1%) and in households with children under 15 years of age (90.7%). The potential to receive VoD services is higher in cities with more than 200,000 to 500,000 inhabitants (73.2%) and especially in cities with more than 500,000 inhabitants (77.5%).

Regardless of regularity, use of VoD/streaming content, in the last 30 days, is reported by 63.1% of people aged 4+. The use of VoD content is more frequent among children, adolescents and young adults.

Figure No 15. Watching VoD/streaming in the last 30 days by age of person



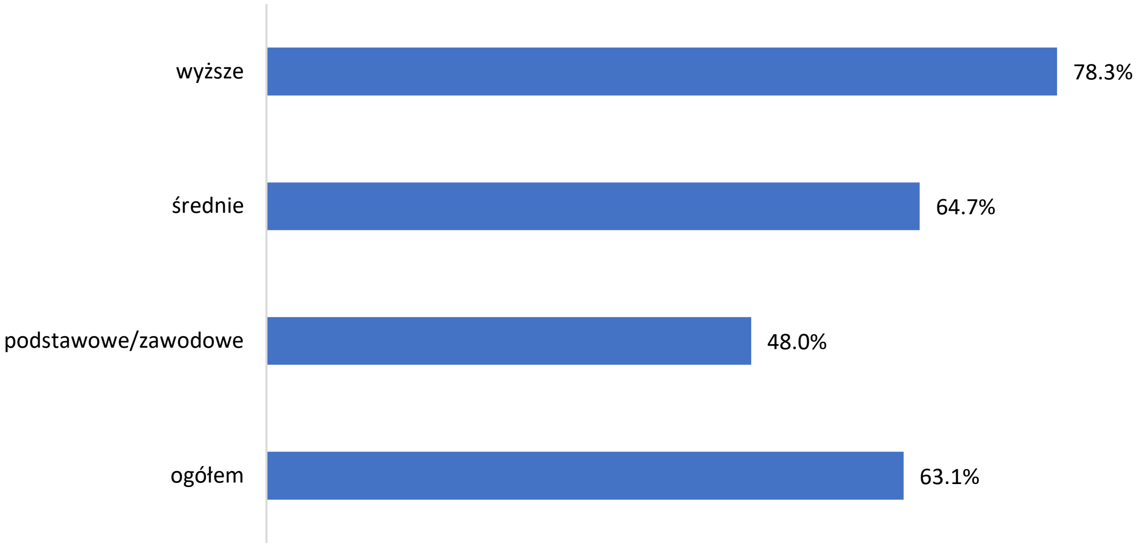
Source: compiled by the NCRB Office based on the National Media Institute study, Media services and reception infrastructure in 2022. Results of the Foundational Survey, April 2023. Polish residents aged 4 and over.

VoD/streaming reception also increases with education.

[17] https://strefabiznesu.pl/sprzedaz-telewizorow-w-polsce-mocno-w-dol-nowy-trend-na-rynku-producenci-musza-sie-dostosowywac-do-zmieniajacych-sie-realiow/ar/c3-17259587

[18] *Media services and infrastructure for their reception in households in Poland in 2022*. Results of the Foundational Survey of the National Media Institute, April 2023.

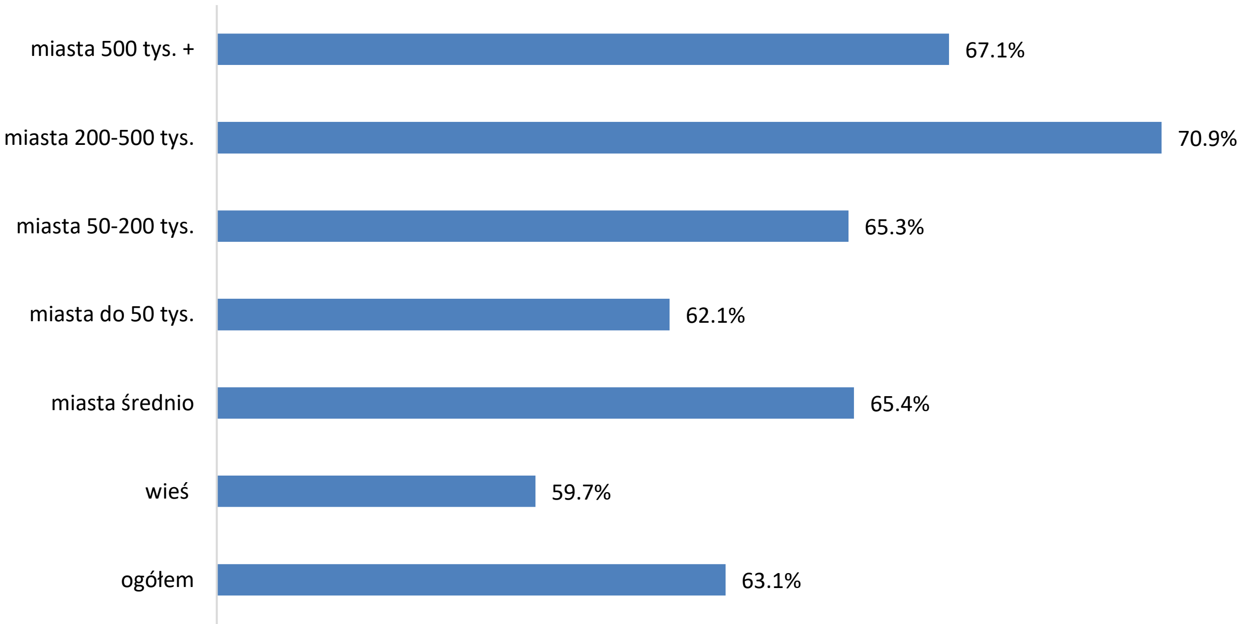
Figure No 16. Watching VoD/streaming in the last 30 days, by education (persons aged 13 and over)



Source: Compiled by the KRRiT Bureau on the basis of a study by the National Media Institute Media services and reception infrastructure in 2022. Results of the Foundational Study, April 2023. Polish residents aged 4 and over.

VoD reception is slightly lower among rural residents, but there is little difference in VoD use between urban and rural residents, with usage levels of 65.4% in urban areas and 59.7% in rural areas respectively.

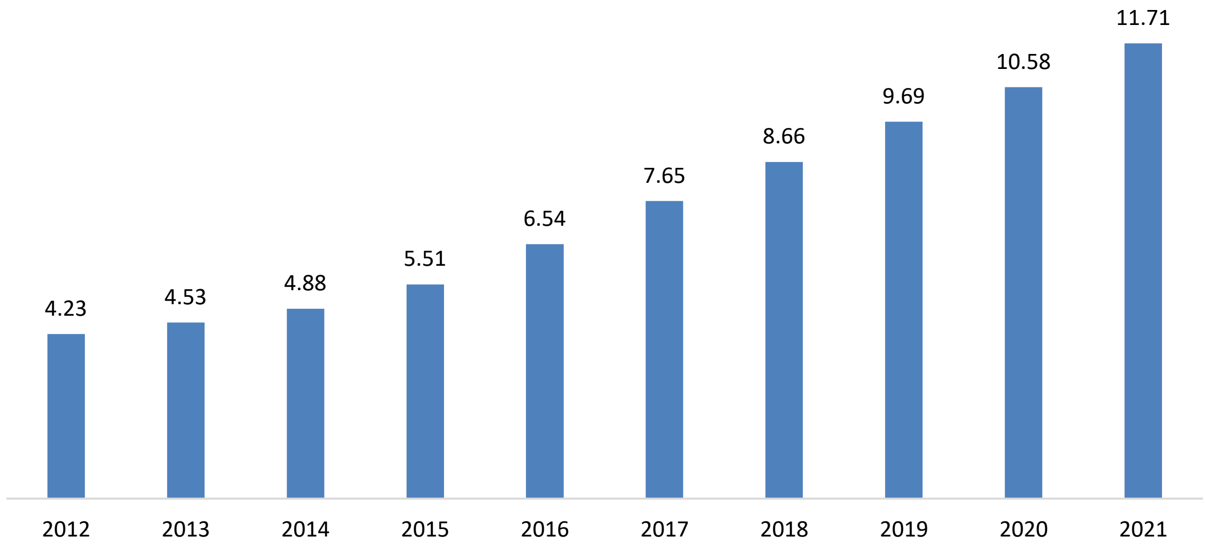
Figure No 17. Watching VoD/streaming in the last 30 days, by place of residence



Source: Compiled by the KRRiT Bureau on the basis of a study by the National Media Institute Media services and reception infrastructure in 2022. Results of the Foundational Study, April 2023. Polish residents aged 4 and over.

In Poland, classic VoD services are used by more than 69% of households, or 82% of households with internet access.[19] From 2012 to 2021, more than 7 million have arrived.

Figure No 18. Number of households in Poland using VoD services in the years 2012-2021 (in millions)



Source: PMR*, Pay TV and VoD services market in Poland. Market analysis and development forecasts for 2022-2027*

Recipients choosing to access video on demand, as in previous years, emphasise the functionalities that give them the freedom to use these services. In particular, they point out the possibility to pause a programme (39%) and to watch several episodes of a favourite series at the same time (35%) or the possibility to watch at a convenient time (32%). They also indicate that the decision to use VoD is dictated by the lack of an interesting TV offer (32%).[20]

It is estimated that 65% of Polish internet users pay for access to on-demand film offerings. This represents an 8% increase on the previous year. The biggest increase in those paying for subscriptions in this respect is in the 55+ group (from 41% to 58%).[21]

Most users prefer a subscription for several months (74%). Much less popular is a monthly or bi-monthly subscription. Such access models were declared by 16% of users. Recently, annual access, promoted by various VoD services, has been gaining strongly. In the seventh edition of VideoTrack, almost one in five surveyed e-viewers claimed that this was the most convenient form of access for them.[22] Some viewers (6%) only use the free subscription during the trial period. After watching their favourite film or series, they cancel their subscription.[23]

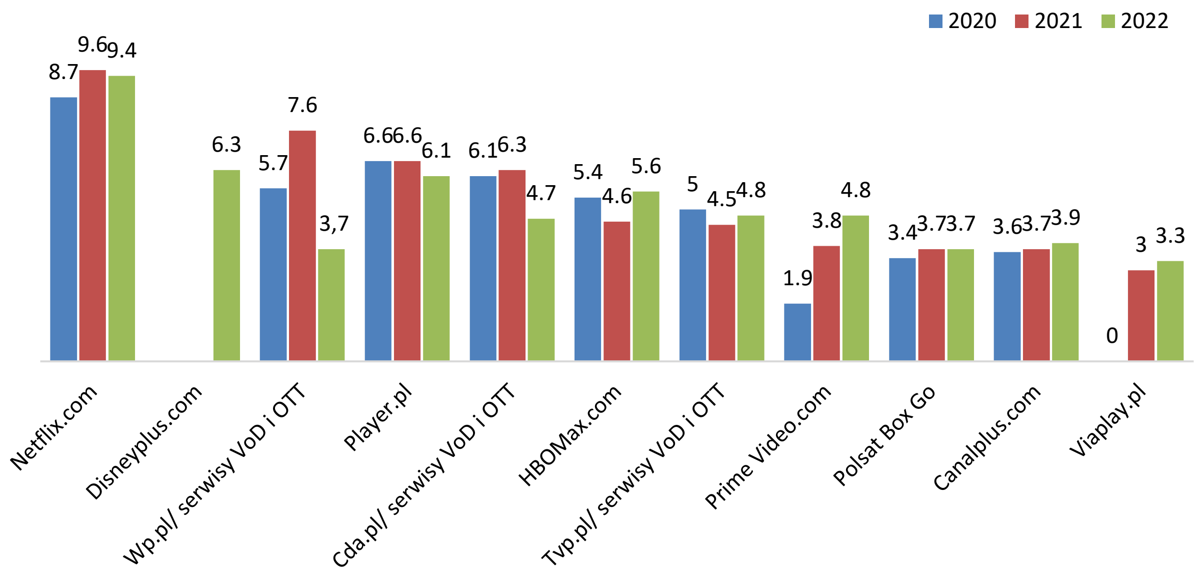
[19] PMR, *Pay TV and VoD Services Market in Poland. Market analysis and development forecasts for 2022-2027*, July 2022.
[20] Wavemaker, *Video Track VII, Report on the 7th Edition of the VOD market research in Poland,* December 2022.
[21] Ibid.
[22] https://satkurier.pl/news/224594/serwisy-svod-coraz-bardziej-popularne-w-polsce.html
[23] Ibid.

Only 4.3 million households use free VoD services, which is 100,000 fewer than in 2021.[24]

Polish users most often watch video at home using a TV set with Internet access. This method of reception, almost invariably, has been declared for several years. In 2022, such viewers accounted for 98%. Although those who watch video content alone are still the largest number, this trend is changing year on year (a 3% difference in 2022) in favour of watching with another person (41%) or with family (13%).[25]

The most popular VoD platform on the Polish market is Netflix, which has been operating since 2016. Despite the debut of Disney+ (2022) and Amazon Prime Video (2021), as well as the operational HBO Max platform, it is Netflix that most effectively responds to viewers' expectations, focusing the attention of more than 9 million viewers. In addition to its own original film and series offerings, the platform competes with its technical quality and intuitive content search engine.[26] Also important for the Polish viewer is the database of 30 Polish titles (films and series), which, according to Netflix's 2022 announcement, was to be increased by another 18 premieres.

Figure No 19. The most popular VoD services - users (in millions)



Source: Compiled by the KRRiT Bureau on the basis of Gemius/PBI data, Q4 2022.

Netflix also owes its success to the ability to share subscriptions (four screens). However, the platform provider announces a change in this policy and the introduction of a solution to prevent this common practice in Poland. It should be added that account sharing is also enabled by HBO Max and Amazon Prime Video, giving the possibility to use three screens simultaneously. Therefore, if Netflix were to eliminate the possibility of creating several profiles, this could, according to experts' estimates, affect the growth of the market through the creation of new subscriptions. Such a scenario is very possible, as in

[24] PMR, *Pay TV and VoD Services Market in Poland. Market analysis and development forecasts for 2022-2027*, July 2022.
[25] Wavemaker, *Video Track VII, Report on the 7th Edition of the VOD market research in Poland*, December 2022.
[26] https://www.wirtualnemedia.pl/artykul/jak-zrezygnowac-netflix-pakiety-abonament-cena-plany-4k-ultra-hd-dzielenie-kont-polskie-produkcje-dzwiek-3d

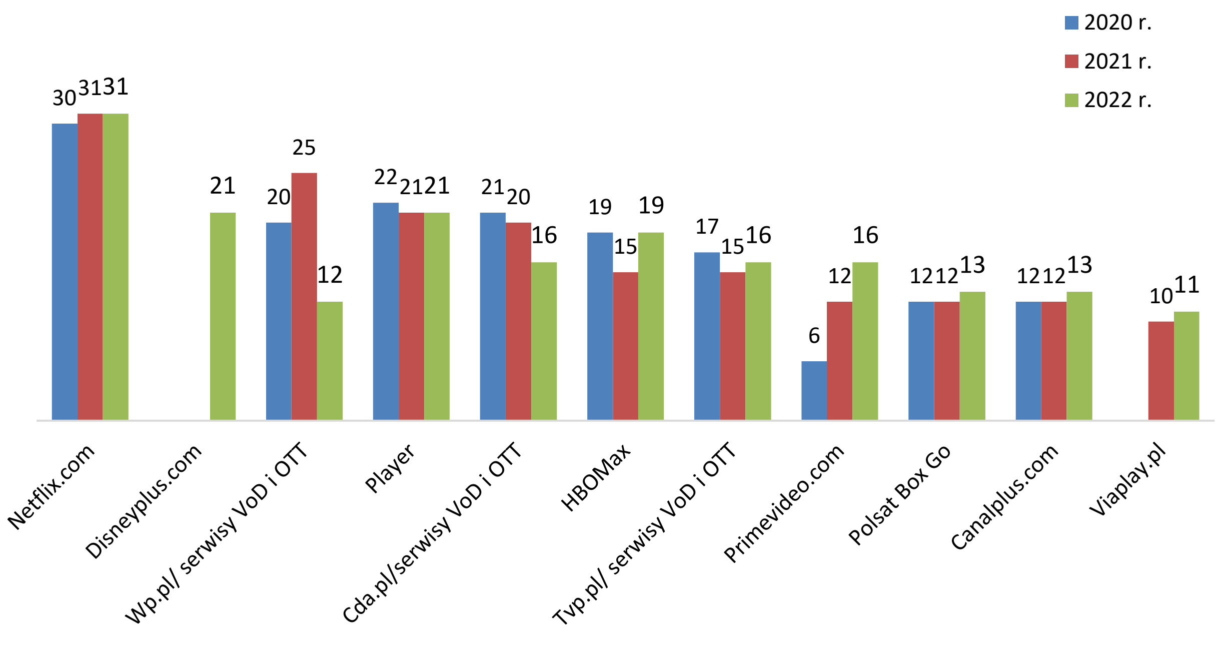
Canada, New Zealand, Portugal and Spain, the platform has introduced a pay-per-password policy, verifying the use of the service through the location of the holding via the IP number.[27]

The second direction, although not yet visible on a large scale, is the abandonment by viewers of the use of multiple services at the same time. In *Video Track VII, Report from the 7th Edition of the survey of the VOD market in Poland,* as many as 34% of respondents at the end of 2022 (an increase of 4 p.p. compared to the beginning of the year) stated that price had become an important obstacle to purchasing a VoD subscription. A similar phenomenon was noted in the Nielsen study, with 8% of VoD users aged 35-44 having given up paying for video content.[28]

Next in the ranking of the most popular VoD services were Disney+, Player and HBO Max. A special position was held by the Disney+ service, which appeared on the Polish market in June 2022. According to the Wavemaker study, this service, a large proportion of whose main users are 16-24 years old, received the highest marks in terms of overall rating.[29]

Below are the coverage figures for the main VoD services (data for Q4 2022).

Figure No 20. The most popular VoD services - reach among Internet users (in %)[30]



Source: Compiled by the KRRiT Bureau on the basis of Gemius/PBI data, Q4 2022. Coverage does not add up to 100 due to co-viewing of sites.

In terms of reach, as with the number of users, Netflix remains the leader. Disney+ and Player are also in the lead.

[27] Ibid.

[28] https://spidersweb.pl/plus/2022/03/polacy-vod-telewizja-co-ogladamy-ekrany-nielsen-badanie

[29] Wavemaker, *Video Track VII, Report on the 7th Edition of the VOD market research in Poland*, December 2022.

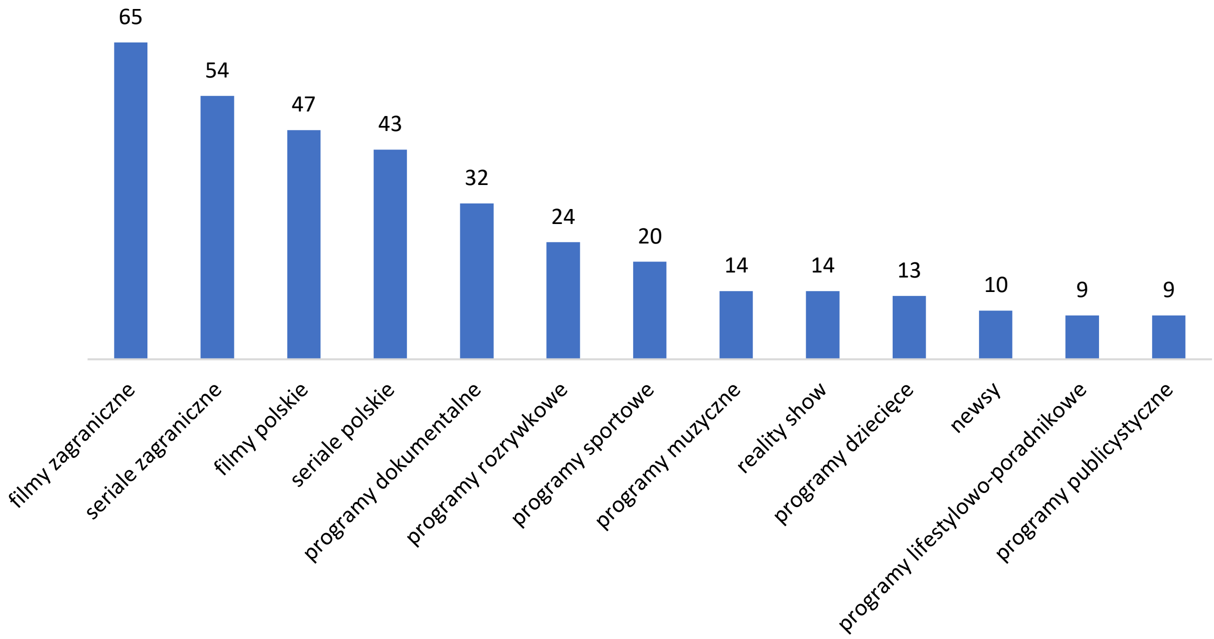
[30] The ratio of the number of users in a given target group who visited the selected node(s) in a defined period to the number of all Internet users in the given target group, in a given month. This indicator is expressed as a percentage.

Despite the enduring position of the major platforms, the Polish market is open to new products. This has been demonstrated by the rapidly growing popularity of the Disney+ service. The willingness to use the new offer is confirmed by PMR's study *Pay TV and VoD Services Market in Poland. Market analysis and development forecasts for 2022-2027. The* results indicate that 42% of households already using VoD services are willing to replace their current service with a new offer if one appears on the market.

VoD content

Viewers using VoD services most often choose foreign and Polish films, as well as series and documentaries. Decreases in viewership were recorded in such categories as entertainment, information and journalism and lifestyle programmes.

Figure No 21. Most viewed VoD content (% of internet users)



Source: Compiled by the KRRiT Bureau on the basis of Video Track VII, Report from the 7th Edition of the VOD market research in Poland, Wavemaker, December 2022.

Legality of VoD sources

According to the PMR report *Pay TV and VoD services in Poland. Market analysis and development forecasts for 2022-2027, the* legality of the source they use is important for almost half of the respondents. However, approx. 20% of the respondents do not care at all whether the content was obtained legally. Unfortunately, viewers do not always know which service operates legally. When downloading torrents,[31] they are mainly guided by the desire to watch videos without adverts (48%). They also emphasise that they then have access to their favourite material without a network connection (30%). In contrast, 28% of users say that the subscription is too expensive to make another purchase.

According to experts, it is the latter reason, i.e. the increasing cost of using film content and the fragmentation of the market, that favours the acquisition of illegal video content. However, online

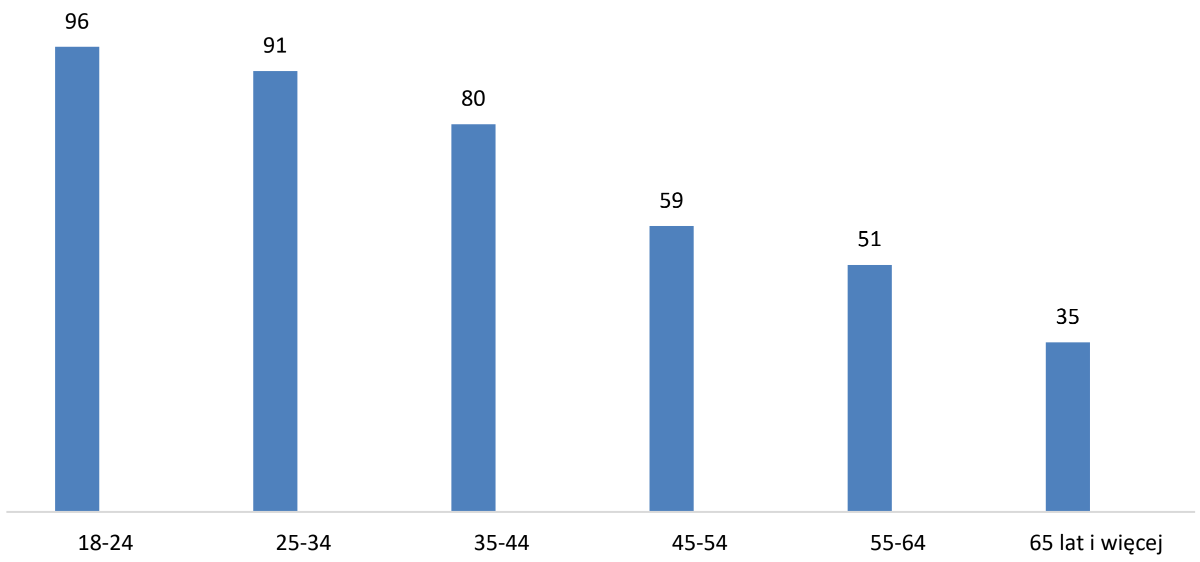
[31] Torrents are a method of distributing files on the internet based on a distributed network. This means that people who download a file simultaneously share it with others. While torrent downloaders are legal, it is illegal to use this technology to share copyrighted content (books, films, series, games, etc.).

platforms are a small part of the pirate market. It is estimated that the main source of pirated content is IPTV.[32] The Audio-visual Anti-Piracy Alliance report shows that 17 million citizens of the European Union use pirated IPTV services. In this respect, Poles are below the EU average. Illegal subscriptions are purchased by 1.5% of the population.[33]

1.1.5. Social networks, video-sharing platforms

72% of internet users[34] say they have an account on some social networking site and 89% browse social networking resources.[35]

Figure No 22. Percentage of internet users registered on social networking sites by age



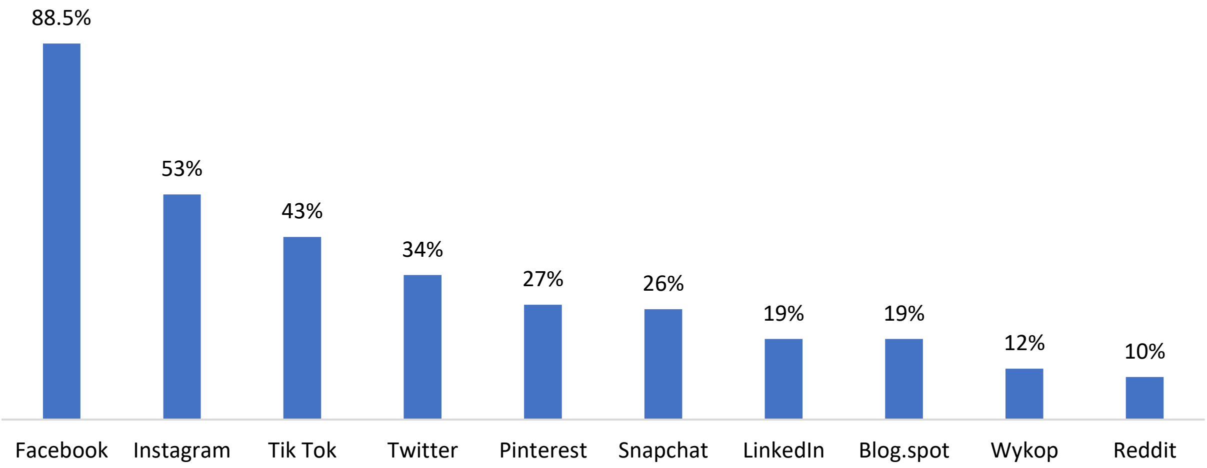
Source: Compiled by the KRRiT Bureau on the basis of the CBOS report, Internet usage, June 2022.

Much more often than average, social networks are used by younger internet users, especially those under the age of 35.

The most popular social network is Facebook, which is used by 88.5% of internet users. They spend an average of 16 hours per month on this site.

[32] Internet Protocol Television is an Internet TV standard that enables the delivery of audio and video signals using a closed, operator-separated broadband network .
[33] https://www.wirtualnemedia.pl/artykul/serwisy-streamingowe-piractwo-torrent-rod-smoka-wladca-pierscieni-pierscienie-wladzy-boys-hbo-max-amazon-prime-video-disney-netflix-paramount
[34] This represents 55% of Poland's population.
[35] CBOS, *Internet usage,* June 2022.

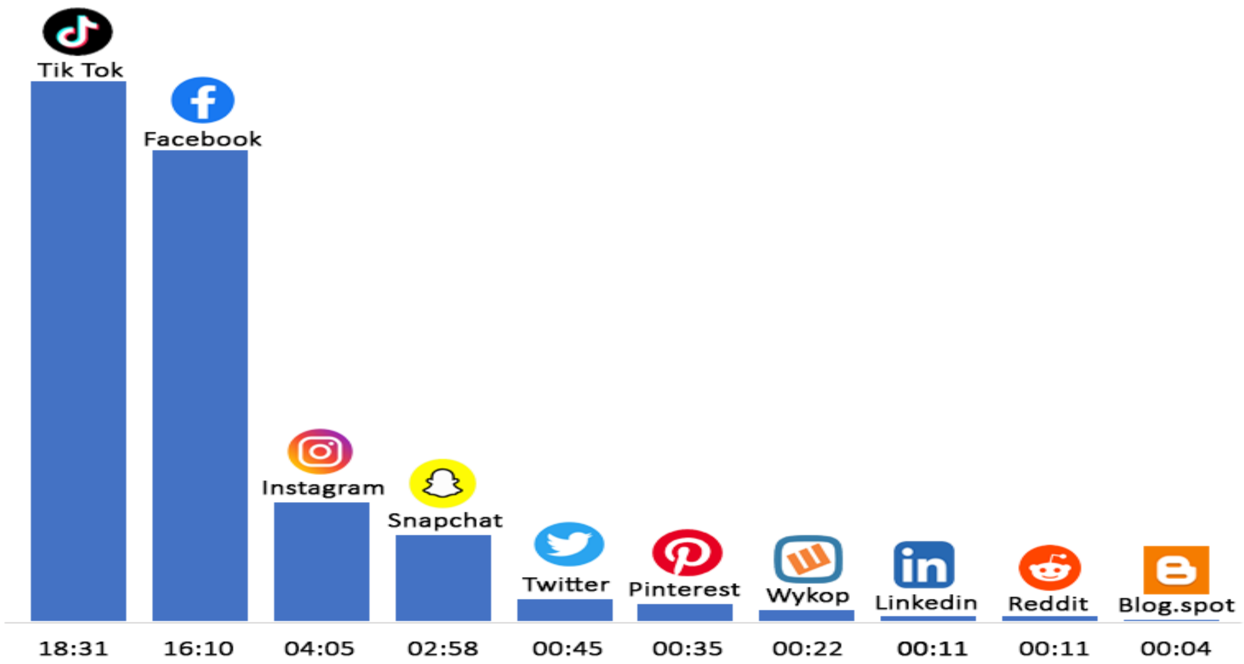
Figure No 23. Reach of use of social media platforms



Source: Compiled by the KRRiT Bureau on the basis of the Gemius/PBI survey for June 2022; after Wirtualne Media[36]

TikTok, although it has a much smaller reach than Facebook, engages its users for 2.5 hours longer than the most popular site. Users using the other social networks spend significantly less time on them (less than 1 hour per month), with the exception of Instagram (over 4 hours) and Snapchat (almost 3 hours).

Figure No 24. Average monthly time spent on social media platforms (gg.mm), June 2022



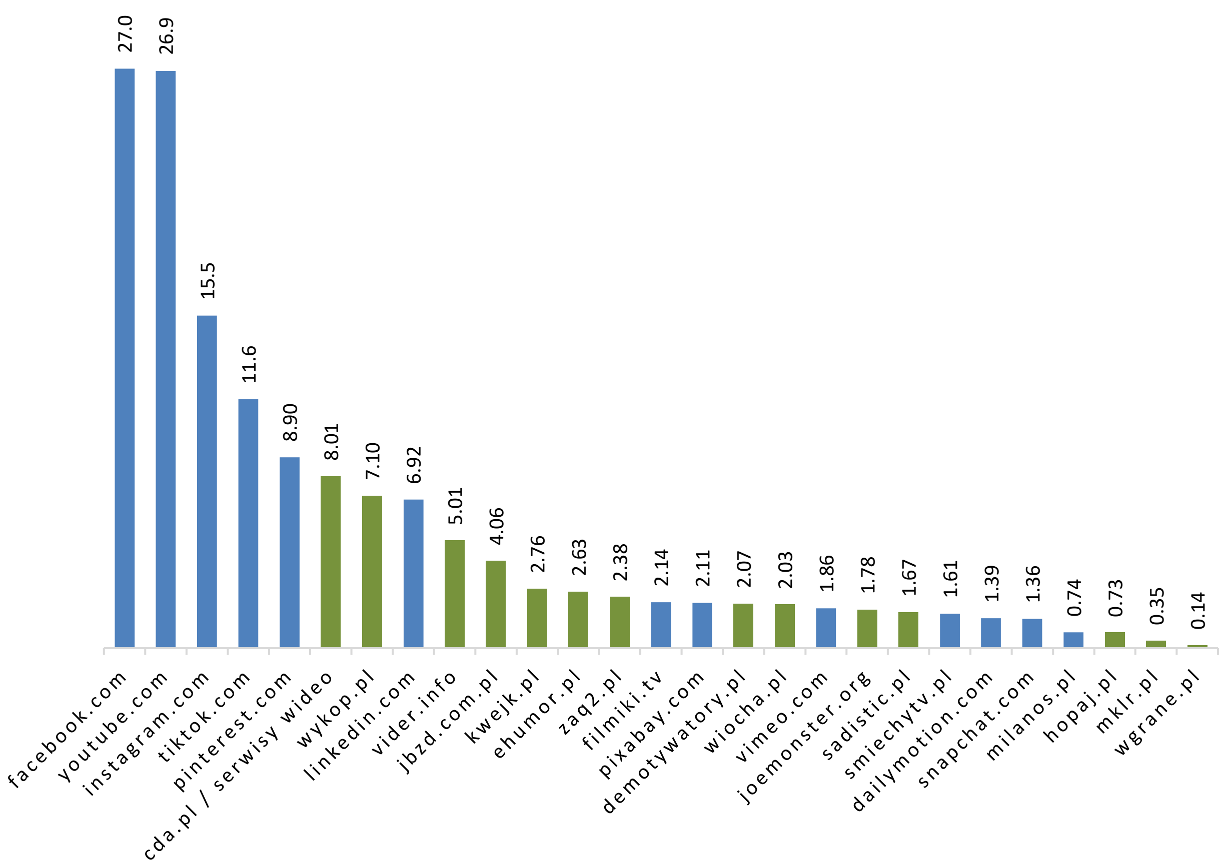
Source: Compiled by the KRRiT Bureau on the basis of the Gemius/PBI survey for June 2022; after Wirtualne Media[37]

Social networking sites play an important role in access to short-form video created by professional and non-professional users. The popularity of video content means that most sites can be classified as

[36] https://www.wirtualnemedia.pl/artykul/tiktok-aplikacja-ilu-ma-uzytkownikow-w-polsce-twitter-traci-facebook
[37] https://www.wirtualnemedia.pl/artykul/tiktok-aplikacja-ilu-ma-uzytkownikow-w-polsce-twitter-traci-facebook

video sharing platforms (VSPs), as defined by the Audio-visual Media Services Directive and, by extension, the Broadcasting Act.[38]

Figure No 25. Websites that can fully or partly fulfil the characteristics of VSP platforms (in millions of users in Poland)[39]



Source: Compiled by the KRRiT Bureau on the basis of Gemius/PBI data, Q4 2022.

In this ranking, as among Internet services, Facebook takes the lead. Close behind is the YouTube platform, which is becoming an increasingly common way of accessing so-called channels, i.e. catalogues of programmes created by so-called youtubers.

[38] Art. 4, section 22a of the Broadcasting Act: a *video-communication platform is a service provided electronically in the course of a business activity in this respect, if the principal purpose or function of the service or a separable part thereof is to provide the general public with programmes, user-created video or other content for which the service provider has no editorial responsibility, but which the service provider decides, including automatically or by means of algorithms, in particular by displaying, flagging and sequencing, for informational, entertainment or educational purposes*.

[39] The chart above does not show all sites that can fulfil the characteristics of VSP platforms. It does not indicate websites whose audience did not exceed the threshold of 0.1 million users, with the exception of Polish websites listed by the President of the National Broadcasting Council. The chart also did not include such sites: Kawusia.pl, Vider.love and BanBye, which, although included in the President's list, are not reflected in the Gemius/PBI data (Q4 2022).

TikTok saw a significant increase in audience in Q4 2022 compared to Q4 2021 (by almost 2.5 million viewers). As many as 83% of internet users using TikTok have posted at least one video on this platform, and video content is twice as likely to be shared by social media users, compared to posts, articles or photos.[40] In contrast, the three most popular VSP platforms under Polish jurisdiction, as listed by the Chairman of the KRRiT, are: cda.pl, vider.info and jbzd.com.pl.[41] For more information on the VSP providers included in the list of the KRRiT Chairman, see the *Report on the activities of the KRRiT in 2022*.

The rapidly growing interest in video content, including short videos, the so-called ‘reels’, is causing platforms such as Instagram and Pinterest, which until now have mainly engaged the viewer through photos, to invest in functionalities that allow for quick and easy posting of this content.

Watching online broadcasts made and broadcast live by other Internet users is declared by more than a third of those who use the web (36%, i.e. 27% of total respondents). An increase in the number of viewers of such broadcasts was registered in 2020, during the first phase of the coronavirus epidemic in Poland. Since then, the popularity of so-called 'streams' has remained stable. Their viewers are mostly younger internet users, aged 18-24 (61%) and 25-34 (46%). In the month preceding the survey, video blogs were watched, as in the previous year, by one in four internet users (26%, i.e. 20% of all respondents). Again, younger users, aged 18-24 (50%) and 25-34 (36%) stand out.[42]

Platform users most often watch video content on YouTube, which is visited by 88.1% of Polish internet users, each spending almost 20 hours there per month.

YouTube mainly serves as a platform for accessing video content, so-called channels or individual videos, as do the less popular additional video services created by LinkedIn (LinkedIn Video), Instagram (Instagram Video) or Facebook (Facebook Video) – reaches of 68% to 65% among users.

In the case of the most popular platform, YouTube, the content of interest includes music videos, video blogs on hobbies, trivia and technology news.

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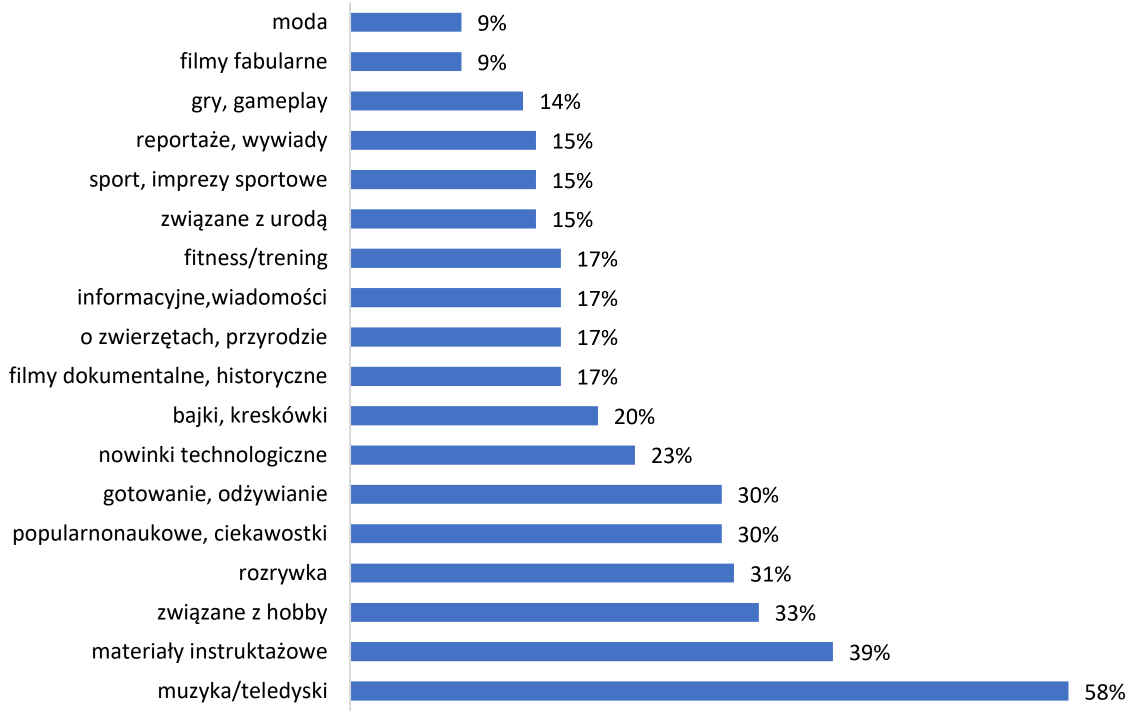
[40] Interaktywnie.com, *Video marketing for companies*, August 2022, https://interaktywnie.com/download/265-wideo-marketing

[41] In the case of wykop.pl, a procedure to clarify the status of the site is underway.
A list of Polish VSP providers is available at: https://www.gov.pl/web/krrit/lista-dostawcow-platform-udostepniania-wideo-wpisanych-do-wykazu-przewodniczacego-krrit-na-podstawie-art-1a-ust7-urt

[42] https://www.cbos.pl/SPISKOM.POL/2022/K_077_22.PDF

Figure No 26. Types of content most viewed on YouTube



Source: Compiled by the KRRiT Bureau on the basis of the report Videonauts. How viewers navigate a world of multiple screens, content, media, Syndicate Report, Nielsen, January 2022. Basis for percentage: YouTube users aged 16-74, N=2403

Use of YouTube is often characterised by spontaneous content selection. Some 44% of respondents say they search the site to select something using algorithm prompts based on content popularity or viewer preferences. A slightly different way of selecting content is preferred by the younger user group. Two thirds of young people under 24 watch content from specific youtubers, subscribing to dozens of so-called channels. However, they actually play around 10-20 channels on an ongoing basis.[43]

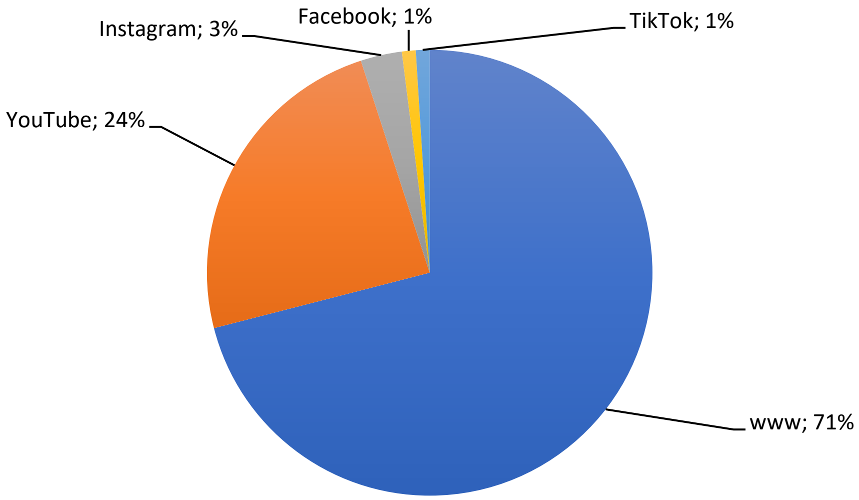
YouTube's video offering is evolving towards increasingly professional content. Audiences are enjoying the longest forms on this platform, with a variety of topics, including the presence of news and journalism, reports and interviews, documentaries and historical films, as well as educational and how-to content, indicating YouTube's important role in accessing knowledge.

In terms of entertainment, internet users spend the most time searching for it on TikTok, with an average of 95 minutes per day, followed by Facebook at 33 minutes and then Instagram at 28 minutes, while YouTube is only 17 minutes and 31 seconds.[44]

[43] Nielsen, *Videonauts. How viewers navigate a world of multiple screens, content, media,* Syndicate Report, January 2022. Basis for percentage: YouTube users aged 16-74, N=2403 and YouTube users aged 16-24 N=273
[44] Interaktywnie.com, *Video marketing for businesses*, August 2022, https://interaktywnie.com/download/265-wideo-marketing.

In 2022, 304 entities were included in the VoD list[45] maintained by the KRRiT Chairman. Most entries were on-demand services offered through websites (71%). Another group were the so-called 'youtubers' (24%). The smallest group, on the other hand, was made up of entities operating on social media platforms: Instagram (3%) and Facebook and TikTok – 1% each.

Figure No 27. Websites and social networks with so-called channels, i.e. systematically shared programmes, created by users, which can be classified as VoD services



Source: Study by the KRRiT Bureau, December 2022.

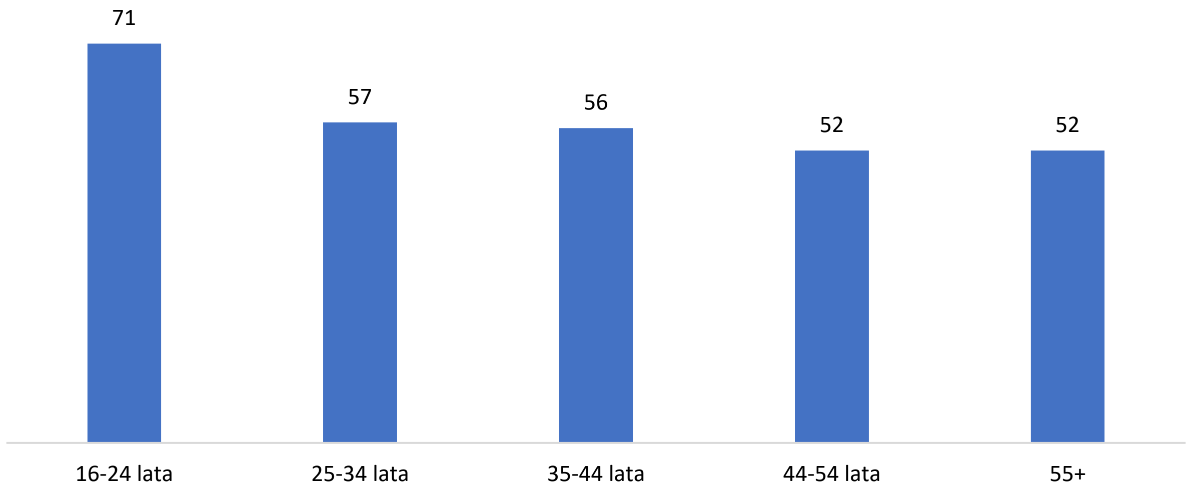
User channels (so-called youtubers), which have been around for years, are already professional services. They offer mostly satirical and entertaining content. Their creators have a regular, large audience, who subscribe to their channels and are kept informed of new episodes posted by the authors. Engaged users eagerly comment on and 'like' these creations. The popularity of the channels translates into revenue for the youtuber.

Content and channels on YouTube

Content on YouTube is most often viewed by young people (16-24), who form its main audience (71%).

[45] https://www.gov.pl/web/krrit/lista-dostawcow-audiowizualnych-uslug-medialnych-na-zadanie2

Figure No 28. Age structure of YouTube users (% of internet users)

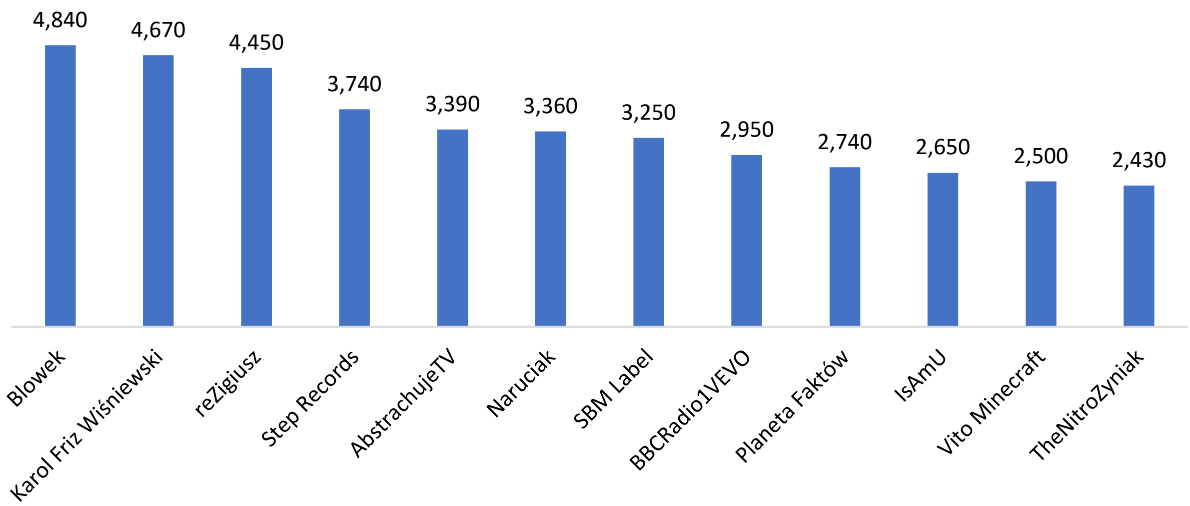


Source: Compiled by the KRRiT Bureau on the basis of Video Track VII, Report from the 7th Edition of the VOD market research in Poland, Wavemaker, December 2022.

The most frequent users of YouTube are digital terrestrial TV viewers (61%). A slightly smaller group is made up of satellite and cable TV viewers with internet access – 54% each.

Users of the platform, invariably for several years, search for music videos, content created by youtubers and entertainment, music and documentary content on the platform. Among the most popular channel creators are Blowek, Karol Friz Wisniewski and reZigiusz.[46]

Figure No 29. So-called user channels on YouTube by number of subscribers



Source: KRRiT Bureau compilation based on PBI report Ranking of Polish channels on the YouTube platform

[46] https://ddob.com/ranking/youtube

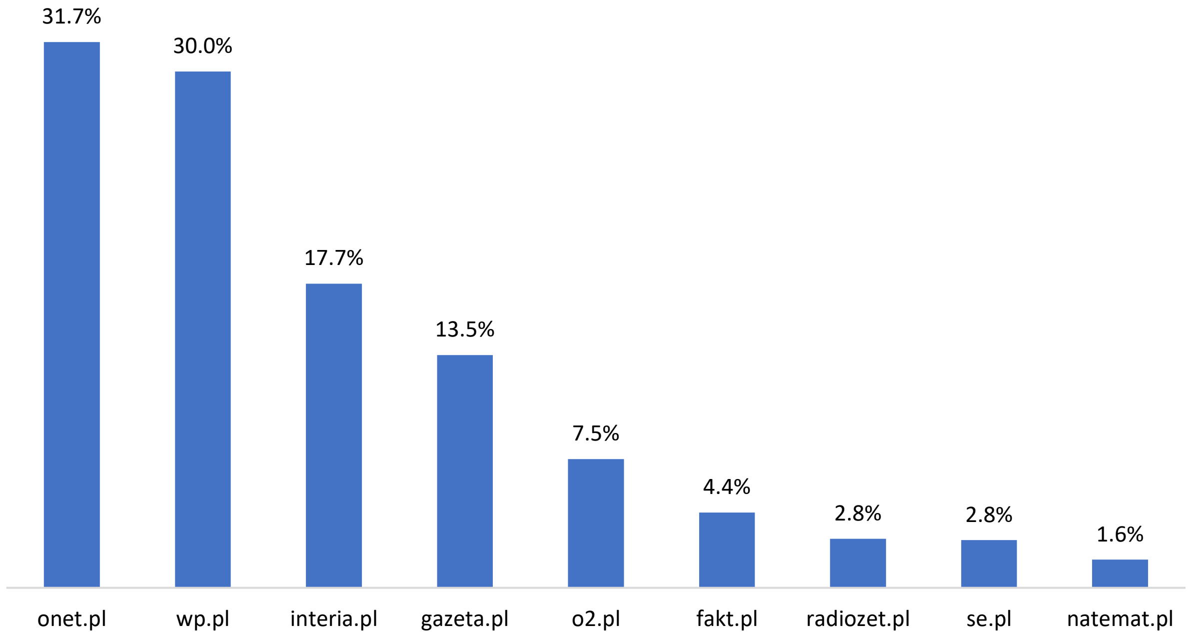
Making it easier to follow content published by creators will be helped, YouTube announced, by the unique username and short identifier that each channel will receive. These will be visible on channel homepages, in the so-called Shorts tabs[47] and in search results. This will not only allow the channel to be easily and quickly identified, but will also give creators the opportunity to highlight their own productions.[48]

Horizontal and vertical portals

Horizontal portals provide information of interest to a wide audience. In addition to current news, they include weather forecast information, horoscopes, web directories, chat rooms and discussion forums. They include mechanisms to search for information within the portal as well as on external Internet resources and applications, e.g. e-mail, birthday cards and virtual games. Portal publishers aim to have users set the address of their entry page as their homepage in their web browser.

The homepages of the onet.pl and wp.pl portals are the most popular among Polish users. Their reach is approximately 30% of real users each. Each of them gathers around 9 million viewers.

Figure No 30. Page reach of the main horizontal portals



Source: Compiled by the KRRiT Bureau on the basis of Gemius/ PBI research for November 2022; after Wirtualne Media[49]

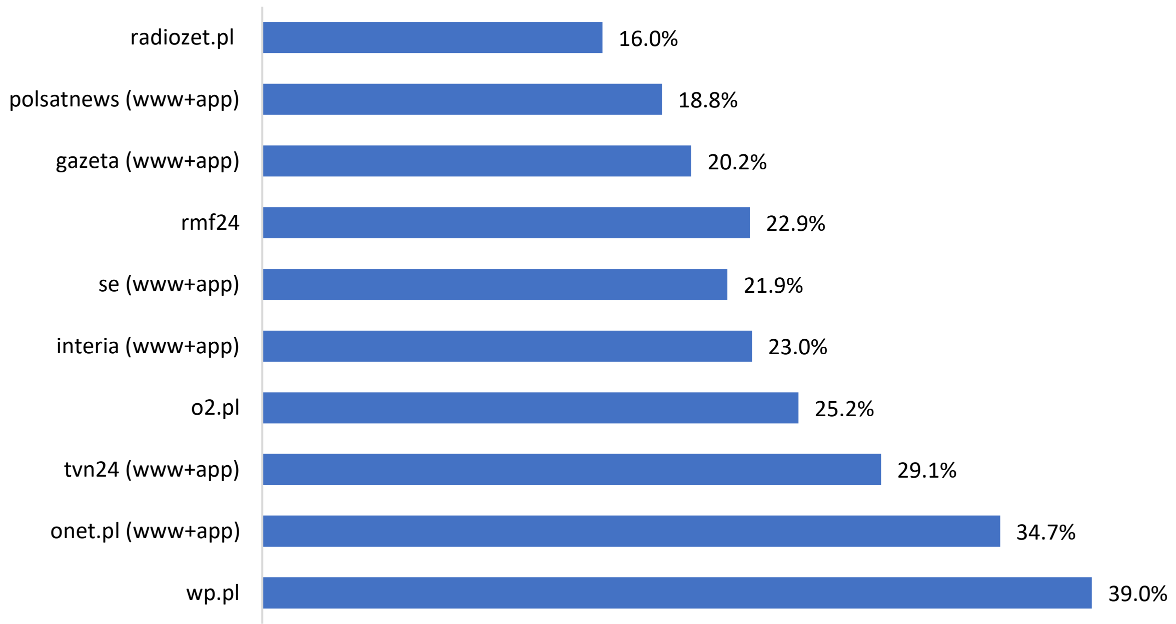
Vertical (thematic) portals are specialised websites that publish information from one field, thematically similar to each other, e.g. automotive, music, film, computer programmes, etc. In the Gemius/PBI study, thematic portals were presented, including: news and journalism; local and regional

[47] Shorts cards are elements available in YouTube statistics, in the content cards. They contain data on, among other things, views, comments or remixes.
[48] https://www.wirtualnemedia.pl/artykul/youtube-nicki-do-czego-sluza
[49] https://www.wirtualnemedia.pl/artykul/strony-glowne-onet-zwiekszyl-przewage-nad-wp-pl-spadki-o2-pl-i-fakt-pl

news; business, finance and law; science and technology; sports; women's multithreaded services; gossip; celebrity life; online shopping; health and medicine, as well as VoD services (described in more detail in the subsection Watching on demand – VoD).

News and journalism platforms are among the most popular vertical portals. They engage a significant number of users. Most of them use wp.pl news (almost 12 million users). Further favourite news and current affairs websites are onet.wiadomości (around 10 million users), o2.pl.news and TVN 24 (around 8.5 and over 9 million). Users spend the most time per month using news and journalism services on: wp.pl (48 minutes), onet.pl (45 minutes) and Interia.pl (34 minutes) and TVN 24 (25 minutes).

Figure No 31. Coverage of leading news and current affairs platforms



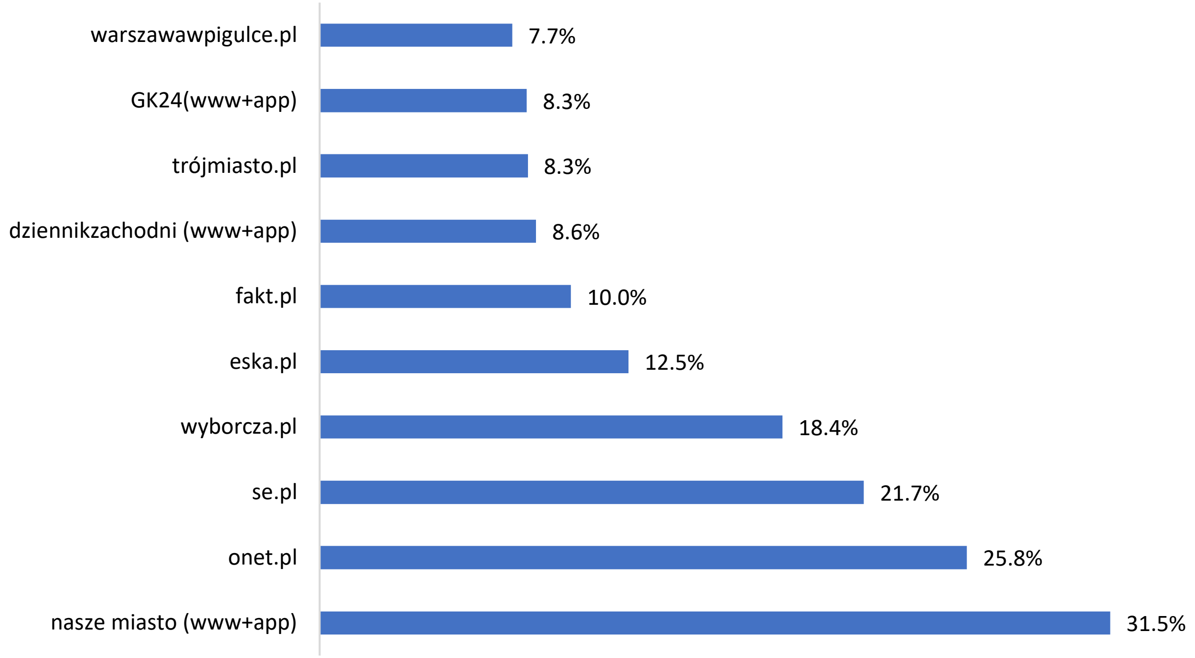
Source: Compiled by the KRRiT Bureau on the basis of the Megapanel/Gemius study for November 2022; after Wirtualne Media[50]

Popular websites with news and journalistic content include those devoted to local and regional issues. The main publisher of such news is the naszemiasto.pl portal owned by Polska Press. It is used by over 31% of Internet users, i.e. over 10 million recipients. The site offers information from 500 cities in 16 regions of Poland.

The time spent browsing regional and local sites is shorter than for news and current affairs sites devoted to national issues. Users spend the longest time browsing: regional trójmiasto.pl (14 minutes), onet.wiadomości regional (nine minutes). Naszemiasto.pl engages users for approximately four minutes per month.

[50] https://www.wirtualnemedia.pl/artykul/informacje-i-publicystyka-wp-pl-stracila-czesc-przewagi-nad-onetem-tvn24-pl-wyprzedzil-o2-pl

Figure No 32. Coverage of services containing local and regional information



Source: Compiled by the KRRiT Bureau on the basis of Gemius' Megapanel survey for November 2022. [51]

Among the remaining vertical portals, the most popular are the multi-topic women's portals (at wp.pl - over 11 million users) and those concerning health and medicine (medonet.pl - over 10 million), gossip and celebrity life (Plotek.pl - over 8 million), sport (wp.pl - over 8.5 million), science and technology (play.google.com – over 6 million).

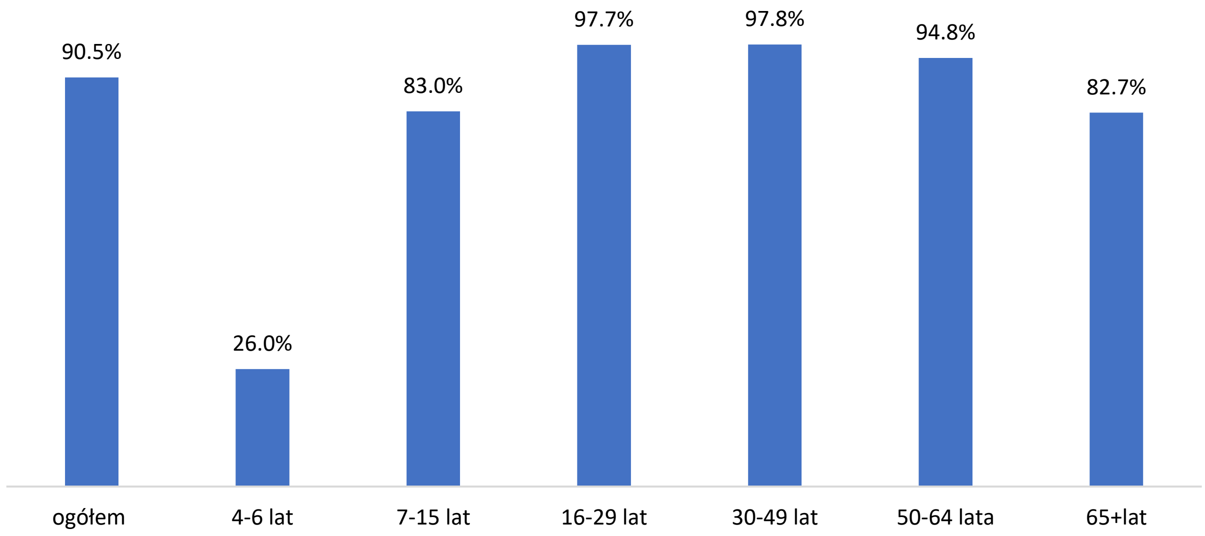
1.1.6. Mobile devices and e-entertainment

Smartphones and apps

A mobile phone is used by 90.5% of people aged 4 and over. The percentage is higher in the age groups 16-29 and 30-49.

[51] https://media-panel.pl/pl/aktualnosci/zestawienia-tematyczne-i-funkcjonalne-listopad-2022/

Figure No 33. Mobile phone use by age of person



Source: Study of the KRRiT Bueau based on Media services and infrastructure for their reception in 2022. Polish residents aged 4 and over. Results of the Foundational Survey of the National Media Institute, April 2023.

It is important to note the significant proportion of children aged 4-6 who use a mobile phone. In the 7-15 age group, on the other hand, mobile phone use is virtually universal. It is also worth noting that people aged 65 and over are mobile phone users almost as often as teenagers under 15.

Smartphones are predominant among mobile phone users (87.9%), owned significantly more often than key phones – 12.2%.[52]

The Polish market is dominated by Android devices (almost 90%). The remaining 10% are iOS devices, supplied by Apple. Every third phone in Poland is a Samsung-branded smartphone, an iPhone is used by one in ten people.

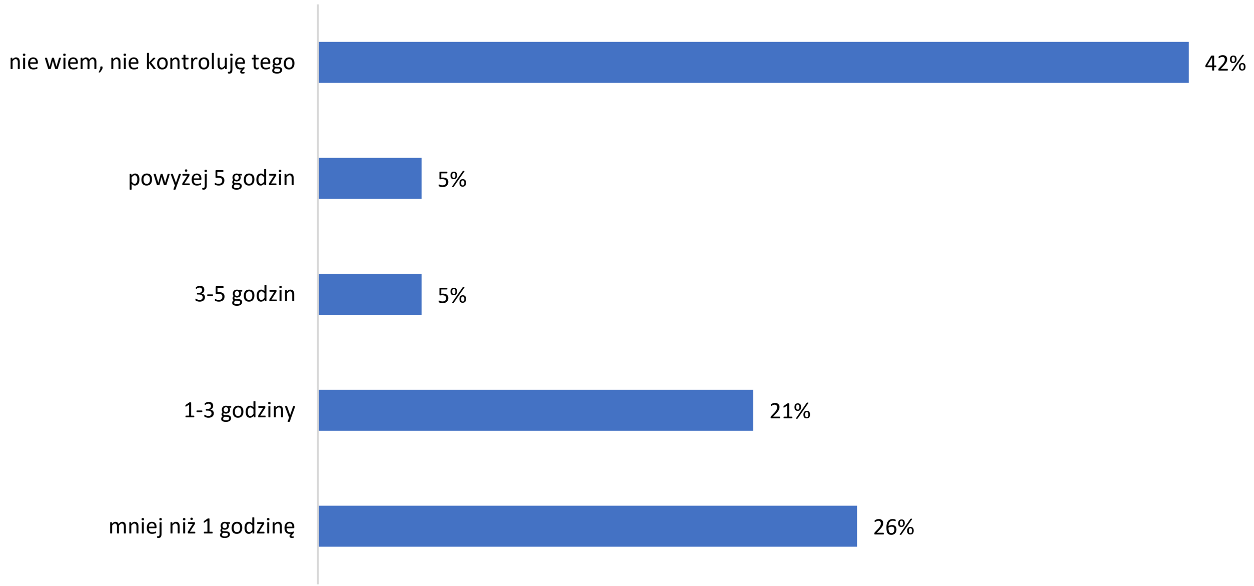
One in three users replace their smartphone after two years (31%), while 24% do so even more frequently, 14% after two and a half years and 19% after three years. This means that most Poles (64%) use their phones in 2-3 year cycles.[53] Such a cycle seems to coincide with the typical subscription periods of mobile operators, who provide a phone in the price of the service. However, it turns out that the majority of Poles (62%) buy a phone and a subscription separately. According to the survey, only one in four Poles chooses the package offered by their operator.

[52] *Media services and the infrastructure to receive them in 2022. Polish residents aged 4 and over*. Results of the Foundational Survey of the National Media Institute, April 2023.

[53] Kantar survey conducted for Swappie. https://gsmonline.pl/artykuly/jakie-telefony-maja-polacy-jak-je-kupuja-badania

Poles are spending more and more time using smartphones – on average 5 hours a day.[54] According to parents' declarations, 1/4 of children spend up to one hour a day with their smartphone. But as many as 42% of respondents do not control the time spent by their children using a smartphone.[55]

Figure No 34. Time spent using a smartphone in the 5-15 age group according to parents' declarations



Source: Compiled by the KRRiT Bureau on the basis of data from the Digital Care survey conducted in August 2022; after benchmark.pl

40% of respondents choose to check the location of their children on the basis of an application installed on their phones. Also less than half of parents (46%) install parental locks on their child's smartphone, preventing the use of selected websites and apps.[56]

Circumstances related to epidemics, isolation, remote working and learning have further increased the demand for apps.

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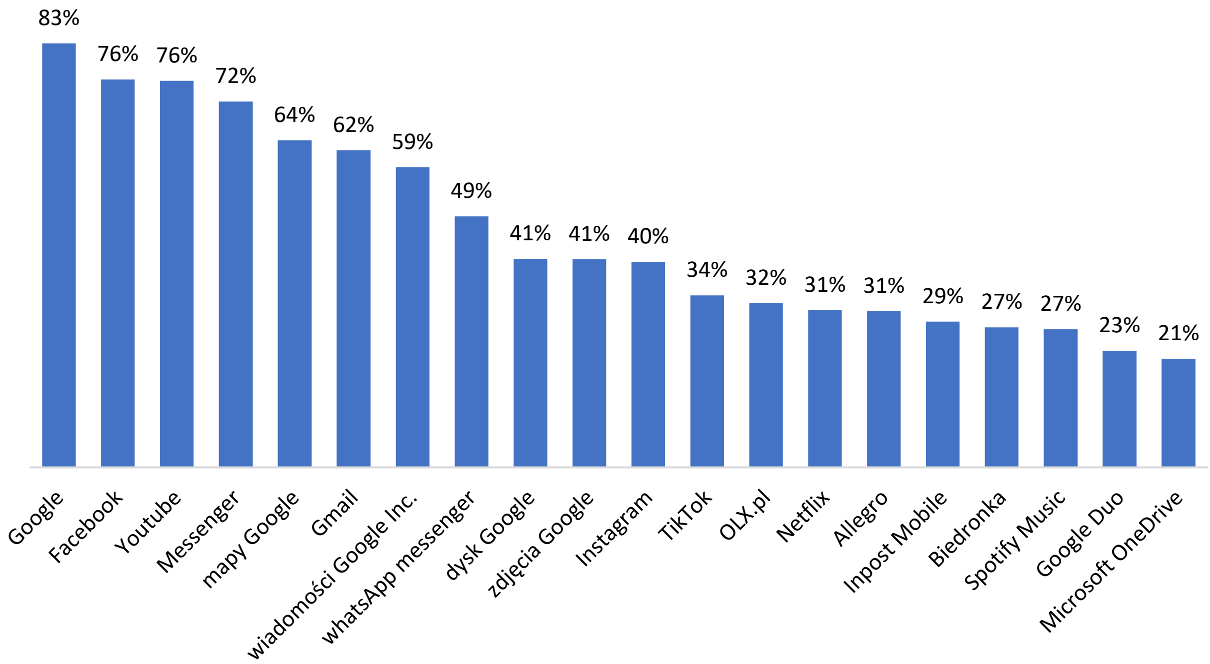
[54] https://strefabiznesu.pl/5-godzin-dziennie-tyle-czasu-spedzamy-przed-smartfonem-do-czego-ich-uzywamy-okazuje-sie-ze-nie-do-dzwonienia/ar/c3-17289925#najwazniejsza-funkcja-telefonu-coraz-rzadziej-sluza-do-dzwonienia

[55] *Digital Care* study August 2022 https://www.benchmark.pl/aktualnosci/dzieci-a-smartfony-badanie.html

[56] Ibid.

Figure No 35. Percentage of application coverage among internet users



Source: Compiled by the KRRiT Bureau on the basis of Gemius PBI Mediapanel data, December 2022.

To communicate with loved ones, internet users use Messenger (71.61%), less frequently WhatsApp (49.1%). In entertainment, YouTube and Netflix and Spotify Music dominate. Among social networks, Facebook is in first place (almost 76%), followed by Instagram (40%).

Video games

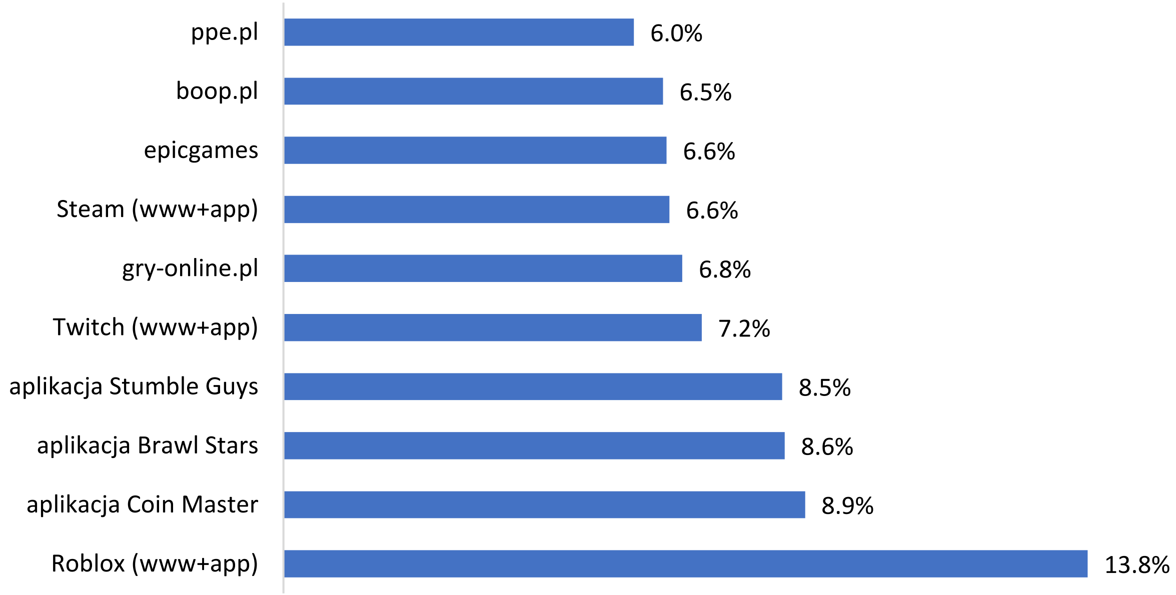
Electronic games on any device have been played in the past year by 67% of the respondents.[57] The most popular device for gaming was the telephone, which is used at least occasionally in this way by 58% of respondents. Regularly, a minimum of several times a month, 45% of the survey participants do so, with 16% each doing so several times a week or daily. Those who play on their phone at least several times a week spend an average of 7.7 hours a week doing so. Among children aged 7-15, as many as 75.6% play computer games. Children and young people are most likely to choose adventure games, sports and strategy games and action games.

Almost half of children (42.9%) play games between 30 minutes and 2.5 hours a day. One in ten children spend between 2 and 3 hours playing computer games each day. As they get older, gaming time increases.

Among the popular sites offering video games, fantasy games, such as ROLBOX and Coin Master, were in the lead in December 2022. Among Polish websites dedicated to games, the most popular is gry-online pl.

[57] Report *Esport and gaming in Poland*, Inquiry in association with Try Evidence, September 2022. https://inquirymarketresearch.pl/e-sport-i-gaming-w-polsce-raport-inquiry-i-tryevidence/

Figure No 36. Reach of leading apps about and with online games in December 2022

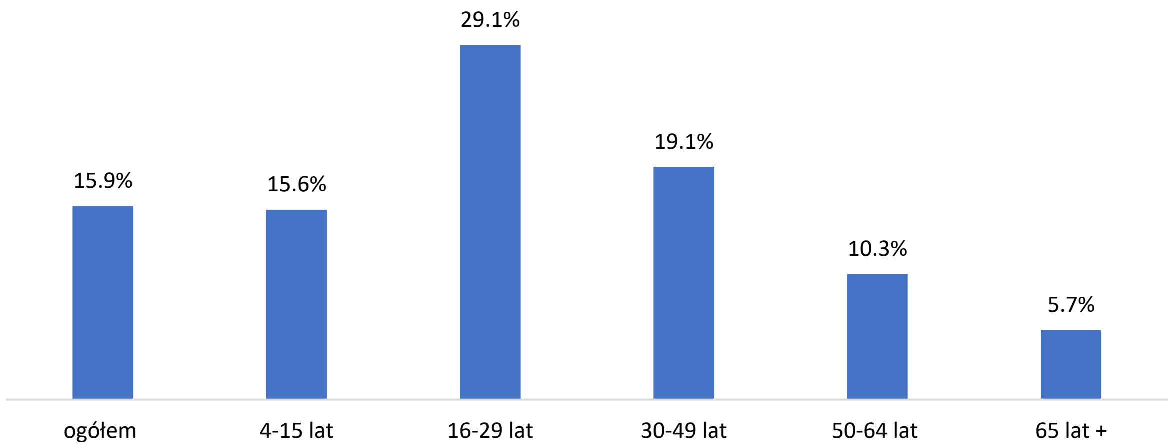


Source: Compiled by the KRRiT Bureau on the basis of a Gemius/PBI survey in December 2022 for virtual media

E-books and audiobooks

The use of electronic editions of books (e-book) in the last 12 months is declared by 15.9% of the Polish population, according to data collected in the April 2023 National Media Institute Founder's Survey. The most frequent users of e-books are those aged between 16 and 29.

Figure No 37. *E-book* readership by age

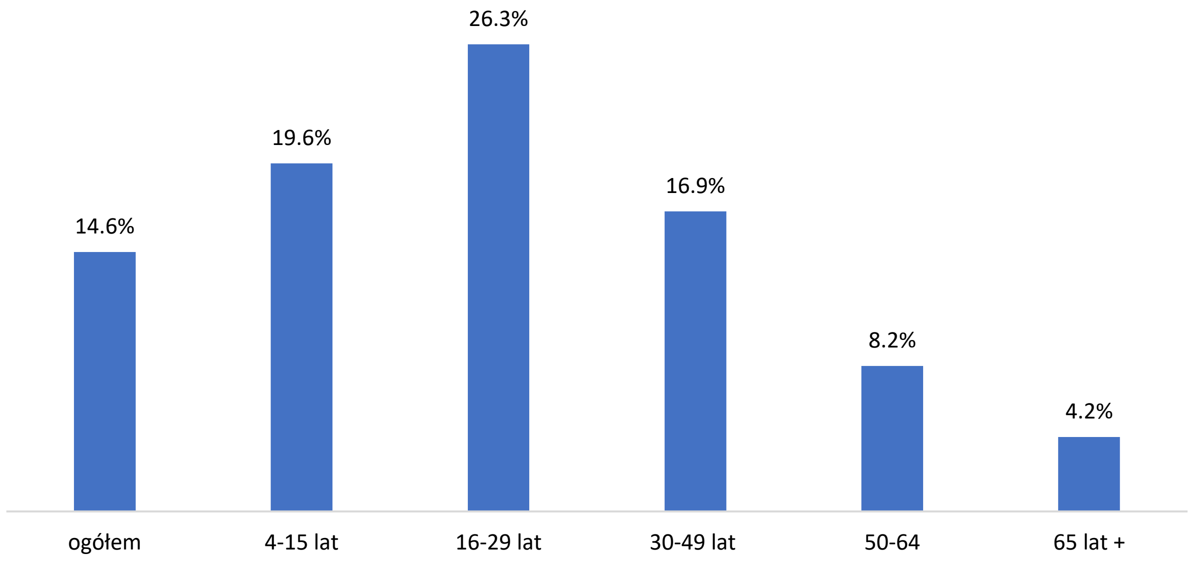


Source: Study of the KRRiT Bureau based on Media services and infrastructure for their reception in 2022. Polish residents aged 4 and over. Results of the Foundational Survey of the National Media Institute, April 2023.

The most popular e-bookstores in Poland in 2022 are Publio, Woblink, Legimi, Empik, Virtualo, Ebookpoint, Nexto, Tania książka.[58]

Various types of audio content other than radio were used by 61.9% of the Polish population in the last 12 months, of which 14.6% listened to audiobooks.

Figure No 38. Use of audiobooks by age of users



Source: Study of the KRRiT Bureau based on Media services and infrastructure for their reception in 2022. Polish residents aged 4 and over. Results of the Foundational Survey of the National Media Institute, April 2023.

The most popular audiobook libraries in the subscription model include: Audioteka, Storytel, Empik GO, Legimi, Bookbeat.[59]

1.2 The market of audio content consumers

1.2.1. The audience of audio content

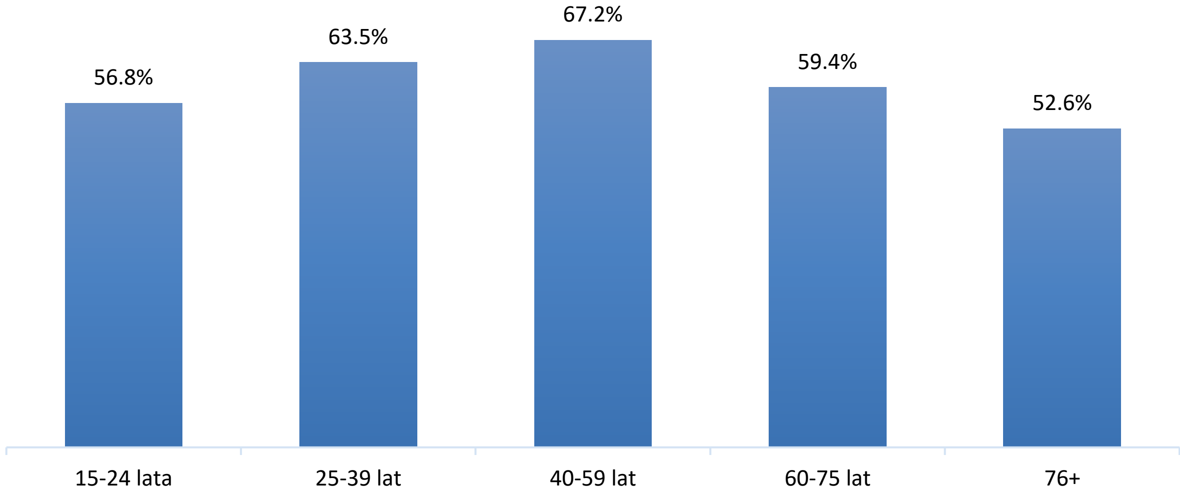
Radio is invariably the favourite medium of Poles. In 2022, it was listened to on average every day by 19.5 million Poles,[60] devoting an average of 4 hours and 14 minutes to it.[61] On weekdays, this medium accompanies adult listeners from the morning (8:00 a.m.) until the afternoon (3:00 p.m.). Younger people, aged 15-24, have a slightly different listening rhythm, as this group turns on the radio at 7:00 a.m. and finishes listening in the afternoon (with a drop in listening after 3:00 p.m.).[62]

[58] https://nano.komputronik.pl/n/najlepsze-polskie-ksiegarnie-ebookow/
[59] https://www.wydawajdobrze.com/poradniki/tanie-sprytne-zakupy/-audiobooki-w-abonamencie
[60] https://www.wirtualnemedia.pl/artykul/lubimy-radio-komu-towarzyszy-gdzie-sie-slucha-jakie-wyniki
[61] Ibid.
[62] iloveradio.co.uk, *RADIO 2022 summary of listening results*, https://iloveradio.pl/sluchalnosc-radia-w-2022-roku-blisko-20-mln-sluchaczy-dziennie-i-26-mln-tygodniowo/

According to a study by the National Media Institute,[63] the radio audience in the 4+ population is 85.3% of respondents. Between March 2022 and March 2023, 85.3% of respondents declared listening to radio. The National Media Institute survey shows that radio listening is more often declared by those with a university education (81.9%) and those in employment (81.3%) There were no significant differences in radio listening levels between rural and urban residents (76.71% and 73.5% respectively).

The largest group of radio listeners (over 67%) are adults aged 40-59. The second largest group (over 63%) is made up of listeners aged 25-39. Slightly smaller, at 59%, is the group of 60-75 year olds. The smallest group of listeners are those aged 15-24 (56.8%). The National Media Institute's study also takes into account the audience aged 76 and over (52.6%).

Figure No 39. Percentage of radio listeners by age group in 2022.

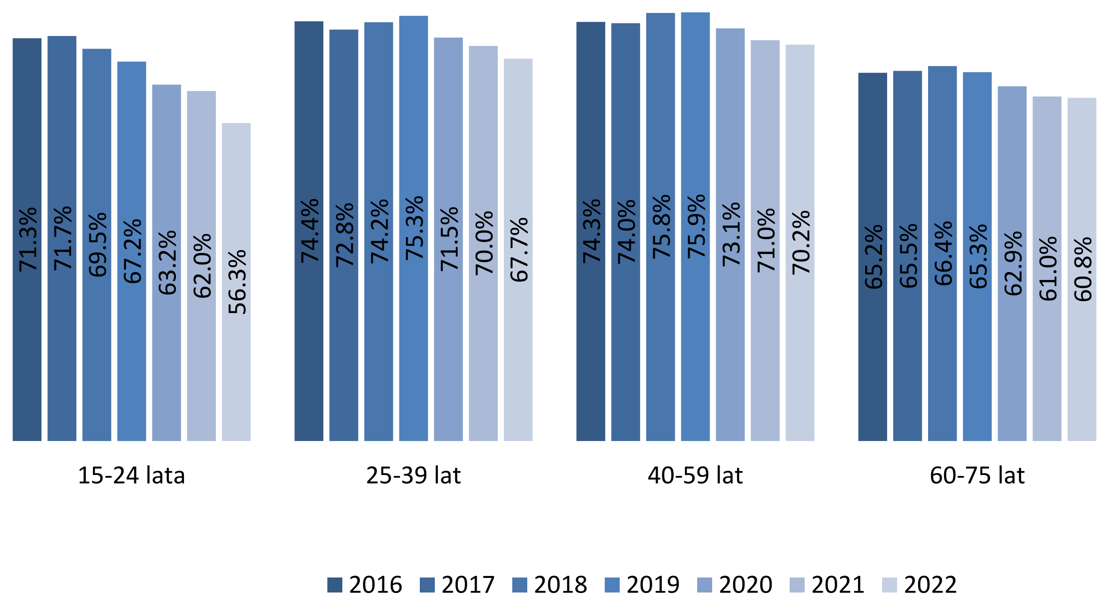


Source: compiled by the NCRB Office on the basis of the 2022 National Media Institute study.

Despite the different methodologies, a fairly similar listening trend is evident in the Radio Track survey conducted by Kantar Polska.

[63] The methodology of the survey carried out by the National Media Institute involves conducting interviews from a randomly generated database of telephone numbers. Any person over 15 years of age enters the survey. The demographic structure of the sample is not assumed in advance. This structure is analysed by result and, if necessary, appropriately weighted based on CSO data. The starting point for the survey is media reception in the broad sense.

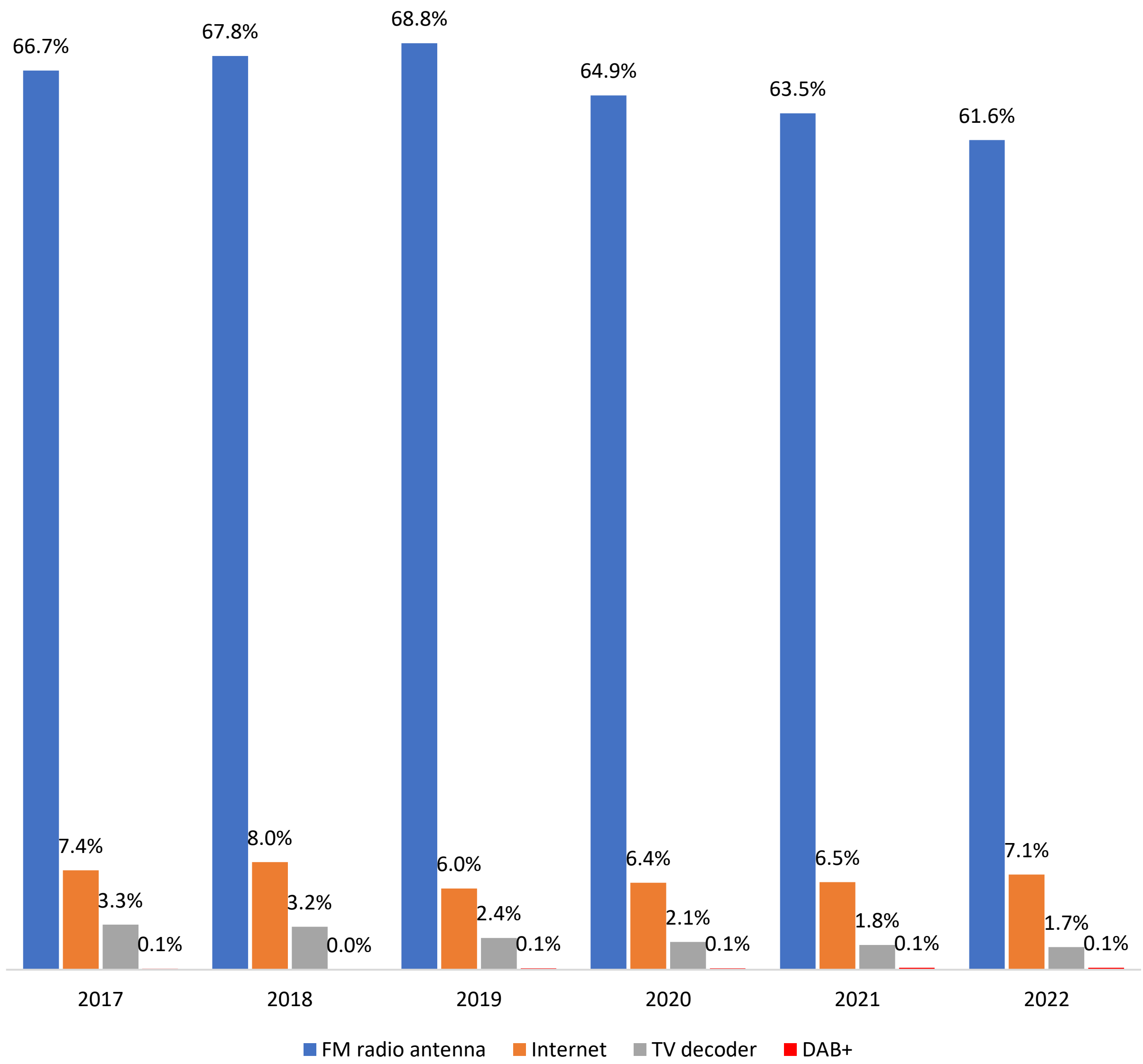
Figure No 40. Percentage of radio listeners by age group 2016-2022



Source: compiled by the KRRiT Bureau on the basis of the Kantar Polska SA Radio Track survey (2016-2022), March 2023.

Listeners have unlimited choice between different audio platforms, but FM still plays a key role. With each passing year, however, a slow shift away from this signal source is evident. In six years, analogue radio's reach has decreased by 7.5 percentage points, with no significant growth in online radio listening. Compared to 2021, this coverage has only increased by 0.6 pp. Digital radio listenership is less than 0.1 per cent.

Figure No. 41. Radio listening in Poland 2016-2022 by signal source (% of listeners)

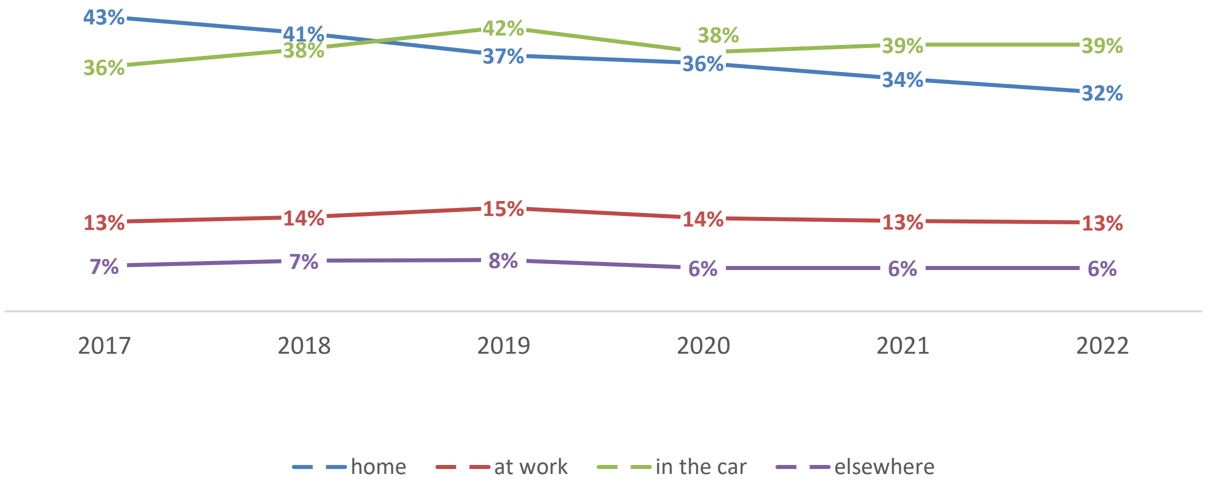


Source: KRRiT Bureau compilation based on Radio Track, Kantar Polska, March 2023.

The trend related to where radio is listened to also remains unchanged. Most consumers listen to the radio in the car. This method of reception is declared by almost 39% of respondents. Another place where radio accompanies listeners is at home (32%). On the other hand, 13% of recipients accompany the radio to work.[64]

[64] Kantar Polska SA, *Radio market in Poland,* March 2023.

Figure No 42. Place of radio listening (% of listeners)



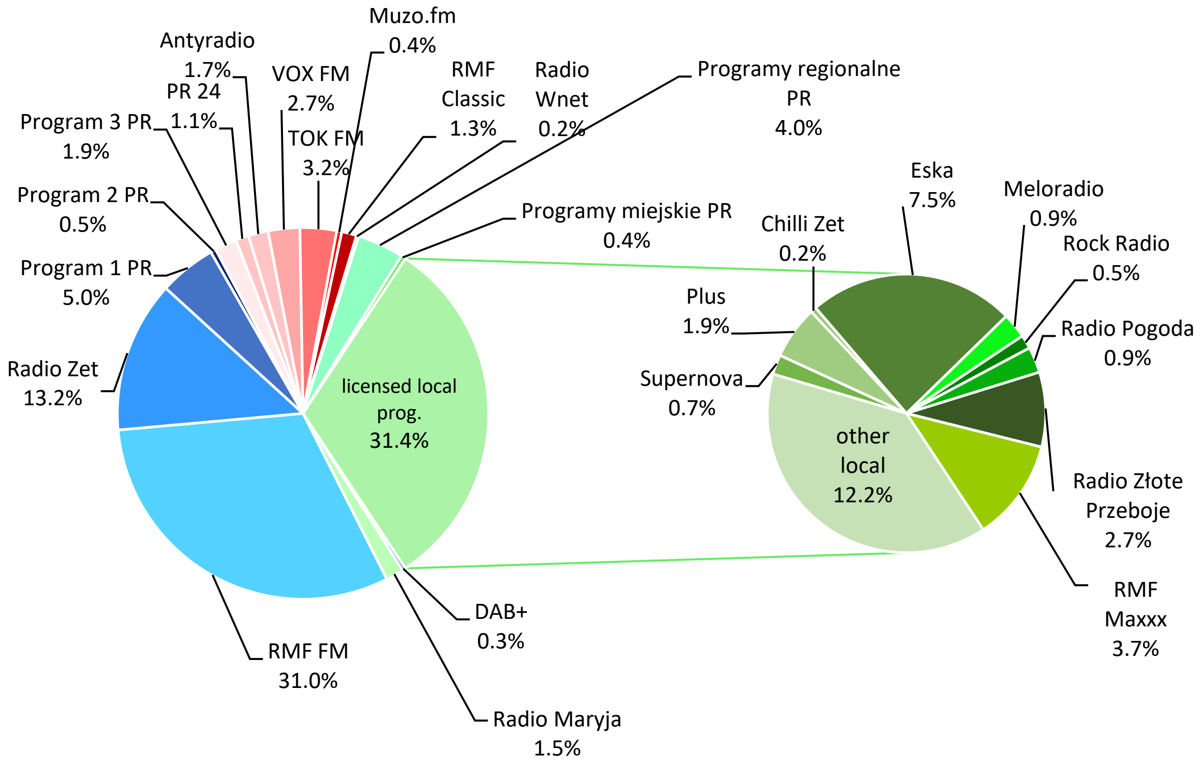
Source: Compiled by the KRRiT Bureau on the basis of the Radio Track survey, Kantar Polska SA, March 2023.

The majority of Poles, 57%, listen to only one radio programme during the day, more than 27% listen to two radio stations and around 10.5% listen to three.[65]

[65] https://www.wirtualnemedia.pl/artykul/lubimy-radio-komu-towarzyszy-gdzie-sie-slucha-jakie-wyniki

1.2.2. Audience of radio programmes[66]

Figure No 43. Structure of the radio market in 2022. - Shares in listening time[67]



Source: Kantar Polska SA, Radio in Poland 2022, March 2023. [68]

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[66] The information was prepared at on the basis of the report *Radio in Poland 2022*, Kantar Polska SA, March 2022. The report was prepared on the basis of the Radio Track radio audience survey conducted by Kantar Polska SA. The research is conducted on a nationwide sample of people aged 15-75, through computer assisted telephone interviews (CATI) using the Day After Recall method, which involves the respondent reconstructing the previous day's radio listening and, in this context, recalling the radio programmes listened to during the day. Approximately 7,000 interviews are conducted per month. The data are combined into bundles, called waves, of three months. Each wave contains information from around 21,000 respondents. The selection of respondents takes into account the following principle: half of the monthly research sample is selected in proportion to the distribution of the population in Poland, while the other half is made up of additional respondents from large cities (over 100,000 inhabitants) - this is known as urban over-representation. For this reason, listenership rates for areas outside the overrepresentation are determined with significantly less accuracy. The sample size for the whole of 2022 was 83,866 respondents. The survey included radio programmes, public and licensed, broadcast around the clock (312 programmes).

[67] The pie chart shows the division of the radio market between individual programmes and programme groups by listening time share. The chart distinguishes national programmes: RMF FM, Radio Zet, Polish Radio Programmes 1, 2 and 3, Polskie Radio 24 and Radio Maryja. Then the supra-regional programmes: Antyradio, VOX FM, TOK FM, muzo.fm, RMF Classic, Radio Wnet, regional and municipal public radio programmes, local programmes as one group and digitally distributed programmes (DAB+). Local programmes are additionally shown in the smaller circle of the chart, broken down by programme network: SuperNova, Plus, Chilli Zet, Eska, Meloradio, Rock Radio, Radio Pogoda, Złote Przeboje, RMF Maxxx.

[68] In 2022, the following changes occurred in the list of surveyed stations:

- The listenership study included new programmes: Mega Radio, Radio Nuta, Disco Radio (April) and Radio Włocławek po polsku (August).
- In December, Radio Września FM was renamed Radio Warta.
- Several stations ceased broadcasting, these were: Radiofonia (Kraków), Fama (Kielce), Radio Nysa.
- For some programmes, there were changes in the location and technical conditions of the transmitting stations, resulting in changes in the technical coverage of these programmes.

Table No 3. Radio programme listening rates in 2022 and their change from the previous year

	Daily coverage		Share of listening time (%)		Daily listening time	
	value	change	value	change	Value	change
ALL	65.4%	-1.8 pp.	100%	0.0 pp.	4:14:00	-4 min.
NATIONAL PROGRAMMES	43.0%	-0.7 pp.	53.1%	+1.5 pp.	3:25:16	0 min
Programme 1 PR SA	4.8%	-0.2 pp.	5.0%	+0.3 pp.	2:51:46	3 min.
Programme 2 PR SA	0.6%	-1.0 pp.	0.5%	0.0 pp.	2:02:25	2 min.
Programme 3 PR SA	2.4%	-0.1 pp.	1.9%	0.0 pp.	2:11:06	-1 min.
Radio RMF FM	28.8%	-0.2 pp.	31.0%	+1.1 pp.	2:58:59	0 min.
Radio Zet	15.0%	0.0 pp.	13.2%	+0.1 pp.	2:26:18	-5 min.
Radio Maryja	2.0%	-0.1 pp.	1.5%	0.0 pp.	2:11:24	4 min.
SUPRA-REGIONAL PROGRAMMES	11.0%	+0.3 pp.	10.7%	+0.4 pp.	2:42:08	-5 min.
PR 24	1.3%	+0.3 pp.	1.1%	+0.3 pp.	2:28:28	0 min.
Anti-radio	2.0%	0.0 pp.	1.7%	-0.1 pp.	2:25:11	-7 min.
VOX FM	2.9%	-0.3 pp.	2.7%	-0.4 pp.	2:37:40	-10 min.
TOK FM	3.4%	+0.4 pp.	3.2%	+0.5 pp.	2:35:45	-1 min.
Muzo.fm	0.5%	0.0 pp.	0.4%	-0.1 pp.	2:32:35	-16 min.
RMF Classic	1.8%	0.0 pp.	1.3%	0.0 pp.	2:01:16	-9 min.
Radio Wnet	0.3%	+0.1 pp.	0.2%	+0.1 pp.	1:48:07	-9 min.
REGIONAL PUBLIC RADIO STATIONS	4.5%	-0.5 pp.	4.0%	-0.3 pp.	2:27:19	-1 min.
PUBLIC RADIO CITY PROGRAMMES	0.5%	0.0 pp.	0.4%	0.0 pp.	2:15:40	-11 min.
CONCESSIONARY LOCAL PROGRAMMES	30.5%	-2.1 pp.	31.4%	-1.8 pp.	2:51:05	-6 min.
Eska	10.5%	-0.5 pp.	7.5%	-0.3 pp.	1:59:37	-4 min.
Golden Hits	3.3%	0.0 pp.	2.7%	0.0 pp.	2:15:47	-7 min.
RMF Maxxx	5.0%	-0.4 pp.	3.7%	-0.3 pp.	2:02:57	-5 min.
Plus	2.1%	-0.3 pp.	1.9%	-0.1 pp.	2:30:35	6 min.
Meloradio	1.1%	0.0 pp.	0.9%	-0.2 pp.	2:23:35	-3 min.
SuperNova	1.4%	-0.8 pp.	0.7%	-0.4 pp.	2:20:59	3 min.
Chillizet	0.3%	0.0 pp.	0.2%	0.0 pp.	1:42:20	-8 min.
Rock Radio	0.6%	0.0 pp.	0.5%	0.0 pp.	2:12:55	-8 min.
Radio Weather	1.1%	0.0 pp.	0.9%	-0.1 pp.	2:19:37	-10 min.
other local	12.2%	-0.9 pp.	12.2%	-0.6 pp.	2:46:53	-3 min.

Source: Kantar Polska SA, Radio in Poland 2022, March 2023.

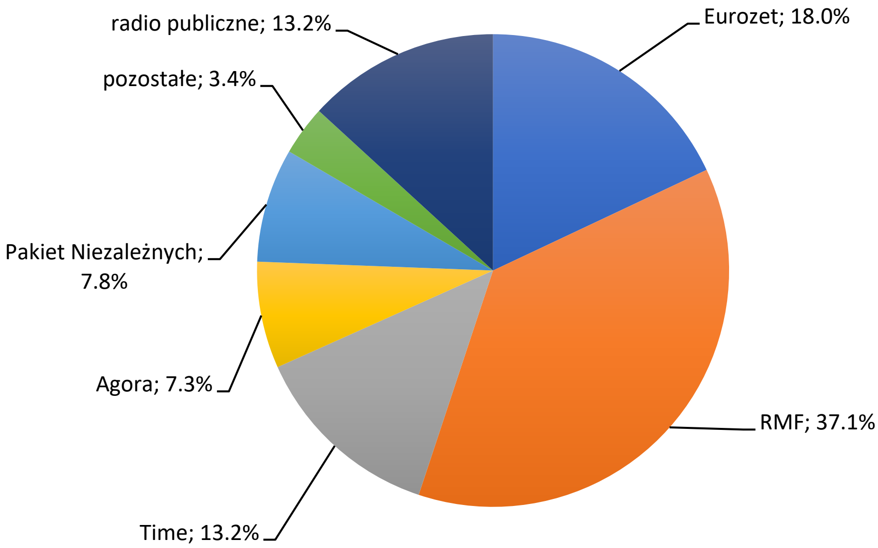
In 2022, 65.4% of the Polish population aged 15-75 listened to programmes covered by the *Radio Track* survey. This was 1.8 pp less than in 2021.

The four all-purpose national channels, RMF FM, Radio Zet and Polish Radio One and Three, were the most popular among listeners. Together they achieved a 53% share of listening time, with RMF FM accounting for more than half (31%). Other specialised national programmes had a much smaller share of listening time: the socio-religious Radio Maryja (1.5%), the news and current affairs channel PR 24 (1.1%) and the classical music channel Programme 2 (0.5%). Half of the programmes maintained last year's result in listening time. Slight increases were recorded by: RMF, Jedynka and Radio Zet.

Due to the overall decline in radio listenership, the daily reach of almost all nationwide programmes was lower than last year, with the exception of Radio Zet, whose result remained at last year's level.

The chart below shows the breakdown of the radio market by listening time share of the main groups of radio broadcasters.

Figure No 44. Division of the radio market by main broadcasting groups in 2022 (share of listening time)



Source: Report Radio in Poland 2022, Kantar Polska SA, March 2023.

The Polish radio market is divided between public radio, four commercial capital groups and other local programmes, some of which are affiliated to the Independent Package:

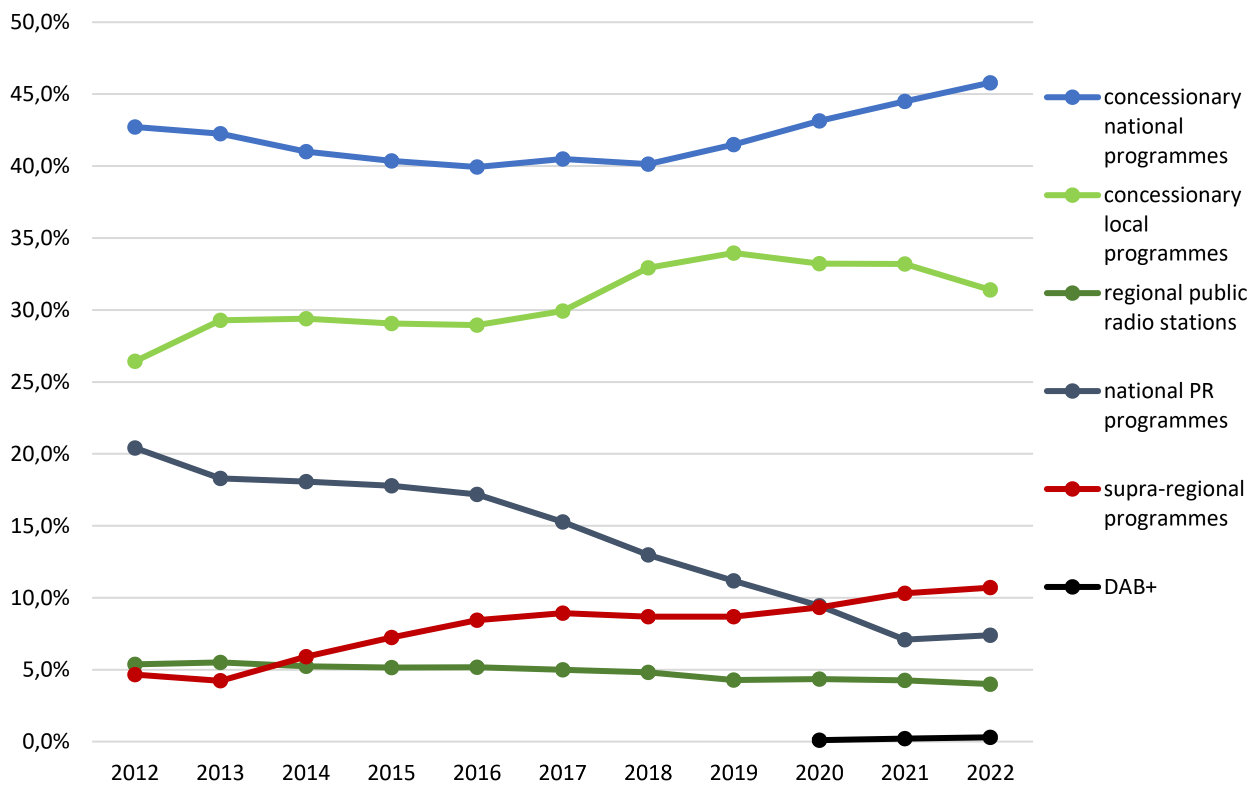
- public radio comprises the programmes of Polskie Radio SA and regional radio stations which are separate companies;
- The RMF Group includes the nationwide RMF FM, the supra-regional RMF Classic, the RMF Maxxx network and five other local programmes;
- Time Group comprises the Eska, SuperNova (formerly Wawa), Radio VOX FM programme networks, nine programmes from the Plus network (the others are part of Eurozet) and

the Eska Rock programme. In December 2022, the group acquired the supra-regional station Muzo.fm, previously owned by Cyfrowy Polsat;

- Agora's group includes the super-regional TOK FM and the Rock Radio, Złote Przeboje and Radio Pogoda networks;
- Eurozet broadcasts the nationwide Radio Zet, the supra-regional Antyradio, the local programme networks Meloradio and Chilli Zet and part of the Plus network programmes. Eurozet Group's shareholder since February 2019 is Agora SA, which bought a 40% stake;
- Other programmes include the nationwide Radio Maryja and local programmes, 62 of which collaborate under a business arrangement with Eurozet called the Independent Package.

Groups with nationwide programmes had the highest share of listening time, led by RMF Group, whose programmes had a share of more than 37.1% in 2022. The RMF group gained 0.8 pp over the previous year. The second group, Eurozet, lost 0.1 pp, reaching 18%. Declines were also seen for the Time group (down 1.1 pp, 13.2% share). The Independent package maintained its share (7.8%), although it should be noted that it had more stations in 2022 than in the previous year. Public radio and Agora's programmes had a slightly higher share than last year, with both groups gaining 0.4 pp to reach 13.2% and 7.3% share respectively.

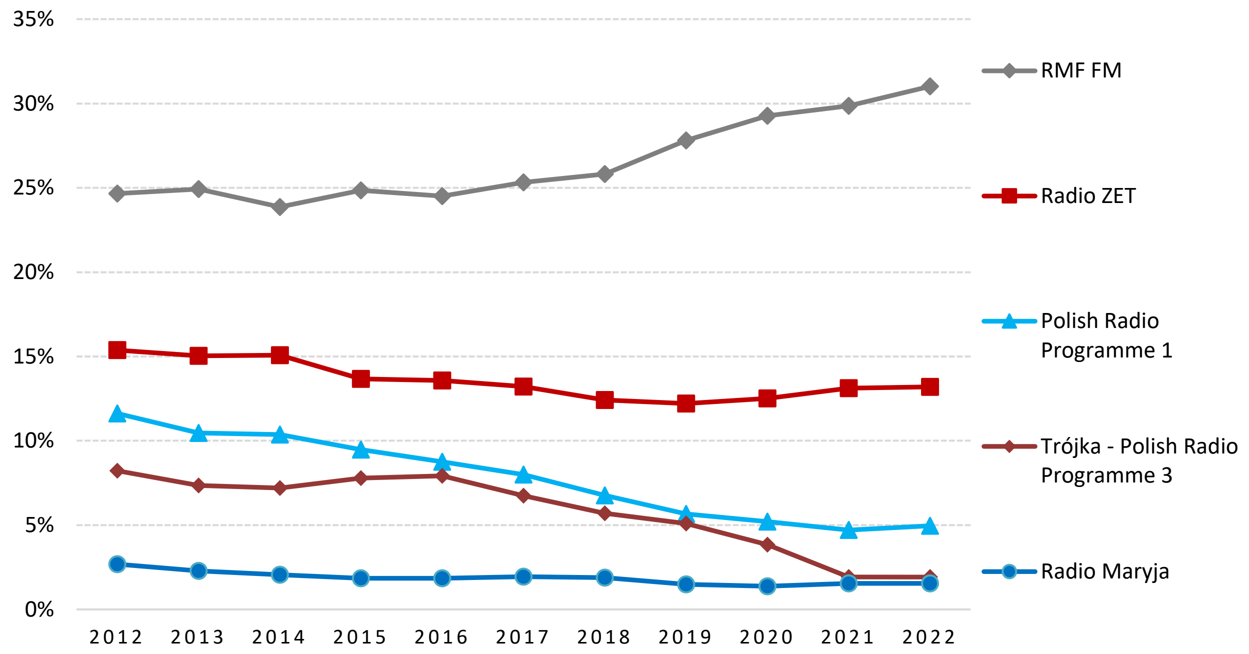
Figure No 45. Share of time spent listening to national, supra-regional, regional and local programmes between 2012 and 2022



Source: Kantar Polska SA, Radio in Poland 2022, March 2023.

The year 2022 was the fourth year of growth in the share of time spent listening to licensed national programmes (RMF FM, Radio Zet and Radio Maryja). For the first time in more than a decade, a slight increase in the audience share of Polish national radio channels was observed (by 0.3pp.); however, this level was almost three times lower than in 2012. The supra-regional channels also improved this indicator, with an increase of 0.4pp. On the other hand, the biggest drop in the ratings was for local licensed programmes, which saw their share of listening time fall by 1.8pp. A decrease of 0.3 percentage points was also recorded for regional public radio stations. Programmes broadcast digitally on DAB+ remain the stations with the smallest audience, with a listening time share of 0.3%.

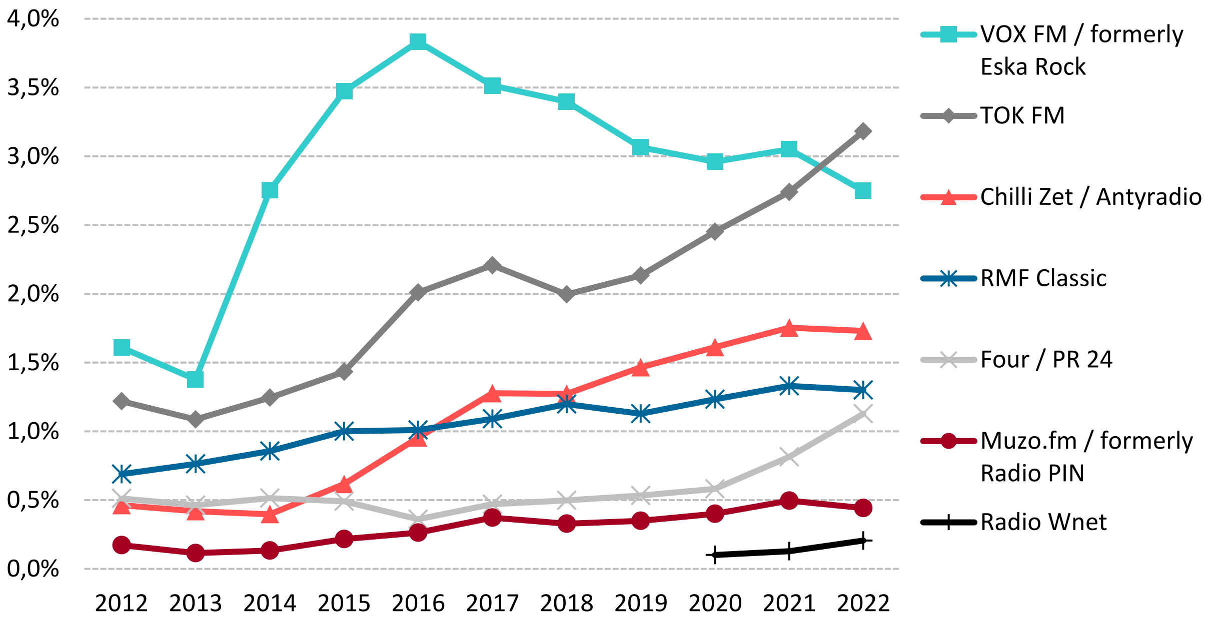
Figure No 46. Share of time spent listening to national radio programmes between 2012 and 2022



Source: Kantar Polska SA, Radio in Poland 2022, March 2023.

The year 2022 was another year of growth in the time share of RMF FM, which clearly dominates this group of programmes. In turn, Radio Zet's listenership share stabilised at over 13%, returning to the 2017 result. After a decade-long series of declines, in 2022 there was a slight increase in the indicator in question for Polish Radio 1 (by 0.3pp.), while *Radio 3's* share of listening time stabilised at 1.9%. Radio Maryja is the only thematic (socio-religious) radio presented in Figure 46. Its share of listening time was the same in 2022 as the previous year.

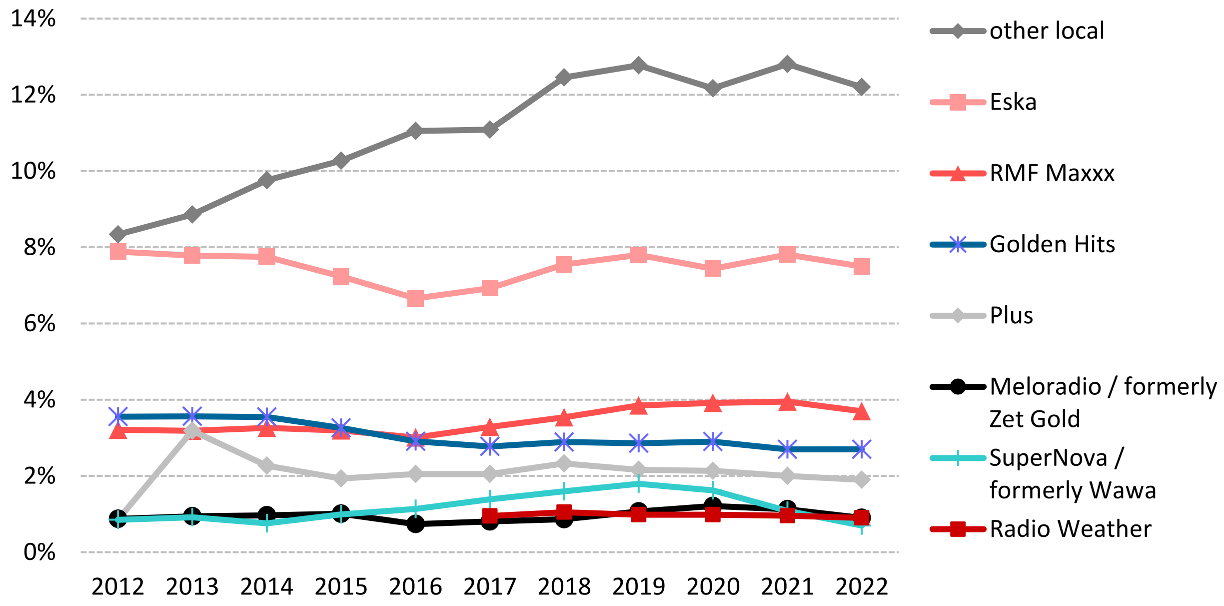
Figure No 47. Share of time spent listening to supra-regional programmes between 2012 and 2022



Source: Kantar Polska SA, Radio in Poland 2022, March 2023.

The supra-regional programmes achieved a total share of 10.7% in listening time in 2022, 0.4 percentage points higher than in the previous year. With a share of 3.2%, news and current affairs radio TOK FM became the most listened to supra-regional programme for the first time, thus overtaking dance radio VOX FM, which had previously held the leading position in this category. TOK FM saw the highest increase in its share of listening time in the ranking in question (by 0.5pp.), while VOX FM worsened its result the most (by 0.4pp.). A significant increase of 0.4pp. was also recorded for Polskie Radio 24. The audience share of Antyradio, RMF Classic and muzo.fm decreased slightly (by approximately 0.1pp. for each of these stations). The youngest of the supra-regional channels, Radio Wnet, achieved a share in listening time of 0.2%.

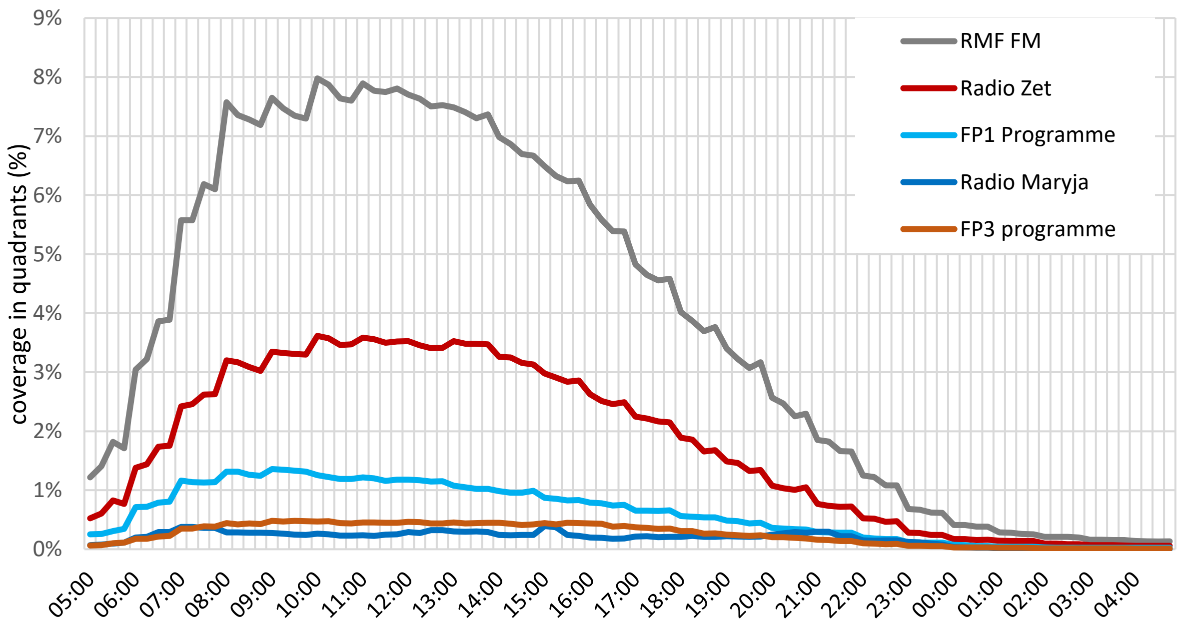
Figure No 48. Share of time listening to local programme groups between 2012 and 2022



Source: Kantar Polska SA, Radio in Poland 2022, March 2023.

The total listening time share of licensed local programmes was 31.4%. The largest market share among this group of programmes was held by those marked on the chart as other local (113 programmes – mainly programmes not affiliated with programme networks), which lost 0.6 percentage points. This was followed by the programme networks with music aimed at young listeners – Eska (41 local programmes, whose total listening time share fell by 0.3pp.) and RMF Maxxx (22 local programmes, whose total listening time share also fell by 0.3pp.). A decrease in share in listening time was recorded for the group of programmes from SuperNova (down 0.4pp.), Plus (down 0.1pp.) and Meloradio (also down 0.1pp.). Złote Przeboje, on the other hand, maintained its 2021 listening time share level.

Figure No 49: Daily listening distribution of the five national programmes in 2022



Source: Kantar Polska SA, Radio in Poland 2022, March 2023.

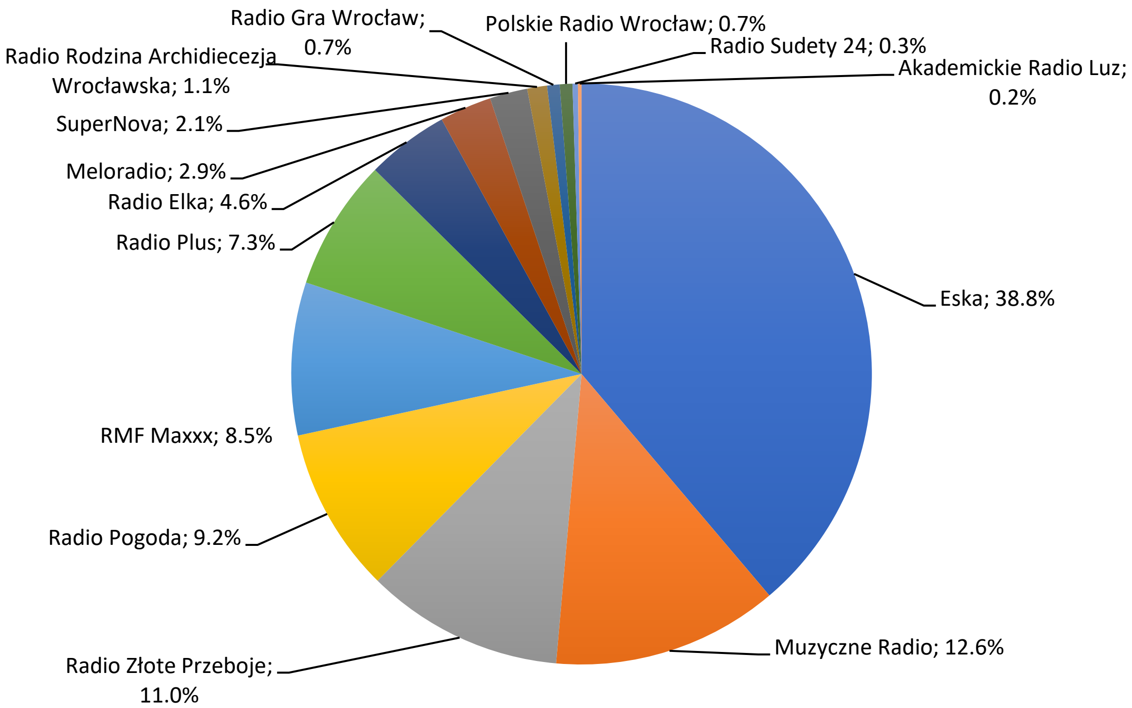
The two nationwide universal licensed programmes, RMF FM and Radio Zet, maintained high audience levels (above 75% of the maximum) between 7:30 a.m. and 4:00 p.m. Thereafter, the number of their listeners gradually decreased. At its listening peak at 10:00 a.m., RMF FM's programme had a quarter-hour reach of 8%. Radio Zet recorded a peak in listenership between 10:00-10:30 a.m., 11:00-11:30 a.m. (with a 3.6% reach in these bands). Programme 1 had the most listeners between 9:00 a.m. and 9:15 a.m. (reach in quarters of 1.4%). After this time, its audience steadily declined. *Triple 3*'s maximum listenership was between 9:00-10:30 a.m. and 11:00-11:30 a.m., and 12:00-12:30 a.m. (listenership was 0.5% in each quarter-hour). The social-religious Radio Maryja attracted listeners primarily during the prayer bands at 7:00-8:00 a.m. and 15:00-15:30 a.m. (listenership in these bands was 0.4%).

Share of time spent listening to radio programmes with regional or local coverage in 2022 in individual provinces[69]

Due to the fact that a large part of the Polish radio market is made up of local radio stations, which are available in particular regions of the country and have an impact on the development of the media market in a given area, we present below charts of shares in listening time for programmes with regional or local coverage, broken down by 16 voivodeships.

Figure No 50. Share of time spent listening to radio programmes with regional or local coverage in 2022 by province

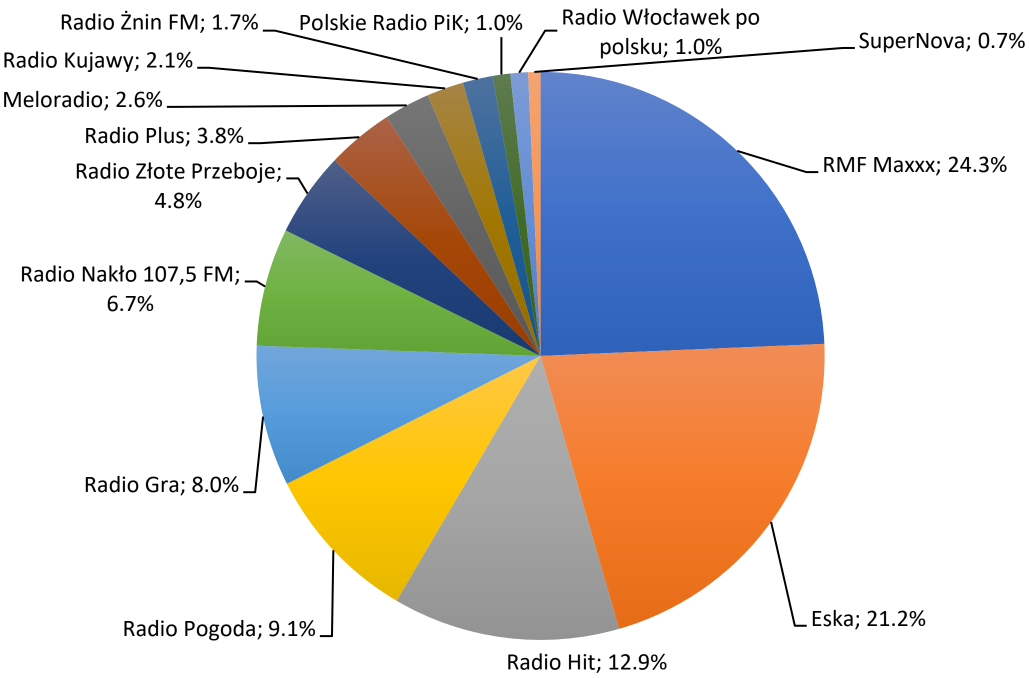
Lower Silesia Voivodeship[70]



Source: compiled by the KRRiT Bureau on the basis of data from the National Media Institute, April 2023.

[69] Based on data from the National Media Institute, April 2023.
[70] Population size (total population of the province aged 15+ listening to at least one station with regional or local coverage in the province): 431,632, sample size: 1,753.

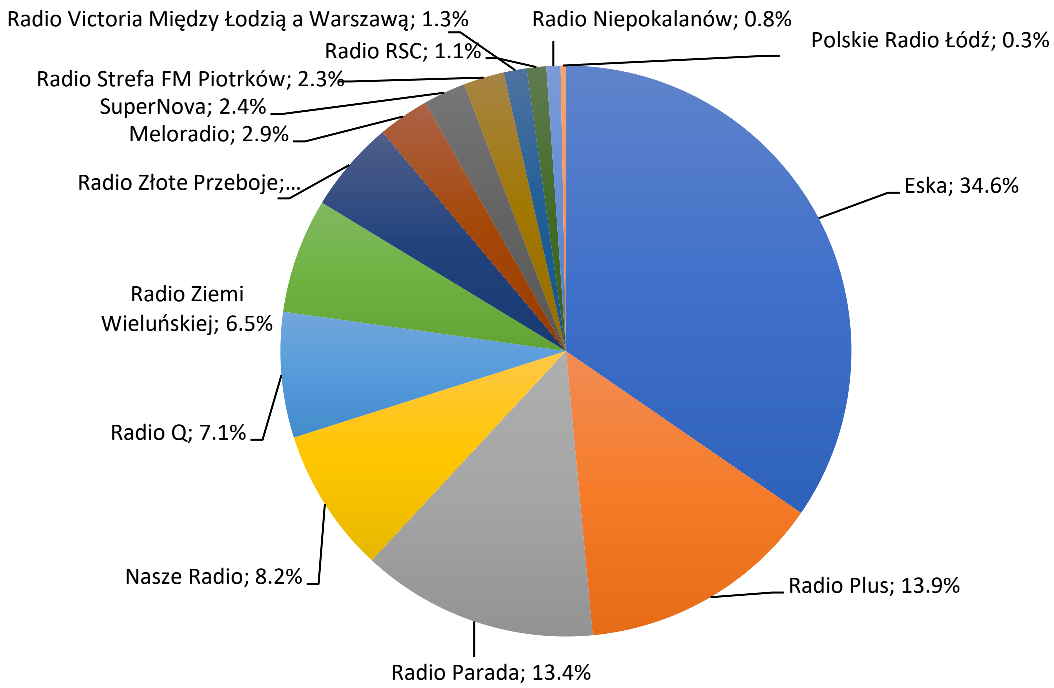
Kujawsko-Pomorskie Voivodeship[71]



Source: Compilation by the KRRiT Bureau based on data from the National Media Institute

[71] Population size (total population of the province aged 15+ listening to at least one station with regional or local coverage in the province): 332,038, sample size: 1,149.

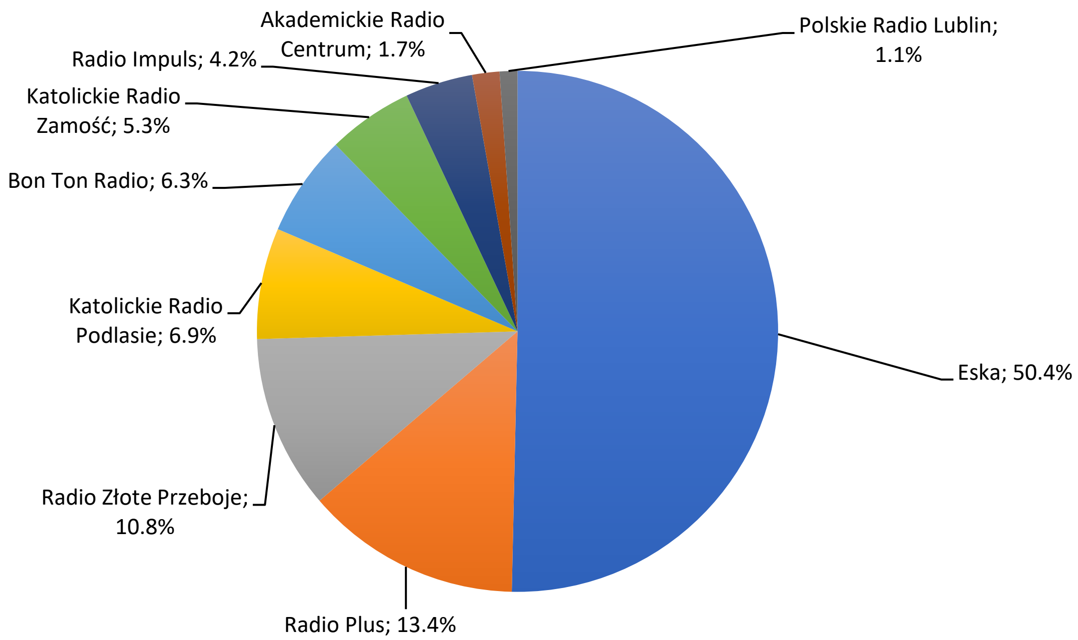
Łódzkie Voivodeship[72]



Source: Compilation by the KRRiT Bureau based on data from the National Media Institute

[72] Population size (total population of the province aged 15+ listening to at least one station with regional or local coverage in the province): 381 392, sample size: 1 522.

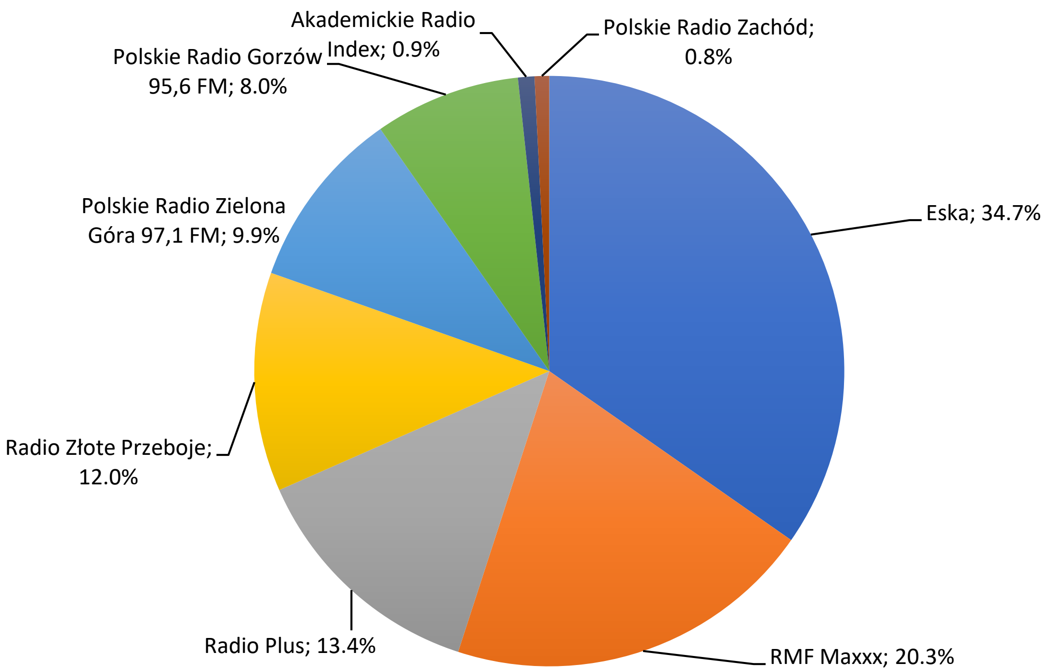
Lubelskie Voivodeship[73]



Source: Compilation by the KRRiT Bureau based on data from the National Media Institute

[73] Population size (total population of the province aged 15+ listening to at least one station with regional or local coverage in the province): 198,156, sample size: 825.

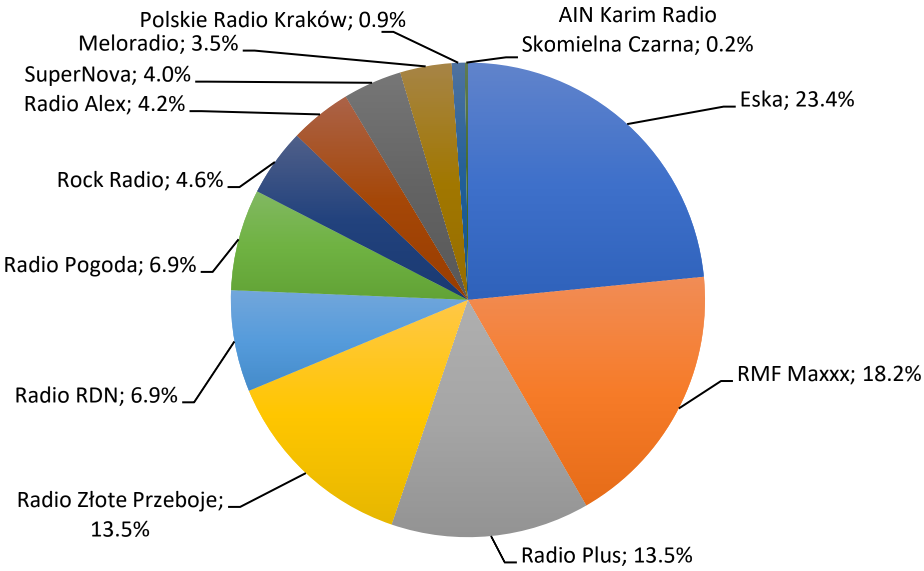
Lubuskie Voivodeship[74]



Source: Compilation by the KRRiT Bureau based on data from the National Media Institute

[74] Population size (total population of the province aged 15+ listening to at least one station with regional or local coverage in the province): 125,223, sample size: 467.

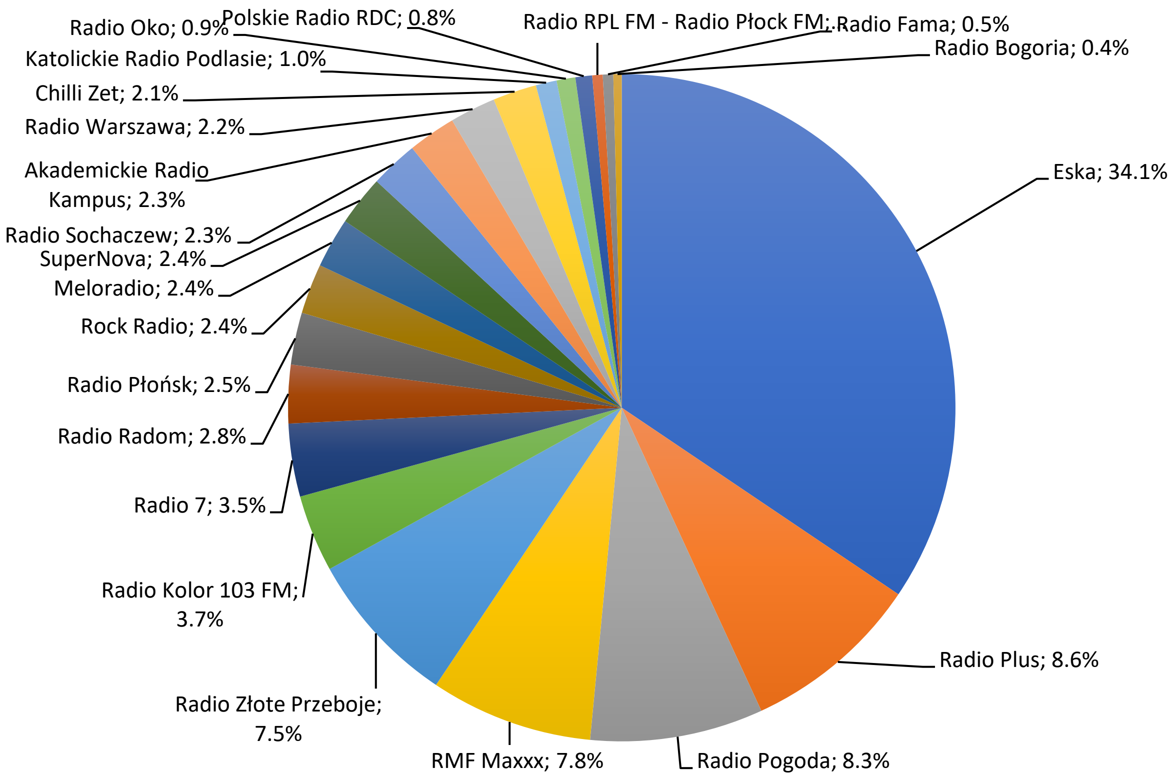
Lesser Poland Voivodeship[75]



Source: Compilation by the KRRiT Bureau based on data from the National Media Institute

[75] Population size (total provincial population aged 15+ listening to at least one station with regional or local coverage in the province): 438,015, sample size: 1,648.

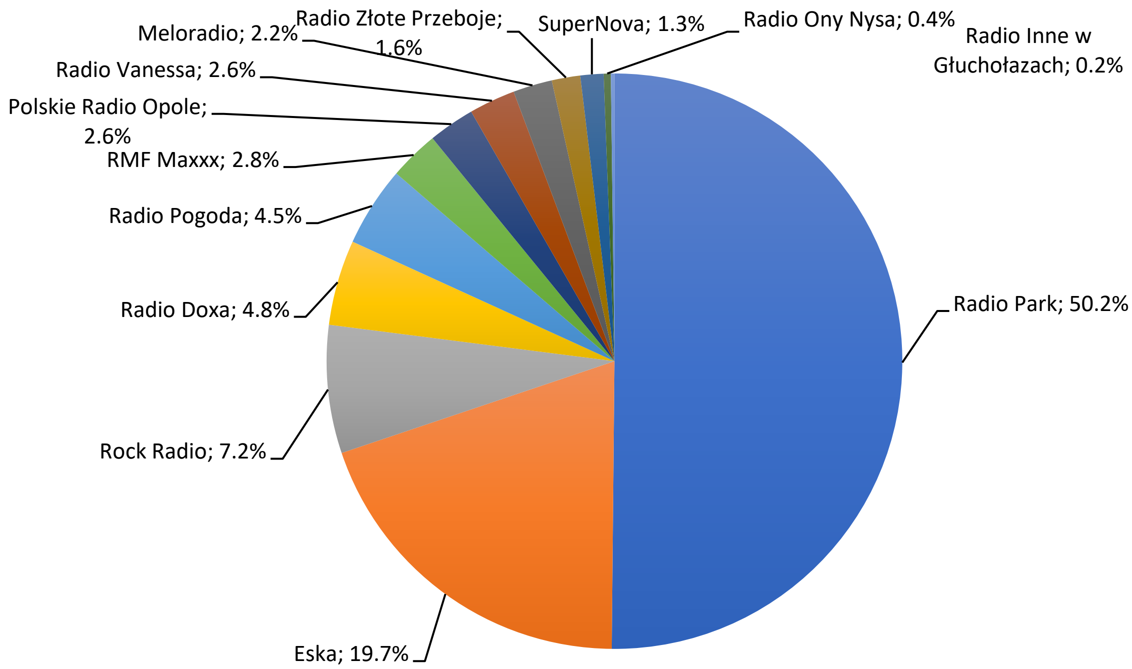
Mazovian Voivodeship[76]



Source: Compilation by the KRRiT Bureau based on data from the National Media Institute

[76] Population size (total population of the province aged 15+ listening to at least one station with regional or local coverage in the province): 834,610, sample size: 4,784.

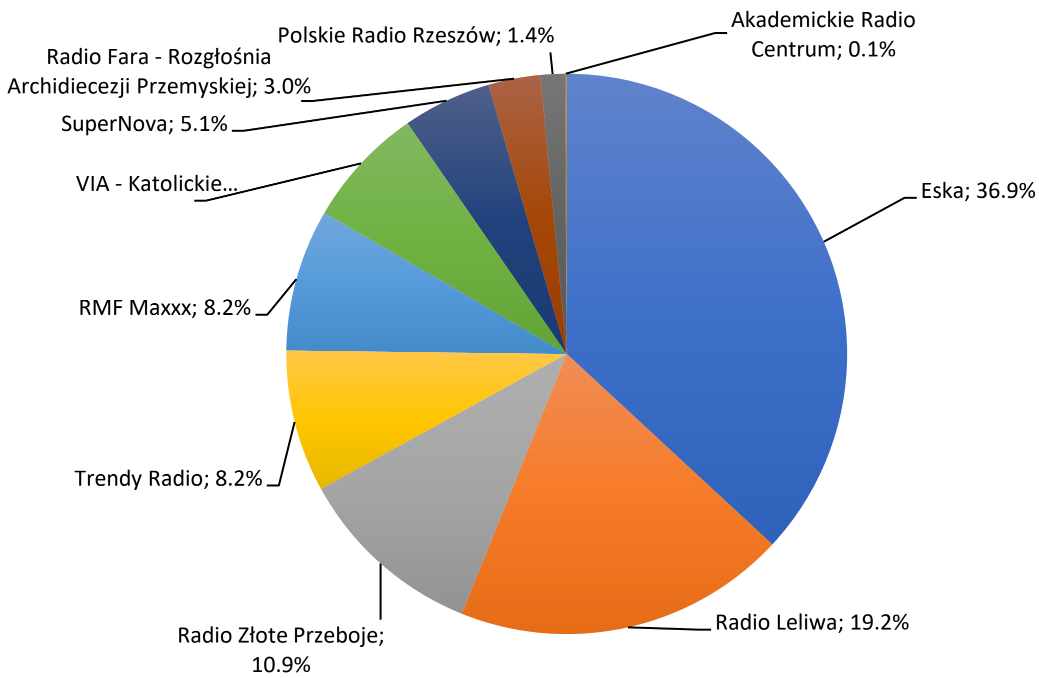
Opolskie Voivodeship[77]



Source: Compilation by the KRRiT Bureau based on data from the National Media Institute

[77] Population size (total provincial residents aged 15+ listening to at least one station with regional or local coverage in the province): 184,861, sample size: 551.

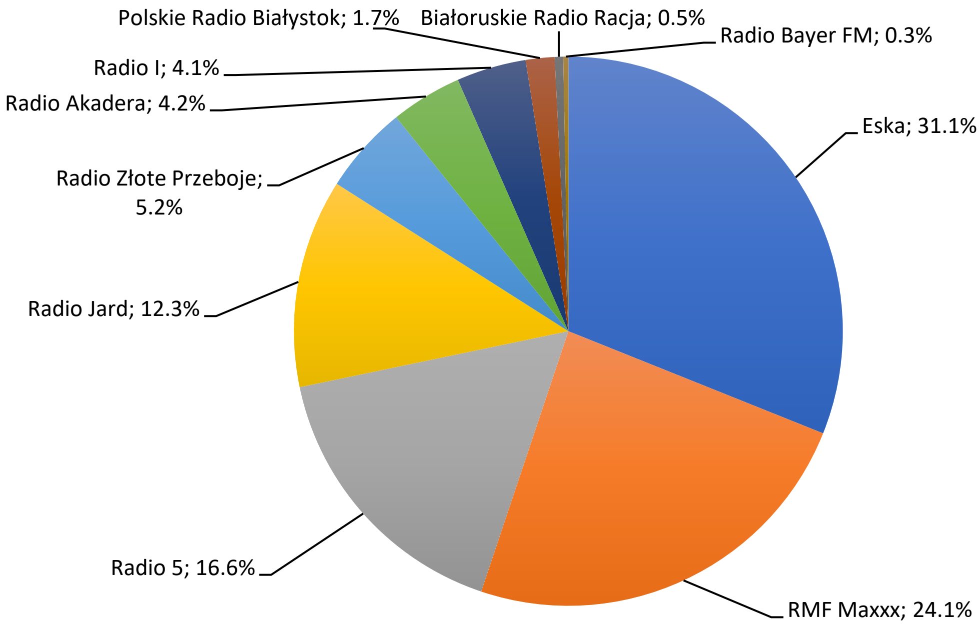
Podkarpackie Voivodeship[78]



Source: Compilation by the KRRiT Bureau based on data from the National Media Institute

[78] Population size (total population of the province aged 15+ listening to at least one station with regional or local coverage in the province): 292,329, sample size: 964.

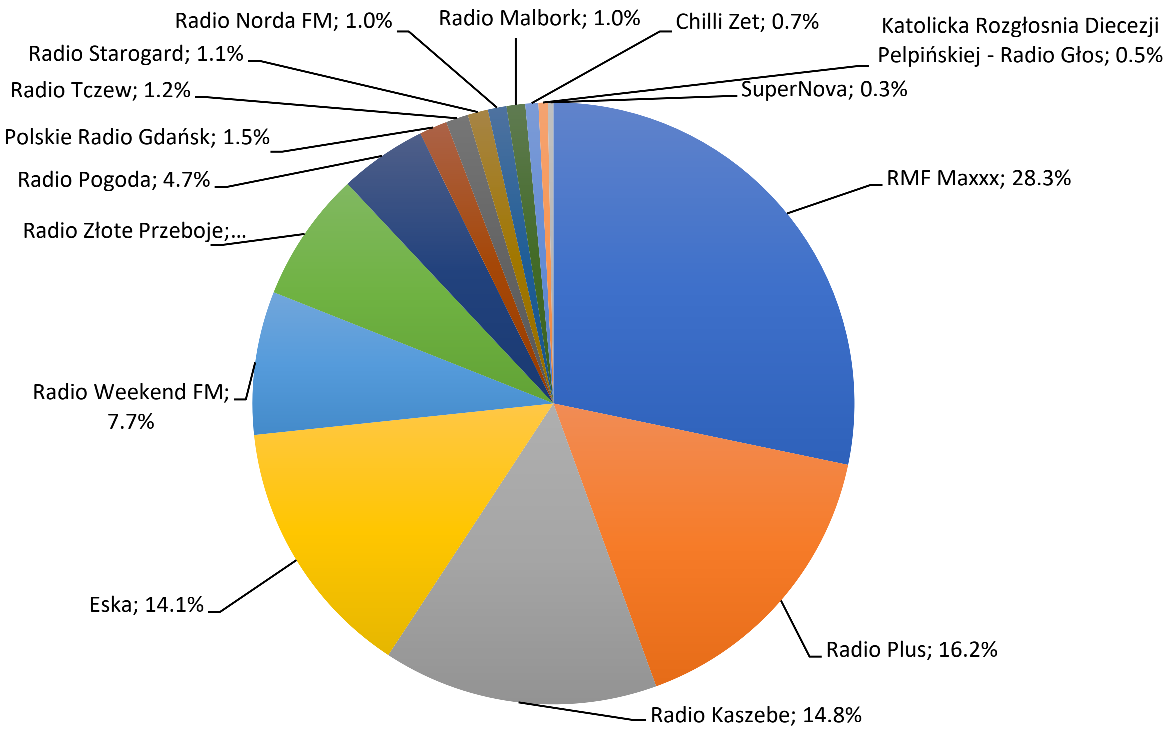
Podlaskie Voivodeship[79]



Source: Compilation by the KRRiT Bureau based on data from the National Media Institute

[79] Population size (total provincial residents aged 15+ listening to at least one station with regional or local coverage in the province): 138,465, sample size: 559.

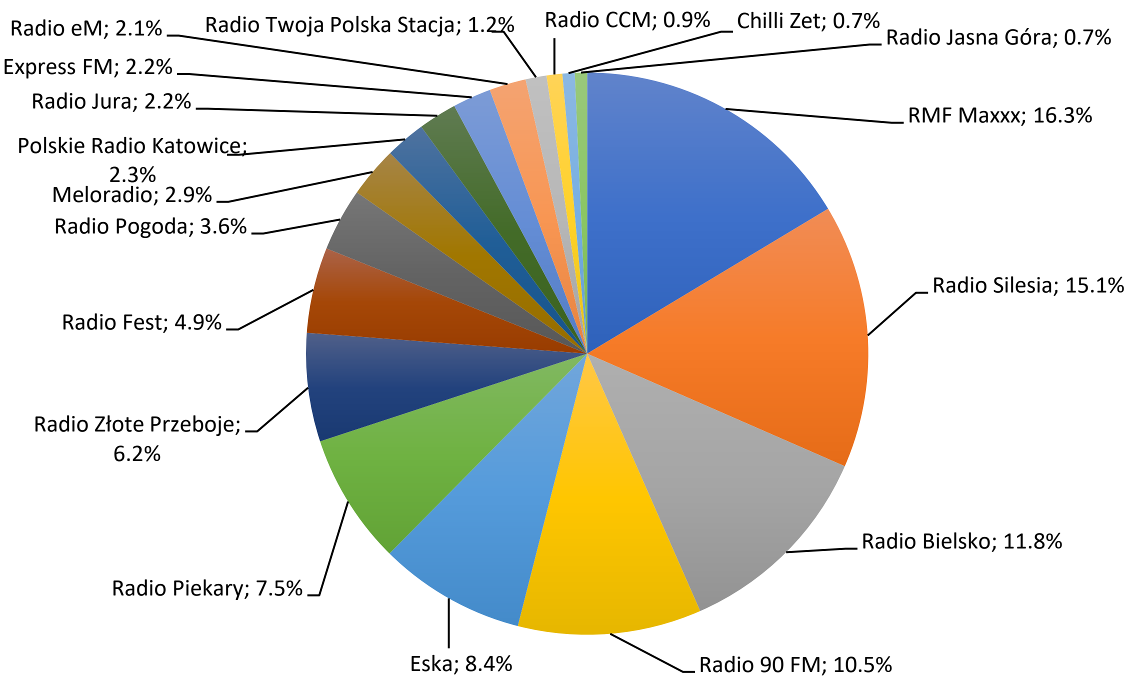
Pomeranian Voivodeship[80]



Source: Compilation by the KRRiT Bureau based on data from the National Media Institute

[80] Population size (total population of the province aged 15+ listening to at least one station with regional or local coverage in the province): 385,437, sample size: 1,544.

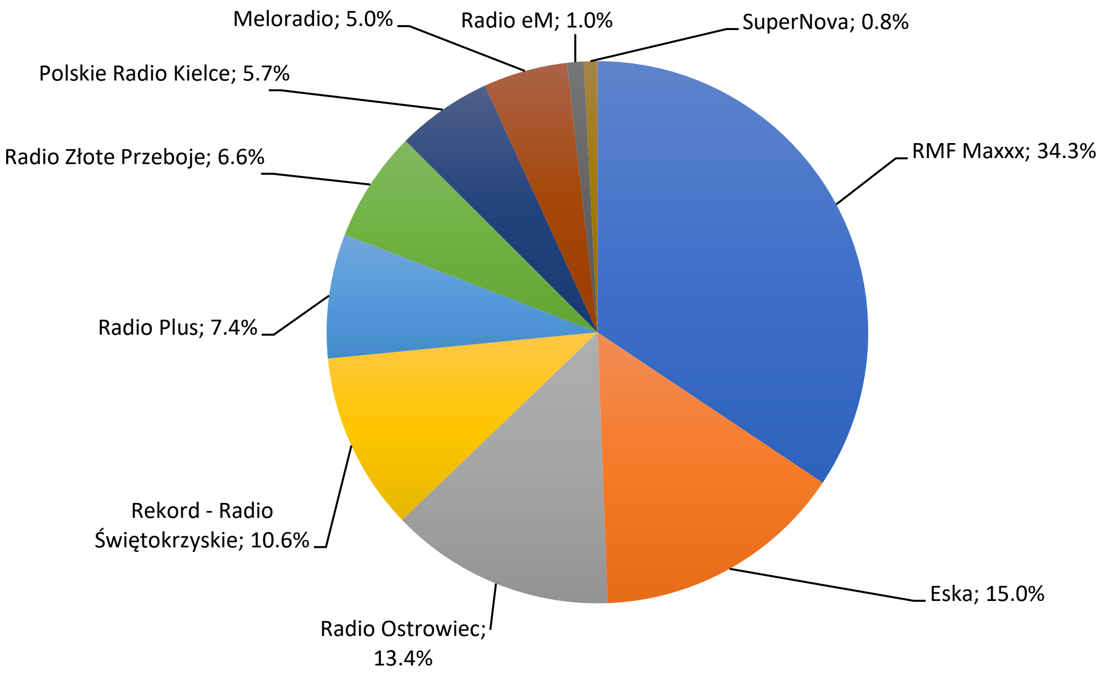
Silesian Voivodeship[81]



Source: Compilation by the KRRiT Bureau based on data from the National Media Institute

[81] Population size (total population of the province aged 15+ listening to at least one station with regional or local coverage in the province): 781,887, sample size: 2,739.

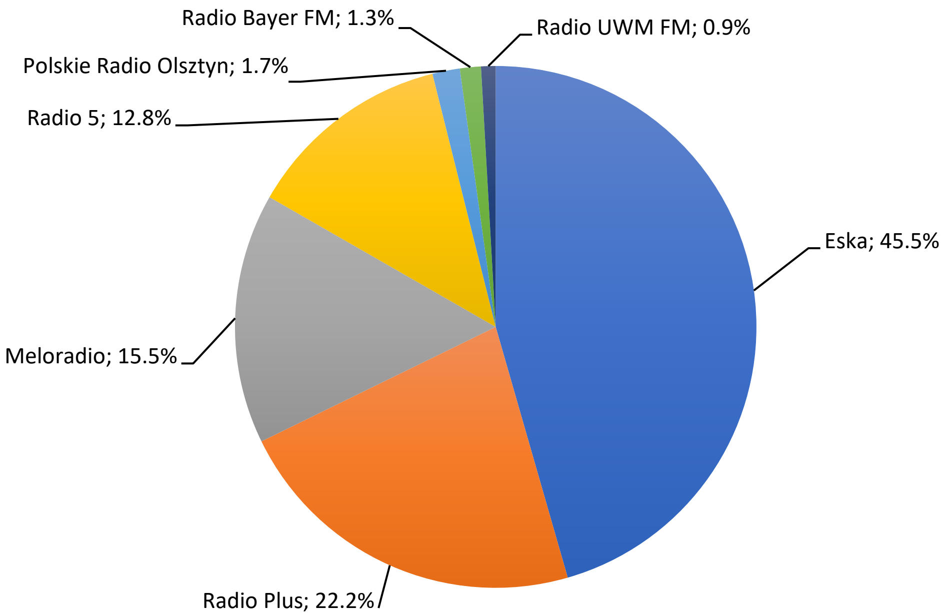
Świętokrzyskie Voivodeship[82]



Source: Compilation by the KRRiT Bureau based on data from the National Media Institute

[82] Population size (total population of the province aged 15+ listening to at least one station with regional or local coverage in the province): 168,301, sample size: 592.

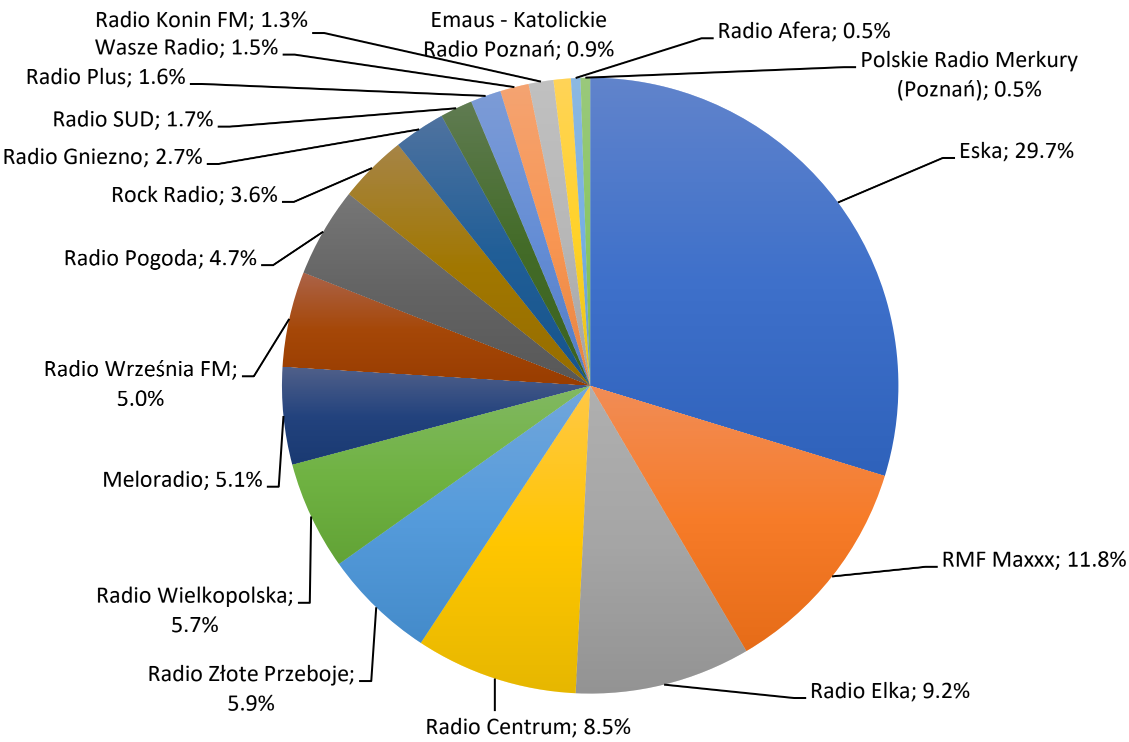
Warmia and Mazury Voivodeship[83]



Source: Compilation by the KRRiT Bureau based on data from the National Media Institute

[83] Population size (total population of the province aged 15+ listening to at least one station with regional or local coverage in the province): 130,617, sample size: 530.

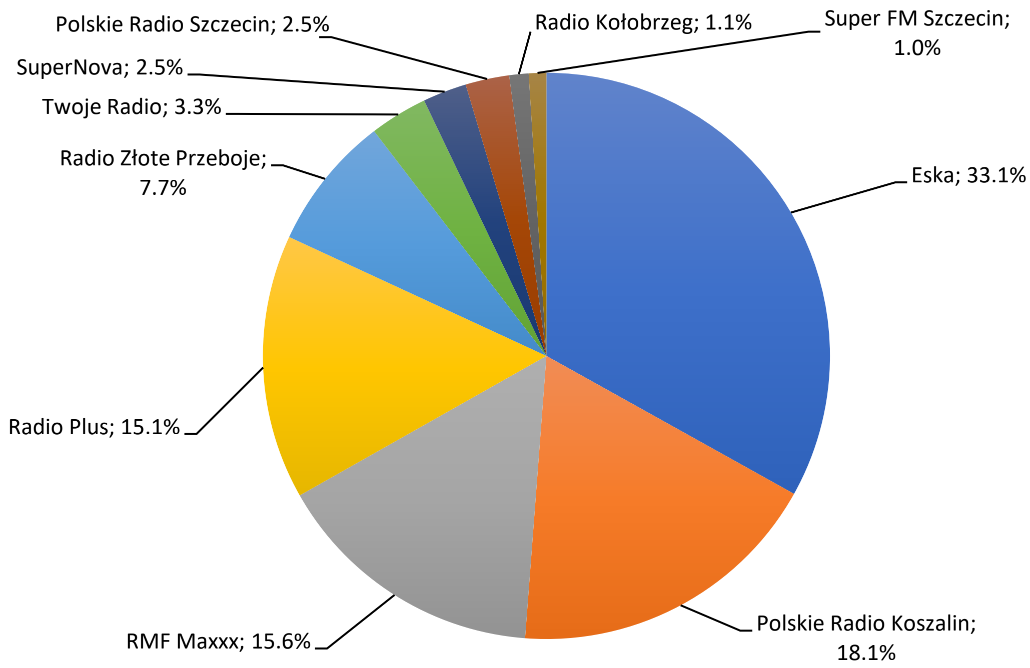
Greater Poland Voivodeship[84]



Source: Compilation by the KRRiT Bureau based on data from the National Media Institute

[84] Population size (total provincial population aged 15+ listening to at least one station with regional or local coverage in the province): 596,002, sample size: 2,145.

Western Pomeranian Voivodeship[85]



Source: Compilation by the KRRiT Bureau based on data from the National Media Institute

1.2.3. Internet radio

Radio in Poland has continued to be very popular for many years (see the subsection "Recipients of audio content" and "Audience of radio programmes"). Audio content can be listened to using both analogue, digital and internet radio. On the web, in addition to dedicated platforms (e.g. Spotify, Apple Music), consumers can choose from thousands of stations in various formats, broadcast online from anywhere in the world. There are programmes from large, well-known FM stations, as well as smaller, local broadcasters or stations broadcasting exclusively online. Also available to listeners is an on-demand offering, a range of podcast offerings.

Although Poles mostly choose analogue radio, there is a slow increase in those willing to listen to radio via the internet. In 2022, there were already 2.1 million such listeners, 158,000 more than in 2021. Every tenth minute was devoted to listening to radio online,[86] which gave a 10% share of listening time per total time devoted to radio.[87]

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[85] Population size (total provincial population aged 15+ listening to at least one station with regional or local coverage in the province): 226,524, sample size: 856.
[86] iloveradio.co.uk, *RADIO 2022: Summary of listening results*, https://iloveradio.pl/wp-content/uploads/2023/01/RADIO-2022-raport-I-Love-Radio.pdf
[87] Ibid.

According to a study by the National Media Institute, 3.8% of households have access to internet-connected radio. It is more common for households where the household leader is aged 24 or under to have access (7%). In households where the leader is 65 or older, 1.4% have access to internet-connected radio.[88]

In 2022, listeners who chose to receive radio stations online most often chose music programmes. Radiozet.pl continued to be popular, albeit less so. Fewer recipients chose the rmf.fm programme on the internet. On the other hand, services such as eska.pl, rmf24.pl, rmfmaxxx.pl, tokfm.pl, polskieradio.pl and planeta.pl recorded an increase, compared to January 2022. In the top ten, for the first time since 2020, were voxfm.pl. and radiopogoda.pl. Details are presented in the table below.

Table No 4. Popularity of selected services of radio stations and broadcasters on the Internet

Domain	January 2020		January 2021		January 2022		January 2023	
	users	coverage	users	coverage	users	coverage	users	coverage
radiozet.pl	9,424,981	33.57%	12,380,040	42.58%	10,789 848↓	35.75%	10,365 408↓	35%
rmf24.pl	4,988,207	17.77%	6,856,488	23.58%	5,997 888↓	19.87%	6,582 870↑	22%
eska.pl	4,292,935	15.29%	5,938,920	20.43%	5,218 344↓	17.29%	8,432 262↑	28%
rmf.fm	2,865,720	10.21%	5,043,384	17.35%	4,880 898↓	16.17%	4,199 040↓	14%
chillizet.pl	2,495,732	8.89%	Outside the top ten		Outside the top ten		Outside the top ten	
antradio.co.uk	2,013,019	7.17%	1,440,504	4.95%	1,418 472↓	4.70%	Outside the top ten	
tokfm.pl	1,433,617	5.11%	1,737,288	5.98%	1,853 280↑	6.14%	2,373,138 ↑	8%
polskieradio.pl	1,348,924	4.80%	1,512,432	5.20%	963 576↓↓	3.19%	1,366 308↑	5%
rmfmaxxx.pl	1,190,955	4.24%	2,928,960	10.07%	2,544 372↓	8.43%	2,548 422↑	9%
radiomaryja.pl	380,697	1.36%	1,160,568	3.99%	Outside the top ten↓↓.		Outside the top ten	
planeta.pl (Eurozet)	-	-	1,353,672	4.66%	1,493 802↑	4.95%	1,722 708↑	6%
voxfm.pl	-	-	-	-	-	-	1,312 686↑	4%
radiopogoda.pl	-	-	-	-	-	-	957 744↑	3%

[88] *Media services and infrastructure for their reception in households in Poland in 2022.* Results of the Foundational Survey of the National Media Institute, April 2023.

Source: Compiled by the KRRiT Bureau on the basis of Gemius/PBI data.

Although Poles have been fairly slow to embrace online radio reception, the trend is likely to grow. The global internet radio market is predicted to grow from USD 32,950,000,000 in 2022 to USD 66,180,000,000 in 2029.[89] Experts expect it to grow at an average of more than 10% between 2023 and 2029 (CAGR).[90]

1.2.4. On-demand listening - podcasts and streaming services

A report by the Reuters Institute[91] shows the increasing frequency of podcast reception. Podcasts are the preferred form of audio content in: Ireland, Sweden, Norway, Spain, Denmark, Belgium or the UK.

Data collected by the National Media Institute as part of the Founder's Survey shows that music on online platforms was listened to by 54% of the Polish population aged 4+ in the last 12 months of the survey, podcasts by 26.6% and audiobooks by 14.6%.[92] This content is more popular among the 16-29 age group (83.7%, 45.8%, 26.3% respectively) and least popular among those 65+ (15%, 7.1% and 4.2% respectively).

In 2022, almost 30% of Poles used podcasts, up 6% from 2020 and 13% from 2019.[93] Among Poles in general, one in ten people use podcasts.

Among the available audio content, music continues to be the most popular, for both Polish and foreign audiences. The average global time spent listening to it in 2022 was 20.1 hours per week, an increase of almost two hours compared to 2021.[94] Music is for 46% of respondents the main reason for using subscription audio streaming services, which offer uninterrupted on-demand access to millions of licensed tracks.[95]

Poles listening to music were most likely to visit eska.pl in 2022. Interia.pl had a slightly smaller reach. Spotify.com is also among the favourite websites of Polish listeners. Increased reach was also recorded by onet.pl/muzyka and disco-polo.info. Detailed data for the top ten music websites is presented in the chart below.

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[89] https://www.globenewswire.com/news-release/2023/02/02/2600186/0/en/10-5-Growth-in-Internet-Radio-Market-by-2023-2029-Future-Investment-Expansion-Plan-Market-Dynamics-Key-Players-Opportunities-Challenges-Risks-Factors-Analysis-Sales-Price-Revenue-G.html

[90] CAGR (Compound Annual Growth Rate) is the average annual growth rate over the period under review, assuming that annual increases are added to the value of the next period's base, Woźniewska G. (2013), *Growth drivers and challenges of private banking*, Faculty of Management University of Gdańsk https://mfiles.pl/pl/index.php/CAGR

[91] Reuters Institute, *Digital News Report 2022,* https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2022-06/Digital_News-Report_2022.pdf

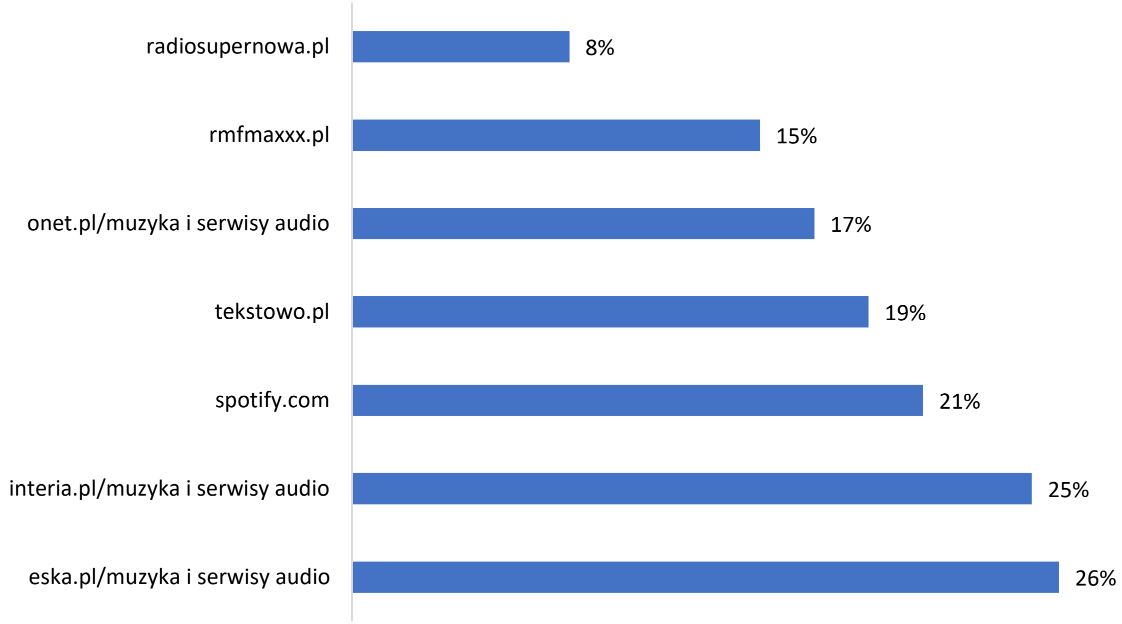
[92] *Media services and infrastructure for their reception in households in Poland in 2022*. Results of the Foundational Survey of the National Media Institute, April 2023.

[93] https://iloveradio.pl/wp-content/uploads/2023/01/RADIO-2022-raport-I-Love-Radio.pdf; no data available in this report for 2021.

[94] IFPI, *Engaging with Music 2022 Report*, https://www.ifpi.org/ifpi-releases-engaging-with-music-2022-report/

[95] Ibid.

Figure No 51. Reach among Internet users - the most popular music services



Source: Compiled by the KRRiT Bureau on the basis of Gemius/PBI data, Q4 2022.

2. Value of the media market

The chapter presents a picture of the markets from the point of view of the revenues generated by the provision and distribution of media services, based on information contained in the annual reports of specialised research companies such as Publicis Media Groupe and PMR Market Experts, covering the results for 2021. These companies make annual estimates based on an accepted methodology and their own data resources. Information on how the reports are compiled can be found on the websites of both companies.

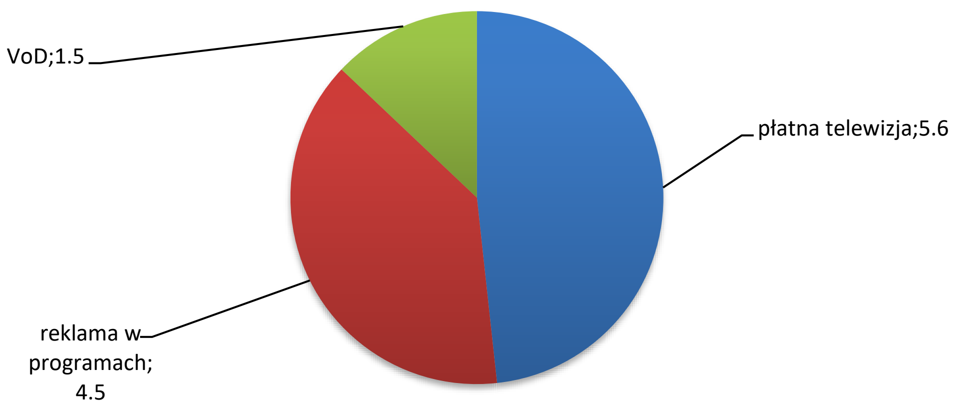
Notwithstanding the above, in order to continue the previous coverage of the economic and financial situation of TV and radio broadcasters and TV distribution operators (pay-TV providers), the chapter also presents and discusses data based on the 2021 financial statements prepared and submitted by broadcasters to the KRRiT and the National Court Register in 2022.

For obvious reasons, the data presented in the two approaches will differ, but both provide an insight into the structure of media markets.

2.1. Share of revenue from audio-visual services (TV programmes and VoD) and their distribution (pay-TV)

The value of audio-visual services in Poland (TV programmes and VoD) including their distribution (pay-TV) in 2021 was PLN 11,600,000,000. This result consists of: PLN 4,500,000,000 from advertising in TV programmes, PLN 1,500,000,000 from pay-per-view on-demand (VoD) services and PLN 5,600,000,000 revenue from pay-TV (satellite platforms and cable networks).

Figure No 52. Shares in the value of revenues from audio-visual services and their distribution in 2021. (in PLN billion)



Source: Study from the KRRiT Bureau[96]

[96] Data for the pay TV and VoD market based on PMR, *Pay TV and VOD market in Poland. Market analysis and growth forecasts for 2022-2027*. Data for the advertising market based on Publicis Groupe's report *Advertising market in 2022.* Data presented by PMR relates to the year 2021. Final year data for 2022 will be compiled, as every year, in the second half of 2023 in the next edition of the PMR report.

Revenues generated by paid VoD services account for almost 13% of the total audio-visual content market revenues generated from the distribution of TV programmes and the provision of VoD catalogues.

2 .2. Value of the advertising market

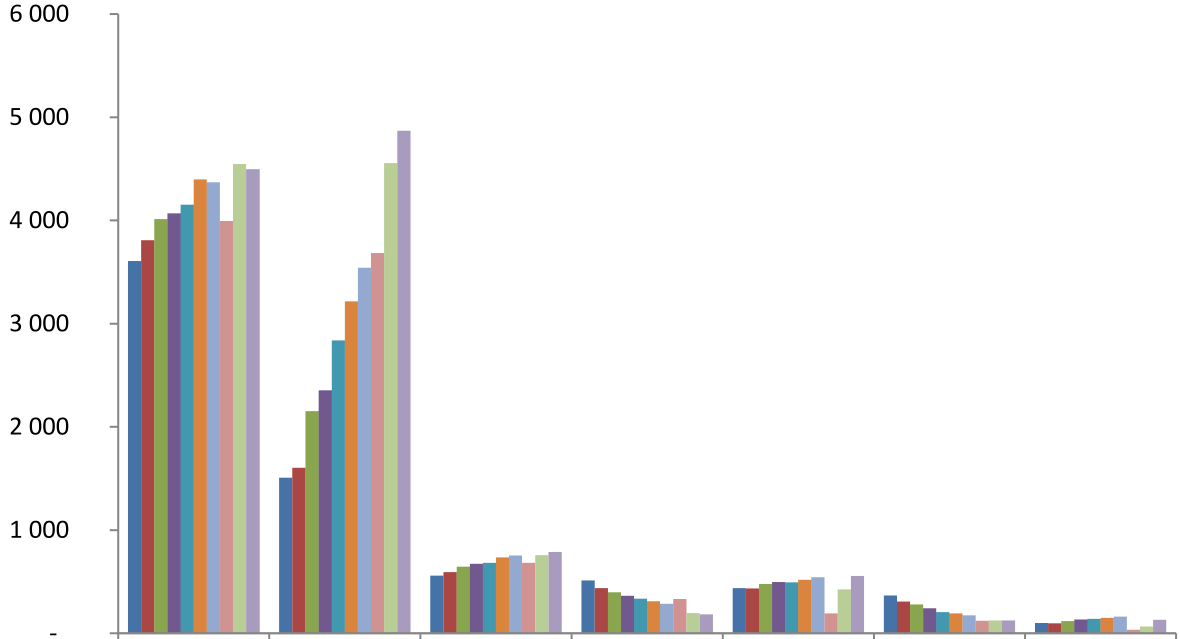
The information on the advertising market in Poland is based on data from Publicis Groupe reports.[97]

The data, year-on-year, may differ from those presented in the previous *Information on Basic Broadcasting Problems due* to adjustments made by the authors of the reports.

The value of the advertising market in Poland after four quarters of 2022 exceeded PLN 11,100,000,000 – an increase of 4.4 per cent, or almost PLN 475,000,000 compared to 2021. This result can hardly be seen as a sign of a crisis, but after a deeper analysis of the decline in the dynamics of TV advertising spending, it can be concluded that a slowdown in advertising spending will come in 2023. In 2022, there was a recovery of the advertising market after the crisis caused by the COVID-19 pandemic. However, the Russian aggression against Ukraine and the global fight against inflation will have an impact on media advertising investments. Increases in revenue, compared to the previous year, were recorded by all media except TV and print.

[97] Publicis Groupe agency's cyclical report entitled *Advertising Market in Poland in 2022*. The data presented in the report are net estimates of advertising investments, i.e. estimated amounts of media advertising revenues after discounts but before VAT. The starting point is monitoring data (gross value - before discounts, excluding VAT) provided by Kantar Media (all media excluding TV) and Nielsen Audience Measurement (TV). Macroeconomic indicators are taken from CSO analyses, and forecasts from the National Bank of Poland and the Gdańsk Institute for Market Economics. Online net advertising investment data is estimated using the Publicis Groupe know-how model, and outdoor net advertising investment data is based on Kantar Media and the Economic Chamber of Outdoor Advertising. Newspaper sales data comes from ZKDP and cinema attendance from boxoffice.pl. Radio data comes from Millward Brown. Mobile market data comes from eMarketer reports, SMG/KRC Millward Brown: Startrack (a survey of Internet users commissioned by SMG - the only single-source study of all media). Data on e-commerce and m-comerce comes from a study by the Chamber of Electronic Economy.

Figure No 53. Value of the advertising market in Poland between 2013 and 2022 (PLN million)

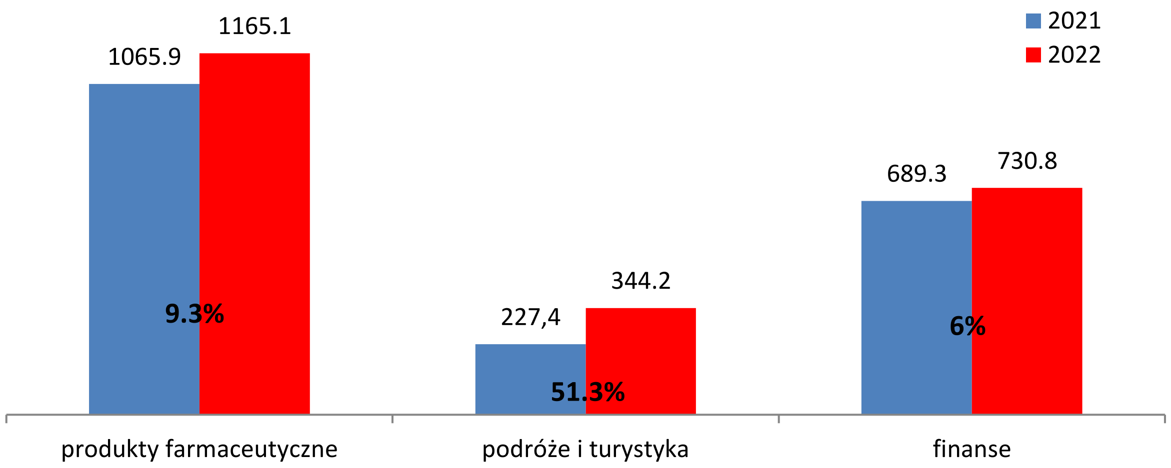


	Telewizja	Internet	Radio	Magazyny	Outdoor	Dzienniki	Kina
2013	3 608	1 506	559	512	437	367	99
2014	3 810	1 602	594	438	434	307	98
2015	4 014	2 152	644	397	478	280	119
2016	4 068	2 355	673	363	496	241	135
2017	4 154	2 838	682	334	495	206	141
2018	4 398	3 217	734	311	519	193	150
2019	4 371	3 542	753	285	542	174	161
2020	3 993	3 686	681	333	193	122	34
2021	4 548	4 555	758	196	425	125	65
2022	4 497	4 869	788	183	554	123	132

Source: Starlink/Starcom reports, Publicis Groupe, Advertising market in Poland 2013-2022

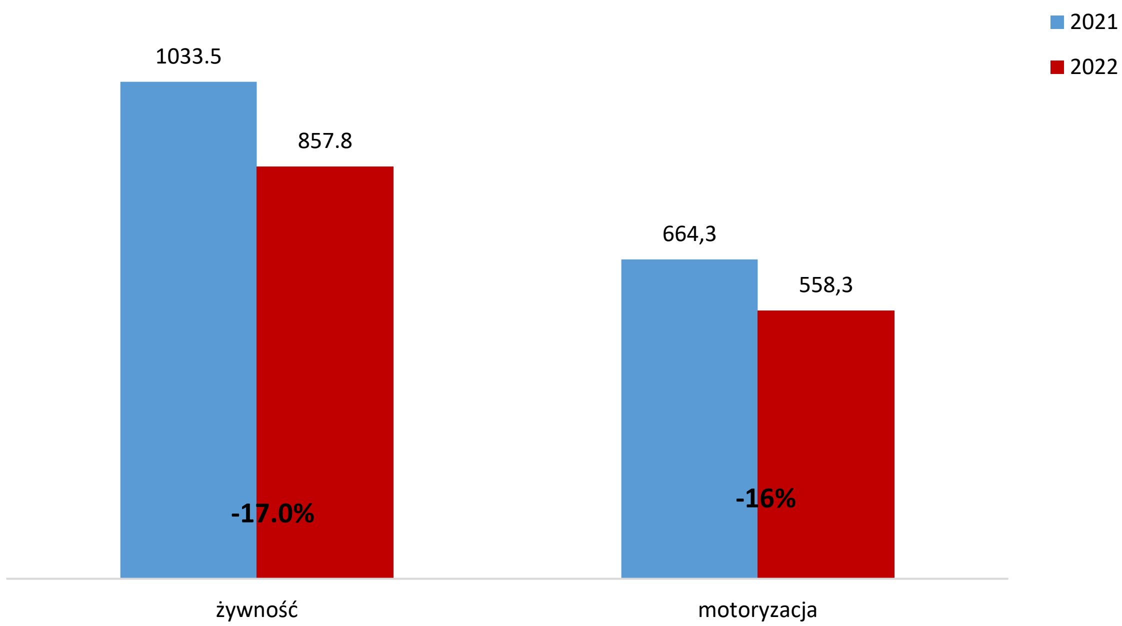
Eight economic sectors spent more on advertising than in 2021. The leader in terms of growth rate for advertising in 2022 was the pharmaceutical manufacturers sector (growth rate of 9.3%). The tourism sector increased its advertising investment by 51.3% year-on-year. The finance sector also stood out with a noticeable increase in advertising expenditure (growth rate of 6%). Sectors that decreased funds allocated to advertising were food (-17%) and automotive (-16%).

Figure No 54. Dynamics of change in the sectors with the fastest advertising growth in 2022. (PLN million)



Source: Publicis Groupe, Advertising market in Poland in 2022.

Figure No 55. Sectors with the largest declines in advertising expenditure in 2022 (PLN million)



Source: Publicis Groupe, Advertising market in Poland in 2022.

In 2022, the largest growth in advertising revenue occurred in online. It gained 6.9% compared to 2021. Radio (4%) and outdoor advertising (30.3%) also gained.

The decline in TV advertising budgets amounted to 1.1 per cent (PLN 50,250,000) in 2022 and thus contributed to a slowdown in the dynamics of the overall market. Advertising expenditure in newspapers decreased by PLN 15,700,000. Advertising expenditure in cinemas was 102.6% higher (PLN 67,000,000). Such high advertising revenues are the result of the decision to return cinemas to business in June 2022, i.e. after the pandemic lockdown. The 2022 revenue level is 17.8% lower than the advertising investment in 2019, when cinema advertising was worth PLN 161,000,000 and in 2020 it fell to PLN 34,000,000.

According to a forecast by the National Bank of Poland, Poland's GDP will grow by around 0.9% in 2023. Such predictions would be a good prognosis for the advertising market. However, inflationary pressures and high uncertainty related to the geopolitical situation are prompting them to be revised.

2.3 Advertising revenues in TV programmes

Based on information from the Publicis Groupe report,[98] the value of the TV advertising market in 2022 is PLN 4,497,000,000 . Compared to 2021 revenues, there was a decrease of 1.1%. The decrease in revenues in 2022 was linked to reductions in advertising budgets in several sectors, including food, automotive, telecoms and FMCG (basic needs products). Throughout 2022, the average TV viewing time in the so-called commercial group 16-59 years was 3 hours 32 minutes, 12 minutes less than in 2021, of which 26 minutes came from other sources, i.e. from other programmes or signal sources that are not available in the TV advertising study.

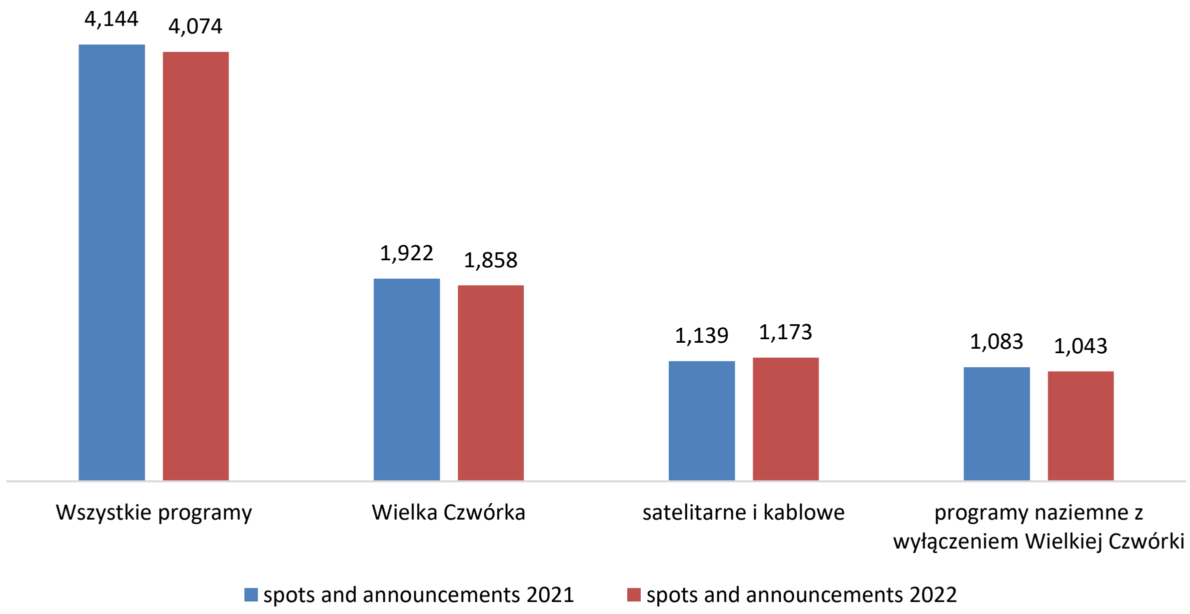
In 2022, advertising revenues from the four main antennas (TVP1, TVP2, Polsat and TVN) amounted to approximately PLN 2,161,7000,000 , i.e. PLN 46,500,000 (-2.1 %) less than in 2021, when they reached PLN 2,208,000,000 .[99]

Revenues from advertising activities including sponsorship, product placement and advertisements in programmes available on DTT fell by 4.3% and amounted to PLN 1,065,700.000 , down by PLN 47,600,000 compared to 2021. On the other hand, when analysing revenues from broadcast spot advertising alone, the decrease amounted to PLN 40,200,000 , or 3.7%.

The revenues of the remaining programmes, available only on cable networks and satellite platforms, taking into account the value of advertising spots alone, i.e. without sponsorship and product placement, increased by 3% compared to 2021 and amounted to PLN 1,173,000,000.

[98] Publicis Groupe, *Advertising market in Poland in 2022.*
[99] Due to the source of the data, these figures differ from those given in the section on broadcasters' financial performance. The figures quoted here are net estimates of advertising investments, i.e. estimated amounts of media advertising revenues after discounts but before VAT, published by Publicis Groupe on the basis of information on advertising contracts. On the other hand, in the section on the financial performance of broadcasters, the data is sourced from the broadcasters' financial statements, i.e. it presents the information provided by the broadcasters in their annual financial statements filed with the National Court Register (KRS).

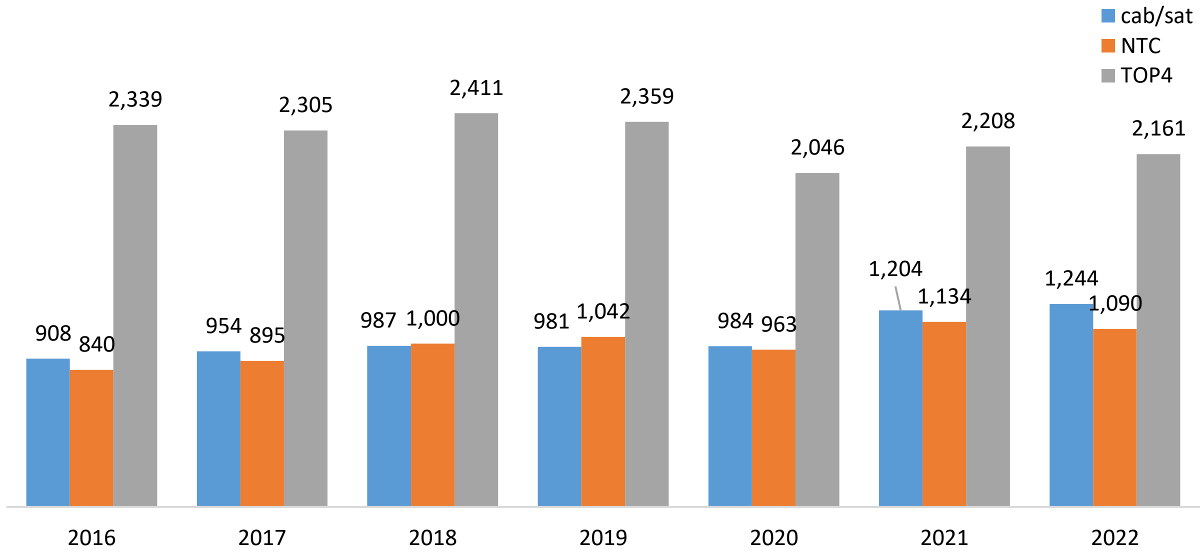
Figure No 56. Advertising revenues (spots only) of TV programmes, including the so-called Big Four (TVP1 TVP2, TVN and Polsat) of terrestrial TV programmes and satellite and cable programmes in 2022 (PLN million)



Source: KRRiT Bureau compilation based on data from the Publicis Groupe report, Advertising market in Poland in 2022.

Despite the steady downward trend in the share of the so-called Big Four in TV advertising revenue, these programmes concentrate around half of TV advertising spend.

Figure No 57. Advertising revenues from television programmes, including the so-called Big Four (TVP1 TVP2, TVN and Polsat), programmes on digital terrestrial television and satellite and cable programmes between 2016 and 2022 (PLN million)

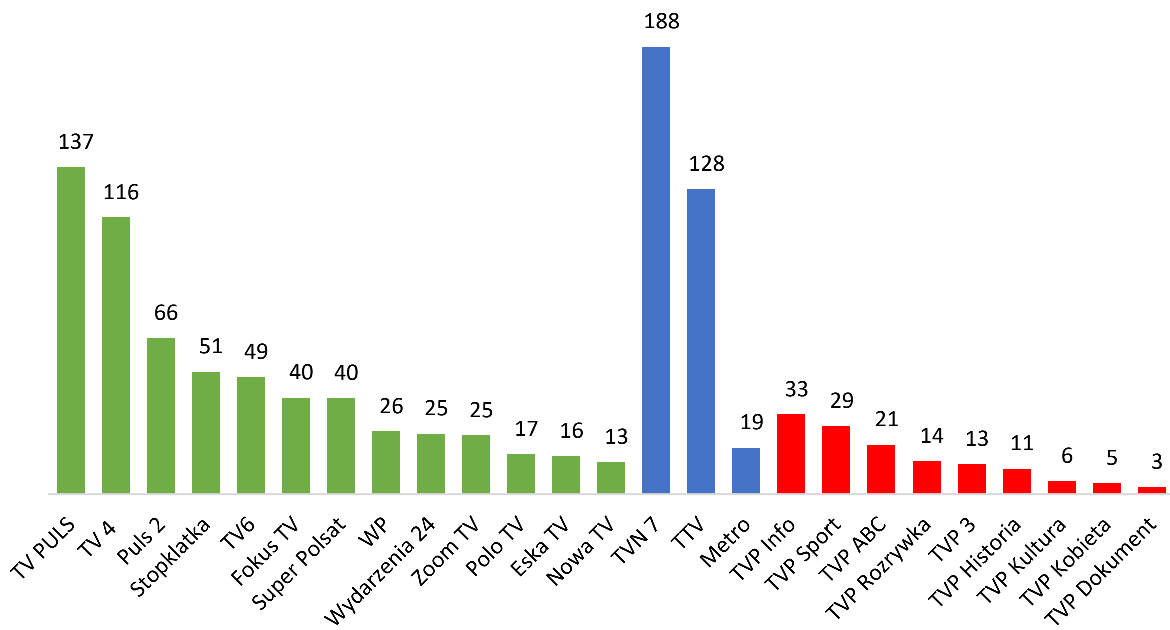


Source: compilation by KRRiT Bureau based on data from Publicis Groupe reports, Advertising market in Poland 2016-2022.

Broadcasters' revenues in digital terrestrial television

Terrestrial television, which has been rolled out digitally since 2013, has significantly increased its offerings. Since the conversion, the number of TV programmes available via this route has almost quadrupled. Revenues of programmes available on digital terrestrial television in 2022 amounted to PLN 1,090,700,000 , down by PLN 44,000,000 or 3.9 per cent, on the 2021 results.

Figure No 58. Revenues of broadcasters distributing programmes in digital terrestrial television in 2022 in PLN million, excluding programmes of the so-called Big Four, i.e. TVP1, TVP2 Polsat and TVN



The green colour indicates TV programmes where Polsat Media sells advertising, the blue colour indicates TVN Media and the red colour indicates TVP Advertising.

Source: KRRiT Bureau compilation based on Publicis Groupe report, Advertising market in Poland in 2022. ATM was a broadcaster until February 2022.

Excluding the Big Four programmes, after adding up the revenues of the programmes from the group of a given broadcaster present on DTT, Polsat (TV Puls, TV4, Puls2, TV6, Super Polsat, Stopklatka, Focus TV, Polo TV, Eska TV, WP, Zoom TV, Nova TV, Events 24, ATM Rozrywka) comes out on top, with revenues of PLN 623,000,000 in 2022. TVN (TVN 7, TTV, Meteo) also achieved high revenues from programmes on digital terrestrial television - it was PLN 335 million. TVP achieved from specialised terrestrial programmes (TVP ABC, TVP Info, TVP Sport, TVP Entertainment, TVP History, TVP3, TVP Culture, TVP Woman, TVP Documentary) revenues of PLN 133,000,000. TV PULS (TV Puls and Puls2) revenues of PLN 203,000,000 were high. Programmes: Stopklatka, Eska TV, Zoom TV, WP and Metro together earned PLN 138,000,000.

TV broker market

In 2022, TVN Media's special offer TVN Premium, together with all of Discovery's TVN Group channels, had a 41% market share in TV ad buying, while also being a broker for:

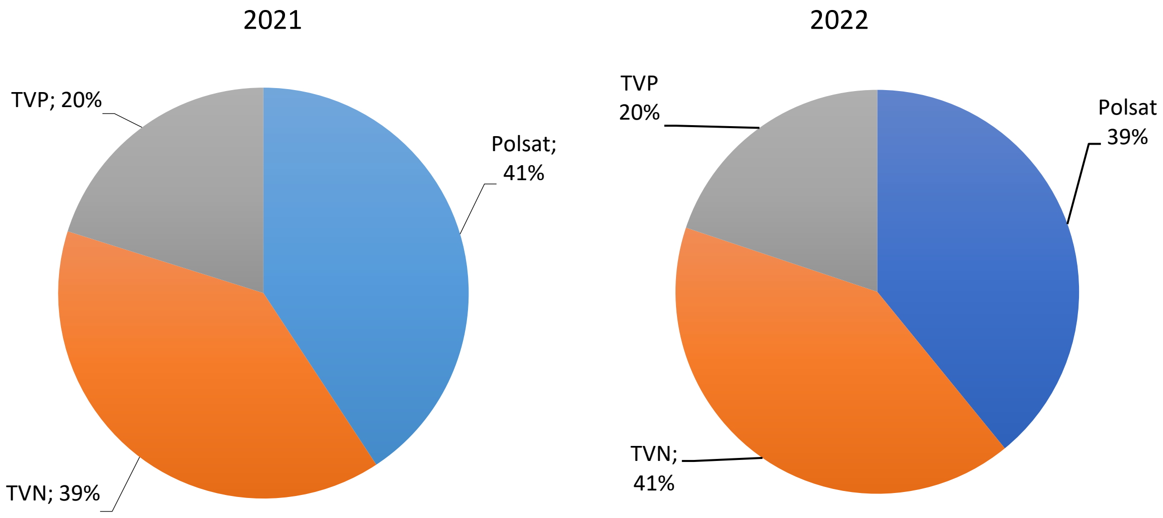
- own programmes: TVN, TVN7, TVN24, TTV - Your Television, TVN Fabuła, TVN Turbo, TVN Style, HGTV, Discovery, Metro, Investigation Discovery, TLC, TVN24 Business and World, Discovery Science, Discovery Historia, Discovery Life, Animal Planet HD;
- Canal+ (MiniMini+, Domo+, Planete+, kuchnia+, Ale Kino+, teleTOON+, Canal+ Sport, nSport+, Canal+ Sport2, Canal+ Family, Canal+ Premium, Canal+, Canal+ Documentary);
- Disney (Disney Junior, Disney Channel, Disney XD);
- Viacom CBS (Comedy Central, Nick Jr, Paramount Channel HD, Polsat Comedy Central Extra, Nickelodeon, Nicktoons, VH 1);
- FOX (FOX, National Geographic, National Geographic Wild, FOX Comedy, Nat Geo People);
- MTV Polska, MTV Music Polska;
- Eurosport 1, Eurosport 2;
- and others such as Polsat Food (Food Network), Travel Channel, DTX, Mainstream Networks (Romance TV), IKO Media Group (Sportklub, Fightklub), Motowizja (Motowizja), Esport (e-sport tv), Edusat (Red Carpet TV), Idea4 Broadcasting (StudioMED TV), ULTRA TV (ULTRA TV).

In 2022. Polsat Media had a 39% share of the TV ad buying market and was the broker for:

- Polsat’s own channels (TV4, TV6, Polsat News, Polsat2, Super Polsat, Fokus TV, Polsat Film, Eska TV, Polo TV, ATM Rozrywka, Polsat Play, Polsat Café, Nowa TV, Polsat Seriale, Disco Polo Music, Polsat Sport, Eleven Sports 1, Vox Music TV, Polsat Doku, Eska TV Extra, Polsat Music HD, Polsat Rodzina, Polsat Sport Extra, Polsat News 2, Eleven Sports 2, Eska Rock TV, Superstacja, Polsat Sport News HD, Polsat Games, Polsat Romans, Polsat Sport Fight);
- Pulse, Pulse 2;
- Kino Polska (Stopklatka, Zoom TV, Kino Polska, Kino TV, Kino Polska Muzyka, Gametoon);
- Fratria (Telewizja WPOLSCE.PL), TV Republika (TV Republika);
- Warner (TNT, Cartoon Network, Boomerang);
- A&E Television Networks (HISTORY, CI Polsat, History2, Lifetime);
- Wirtualna Polska (WP);
- AXN (Sony) (AXN, AXN Black, AXN Spin, AXN White);
- Viasat (Epic Drama, Polsat Viasat History, Polsat Viasat Explore, Polsat Viasat Nature);
- 4fun Media (4FUN.TV, 4FUN DANCE, 4FUN KIDS, 4FUN GOLD HITS);
- BBC (BBC Earth, BBC Brit, BBC CBeebies, BBC Lifestyle, BBC First);
- AMC Networks (Polsat JimJam, AMC, Extreme Sports, Sundance Channel);
- Universal (13th Street, Scifi Universal, E!Entertainment, Golf Channel Poland);
- ViacomCBS (CBS Europa, CBS Reality);
- and others such as Polcast Television (Tele5, Polonia1, Water Planet, Novela TV), JBD SA (Stars.tv), Da Vinci Media (Da Vinci).

The third broker in terms of market share is public television. The TVP Advertising Bureau handles TVP1, TVP2 and thematic programmes, giving it a market share of 20% in 2022.

Figure No 59. TV brokers' market shares 2021-2022



Source: KRRiT Bureau compilation based on data from Publicis Groupe

Advertising revenues of broadcasters available in satellite and cable networks

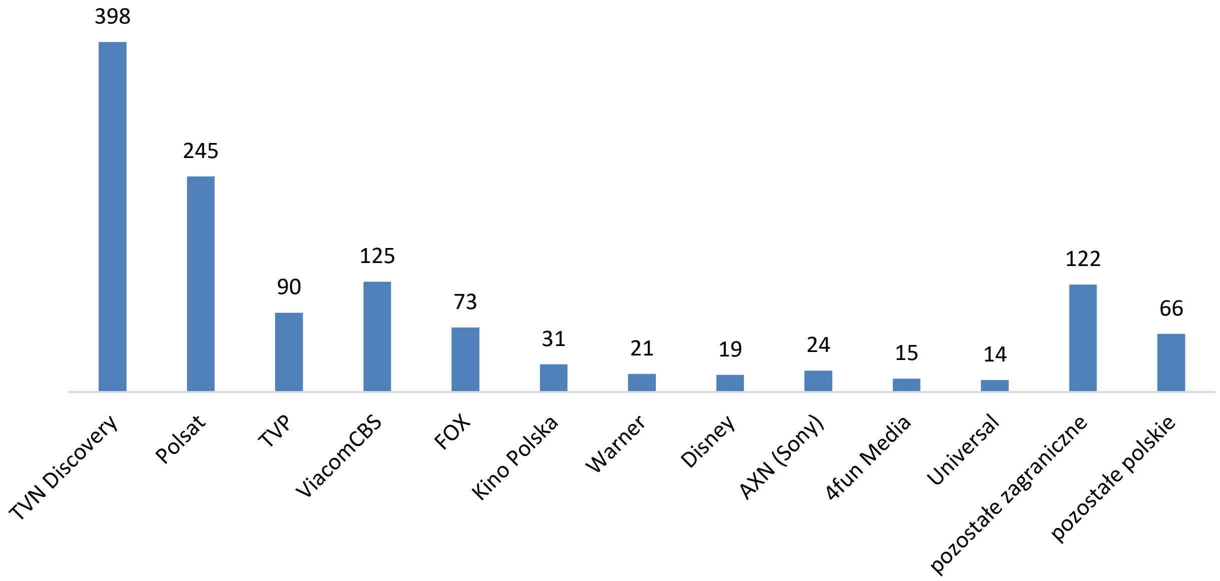
The situation in the group of satellite/cable broadcasters is similar to that in DTT. Here, too, the leading positions are occupied by the programmes of the main TV players.

In 2022, the advertising revenues of the remaining programmes available only on cable networks and satellite platforms amounted to PLN 1,244,500,000. Compared to PLN 1,204,000,000 in 2021, this represents an increase of PLN 40,300,000 or 3.3% year-on-year.

The programmes of TVN Discovery, Polsat and TVP used PLN 732,700,000 of the PLN 1,244,500,000 . Programmes of other Polish broadcasters such as MWE Networks Winnicki, TVS, Red Carpet Media Group S.A., JBD S.A., R.D.F. Broadcasting, Polcast Television, SandBox Music, Idea4Brodcasting, TV Republika, Fratria received PLN 66,000,000 in revenues. In total, Polish satellite and cable broadcasters earned almost PLN 845,000,000 , i.e. 68% of all revenues from this market segment (revenues from all forms of advertising).

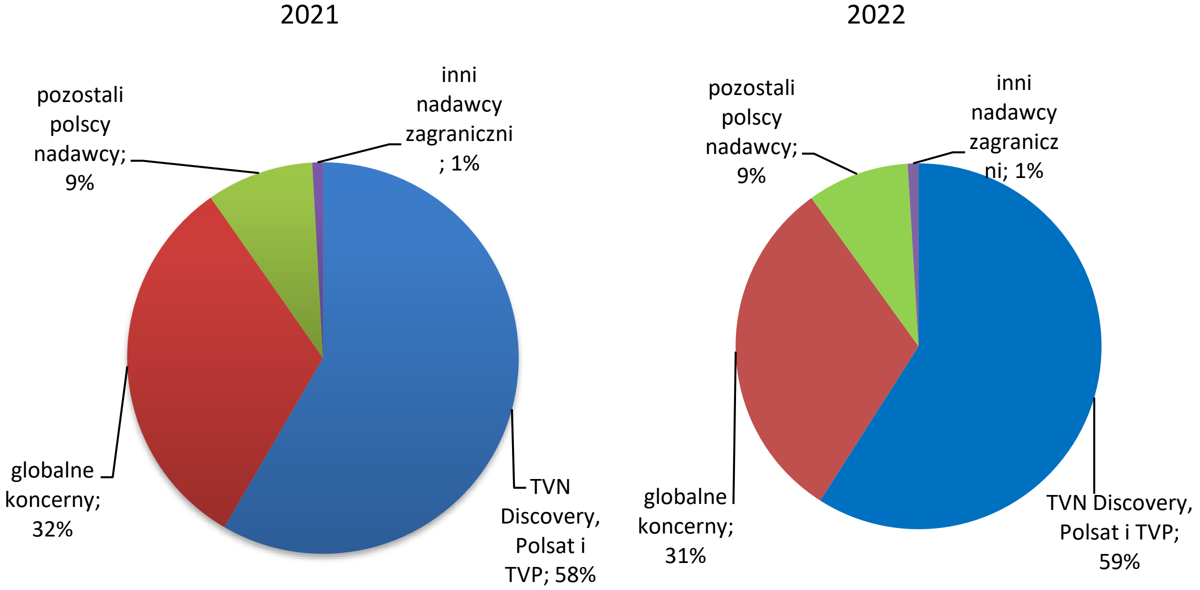
The remaining 32% of the revenue of PLN 399,000,000 was generated by programmes from global companies targeting the Polish market (Sony, Warner, CBS Viacom, Universal, Fox and Disney - PLN 277,000,000) and programmes from broadcasters from other countries (Italy, the Czech Republic, Germany or the UK - PLN 122,000,000).

Figure No 60. Advertising revenues of broadcasters available on satellite and cable networks in 2022 (PLN million)



Source: compiled by the NCRB Office on the basis of the Publicis Groupe report, Advertising market in 2022.

Figure No 61. Share of Polish and foreign satellite and cable broadcasters in revenues from advertising activities in 2021 and 2022



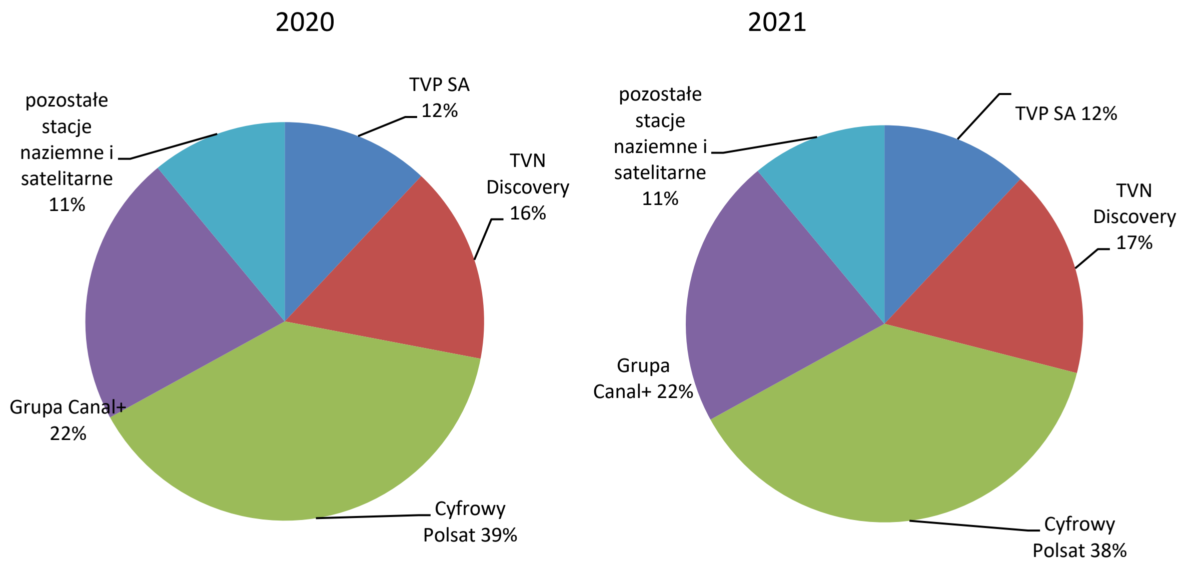
Source: compiled by the NCRB Office on the basis of the Publicis Groupe report, Advertising market in 2022.

The advertising revenue market is dominated by the shares of groups with programme packages. The chart above shows the combined shares of broadcasters with concessions in Poland (Polsat and TVN Discovery, as well as TVP) and the combined shares of global television companies

(Sony, Warner, CBS Viacom, Universal, Fox and Disney) and other Polish and foreign broadcasters operating outside the large groups. Advertising time in these programmes is sold by national brokers, i.e. the advertising offices of TVN, Polsat and TVP.

2.4 Financial performance of TV broadcasters based on data from financial statements

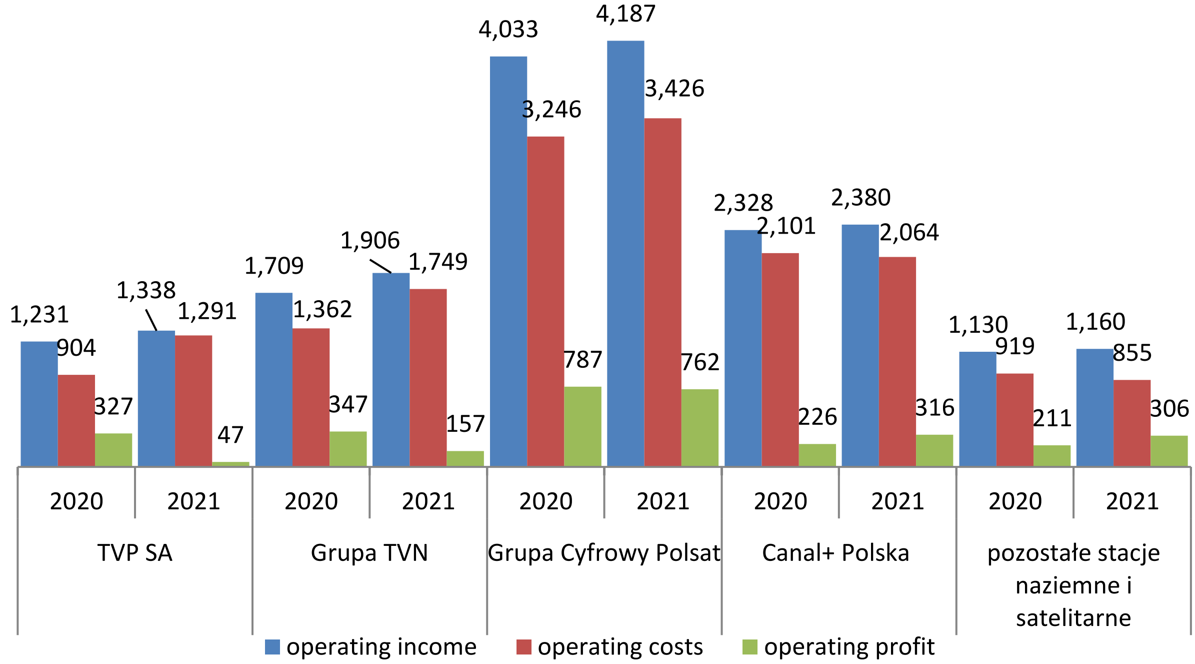
Figure No 62. TV broadcasters' shares of operating revenue in 2020-2021



Source: compilation by the KRRiT Bureau on the basis of TV broadcasters' financial statements for 2020-2021

In 2021, revenues from commercial activities of the main players among TV broadcasters (programme distribution and distribution and VoD) amounted to PLN 10, 971,000,000 and were 4.9% (i.e. PLN 540,000,000) higher than in 2020. All groups of broadcasters maintained revenue shares at a similar level to the previous year.

Figure No 63. Operating activities of broadcasters and operators in 2020-2021 (in PLN million)



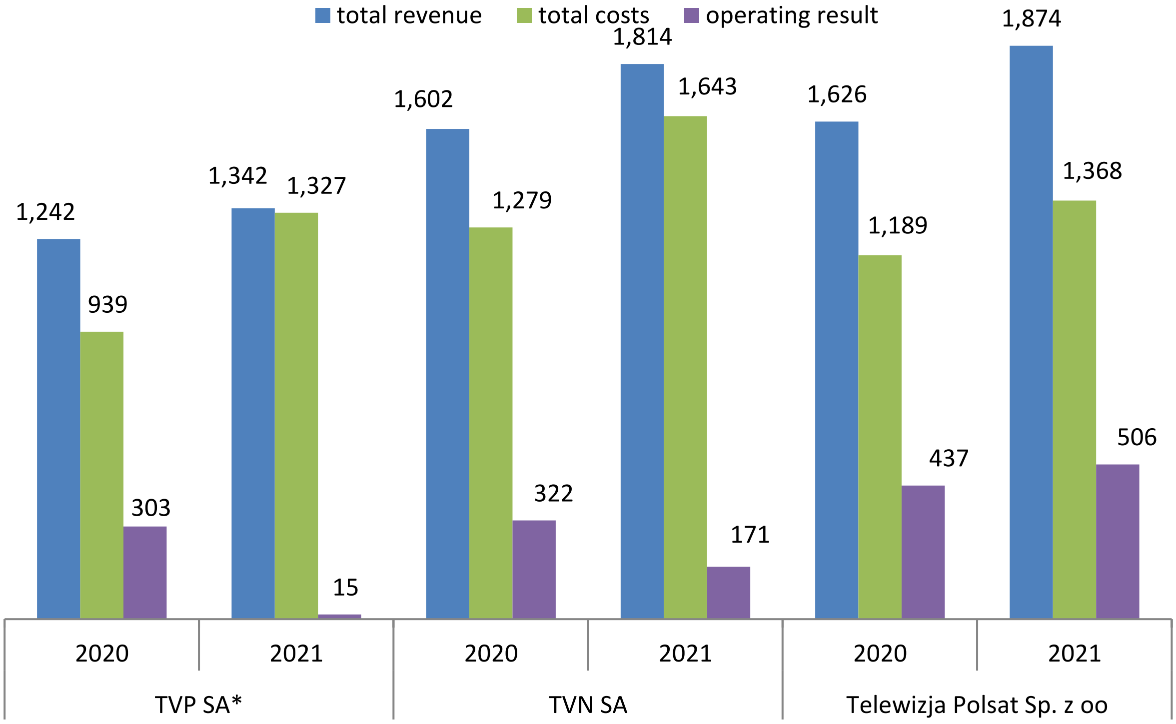
* Revenues and costs of Telewizja Polska S.A. after subtraction of the rtv licence fee and compensation from the state budget for lost licence fee revenues.

Source: Compilation by the KRRiT Bureau on the basis of broadcasters' financial statements for 2020-2021

Revenues of the main broadcasters derived exclusively from television broadcasting activities

Comparing the financial results relating solely to the creation and distribution of television programmes by the main broadcasters, i.e. Telewizja Polsat sp. z o.o., TVN SA and TVP SA, for 2021 against 2020, an increase of approximately 12.5%, i.e. by PLN 560,500,000 , should be noted. The broadcasters in question collectively generated revenue of PLN 5,030,100,000 in this period.

Figure No 64. Revenue, costs and result on the main TV broadcasters in 2020-2021 (PLN million)



*Revenues and costs of Telewizja Polska S.A. after subtraction of rtv subscription fee and compensation from the state budget for lost subscription revenues

Source: Compilation by the KRRiT Bureau on the basis of TV broadcasters' financial statements for 2020-2021

Other financial indicators of the television sector

The total assets of terrestrial and satellite TV broadcasters at the end of 2021 amounted to PLN 12,791,000,000 (an increase of 11% on the previous year). Within its structure, 67% were fixed assets. Assets were 70% financed by entrepreneurial equity. Net working capital (current assets - current liabilities) in this group of broadcasters amounted to PLN 1,515,000,000 , while the liquidity ratio had a value in the optimal range and amounted to 1.6. The result on sales in this business segment amounted in 2021, PLN 1,917,000,000 (a 24% increase in value compared to 2020).

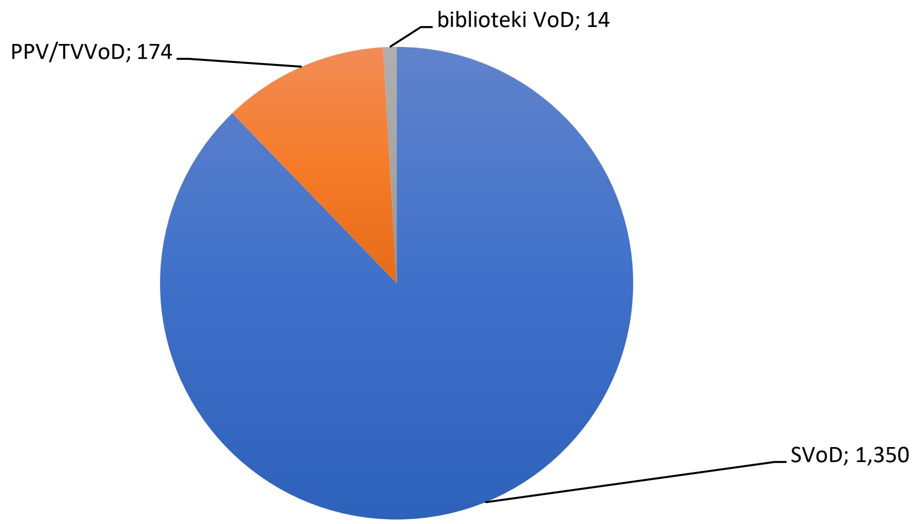
2.5 Revenues of on-demand audio-visual services (VoD)

According to PMR, the value of the market for paid VoD services in Poland in 2021 will be PLN 1,500,000,000 . Compared to 2020, this represents an increase in providers' revenues of around 22%. The dynamics of the market should be linked primarily to the development of video on demand in the subscription model (SVoD), coupled with an increase in the number of subscribers to such services and a stable average revenue per user (so-called average ARPU). This result, as in previous years, was mainly driven by SVoD revenues, which accounted for 88% of revenues from paid VoD services. SVoD revenues consist of standalone subscriptions, which account for 67% of SVoD revenues, and revenues from the sale of subscriptions in the so-called operator channel, mostly generated by HBO Max. The remaining revenues in the VoD market come from single transactions (PPV/TVoD model) and from VoD libraries offered by pay-TV operators.

VoD providers use different models for paid access to content: subscription/subscription (SVoD) or purchase of a single film/series (TVoD).[100]

Access to live broadcasts (PPV),[101] e.g. from sports events, is provided by cable network operators and Cyfrowy Polsat as part of Ipla (Polsat Box Go).

Figure No 65. Revenue structure of the various models of paid VoD services in 2021. (PLN million)



Source: Study by the KRRiT Bureau based on data from the PMR report, Pay-TV and VoD market in Poland. Market analysis and development forecasts for 2022-2027.

SVoD services reported revenue growth of 24%. Among subscription services, the majority of revenue is generated by the Netflix service (approximately 45%). A much smaller share of the SVoD revenue market is held by domestic services such as Player and Polsat Box Go, whose combined market share was around 20%.

The services and content available under the transactional model (pre-broadcast fee), i.e. TVoD and PPV, together generated around 12% of revenues. In the long term, TVoD will lose ground in parallel with the growth of SVoD - TVoD lost almost 7% of revenue in 2021. The PPV service gained nearly 9% revenue growth in 2021 by offering access to sports content that does not appear on SVoD services. TVoD and PPV services also often accompany SVoD as an additional option.

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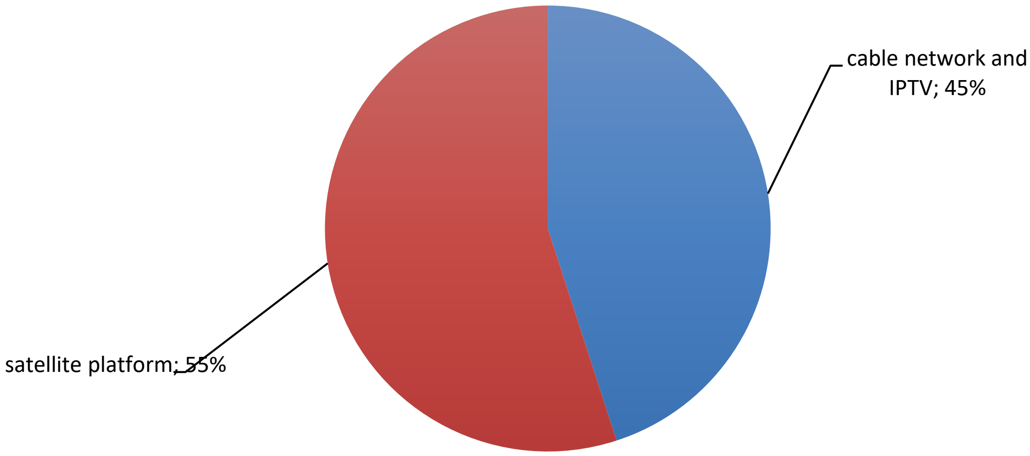
[100] The most popular services include: Netflix.com, Wp.pl, Player.pl, Cda.pl, Hbogo.pl, Tvp.pl, Primevideo.com, Ipla/Polsat Box Go, Canalplus.com, Viaplay.pl, VoD.pl.
[101] PPV (pay per view) - payment for watching specific content, such as live broadcasts of sports events.

2.6 Pay-TV revenues

According to PMR estimates,[102] the value of the pay-TV market in 2021 will exceed PLN 6,300,000,000 (a 1.9% increase), indicating a stable situation for the sector. The pay-TV market is a mature market where operators compete with each other not on price, but on the quality of the offer. Of growing importance in maintaining the value of the market is television offered in the IPTV system (12% share in revenues, growth of 24%) developing among more affluent customers living in large cities, where there is no problem with high-speed internet.

Figure No 66. Structure of the pay-TV market in Poland by revenues from individual types of services in 2021[103]



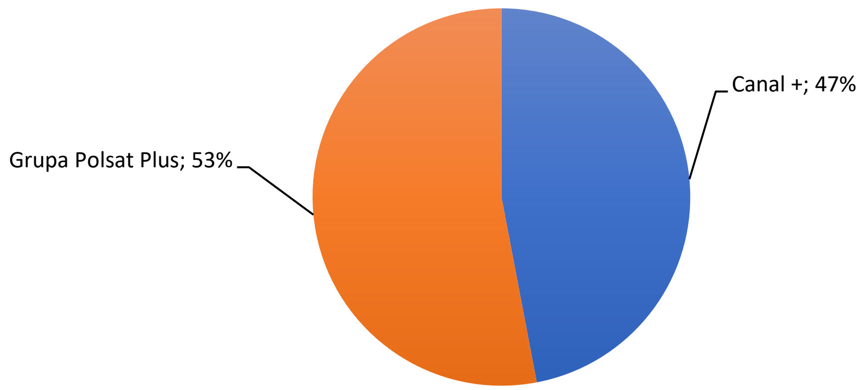
Source: PMR, *Pay-TV and VoD market in Poland. Market analysis and development forecasts for 2022-2027*

In 2021, as in the previous year, digital satellite platforms earned PLN 3,500,000,000 in revenues, but their importance declined. Cable TV revenues remained at 2020 levels mainly due to digital offerings. As mentioned above, significant growth was recorded by IPTV operators.

[102] PMR, *Pay-TV and VoD market in Poland in 2022. Market analysis and development forecasts for 2022-2027*, July 2022.
[103] The names of satellite platforms and cable operators are given in the following charts.

Satellite TV

Figure No 67. Revenue share of digital satellite platforms in 2021



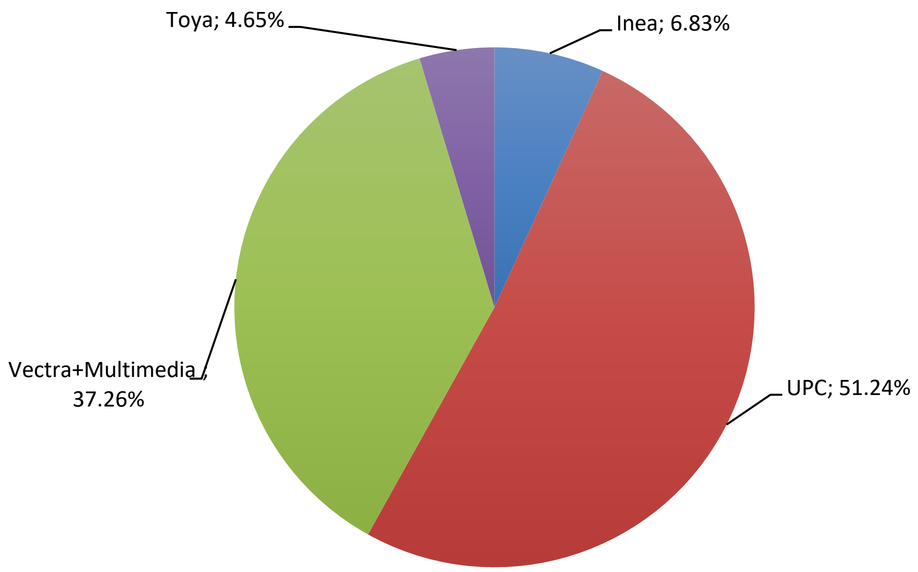
Source: PMR, Pay-TV and VoD market in Poland. Market analysis and development forecasts for 2022-2027

The lead of the Polsat Plus Group (previously Cyfrowy Polsat) over Canal+ has widened in 2021.

Cable TV

Revenues of cable TV operators in 2021 amounted to approximately PLN 2,100,000,000 , remaining almost at the same level for six years.

Figure No 68. Operators' share of cable TV revenue in the market in 2021.



Source: KRRiT Bureau compilation based on data from the Report on the State of the Telecommunications Market in 2021

For years, the leading position on the cable TV market has been held by the largest operator, UPC. The second place is held by Vectra together with Multimedias, a slight increase was recorded by both Toya and Inea.

IPTV

The share of IPTV (television distributed via internet protocol) in 2021 was around 12% of the total pay-TV market. In nominal terms, the market gained almost 300,000 new subscribers and the year-on-year increase in providers' revenues, according to PMR estimates, was 24%, or around PLN 177,500,000. Between 2016 and 2018, the number of IPTV subscribers grew enough to keep the entire pay-TV market from falling. Even if a similar trend could not be sustained in the 2019-2021 period (however the IPTV segment held back the market from greater erosion), this shows that despite a saturated market, the IPTV offering is capable of attracting entirely new subscribers for the market.

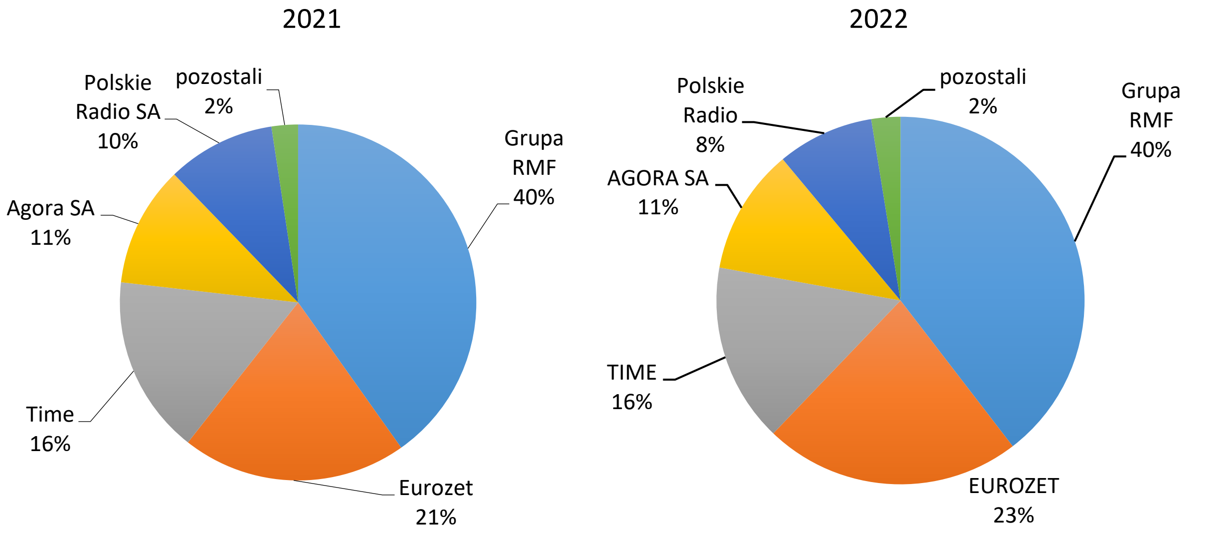
2.7 Advertising revenue in radio programmes

The estimated value of radio advertising was in 2022. PLN 788,500,000. The growth rate of radio advertising revenue compared to 2021 was 4%.

The radio advertising market looks different from the television advertising market. Advertisers can buy advertising space directly from each broadcaster, i.e. they do not necessarily use brokers. If a broadcaster has an advertising campaign planning tool (so-called software), it can also be a broker. Having this tool is the biggest advantage of radio brokers. It allows them to plan campaigns involving several broadcasters and then broker the purchase of advertising packages. Approximately, therefore, the revenues of radio brokers reflect the actual revenues of the various groups of broadcasters.

In 2022, RMF FM Group was first in the advertising revenue market with a share of 40%. Radio group Eurozet had 23%, and third place went to Time Group with a share of 16%. Fourth place went to Agora with a share of 11%, followed by Polskie Radio with a share of 8%.

Figure No 69. Radio brokers' market shares in 2021-2022 (according to Kantar Media)

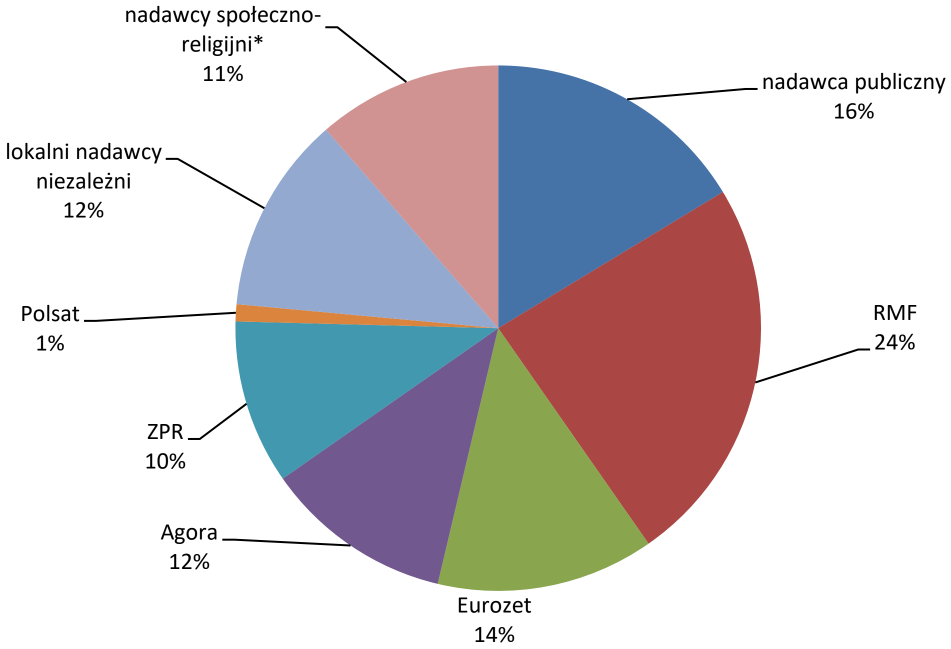


Source: KRRiT Bureau compilation based on Publicis Groupe data

2.8 Revenues of radio broadcasters based on financial statements

According to data from the financial statements for 2021, the radio broadcasters collectively generated operating revenues[104] of PLN 607,100,000 . These were 12% higher than those obtained in 2020.

Figure No 70. Radio broadcasters' shares of operating revenue in 2021



*including Plus network

Source: compilation by the KRRiT Bureau on the basis of broadcasters' financial reports for 2021.

In 2021, 84% of the operating revenue share of all radio went to commercial broadcasters (down 1.1pc); the remaining 16% share belonged to public service broadcasters (up 1pc).

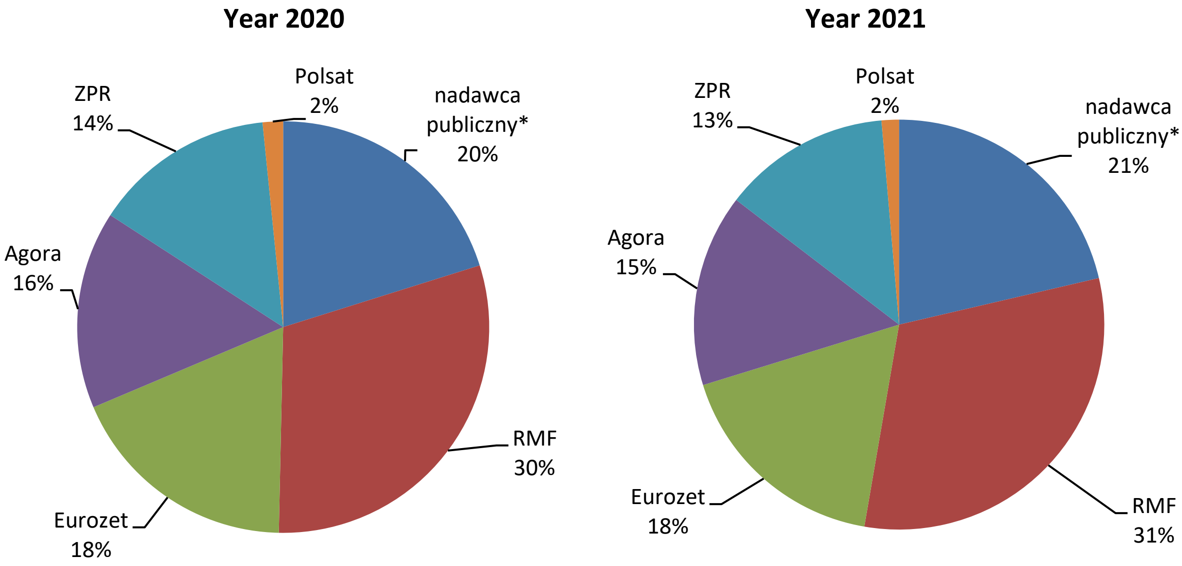
In 2021, local independent broadcasters saw their share fall by 3pp. from 15% to 12%, ZPR Group's share also fell by 1pp. while RMF Group's share rose by 2pp. and Agora Group's by 1pp. By contrast, the shares of the Eurozet Group, Polsat Group and the socio-religious broadcasters remained unchanged compared to the previous year.

[104] In Polskie Radio and the regional radio stations of Polskie Radio, operating revenues were reduced by licence fee income, compensation and subsidies.

Radio groups

Polskie Radio, RMF, Eurozet, ZPR, Agora and Polsat [105] in 2021 had combined operating revenues of PLN 464,200,000 . These were higher by PLN 62,900,000, or 15.7%, compared to 2020.

Figure No 71. Radio groups' share of operating revenue in 2020-2021

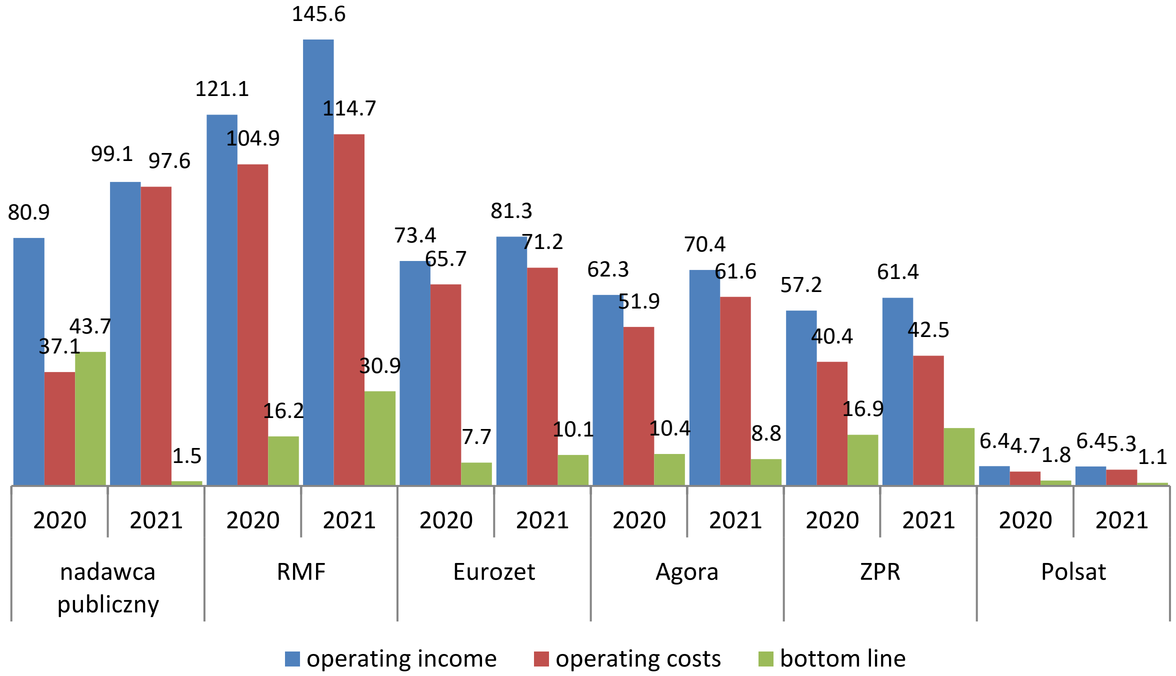


*Revenues of public broadcasters (Polskie Radio SA and regional radio companies) less licence fee income, compensation and budget subsidies

Source: Compilation by the KRRiT Bureau on the basis of broadcasters' financial statements for 2020 and 2021

[105] One muzo.fm station.

Figure No 72. Comparison of operating activities and financial results of radio groups in 2020-2021 (in PLN million)



*In the case of Polskie Radio, the figures for revenues and costs have been reduced by the amount of the rtv licence fee, budget subsidies and compensation from the state budget for lost licence fee revenues.

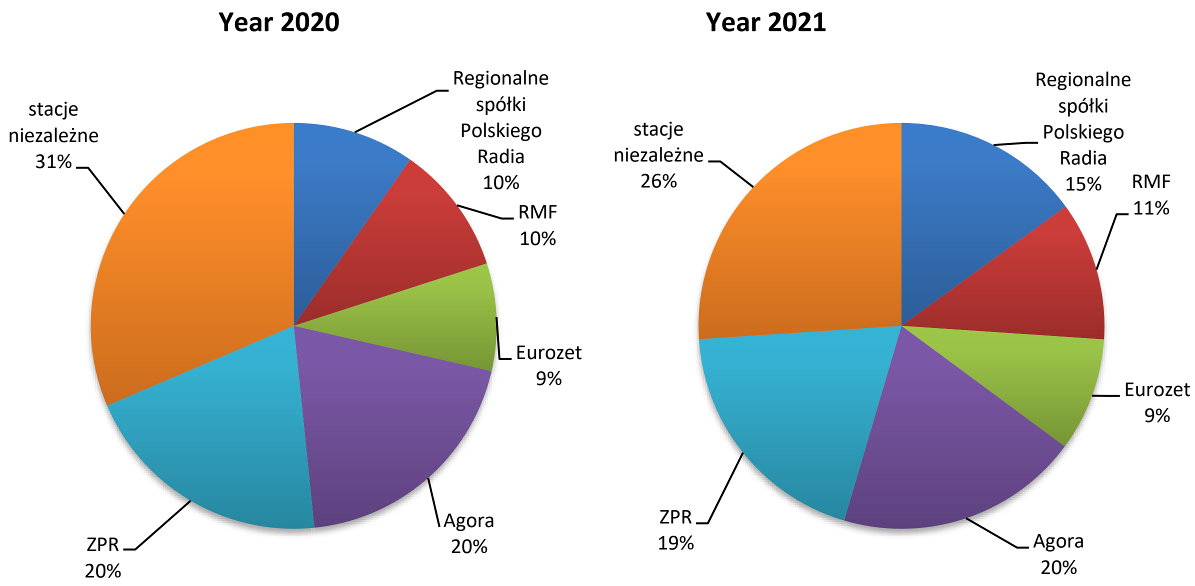
Source: Compilation by the KRRiT Bureau on the basis of broadcasters' financial statements for 2020 and 2021

In 2021, with the exception of Grupa Polsat, all radio groups recorded an increase in the value of operating revenues compared to the previous year. All groups generated a positive financial result on operating activities.

Broadcasters with local coverage

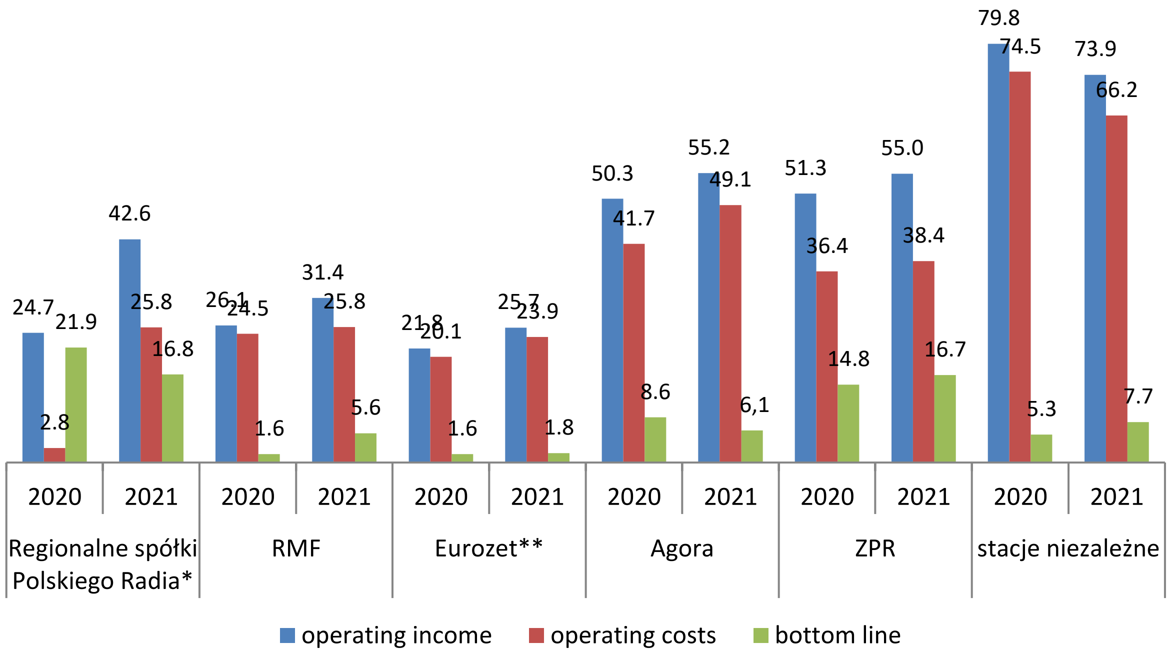
In 2021, regional public radio companies and local commercial broadcasters generated revenues of PLN 283,800,00 from the advertising market. The revenues of this group of broadcasters, compared to with 2020, were higher by 11.7%, i.e. by PLN 29,800,000.

Figure No 73. Local broadcasters' shares of operating revenue in 2020-2021



Source: Compilation by the KRRiT Bureau on the basis of broadcasters' financial statements for 2020 and 2021

Figure No 74. Comparison of operating activities and financial results of local broadcasters in 2020-2021 (in PLN million)



*In order to compare the commercial activities of the PR regional radio stations with those of commercial entities, the totals of revenues and operating costs are reduced by the rtv licence fee and compensation from the state budget for lost licence fee revenues.
** Eurozet Group financial data based on estimates[106] .

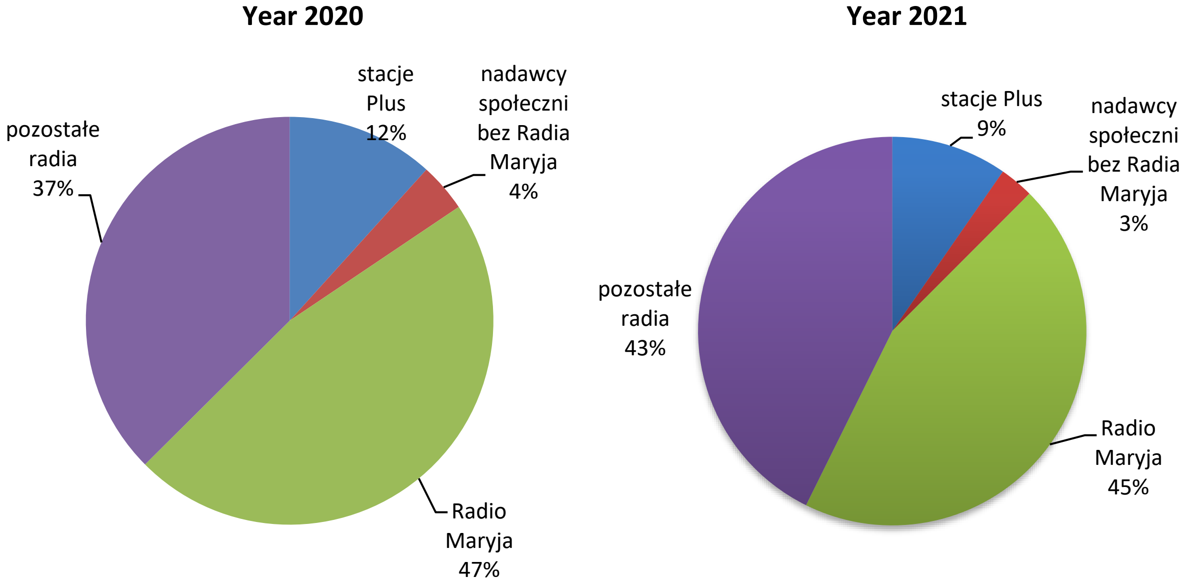
Source: Compilation by the KRRiT Bureau on the basis of broadcasters' financial statements for 2020 and 2021

[106] In 2015, the rights under the concession to broadcast a nationwide programme were transferred to Eurozet Radio sp. z o. o., which had previously exercised concessions for local radio programmes. Since 2015, the company submits a single financial report covering the combined revenues of the national programme broadcaster and the local programmes, while from November 2021 there is a statutory obligation to provide information on revenues and costs relating to individual media services.
Operating revenues and expenses from the Company's local radio operations for 2020-2021 have been estimated in proportion to the share of local revenues and expenses in the Company's total media services revenues and expenses.

Socio-religious broadcasters

Socio-religious broadcasters collectively generated revenues of PLN 69,000,000 in 2021. These were higher by PLN 8.1 million (by 13.3%) compared to 2020.

Figure No 75. Shares of socio-religious broadcasters in total revenue (from advertising market and grants, donations and contributions) in 2020-2021



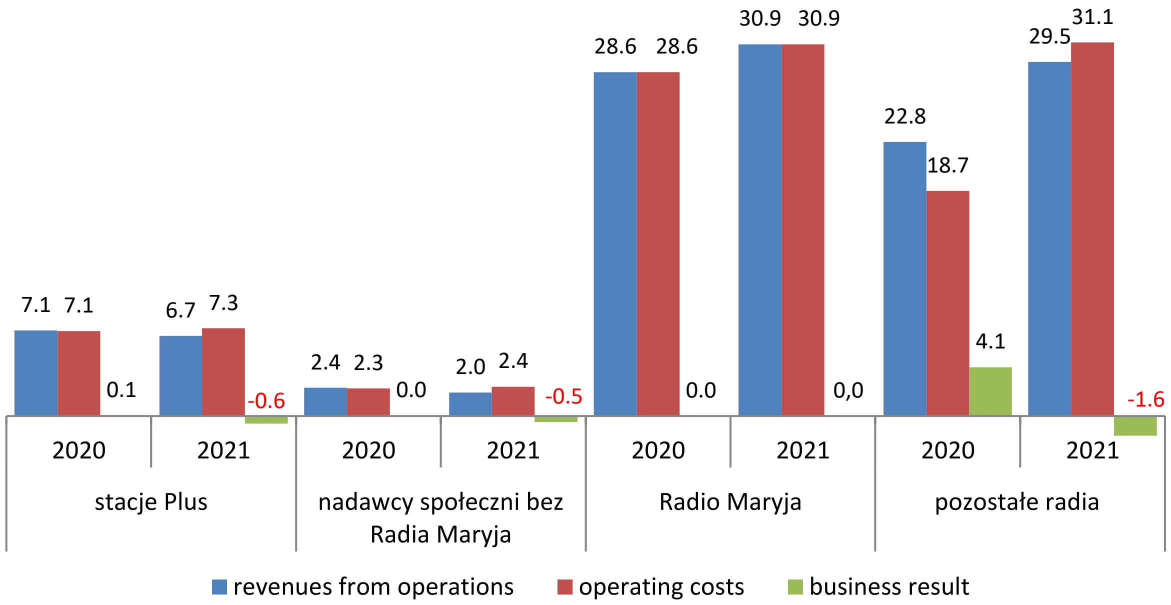
Source: Compilation by the KRRiT Bureau on the basis of broadcasters' financial statements for 2020 and 2021

Broadcasters with community broadcasting status achieved a total share of 48% of operating revenues in 2021. Radio Maryja received the highest revenue of PLN 30,900,000 , up 8% on the previous year. This revenue accounted for 45% of the revenue of the entire group of socio-religious broadcasters. The other broadcasters with social-religious status recorded a total share of 3% in operating revenues, decreasing their share by 1 pp compared to the previous year.

Plus stations in 2021 recorded a decrease in operating revenue of PLN 500,000, or 6.5%, compared to 2020. Their market share fell to 9%.

The other radio stations recorded a 29.9% increase in operating revenues compared to 2020, amounting to PLN 29,500,000. The market share of these radio stations in operating revenues increased to 43%.

Figure No 76. Comparison of revenues and results for socio-religious broadcasters in 2020-2021 (in PLN million)



Source: Compilation by the KRRiT Bureau on the basis of broadcasters' financial statements for 2020 and 2021

Other financial indicators for the radio sector

The financial statements show that at the end of 2021, the total assets of commercial radio broadcasters amounted to PLN 671,000,000 , an increase of approximately 27% compared to 2020. The equity to assets ratio was 72% (down 6 pp). The debt ratio remained at a slightly higher level than in the previous period, at 28%. The positive total net result of all commercial radio broadcasters in 2021 increased by 73.2%, i.e. by PLN 33,100,000 , and amounted to PLN 78,300,000.

3. Other media markets and telecommunications

3.1 Press

In 2022, the situation on the press market improved slightly, but rising paper prices and energy costs, as well as the economic situation related to the war in Ukraine, forced some publishers to close their press titles and reduce employment. Titles which had been published for many years, such as *Naj, Auto Świat, Claudia, Party, Dobre Rady,* disappeared, while others, in order to stay on the market, raised their prices - e.g. *Tygodnik Powszechny, Do Rzeczy* or *Polityka.* Sales of the paper press have been successively declining for several years. Those publishers who have not previously invested in the development of digital press on the Internet are finding it difficult to stay in the market.

The decline of the daily press and cheap colour magazines based on gossip and advice content, which has been heralded for years, is taking place. Press analysts predict that exclusive paper editions targeting specific audiences will remain on the market in the long term, as well as high-quality, specialist and hobby publications. In order to maintain the current level of the paper magazine, publishers are making efforts to reduce its volume or frequency of editions.

The results of the 2022 audit of the Polish Readership Survey (PBC) show that last year there was an 11.06% drop in sales of paper editions, while e-editions and digital subscriptions combined grew by 24.7%. However, it should be noted that the growth in the digital press segment does not compensate for the loss in the traditional press. In 2022, digital press sales accounted for 5.4% of paid press revenues. A major challenge for the digital press is the introduction of appropriate differentiated payment methods for online content.

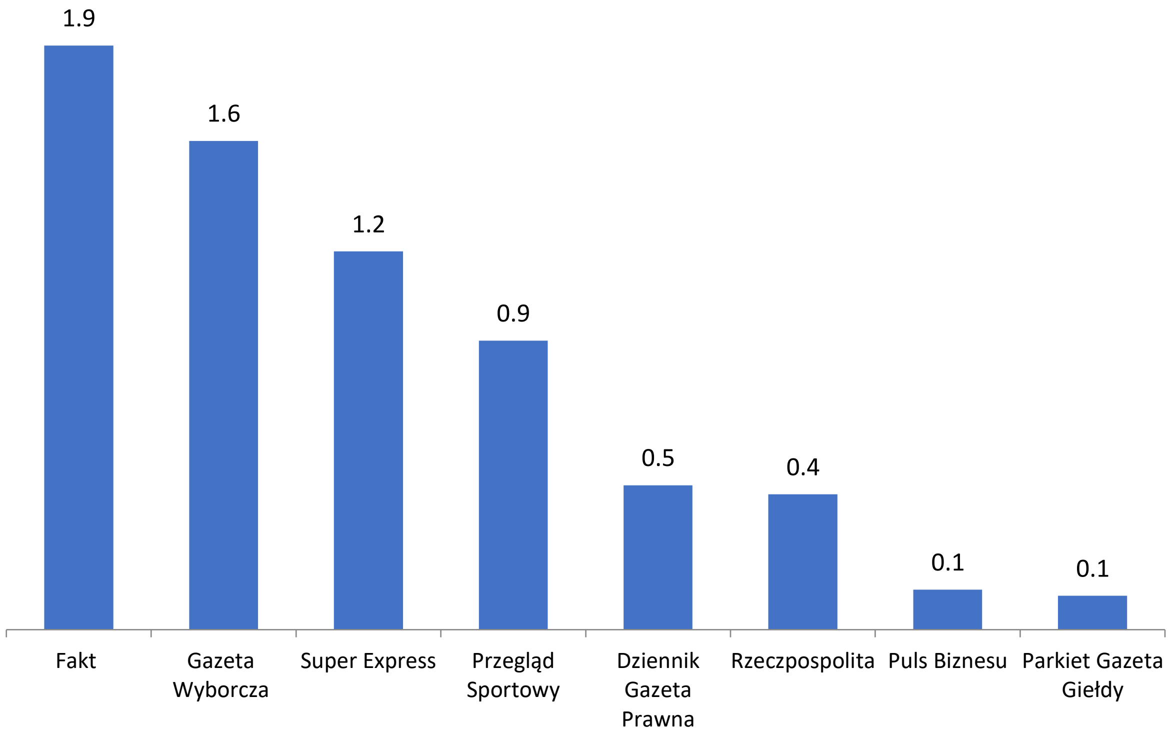
The ever-increasing costs of press and book production are pushing up the price of publishing. This limits the readers' ability to purchase and adversely affects the already low level of readership. Bearing this in mind, as well as the poor economic condition of the enterprises associated with the publishing market, the Chamber of Press Publishers and the Polish Book Chamber initiated talks with the Ministry of Finance on the introduction of a zero VAT rate for press and books.[107]

Newspapers (dailies)

The 2022 ranking of the Polish *Audyt PBC Readership* Survey saw a slight decline in the readership of dailies compared to last year. In first place, *Fakt* consolidated its position, with 1.9% of respondents declaring they read or browse, followed by *Gazeta Wyborcza* (1.6%) and the ever-popular *Super Express* (1.2%) in third place.

[107] https://www.iwp.pl/iwp-i-polska-izba-ksiazki-ponownie-apeluja-do-ministerstwa-finansow-o-zerowa-stawke-vat-na-ksiazki-gazety-i-czasopisma/

Figure No 77. Average percentage of respondents who have been exposed to an average edition of a daily newspaper



Source: Compiled by the KRRiT Bureau on the basis of PBC data, Nationwide Press Readership Survey[108]

Weeklies

Still the most recognisable weekly remains *Tele Tydzień* providing mainly information on TV programmes and *Życie na gorąco,* where current events from the world of show business are presented. In third place is the weekly *Angora,* which reprints articles from the national and world press.

The popularity of weekly opinion magazines is considerably lower; they rank respectively in: *Newsweek* in 5th place, *Gość Niedzielny* in 8th place, which covers religious, social, ethical and political issues*, and Polityka* in 9th place.

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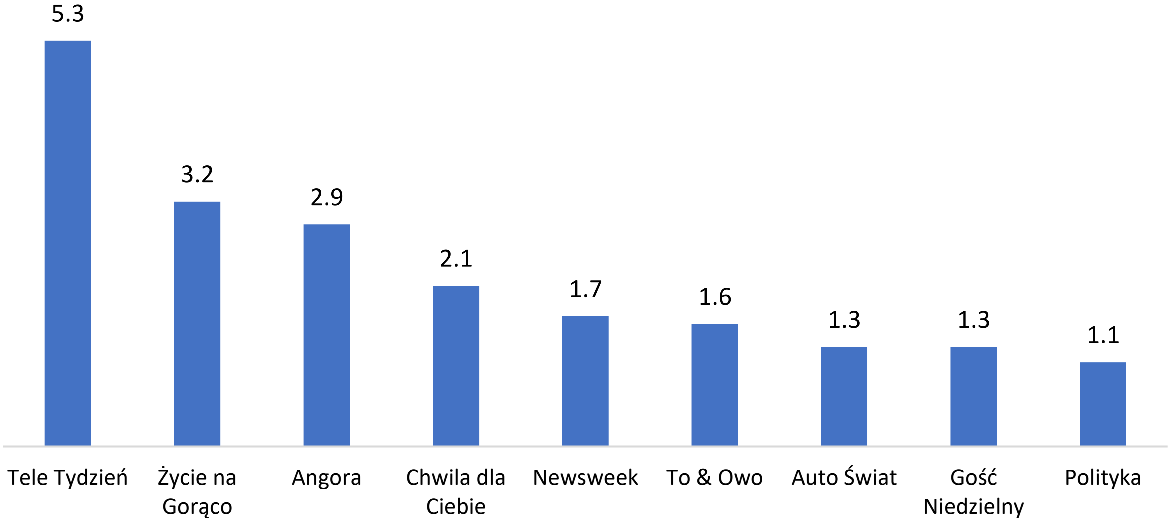
https://www.iwp.pl/iwp-i-polska-izba-ksiazki-ponownie-apeluja-do-ministerstwa-finansow-o-zerowa-stawke-vat-na-ksiazki-gazety-i-czasopisma/

[108] https://www.pbc.pl/rynek-prasowy. Presentation of data for the period January 2022-December 2022. The survey was conducted using the CAPI method - the interviewer conducts a direct interview with the respondent using a computer, on which the answers to the questions asked in the form are recorded. Number of respondents surveyed (age 15-75) in the given period N= 23,781. N denotes the number of people participating in the survey.

Figure No 78. Average percentage of respondents who have been in contact with an average issue of a weekly newspaper

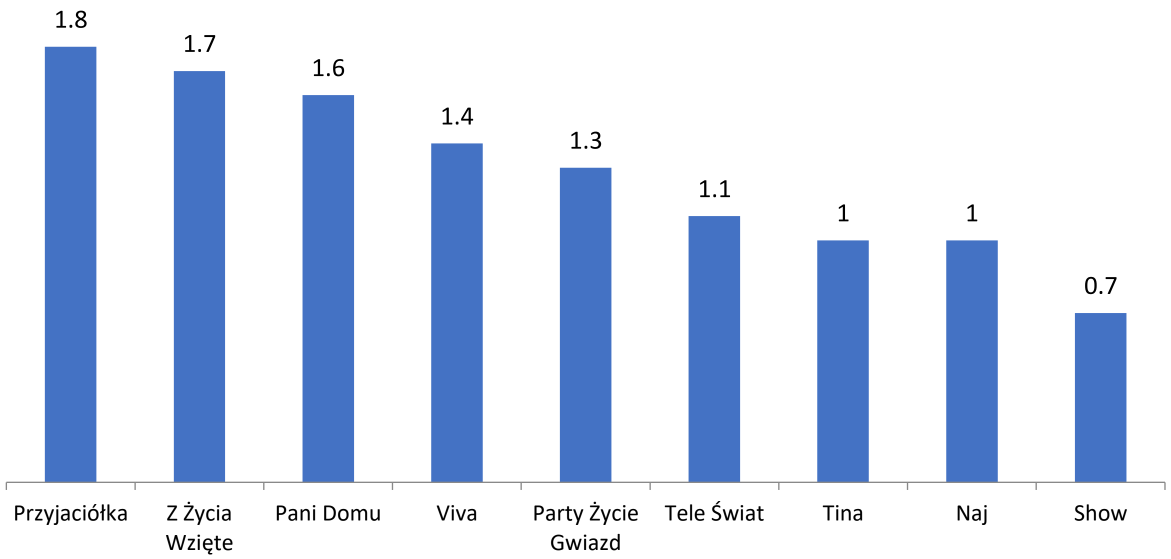


Source: KRRiT Bureau compiled on the basis of Kantar Polska SA data, Nationwide Press Readership Survey.

Biweekly

The favourite magazines in this category are: *Przyjaciółka,* in second place (with a slight decline) remains *Z Życia Wzięte* and in third place is *Poradnik Pani Domu.*

Figure No 79. Average percentage of respondents who had contact with the average biweekly publication



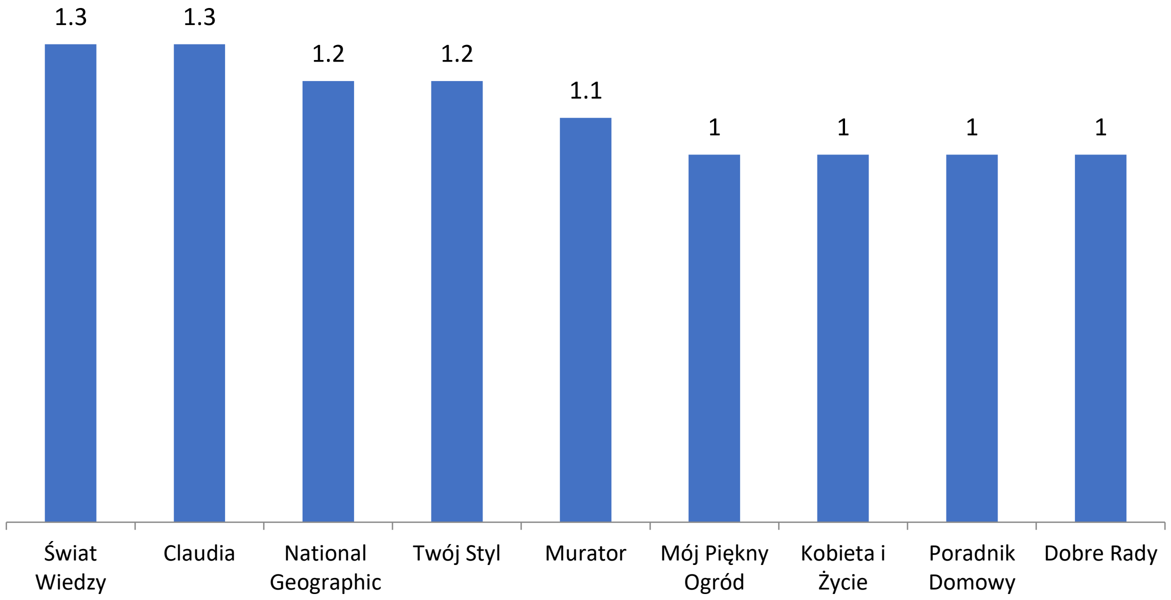
Source: Compiled by the KRRiT Bureau on the basis of PBC data; January 2022-December 2022; CPW; target group: persons aged 15-75, Nationwide Press Readership Survey[109]

[109] Ibid.

Monthly magazines

World of Knowledge was promoted to first place in 2022*.* It is a popular science magazine presenting interesting discoveries in various fields. The second position was retained by *Claudia. National Geographic* was promoted to third place from ninth place. The other monthlies enjoyed similar popularity compared to the previous year.

Figure No 80. Average percentage of respondents who have been in contact with an average issue of a monthly magazine



Source: KRRiT Bureau compiled on the basis of Kantar Polska SA data, Nationwide Press Readership Survey[110]

Press sales

Based on data from the Polish Readership Survey, presented in the *Report on* the *Distribution of Newspaper Titles in 2022,*[111] it was shown that 61% of press titles are available both in print and in digital forms, i.e. e-editions or available on websites. Poles' spending on their favourite press titles amounts to more than PLN 1,100,000,000 per year. Analysts indicate that 84% of people read the press for at least 30 minutes a day. The visibility of advertisements in the press is extremely high at over 85%.

The Media Monitoring Institute's 2022 ranking of the most opinion-forming media shows that the press had the greatest influence on the formation of Poles' opinions, reaching 36% of citation

[110] https://www.pbc.pl/rynek-prasowy. Presentation of data for the period August 2021-January 2022. The survey is carried out using the CAPI method - the interviewer conducts a direct interview with the respondent using a computer, on which the answers to the questions asked in the form are recorded. Number of surveyed respondents (age 15-75) in a given period N=12,350. N denotes the number of people participating in the survey. *Realisation: Kantar Polska, Ogólnopolski Panel Badawczy Ariadna, ARC Rynek i Opinia.*
[111] https://www.pbc.pl/wyniki-prasy-2022-r/

results.[112] Television came second with 25 per cent, internet portals third with 23 per cent and radio fourth with 16 per cent.

National dailies[113]

In 2022, the average sale of daily newspapers was 384,886 copies, down 8.04% on 2021.

The average circulation of *Fakt* was 138,160 copies, 8.22% lower than in 2021. *Super Express* maintained its position in second place (80,433 copies) with a loss of 10.19%. *Gazeta Wyborcza* remains in third place (48,133 copies), while recording the biggest drop in sales (by 15.52%). It was followed by *Rzeczpospolita* with 34,057 copies (down 6.65%), and *Dziennik Gazeta Prawna* - 32,139 copies (down 3.01%).[114]

Sales of regional dailies

The average sales of the regional dailies covered by the PBC survey was, in 2022, 126,265 copies and fell by 20.29%. The biggest losses were recorded by *Dziennik Bałtycki* and *Dziennik Zachodni*. The leader among regional dailies, despite a 17.42% drop in sales in 2022, remained *Gazeta Pomorska* (14,805 copies). Second place was retained by *Dziennik Zachodni* with average sales in 2022. 10,160 copies. (down 21.45%), and third was *Głos Wielkopolski with* 10,048 copies (a decline of 17.98%).

Sales of weekly opinion-shaping magazines

Among the opinion weeklies, only the sales of the weekly *Do Rzeczy* (up 4.5%) increased compared to 2021, with the other titles recording declines.

Polityka's average sales in 2022 were 88,864 copies, 5% lower than in the previous year.[115] In second place was the *Gość Niedzielny,* with average sales of 77,128 copies. (a fall of 10.11%). Another title, *Newsweek Polska,* dropped to third place with average sales of 70,597 copies. (a fall of 11.57%). The figures for the next weeklies in the study are: *W Sieci* - 62,429 copies (a drop of 10.75 per cent), *Do Rzeczy* - 28,396 copies (an increase of 4.5 per cent), *Tygodnik Powszechny* - 22,803 copies (the smallest decrease, i.e. by 4.5%), *Gazeta Polska* - 19,317 copies (down 7.01%), and *Przegląd* - 12,439 copies (a fall of 8.28%).

[112] https://www.imm.com.pl/rmf-fm-najbardziej-opiniotworczym-tytulem-mediowym-2022-roku/
[113] https://www.wirtualnemedia.pl/artykul/fakt-na-czele-sprzedazy-w-iv-kwartale-dgp-liderem-wsrod-e-wydan -
[114] https://www.pbc.pl/wyniki-prasy-2022-r/
[115] Ibid.

Biweekly sales

In 2022, *Przyjaciółka* maintained its popularity and recorded the smallest drop in sales among the biweekly guide magazines compared to 2021.[116]

Przyjaciółka's average total sales were 100,092 copies, 15.56% lower than a year earlier. The publisher of *Tina* sold an average of 42,844 copies (a fall of 24.5%), *Pani Domu* - 36,152 copies. (down 19.42%), while *Naj sold* 19,687 copies (the biggest fall, i.e. by 29.48%).

Sales of monthly luxury magazines

The leading position was maintained by *Twój Styl*. The average sales of this title decreased from 98,156 copies in 2021 to 88,537 copies in 2022, i.e. (a decrease of 18.79%). In 2022. *Zwierciadło* remained in second place, despite increasing its average sales compared to 2021 (up 10.47%) to 87,223 copies. *Wysokie Obcasy Extra* maintained its third position by recording a slight increase (by 1.42%) and selling an average of 50,462 copies. Further down were the monthlies *Pani* - 33,001 copies (a drop of 12.56%) and *Elle* – 27,587 copies (an increase of 12.55%), while *Glamour* sold 18,470 copies, falling by by 6.94%.[117]

Bimonthly

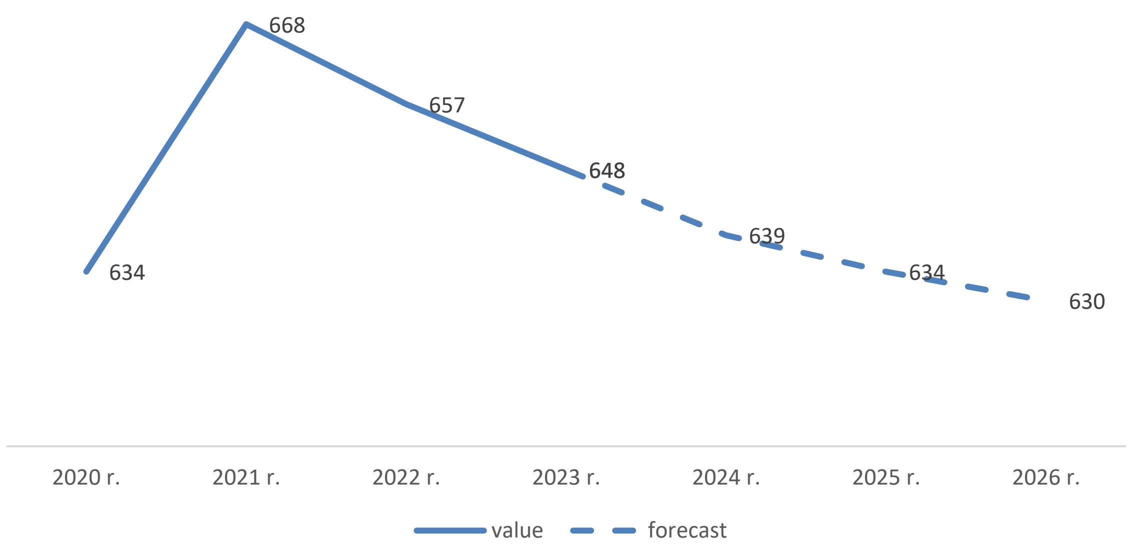
Hobby magazines with a gardening theme are the most popular. The first position in the ranking is occupied by *Przepis na Ogród* (33,473 copies), the second by *Kocham Ogród* (21,609 copies), and *Komputer Świat Twój Niezbędnik* (14,355 copies) dropped to third place from first place. In fourth place is the bimonthly *Samo Zdrowie* (12,044 copies), and in fifth place is *Focus Historia* (10,437 copies) - a popular science magazine that devotes a lot of space to World War II and recent history. Further down the list is the interior design guide *Elle Decoration* (9,757 copies sold).

The value of the press market

A shift in the press reception model is underway. The share of the newspaper and magazine sector (print and digital) in the entertainment and media market in Poland in 2022 was at 5%. Compared to 2021, this represents a decline of around 1.6 %. At the same time, revenues in the press segment combined (from the sale of titles and from advertising activities) decreased from USD 668,000,000 to USD 657,000,000, i.e. approximately PLN 2,820,000,000 . Further sales declines are expected in the next few years for both newspapers and magazines, according to a forecast by experts from PricewaterhouseCoopers (PwC). Looking further ahead to 2026, PwC analysts predict that the market will shrink at an average annual rate of - 1%.[118]

[116] Ibid.
[117] Ibid.
[118] https://www.pwc.pl/pl/publikacje/perspektywy-rozwoju-branzy-rozrywki-i-mediow-w-polsce-2022-2026.html

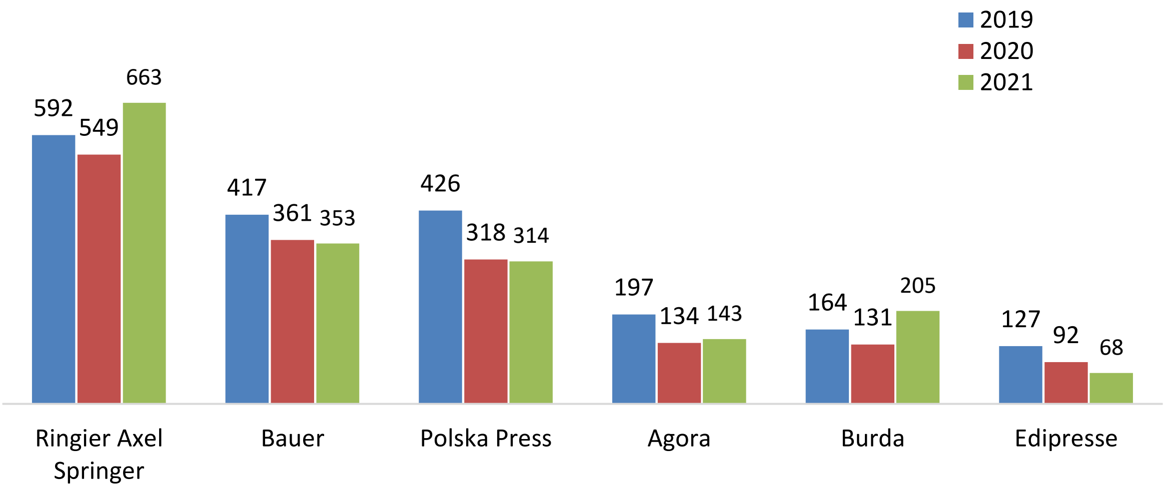
Figure No 81. Value and forecast of the newspaper and magazine market in Poland (USD million) from 2020 to 2026



Source: KRRiT Bureau compilation based on newspaper and magazine market data, PwC,[119] Global Entertainment & Media Outlook 2022-2026

Main publishers

Figure No 82. Largest publishers - revenues from the sale of press titles and from press advertising in 2019 - 2021 (PLN million)



[119] PwC - Price WaterhouseCoopers - a global network of companies providing accounting, auditing and advisory services. It is one of the so-called Big Four audit firms (along with Deloitte, EY and KPMG).

Source: KRRiT Bureau own study[120]

Across the press market segment in 2021, (sales and advertising) followed a slow rebound after losses for all leading publishers in 2020.

In terms of revenue from print press advertising alone, on the other hand, there is a slight 2% increase. The value of print advertising in 2021 increased by 6.6% from PLN 301,000,000 to PLN 321,000,000 compared to 2020. A larger increase was recorded by dailies from PLN 122,000,000 to PLN 125,000,000 (up 2.4%), and smaller magazines - from PLN 193,000,000 to PLN 196,000,000 (by 1.55%).[121]

The Ringier Axel Springer Group (Swiss-German-American-Canadian capital) remains in first place in terms of revenue.[122] The group owns, among others, the weekly newspaper *Newsweek,* the daily *Fakt, Forbes* magazine and *Business Insider*, as well as computer, sports and automotive magazines. It also owns the web portal onet.pl. In 2021, the publisher recorded a large increase in revenue compared to 2020, i.e. by more than 20 per cent.

The second position is held by the German publishing house Bauer,[123] which has been operating in Poland since 1991 as part of the Bauer Media Group holding, which also includes the RMF Group. Bauer publishes weeklies, monthly guide magazines, luxury magazines and computer and automotive magazines. Its revenues decreased to PLN 353,000,000 in 2021 compared to 360,100,000 in 2020. (i.e. by 2.2%).

The publishing house Polska Press has been owned by PKN Orlen since 2021. Polska Press publishes 20 regional dailies and 108 local weeklies, and also runs around 500 online sites. The company's revenue in 2021 was PLN 314,000,000 compared to PLN 318,000,000 in 2020 (a decrease of 1.25%).

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[120] https://www.press.pl/tresc/73080,ringier-axel-springer-polska-w-2021-roku-zwiekszyl-przychody-o-1-5_-zysk-urosl-prawie-o-polow
https://www.wirtualnemedia.pl/artykul/wydawnictwo-bauer-bez-2-proc-wplywow-i-9-mln-zl-zysku
https://www.press.pl/tresc/71820,polska-press-zakonczyla-ubiegly-rok-ze-strata-w-wysokosci-ponad-30-mln-zl
https://www.google.com/search?client=firefox-bd&q=Agora+proceeds+from+sales%C5%BCy+in+2021+r&nfpr=1&sa=X&ved=2ahUKEwj_3vWxosf9AhWTgSoKHcnUCh4QvgUoAXoECB0QAg&biw=1920&bih=927&dpr=1
https://www.wirtualnemedia.pl/artykul/burda-praca-zwolnienia-czasopisma-edipresse-koniec-prasy
https://www.press.pl/tresc/70399,edipresse-polska-z-nizszymi-przychodami-w-2021-roku_-ale-zwiekszylo-zysk-niemal-pieciokrotnie
https://www.google.com/search?client=firefox-b-d&q=UOKIK+zgoda+na+koncentracj%C4%99+Burda+Media+Polska
https://www.agora.pl/wyniki-finansowe-grupy-agora-w-2021
https://rynek-ksiazki.pl/aktualnosci/spadek-przychodow-edipresse-polska/

[121] Publicis Groupe, *Advertising market in Poland in 2021.*

[122] https://pl.wikipedia.org/wiki/Ringier_Axel_Springer_Polska

[123] https://pl.wikipedia.org/wiki/Wydawnictwo_Bauer

Agora Publishing[124] (a Polish listed company) is ranked fourth on this list. The value of the Group's revenues in 2021 amounted to PLN 142,900,000 , an increase of 6.7 per cent compared to 2020 - PLN 134,000,000.

Next in line is the German conglomerate Burda Media Polska, which recorded a significant increase in revenue of 56.4% from 131,000,000 to 205,400,000 . This company publishes around 20 printed titles, including luxury and popular science magazines.

Switzerland-based Edipresse reported a significant 26.1 per cent drop in sales revenue to PLN 68,300,000 . At the beginning of May 2021, it was announced that Edipresse Group would sell its assets in the media market in Poland to Burda. In February 2022, the Office of Competition and Consumer Protection (UOKiK) gave its approval for the publishing house Burda Media Polska to take control of Edipresse Polska. According to the UOKiK, the transaction will not lead to a restriction of competition,[125] After the merger with Edipresse, Burda closed more than 20 print titles (including *Party, Claudia and Burda Style*), leaving *Viva* and *Elle*, intending to focus on its online offer.

In November 2021, the Dutch company Pluralis B.V. acquired 40% of the shares in Gremi Media SA, i.e. the company that publishes *Rzeczpospolita* and *Gazeta Giełdy Parkiet*. These shares entitle to 37.6% of the votes at the company's general meeting. The investment in Gremi Media is Pluralis B.V.'s second investment in Central Europe, following the acquisition of a 34% stake in Petit Press, the second largest news publisher in Slovakia. Pluralis is partly owned by the Media Development Investment Fund (MDIF), financially backed by George Soros. MDIF is also an indirect shareholder in Radio Zet.

The origin of capital in the press

Foreign entrepreneurs with German or Swiss capital: Bauer, Ringier Axel Springer and Edipresse Polska, as well as Burda International Polska reinforced by the acquisition of Edipresse, hold around 70% of the press market. Foreign capital is predominant among publishers of colour and specialised magazines and in the children's and youth press. The impact of the transaction between Gremi Media and Pluralis B.V. can only be assessed in the years to come, if the new shareholder decides to increase its stake in the company.

Other publishers: Agora, ZPR Media, Gremi Media Group, Westa-Druk, INFOR PL SA, Fundacja Gościa Niedzielnego, Polityka, PMGM Polskie Media SA (Platforma Mediowa Point Group and Orle Pióro), Fratria, Forum SA, Niezależne Wydawnictwo Polskie, Tygodnik Powszechny, Fundacja Oratio Recta have a combined share of around 30 per cent in the press market and are mostly publishers of dailies and weeklies.

[124] https://www.google.com/search?client=firefox-b-d&q=Agora+proceeds+from+sales%C5%BCy+in+2021+r&nfpr=1&sa=X&ved=2ahUKEwj_3vWxosf9AhWTgSoKHcnUCh4QvgUoAXoECB0QAg&biw=1920&bih=9

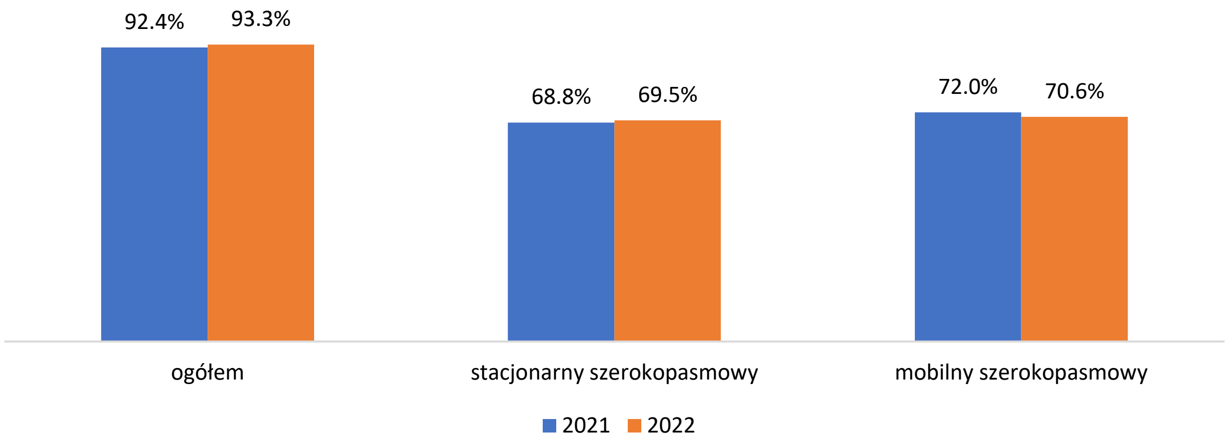
[125] https://www.burdamedia.pl/artykul/polaczenie-edipresse-polska-z-burda-media-polska-formalnie-stalo-sie-faktem

3.2 Internet and telecommunications[126]

Internet access

Poland ranks 16th in Europe in terms of popularity of the Internet in households. In the overwhelming majority of Polish homes, access to the web is one of the basic tools for work, education, access to information and entertainment, and its popularity is increasing year by year. In 2022, the share of households with internet access was 93.3%,[127] an increase of 0.9 p.p. compared to 2021. Access to fixed-line broadband increased (by 0.7 p.p.), while access to mobile broadband decreased by approximately 1.4 p.p. compared to 2021.

Figure No 83. Internet access in households



Source: Compiled by the KRRiT Bureau on the basis of data contained in Statistical Analysis of the Central Statistical Office - Information Society in Poland in 2022, 16 December 2022.

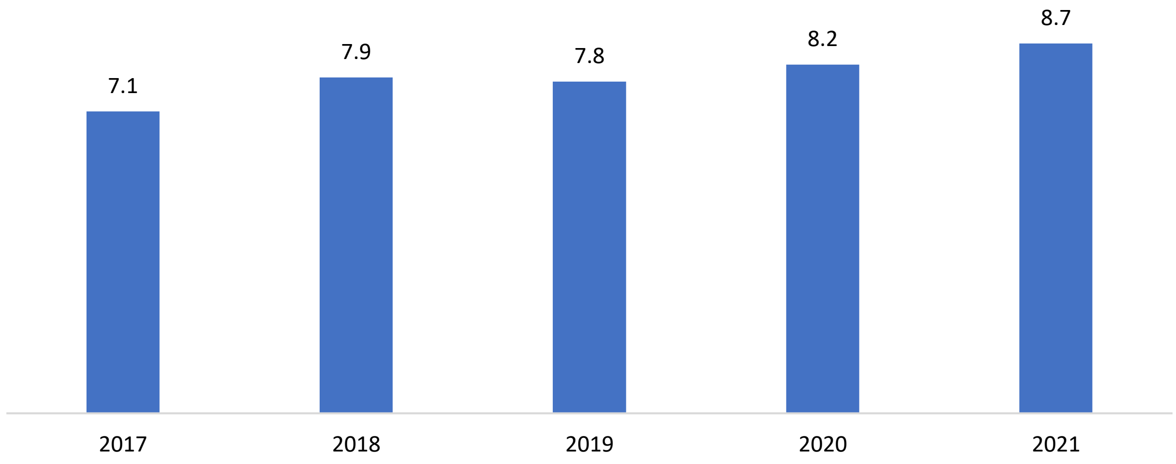
Research on Internet access preferences has shown[128] that 65% of individual users choose fixed-line access due to better quality and stability of the connection. Although the number of fixed internet users in 2021 increased by 0.6% compared to 2020, Poland ranks last in Europe in terms of fixed internet penetration per 100 inhabitants: 22.4% against a European average of 35.4%. At the same time, Poland is among the three countries with the lowest prices for this service.

[126] In describing this part of the market, KRRiT relies on data for 2022 or for 2021, depending on the availability of up-to-date statistics.

[127] The indicator of households with internet access refers to all households with an internet connection via any device, including mobile devices and smartphones, not just households within range of the infrastructure.

[128] Research and consultancy agency Danae on behalf of UKE.

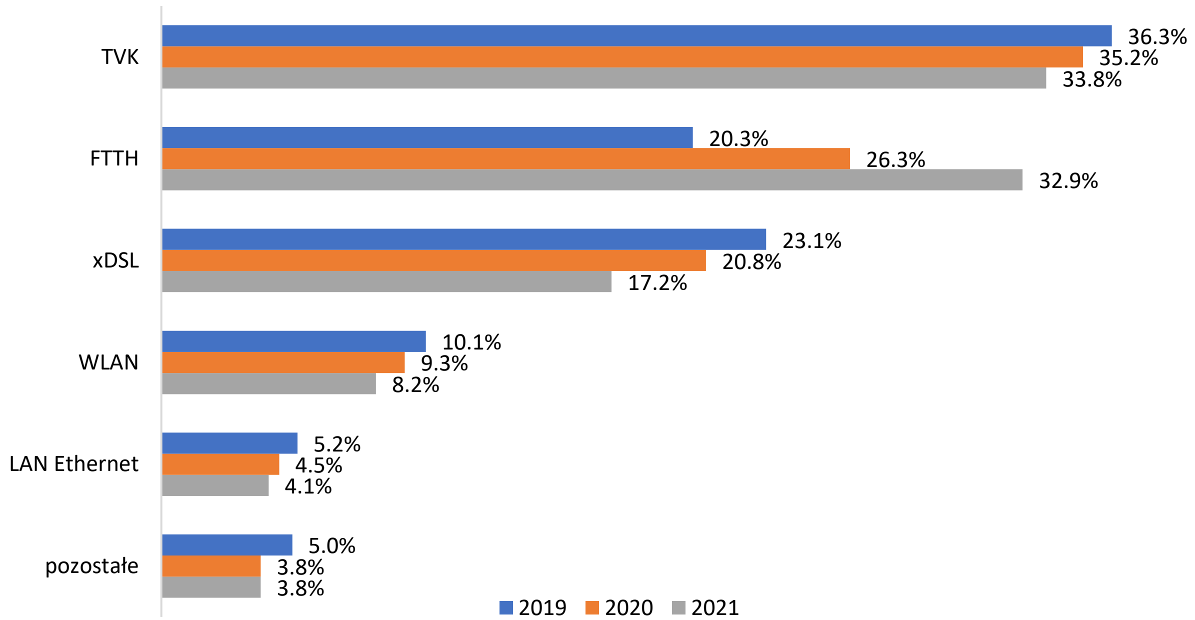
Figure No 84. Number of users of fixed internet access in 2021 (million)



Source: UKE, Report on the state of the telecommunications market in Poland in 2021, June 2022.

The most commonly used access technology is still the cable modem (33.8%), the development of fibre optic infrastructure makes this technology increasingly popular (26.3% in 2020 and 32.9% in 2021).[129] Orange is in first place among fixed-line internet providers with a 24.6% market share, followed by UPC with a 15.8% share.

Figure No 85. Structure of users of fixed-line Internet access by access technology used

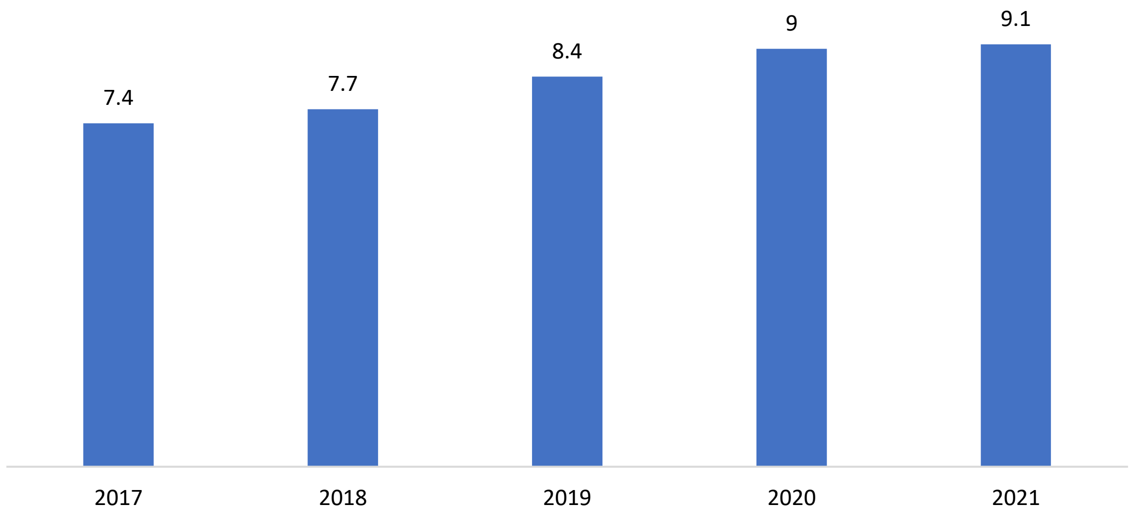


Source: UKE, Report on the state of the telecommunications market in Poland, June 2022.

[129] According to a forecast by research company Analysys Mason, the number of fibre-optic lines will grow steadily. According to the company's estimates, the number of FTTP/B fibre-optic accesses in Poland will grow at an average annual rate of 13.3 per cent to reach 5.7 million in 2026.

The dynamic development of mobile access distinguishes Poland among the European Union countries. Mobile internet penetration,[130] taking into account all possible means of access (e.g. SIM cards, additional packages to the telephone subscription, other data transmission offers), in 2021 amounted to 198.7%[131] (an increase of 3.4 p.p. compared to 2020), which gives Poland the first place in Europe.

Figure No 86. Number of mobile internet access users (million)



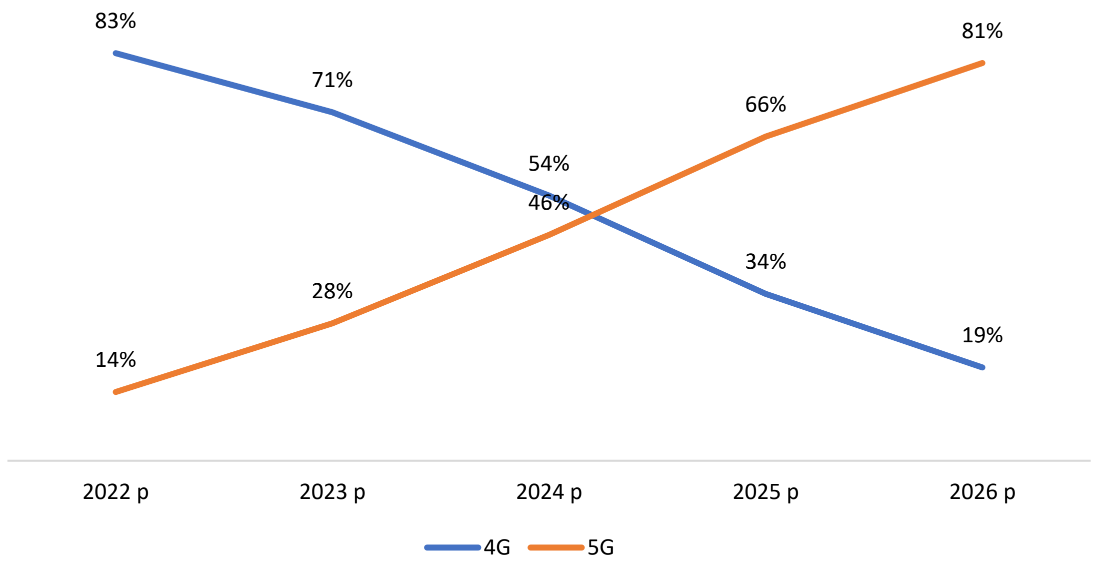
Source: UKE, Report on the state of the telecommunications market in Poland in 2021, June 2022.

Coverage information provided by operators for 2021 shows that LTE continues to dominate among mobile technologies, with a share of 83.5%. In contrast, 5G's share of total mobile internet coverage in 2021 was 16,3%.

Among users of dedicated mobile internet devices, 4G technology is the most popular. Analysys Mason predicts that its share will reach 83% in 2022 and will decline in the following years in favour of 5G access, which will be used by 81% of users in 2026.

[130] The mobile internet penetration rate was related to the population and the fixed internet to the number of households.
[131] UKE, *Report on the state of the telecommunications market in Poland in 2021*, June 2022.

Figure No 87. Share of 4G and 5G technologies in the total number of dedicated mobile internet access devices - forecast



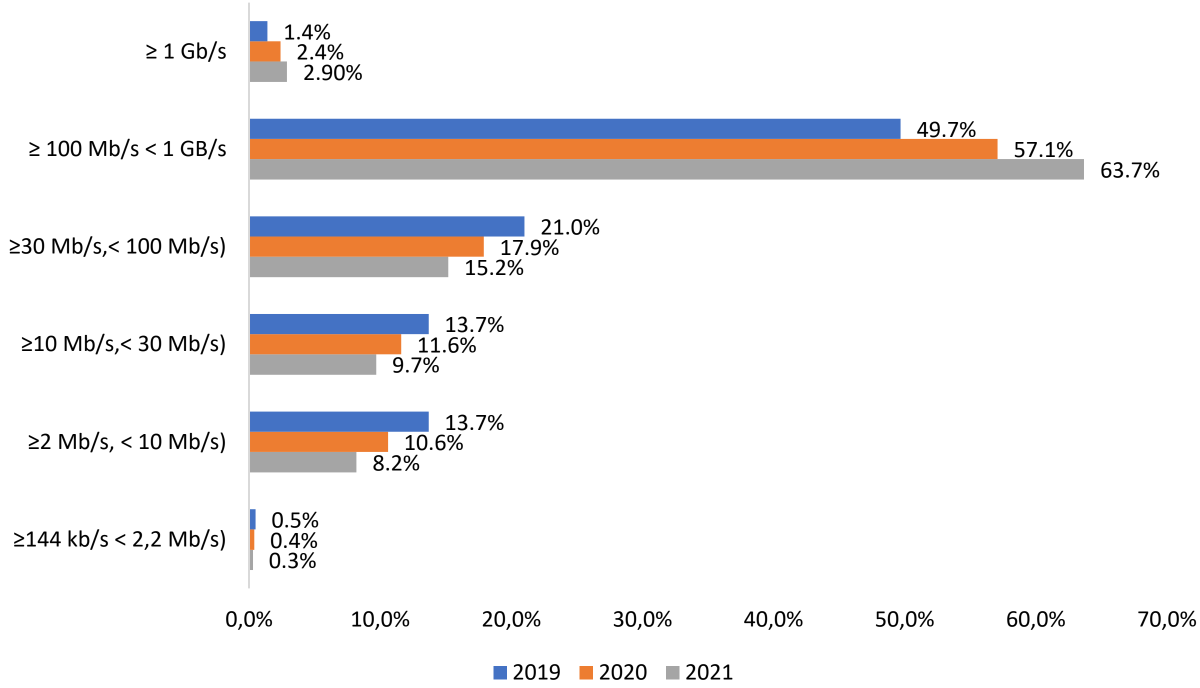
Source: Analysys Mason DataHub - forecast after the Report on the State of the Telecommunications Market in Poland in 2021, June 2022.

The first place among mobile internet providers is held by Orange Polska, which provided this service to 31.4% of users. In second place was Polkomtel with 22.3% of users and in third place was P4 with 21.2%.

The rapid development of telecommunications networks allows for increasingly better network usage characteristics, such as data quality and speed, resulting in virtually unlimited access to its resources, including audio-visual media services.

Compared to 2019, the share of lines at or above 100 Mbps increased by 14 p.p., while the share of lines at or above 1 Gbps represented in 2021. 2.9% of total lines, 1.5 pp. higher than two years earlier.

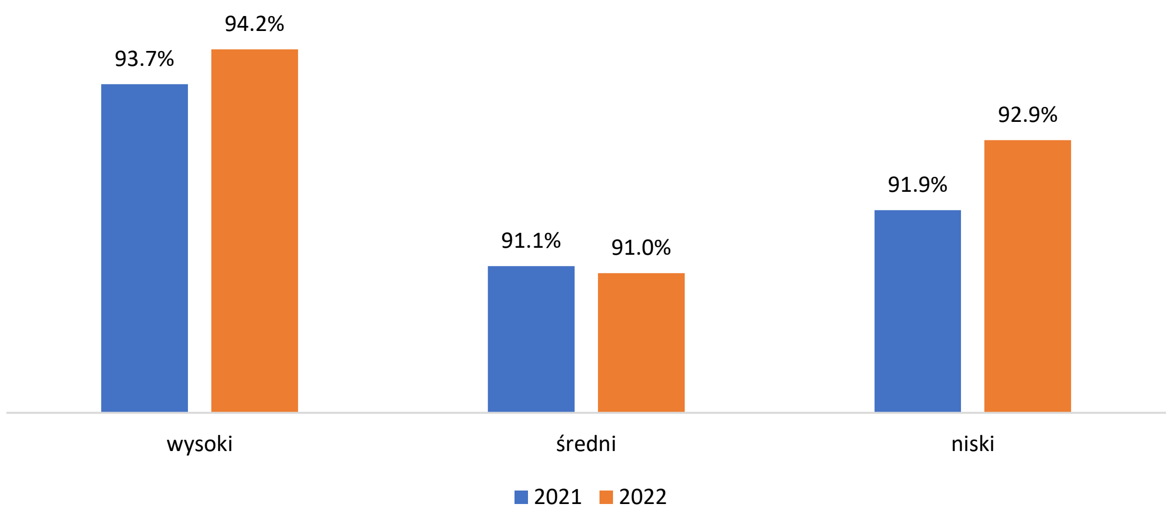
Figure No 88. Share of Internet lines by bit rate



Source: KRRiT Bureau compilation based on data from the Report on the State of the Telecommunications Market in Poland in 2021, UKE, June 2022.

Despite the dynamic development of access to internet services, there is a persistent gap in internet access between highly urbanised and rural areas.

Figure No 89. Internet access in households by degree of urbanisation



Source: Compiled by the KRRiT Bureau on the basis of data contained in GUS Statistical Analysis - Information Society in Poland in 2022, December 2022.

Internet at home is most common in households with children (99.9.%), in large cities (94.4 %) and in more urbanised areas.[132]

Following the release of the so-called digital dividend one (790-862 MHz) in 2012 and its transfer to LTE technology, the WRC-15 World Radiocommunication Conference decided to allocate the digital dividend two (frequencies in the 694-790 MHz band, the so-called 700 MHz band) to mobile broadband services. Full harmonisation of the use of the 700 MHz band in Europe was to take place by the end of 2022 under a European Parliament Decision.[133]

In accordance with the timetable contained in the Ministry of Digitalisation's document entitled *National Action Plan for the Change of Allocation of the 700 MHz Band in Poland (2017),* the years 2020 and 2021 have been used to make the necessary changes in the utilisation of the 700 MHz band, consisting, among other things, of the transfer of DVB-T terrestrial digital television emissions to lower frequency bands. The planned utilisation of the 700 MHz band, once it is fully released and internationally agreed, concerns the expansion of broadband coverage, primarily for the 5G standard.

In June 2022, the process of freeing up the 700 MHz band, combined with the change of the digital terrestrial television standard from DBV-T to DVB-T2 HEVC, was completed in Poland. Already earlier, before the 700 MHz band was fully completed for the new technology, the largest operators – mobile service providers (P4, Orange, T-Mobile and Polkomtel) – had launched the provision of 5G services in higher frequency bands (2.1 GHz, 2.6 GHz) based on frequency reservations issued by the Office of Electronic Communications for the right to provide a technology-neutral service. This made it possible to launch 5G instead of 4G LTE in large urban areas. The Office of Electronic Communications was preparing an auction that would result in telecom operators obtaining frequency reservations in the released bands to enable 5G services. The full availability of internet access services in this technology will mean the removal of most technological barriers and revolutionary changes in the market.

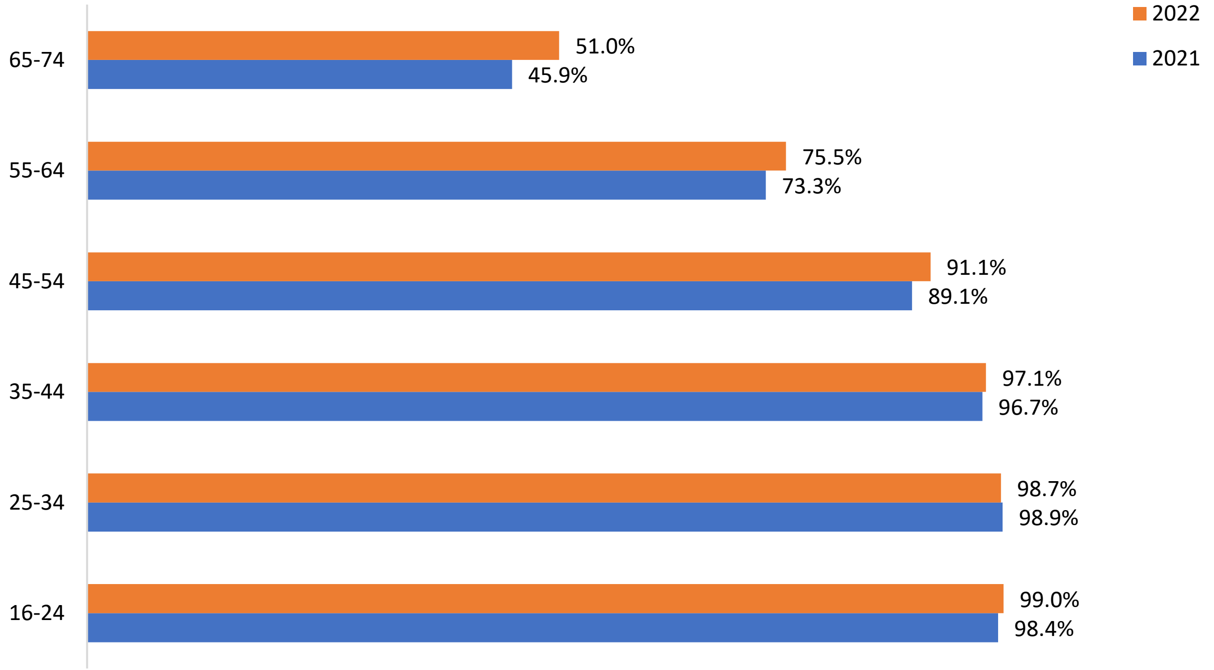
Use of the Internet

In 2022, 85.7% of people aged 16-74 used the internet regularly, at least once a week (previous year 83.6%).[134] The Internet is most often used at home. Much less frequently the web is used in other places such as work, school or public places.[135]

Frequency of internet use is most strongly correlated with age. Virtually the entire population aged 18-24 uses the web, with a 0.6 pp increase over 2022. The number of users aged 55+ has also increased (by 2.2 pp), as well as among seniors (a difference of 5.1 pp from 2021).

[132] *Information society in Poland in 2022*, Statistical analyses of the Central Statistical Office, Warsaw, December 2022.
[133] Decision (EU) 2017/899 of the European Parliament and of the Council of 17 May 2017 on the use of the 470-790 MHz frequency band in the European Union.
[134] CSO, *Use of information and communication technologies in public administration units, enterprises and households in 2022*, January 2023.
[135] *The ICT Usage* 2022 study did not include detailed data on where the internet is used.

Figure No 90. Regular Internet users by age group

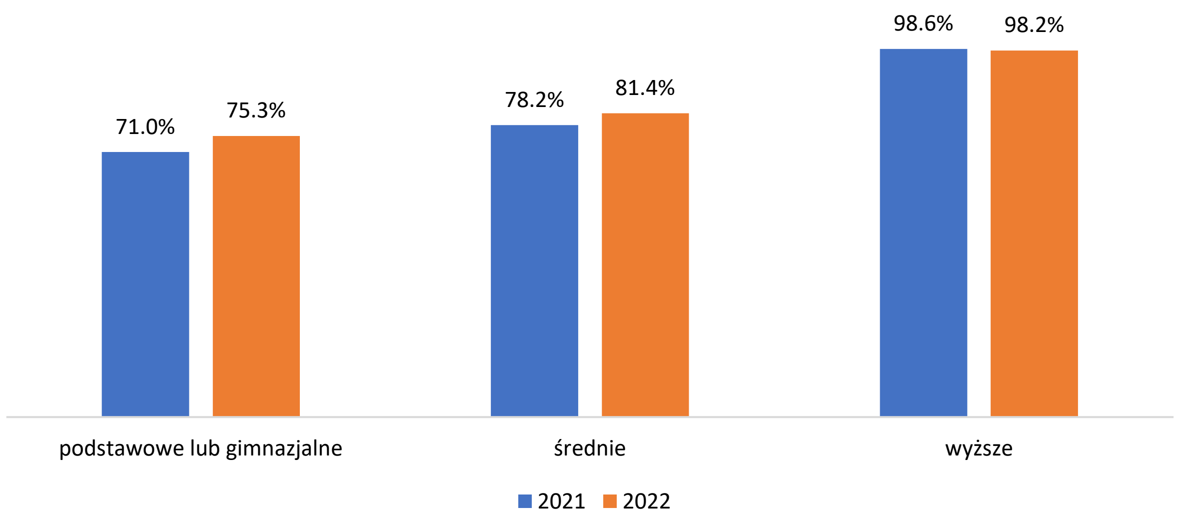


Source: Compiled by the KRRiT Bureau on the basis of data contained in CSO Statistical Analysis - Information Society in Poland in 2022, December 2022.

There is a significant difference in regular internet use according to education level.

In 2022, the difference between the primary and tertiary education groups was 22.9 pp.

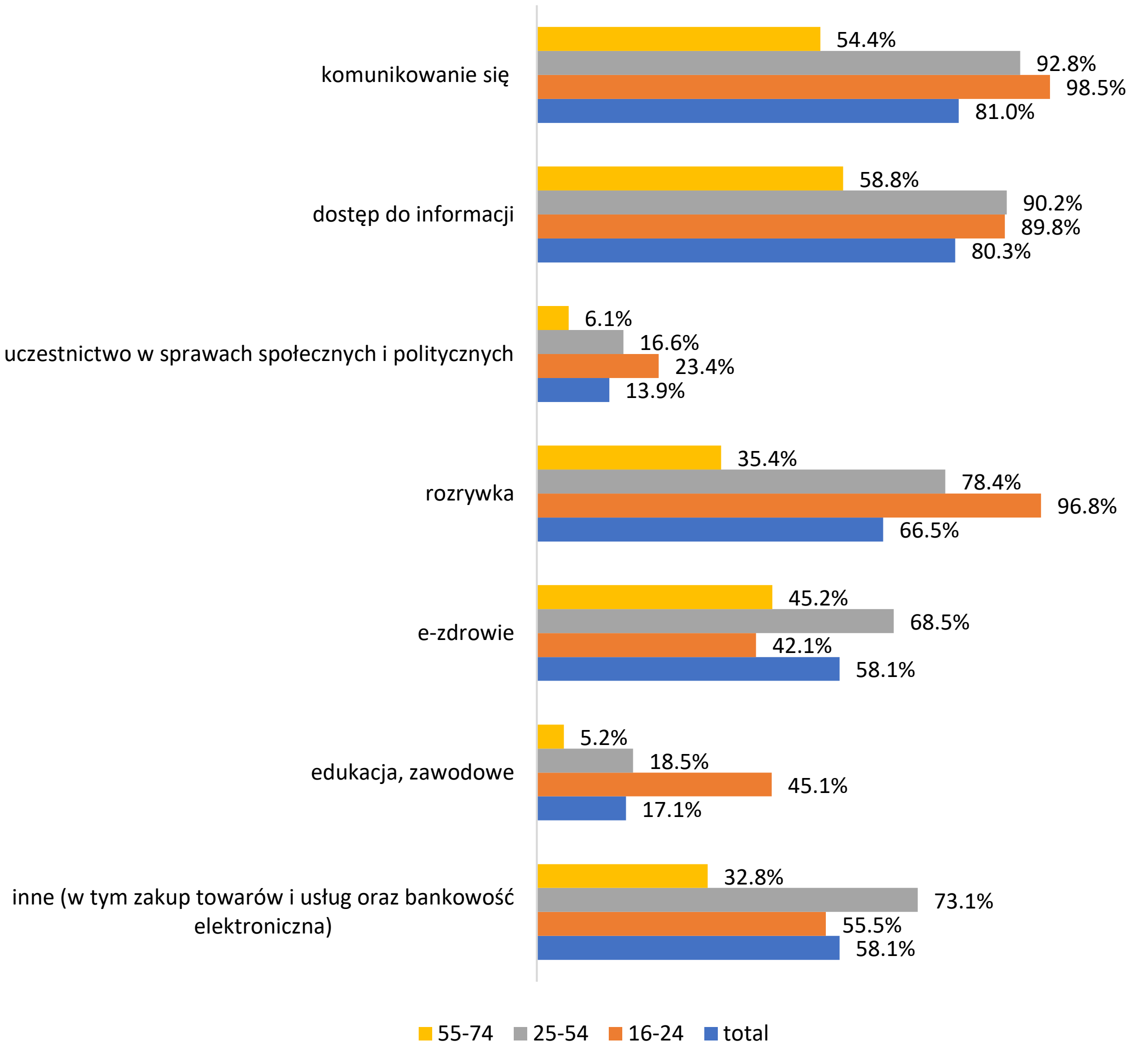
Figure No 91. Regular Internet users by level of education



Source: Compiled by the KRRiT Bureau on the basis of data contained in GUS Statistical Analysis - Information Society in Poland in 2022, December 2022.

The purposes of using the Internet now cover virtually all areas of life and satisfy a significant number of the user's personal, family and social needs. However, the most important purpose for which the internet is used is to communicate via email, social networking, text and visual messaging (Messenger, Skype, etc.).

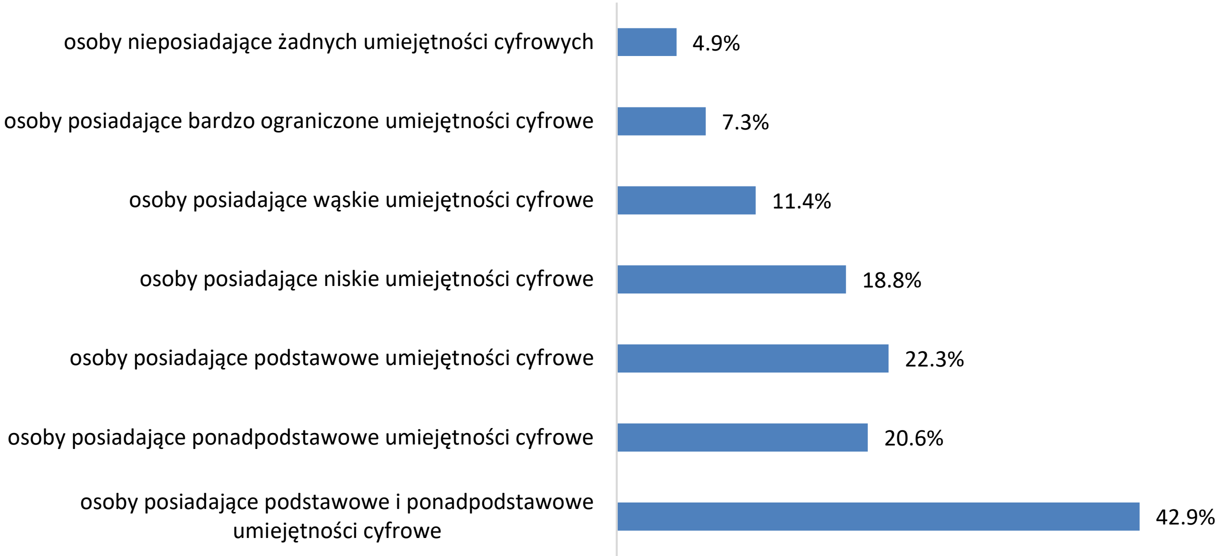
Figure No 92. Purposes of using the Internet for private matters by age group



Source: Compilation of the NCRB Office on the basis of CSO data Use of ICT in public administration units, enterprises and households in 2022, November 2022.

Despite the ever-increasing number of people using the internet, there is still a group that does not use this means of facilitating everyday life. The CSO materials for the last 3 years (2020 -2022) do not present statistics on this issue. However, according to the statistics for 2019, the most common reason for this is the lack of need to use it (9.1%) and the lack of appropriate skills (7.4%). However, the situation is changing in this respect. Digital skills defined as basic and secondary skills are now possessed by almost half of the population and a total lack of such skills by only 4.9%.

Figure No 93. People with general digital skills (by level of these skills)

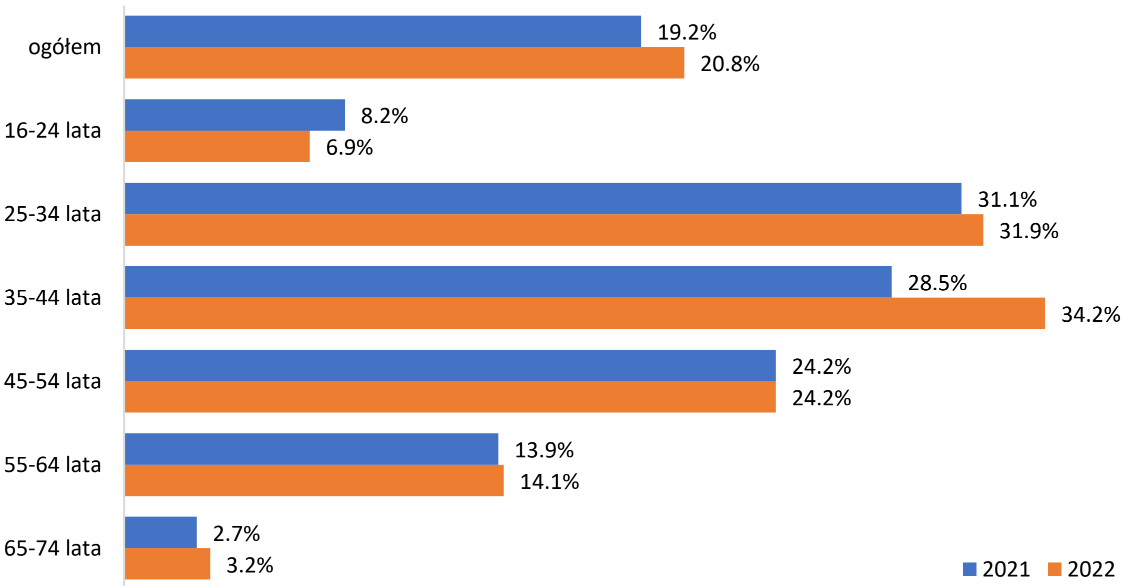


Source: Compiled by the KRRiT Bureau on the basis of data contained in GUS Statistical Analysis – Information Society in Poland in 2022, December 2022.

Although the movement restrictions caused by the COVID-19 pandemic were lifted in 2022, many employees continued to work remotely, and there were even slightly more than the previous year. Thanks to the widespread availability of the internet, this working model was used by 2022.

20.8 per cent of employees, 1.6 percentage points more than in 2021.

Figure No 94. People using remote working by age group



Source: Compiled by the KRRiT Bureau on the basis of CSO data Use of ICT in public administration units, enterprises and households in 2022, January 2023.

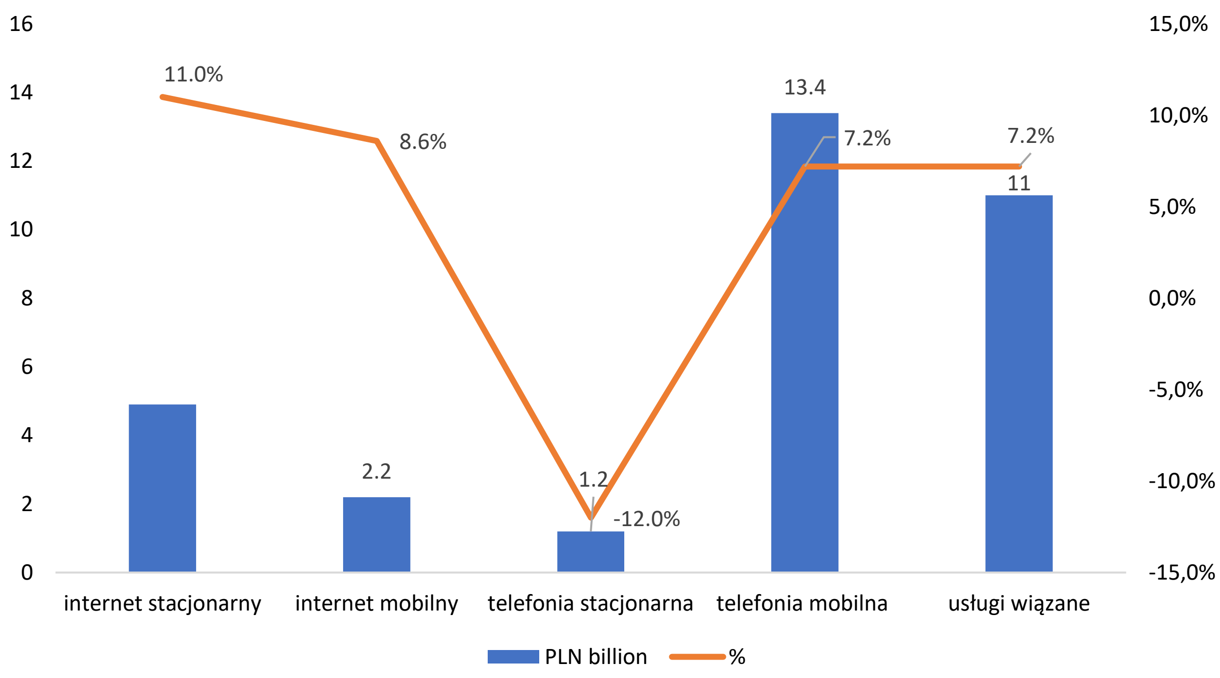
Telecommunications market

Telecommunications is one of the most important sectors of the Polish economy. According to a *report* prepared by the Office of Electronic Communications (*Urząd Komunikacji Elektronicznej*) *on the state of the telecommunications market in Poland in 2021*, the value of the telecommunications market amounted to PLN 40,800,000 and remained unchanged compared to 2020. The value of investment in the telecommunications sector in 2021 was PLN 8,900,000,000 .

Meanwhile, the PMR report[136] puts the value of the telecommunications market in 2021 at PLN 41,300,000,000 and estimates the result for 2022 at PLN 42,200,000,000 . The value growth of the telecommunications market in Poland is expected to be driven primarily by increasing revenues from broadband internet and mobile telephony services**.** The ISP market is currently the most promising part of the telecommunications market in our country. Revenue growth is driven by the expansion of fibre-optic networks, the development of the 'wholesale + retail' model and increasing demand for high-speed services. In mobile telephony, on the other hand, revenues have expanded due to the increases that have taken place between 2019 and 2022.

The mobile segment recorded growth of around 7.2%, with revenues generated from it accounting for 32.8% of revenues nationwide. The fixed telephony market continued to lose value to growth in internet access services. A growth of approximately 7.2% was recorded in the bundled services market.

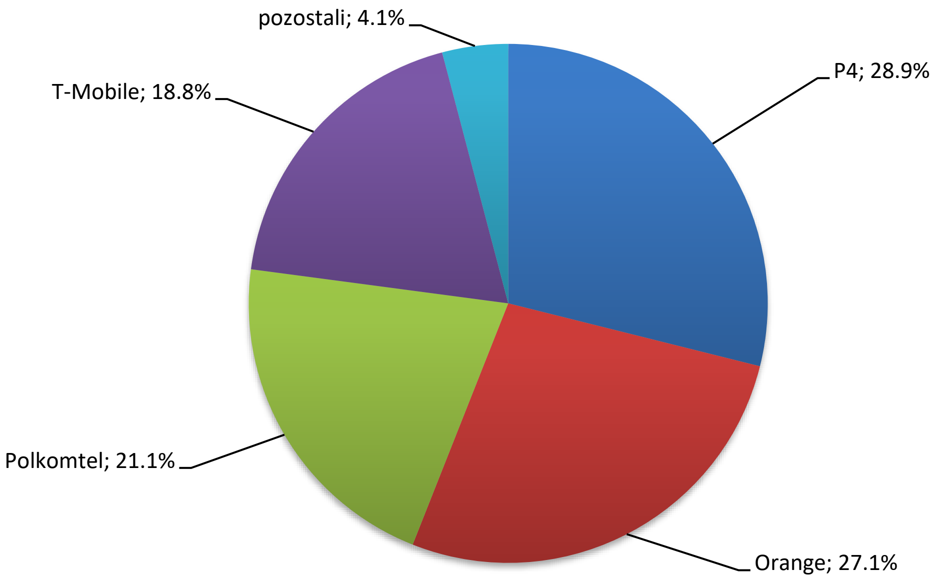
Figure No 95. Revenues of individual segments in the telecommunications market in 2021 (in PLN billion) and changes compared to 2020.



Source: UKE, Study of the KRRiT Bureau based on the Report on the State of the Telecommunications Market in Poland in 2021, June 2022.

[136] PMR, *Telecommunications market in Poland. Market analysis and forecasts for 2021-2026*.

Figure No 96. Shares of mobile operators by number of users in 2021



Source: Study by the KRRiT Bureau based on the Report on the State of the Telecommunications Market in Poland in 2021, UKE, June 2022.

In terms of revenue generated, Orange is in first place (28%). As in previous years, the mobile market had the character of an oligopoly[137] – the four incumbents had a combined 95.1% market share.

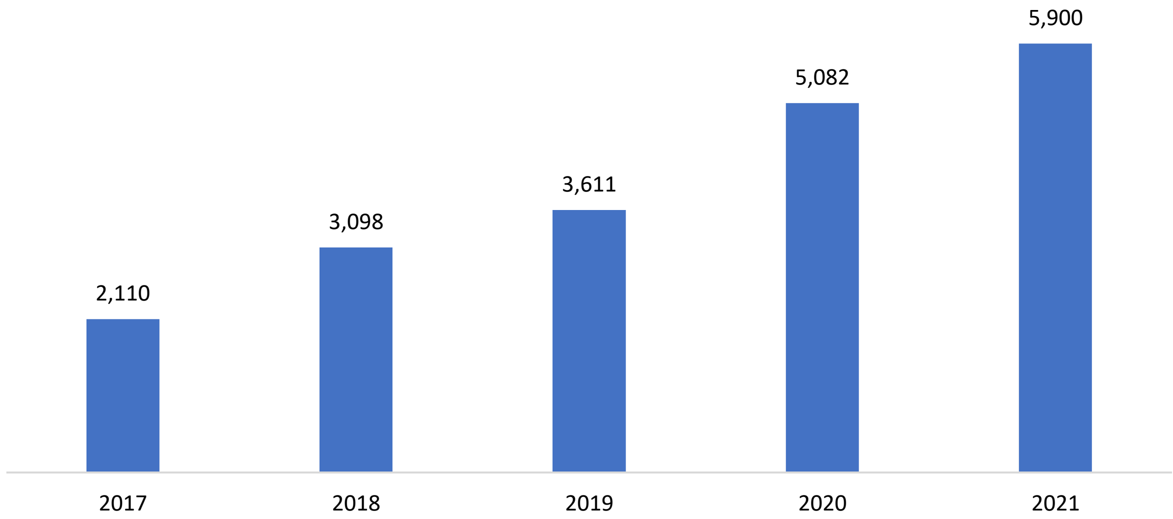
The number of active mobile SIM cards amounted to 56.6 million units, including 6 million M2M cards[138] (54.1 million units in 2020). The penetration of mobile services was 148.7%, placing Poland fourth in Europe, after Finland, Portugal and Latvia. The average length of calls per year was 3,210 minutes per Polish resident.

A service provided by mobile networks that has been growing extremely rapidly in recent years is data transmission. The volume of data transfer in 2021 was 16.1 per cent higher than in the previous year, with an average of 159 GB of data per Polish resident per year.

[137] As mobile telephony requires significant investment and the construction of costly technical infrastructure, there is a lack of strong players in the market to compete with existing operators. The situation is similar in other European countries.

[138] "Machine to Machine" is the ability of machines, devices and objects to communicate with each other and with humans for the efficient management of resources, most often via GSM networks.

Figure No 97. Data transmission volume in PB (petabytes) from 2017 to 2021



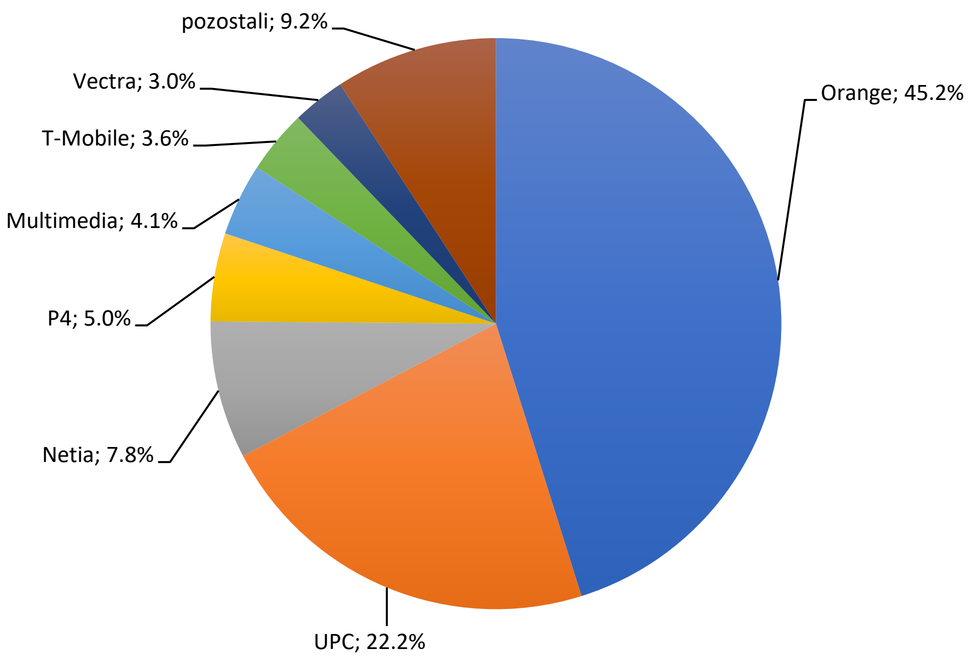
Source: Report on the state of the telecommunications market in Poland in 2021, UKE, June 2022.

There is growing interest in a new type of service, i.e. RCS messaging.[139] Before 2020, this type of communication was not popular. Operators developed this service dynamically in 2021 -–221 million RCS messages were sent at that time, which compared to 2020. (16.0 million) represents an increase of 1,280%.

The fixed telephony market has been on a downward trend for years. Both the number of subscribers and the value of the market have been steadily declining. In 2021, the number of fixed-line subscribers will be just over 2.7 million compared to 3.1 million the previous year, and the value of this market will have declined by 12%.

[139] Rich Communication Services (RCS) text messaging allows messages of up to 100 MB to be sent, good-quality attachments in the form of video files, photos, voice messages, among others, as well as tracking the current status of messages and location sharing.

Figure No 98. Shares of fixed-line operators in terms of subscribers in 2021

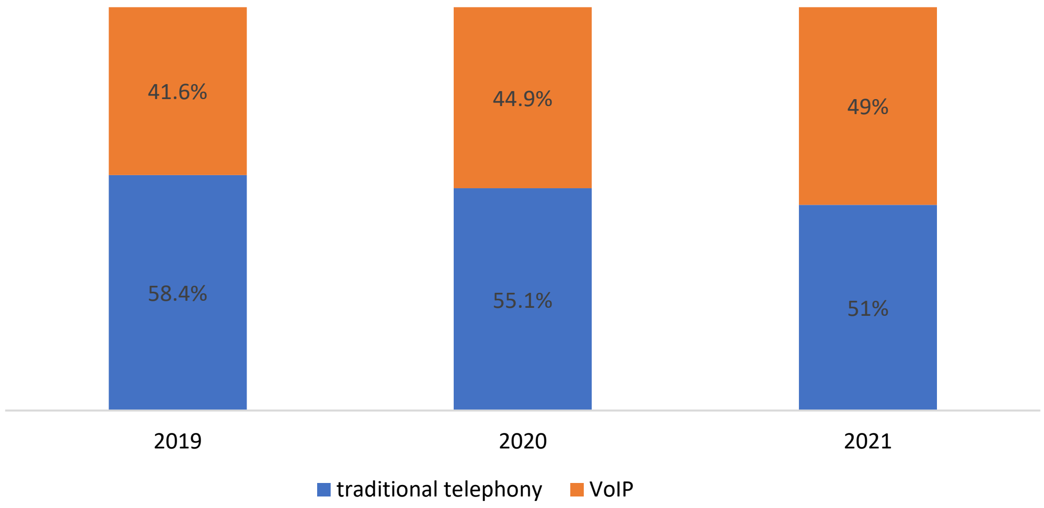


Source: UKE, Study of the KRRiT Bureau based on the Report on the State of the Telecommunications Market in Poland in 2021, June 2022.

VoIP services[140] are a rapidly growing segment of the telecommunications market. They are mainly used for international calls as a cheaper alternative to traditional telephony. In 2021, the number of VoIP users exceeded 2.6 million (0.8% more than last year) and the value of this market segment amounted to PLN 0.3 billion, an increase of 8.6% compared to 2020.

[140] Voice over Internet Protocol - a telephone connection via the Internet.

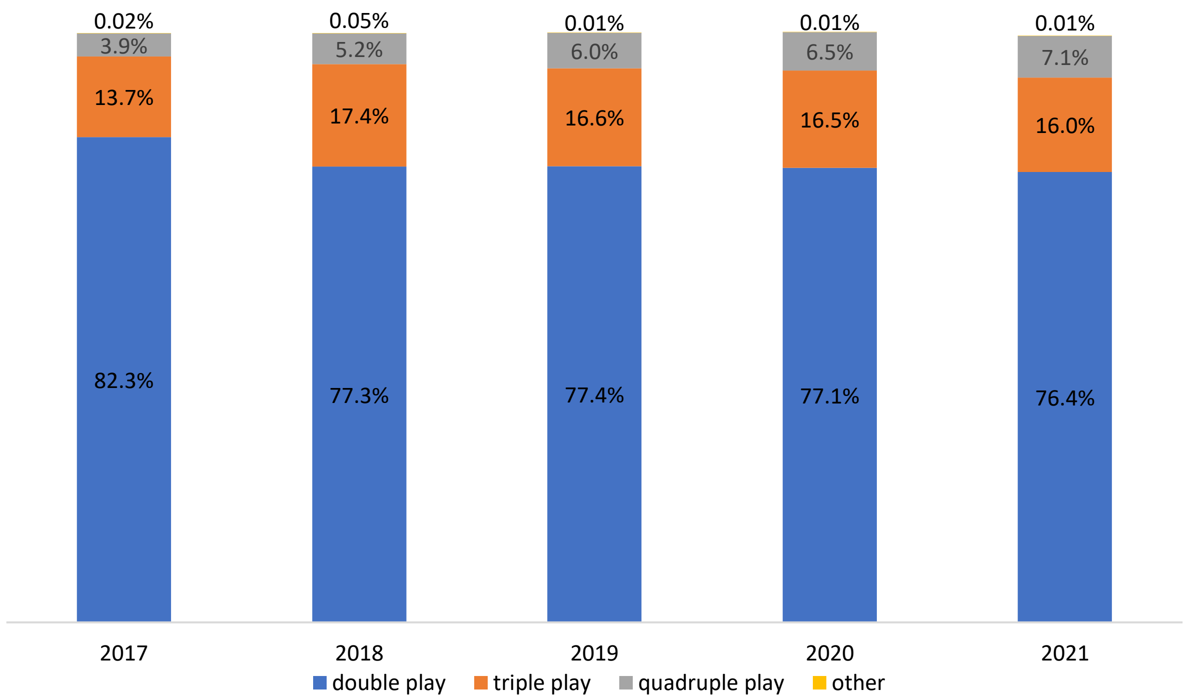
Figure No 99. Share of VoIP and traditional telephony in the total number of fixed telephony users



Source: Study by the KRRiT Bureau based on the Report on the State of the Telecommunications Market in Poland in 2021, UKE, June 2022.

The bundled services market is very popular and is becoming saturated and more stable than in the last five years.

Figure No 100. Changes in the breakdown of bundled service packages by number of subscribers



Source: UKE, Report on the state of the telecommunications market in Poland in 2020, June 2021.

As in 2020, the most popular service packages in 2021 were *double play* packages, chosen by 76.4% of users. *Triple play* packages were chosen by 16% and *quadruple play by* 7.1% of users. The remaining packages: *quintuple play* and *sextuple play were* marginally popular (about 0.01 in total). Among the *double play* packages, mobile telephony + mobile internet (62%) with 50.7% from operator P4 and fixed internet + TV (16.2%) with 13.5% from Orange were the most popular.

As mentioned earlier, Poland and all of Europe are preparing for the commercial deployment of 5G technology. The 5G network allows for high bitrates, lower latency than current standards, easier to achieve universal coverage. It will serve both internet delivery and communication and data transfer purposes. Tests and studies are being undertaken on the possibility of efficient delivery of TV and radio programmes via 5G networks, which will significantly expand the area of service convergence.

The European Commission's plans called for 5G network coverage of one city in each EU Member State by 2020. By 2025, not only all urban areas, but also the main transport routes are to be within 5G network coverage. In the next few years, operators will look for new sources of revenue and diversify their service offerings, there will be increased interest in providing ICT services (services on the borderline between IT and telecommunications), creating their own data and financial services (credit cards, insurance, etc.).

3.3 Cinematography

Patronage of film production in Poland has been exercised on behalf of the state since 2005 by the Polish Film Institute by awarding grants for film production, the organisation of festivals and events, script scholarships, archiving and reconstruction activities, film education, training and professional development, the modernisation of cinemas, and the promotion of Polish film abroad.

Entrepreneurs in the audio-visual industry also have a significant share in film production, as, according to the Cinematography Act (Article 19), television broadcasters, digital platform operators, film distributors, cinema owners and cable operators and entities providing on-demand audio-visual media services contribute to the PISF budget through a mandatory 1.5 per cent deduction from advertising revenues.

Table No 5. Summary of revenues indicated in Article 19 of the Cinematography Act in 2022 by obliged entities (in PLN million)

Lp.	Scope of activity of the obliged entity	Value of the contribution
1.	Cinemas	12.33
2.	Cinema distributors	0.27
3.	TV broadcasters	62.84
4.	Digital platform operators	52.58
5.	Cable TV operators	28.66
6.	Audio-visual media service providers	32.77
	Total:	**189.45**

Source: Study of the KRRiT Bureau based on data from the Polish Film Institute (PISF)

Since 2019, there is also an Act on Financial Support for Audio-visual Production, the main objective of which is to introduce incentives to facilitate the comprehensive development of the Polish audio-visual industry, the development of culture and the promotion of Polish cultural heritage in the world. The mechanism provides for the reimbursement of 30% of the so-called eligible costs incurred for the production of films and series in Poland.[141] The Polish incentive system is open to national and international productions, for feature, animated and documentary films and series. In order for a project to receive support, its producers must, in addition to investing the financial resources specified in the regulations in Poland, cooperate with Polish filmmakers and film crews and shoot in Polish locations or film studios. Once the required criteria are met, support is automatically granted.

In 2022, the PISF Operational Programme 'Film Production' will support, among others, 38 projects at the development stage[142] (including: 17 documentaries, 17 feature films and 4 animated series), 85 projects at the production stage (including: 32 feature films, 40 documentaries, 10 animated films and 3 animated series), 16 international minority co-productions, 7 projects that are micro-budget film productions (feature directorial debuts), 11 film projects for young audiences or family audiences, 17 projects under the "script development" priority and 5 projects under script scholarships (including: 2 feature films and 3 documentaries).

In the second quarter of 2022, the PFI developed a new Operational Programme (Polish-Ukrainian Film Initiatives) to support activities carried out jointly by Polish and Ukrainian producers and filmmakers or with Polish-Ukrainian themes. Under the dedicated programme, 4 projects received funding for documentary film production and 2 for 'script development'.

In 2022, 298 films (240 feature films, 19 documentaries and thirty nine animated films) were released in Polish cinemas, including sixty five Polish productions. Attendance in cinemas was 40 million people, an increase of more than 14 million compared to 2021. As a result, revenue from ticket sales also increased, reaching PLN 695,000,000 compared to PLN 451,000,000 in 2021.

Among the ten most popular films on Polish screens in the Box Office ranking for 2022, the Polish film *Listy do M. 5*, directed by Łukasz Jaworski, was in fifth place (over 1 million viewers), and the film *Johnny*, directed by Daniel Jaroszek, was in 10th place (over 900,000 viewers).

In 2022, a number of Polish films won awards at international festivals, including:

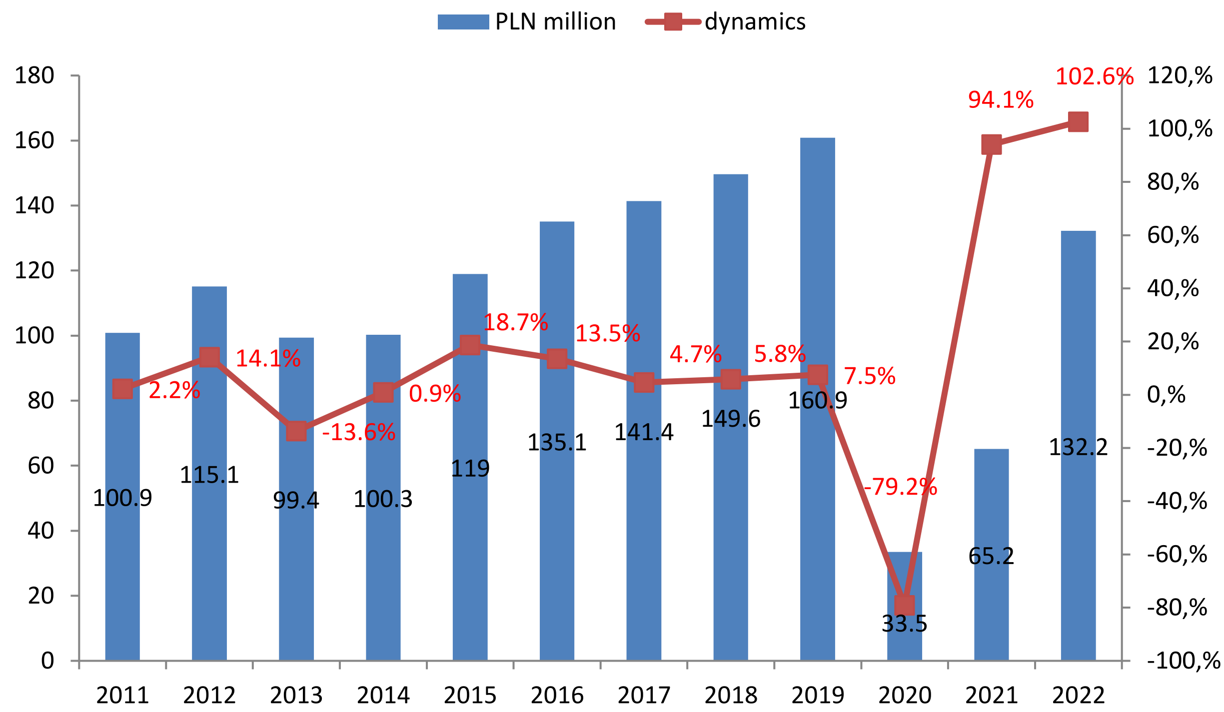
- *IO,* dir. by Jerzy Skolimowski – Oscar nomination (American Academy of Motion Picture Arts Awards) in the International Feature Film category; two awards at the Cannes International Film Festival; two nominations for the European Film Award; New York Film Critics Circle Award; two awards at the Los Angeles Film Critics Association; César nomination (French Academy of Motion Picture Arts Awards); Arab Critics Award;
- *Hamlet Syndrome*, dir. by Elwira Niewiera, Piotr Rosołowski – two awards at the Locarno International Film Festival;

[141] https://pisf.pl/zachety-informacje/

[142] The development of a film project is the preliminary work leading to the production of a feature film, documentary or animated film: preparation and writing of the script, script revisions, so-called script doctoring, preparation of a picture script, so-called storyboard, preparation of artwork, production of the pilot, production of the trailer, so-called trailer, making test shots, searching for investors and/or co-producers, preparation of financial plans, production design documentation, etc.

- *The Silent Twins*, dir. by Agnieszka Smoczyńska – two awards at the British Independent Film Award;
- *Bread and Salt,* dir. by Damian Kocur – Special Jury Prize at the Venice International Film Festival; *Bronze Pyramid Award* at the Cairo International Film Festival;
- *Fucking Borholm,* dir. by Anna Kazejak – Europa Cinemas award at the Karlovy Vary International Film Festival;
- *A Woman on the Roof,* dir. by Anna Jadowska – award at the Tribeca International Film Festival in New York.

Figure No 101. Value and dynamics of cinema advertising revenues from 2011 to 2022



Source: Publicis Group report, Advertising market in Poland in 2022.

In 2022, cinema advertising revenues increased by 102.6% compared to the previous year. Despite a clear increase in 2021-2022 and rebuilding its pre-pandemic position, cinema advertising revenues are still below the value achieved in 2019.[143]

[143] Publicis Group report, *Advertising market in Poland in 2022.*

4. Media markets - structure, origin of capital, ownership transformations

Excessive concentration, as expressed in the market power of the major players operating in a given market, limits the development opportunities of the remaining entrepreneurs and has a negative impact on media pluralism. Limitation of information sources and insufficient funding and lack of investment capacity of smaller media providers reduce the sector's ability to create a diverse programme offer. They also negatively affect the media's organisation of a forum for public debate (including on a local and regional scale) and the exercise of social control. The level of concentration in the media is therefore an important area of analysis from the point of view of protecting pluralism.

In examining the structure of media markets in this chapter, two indicators were used:

- TOP 4, indicating the percentage share of the four largest players in a given market. According to the methodology used in the European *Media Pluralism Monitor,*[144] it is assumed that a high risk to pluralism in the context of competition is when the share is above 50%;
- The Herfindhal-Hischman Index (HHI) is used in anti-trust proceedings and in sector regulation. The HHI is the sum of the squares of the shares of all traders in a market. The value of the index ranges from close to zero for fragmented markets to 10,000 for monopolised markets.[145]

The amount of both indicators and their changes over time make it possible to measure the market power of entrepreneurs and to determine in which direction competitive conditions are developing in a given market.

A dominant position in competition law is not expressed in terms of a percentage share of an entrepreneur in a given relevant market. However, it has been assumed that a value above 40% of the share may mean that a dominant position has been achieved.[146] From an analysis of the solutions adopted in other European countries, where the limits of media entrepreneurs' market share are

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[144] The Media Pluralism Monitor (MPM) is a tool developed by the Centre for Media Pluralism and Media Freedom at the European University Institute to assess threats to media pluralism. https://cmpf.eui.eu/media-pluralism-monitor/

[145] When assessing market concentration in practice, the HHI value:
- lower than 1,000 indicates a low level of concentration;
- between 1,000 and 1,800 indicates a moderate degree of concentration;
- between 1,800 and 2,500 indicates a high degree of concentration;
- over 2,500 a very high degree of concentration, akin to an oligopoly;
- equal to 10,000 means a monopoly.

[146] To be in a dominant position is to be able to influence the market very effectively and thus prevent, distort and, in extreme cases, even prevent the functioning of competing undertakings. An entrepreneur with such a large share of the market is able to act independently, without cooperation with competitors, and thus has the ability to impose operating conditions on them, e.g. by setting prices or controlling distribution, etc.

regulated by law, it can be assumed that the warning state is exceeding 20% of this share, while the upper acceptable limit is 30%.[147]

An examination of media markets using competition law concepts would require the delineation of relevant markets.[148] In describing competition in individual media segments (TV, radio, VoD services or programme distribution), this chapter is limited to providing an overview based on available data. The values of the TOP 4 and HHI indicators should therefore be regarded as illustrative.

Structure of the television market

TOP 4[149] for the TV programme audience market (TVP, Polsat, TVN Discovery and TVP Puls) in 2021 was 79.8%, slightly lower than the previous year's 81.81%. The HHI[150] increased slightly and was at 1995, previously 1965.)[151] The high degree of concentration of the TV audience market has persisted for years with little fluctuation. This indicates a mature phase in the development of this market. The increasing number of programmes available on free-to-air terrestrial television and the large selection of programmes on offer from pay-TV operators do not significantly affect the established position of the main television groups.

The TOP 4 for the TV market in revenue terms (advertising and other commercial communications) in 2021 was 86%, a slight decrease compared to 2020 (87.8%). This is the second year in a row that the revenues of the four largest TV companies are shrinking.[152] However, these changes are not significant. The level of concentration in the TV advertising revenue market measured using the HHI in 2021 was also slightly lower achieving the 2019 level.[153]

The TOP 4 and HHI indicators in both the audience market and the advertising revenue market testify to the persistence of the oligopoly.[154] This is all the more so when considering the position of the other market players, a clear disparity can be seen. The TOP 4 broadcasters achieve an advantage by combining the functions of broadcaster and advertising broker and the practice of so-called programme bundling in sales offers to pay-TV operators.

As of May 2021, antitrust proceedings are pending before the President of the Office of Competition and Consumer Protection against Telewizja Polsat and four companies of the Discovery Group (owner of TVN) – Discovery Communications Europe, Discovery Communications Benelux, Discovery Polska and Eurosport in relation to the bundling of commercial offers by these entities used

[147] KRRiT Observer, *Regulating media ownership concentration in selected countries,* 2021. https://www.gov.pl/web/krrit/regulacja-koncentracji-wlasnosci-mediow-w-wybranych-krajach

[148] The relevant market is the market for goods which, by virtue of their intended use, price and characteristics (including quality), are regarded by their buyers as similar (substitutable) and are offered in an area in which, by reason of their nature, properties, consumer preferences or significant differences in price and transport costs, there are similar conditions of competition.

[149] Share of the top four players in a given market. The TOP 4 TV broadcasters included the same players that were included in the audience market study in Chapter 1.

[150] The HHI identifies the level of competition in a given market and helps to assess the potential effects of corporate concentration.

[151] In 2019, this indicator was 1,965.

[152] In 2019, the TOP 4 for the advertising and other commercial communications revenue market was 89%.

[153] In 2019, this indicator was 2,404.

[154] Over 2,500 – a very high concentration, akin to an oligopoly.

in contracts with pay-TV operators. The outcome of these proceedings will have a significant impact on the pay-TV market.

The origin of the majority of capital in 2022 from the point of view of the TV audience market was national at 56.5%, slightly lower than in 2021 (60%). On the other hand, taking into account advertising revenues, there was a decrease in the share of national players from 61% to 51.5%.

In 2022, there have been no capital changes in the television market that would affect the degree of concentration in the sector.

Structure of the on-demand audio-visual media services market

The TOP 4 ratio for the SVoD subscriber market in 2021 reached 80.4%, which compared to 2020 (82%) represents a slight decrease for the second year in a row.[155]

The SVoD subscriber market survey in 2021 using the HHI yielded a result of 1,975, which represents a slight slowdown in the concentration process compared to the previous year (2,215).[156]

The estimated TOP 4 indicator for the on-demand audio-visual media services subscription revenue market in 2021 was 85.6% (in 2020 - 87.25%), implying a further decrease in the value of this measure.[157] However, the very high concentration in 2021 is indicated by the HHI for the SVoD revenue market, which stands at 3,140 and remains at the same level as in 2020.

Netflix remains the market leader for subscription services, both in terms of SVoD subscribers and subscription revenues. The respective figures are 35.7% and 54.4%.

Services provided by foreign-owned sites (Netflix, Player.co.uk, Hbogo.co.uk, Primewideo.com, Canal+ and other foreign-owned sites) in 2021 comprise 80.2% of revenues from this market. In 2020, this share was 79.5%.

There are no capital changes in 2022 that could affect the state of competition in on-demand audio-visual media services in SVoD.

Structure of the satellite pay-TV market

The TOP 4 ratio for the satellite platform subscriber market in 2021, as in previous years, is invariably 100%. This high ratio is due to the duopoly of Cyfrowy Polsat and Canal+ (together with Orange). The HHI continued to be very high at 5123 in 2021 (previous year – 5,094).[158] This situation is repeated in the sector's revenue market. The HHI for the revenue market in 2021 was at 5024, as it was in 2020 – 5,018.[159] These results should not be seen as a negative development. The existence of more satellite platforms is not justified due to technological considerations in running such a business.

An entity with Polish capital - Cyfrowy Polsat in 2022 received 54% of the number of subscribers and 53.5% of revenues from this market.

[155] In 2019, the rate was 84.32%.
[156] In 2019, this indicator was 2,097.
[157] In 2019, the rate was 91.54%.
[158] In 2019, this indicator was 4,878.
[159] In 2019, this indicator was 5,002.

Structure of the cable pay-TV market

The TOP 4 indicator (Multimedia+Vectra, UPC, Inea and Toya) for the cable pay-TV subscriber market was at 86% in 2021, up from the 2020 value. - 81%.[160] The HHI for such a market snapshot also increased in 2021, which was 2,984 (2020 - 2879).[161]

The figures for the TOP 4 and HHI in revenue terms are similar to those quoted above and are respectively: 86% and 3,009 (in 2020 – 3,103).[162] The market is moving towards a duopoly.

Polish operators: Vectra + Multimedia, Inea and Toya and smaller local cable operators (around 200) together hold 62% of the subscriber and revenue market. The remaining shares belong to P4, the operator of the Play telecommunications network, now owned by the French entity Iliad Purple S.A.S., which purchased 100% of the shares of UPC Polska from the Dutch company Liberty Global.[163] This followed the European Commission's unconditional approval of the transaction in March 2022.

Structure of the radio market

The TOP 4 index (RMF, Polskie Radio, Time and Eurozet) in 2021 for the audience of radio programmes reached 81.5% and remained at a similar level compared to 2020 - 81.8%.[164] The HHI in 2021 was at 2,103, in 2020 – 1,893.[165] These values indicate an increase in the concentration of the sector with the main radio groups.

The TOP 4 for the radio advertising revenue market is slightly different (RMF, Eurozet, Polskie Radio and Agora). This indicator was lower than the audience in 2021 at 66%, returning more or less to the 2019 value.[166] The second indicator, HHI, in this market reached 1,278, which compared to 2020 (1,033) indicates a further slight increase.[167] The radio market is a mature market with no significant changes taking place. This is due to limited access to spectrum resources. Noticeable changes may occur with the implementation of DAB+ or as a result of further consolidations and acquisitions.

In February 2019, Agora SA bought a 40% stake in Eurozet. As part of the deal, it also gained the option to acquire the remaining 60% of its shares from the Czech company SFS Ventures by 2022. The transaction required the approval of the Office of Competition and Consumer Protection. In January 2021, the President of the Office of Competition and Consumer Protection prohibited the transaction. On 27 February 2023, the Court of Appeal in Warsaw issued a verdict signifying unconditional consent for Agora to acquire control of Eurozet sp. z o.o. The verdict is legally binding. As a result of this ruling, Agora was able to take full control of Eurozet and bring about a consolidation of licence rights, which may be particularly significant for certain local markets where both Agora and Eurozet's subsidiaries hold licences.

RMF FM, owned by the German Bauer Media Group, is the radio market leader. Its shares stand at 37% (audience) and 24% (advertising). The other broadcasters represent Polish capital.

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[160] In 2019, the rate was 84%.
[161] In 2019, this indicator was 2,897.
[162] In 2019, this indicator was 2,897.
[163] https://www.wirtualnemedia.pl/artykul/play-kupil-upc-polska-za-ile-od-kogo-liberty-global-odchodzi-prezes
[164] In 2019, the rate was 81.6%.
[165] In 2019, the index was 1,910.
[166] In 2019, the rate was 68%.
[167] In 2019, this indicator was 1,269.

Table No 6. TOP 4 and HHI values for individual media markets for 2022[168]

I. Television		
Audience		
TOP 4	79.8% (81.74%)	TVP, Polsat, TVN Discovery, Puls
HHI	**1,995 (1,965)**	High-concentration
Advertising		
TOP 4	86% (87.8%)	TVP, Polsat, TVN Discovery, Puls
HHI	**2,404 (2,447)**	High-concentration

II. VoD		
Users		
TOP 4	80.4% (82%)	Netflix, Ipla, Player, cda premium
HHI	**1,975 (2,215)**	High-concentration
Subscription revenues		
TOP 4	85.6% (87.25%)	Netflix, Ipla, Player, cda premium
HHI	**3,140 (3,140)**	Very high concentration close to oligopoly

III. Pay-TV - satellite platforms		
Subscribers		
TOP 4	100% (100%)	Polsat Cyfrowy, Canal+, Orange
HHI	**5,123 (5,094)**	duopoly
Subscription revenues		
TOP 4	100% (100%)	Polsat Cyfrowy, Canal+, Orange
HHI	**5,024 (5,018)**	duopoly

IV. Pay TV - cable networks		
Subscribers		
TOP 4	86% (81%)	Vectra + Multimedia, UPC, Inea and Toya
HHI	**2,984 (2,879)**	Very high concentration close to oligopoly
Subscription revenues		
TOP 4	86% (84%)	UPC, Vectra, Inea and Toya
HHI	**3,309 (3,103)**	Very high concentration close to oligopoly

[168] The values in brackets are for 2021.

V. Radio		
Auditorium		
Top 4	81.5% (81.8%)	RMF, Eurozet, Public Radio, Time
HHI	2,103 (1,893)	High-concentration
Advertising revenue		
TOP 4	66% (87.7%)	RMF, Time, Eurozet, Agora
HHI	1,278 (1,033)	Moderate concentration

Source: Study from the KRRiT Bureau

Cross-concentration in the television, radio, press and telecommunications markets

Particular attention should be paid to market positions:

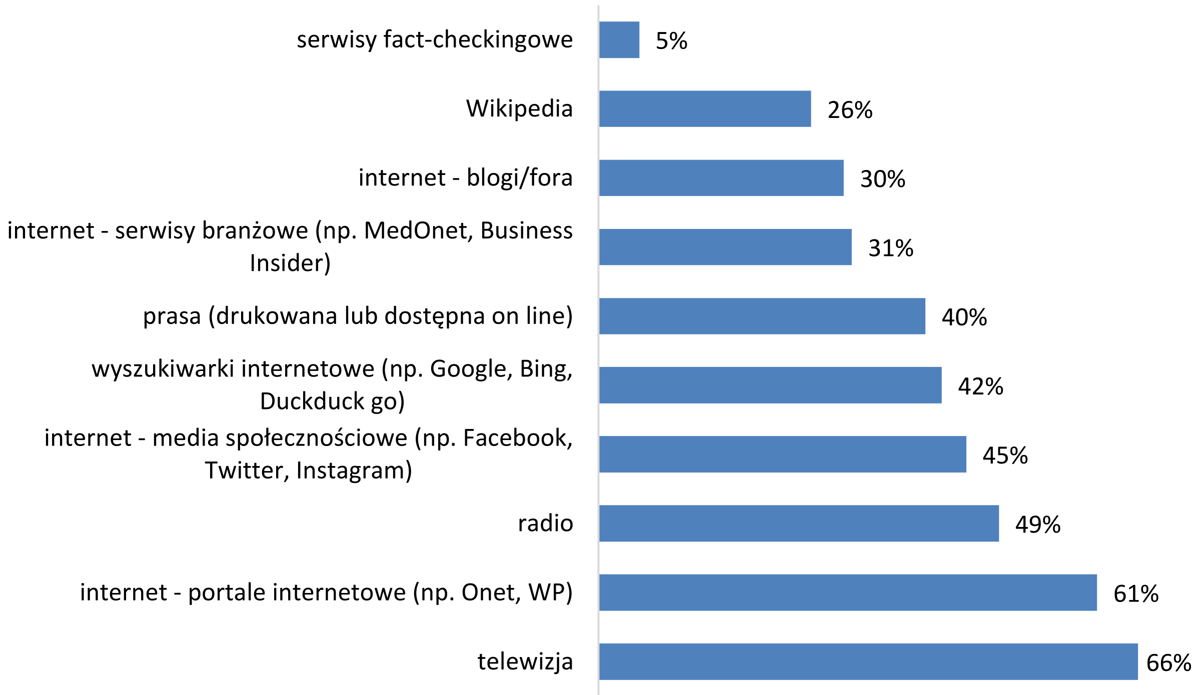
- Cyfrowy Polsat (television, brokerage of advertising campaigns of other broadcasters, satellite pay-TV, VoD, internet delivery, telecommunications);
- TVN Discovery (television, brokerage services for advertising campaigns of other broadcasters, shares in nc+ - satellite pay-TV company, VoD, audio-visual rights);
- Bauer Group (radio, press, internet);
- Agora (internet, radio, press).

The KRRiT draws particular attention to the threats to media pluralism that exist on the Polish market, especially in terms of values such as: rights to works, own productions, content distribution (broadcasting, distribution and VoD), technical conditions of content delivery (networks or applications). Such a situation implies excessive concentration and significantly limits the possibility for other content providers to develop and blocks the entry of new players into the market.

5. Media education in the age of disinformation

Poles derive their knowledge mainly from television, internet portals, radio and social media, as well as search engines. Television and internet portals as a source of information are popular to a similar extent (66% and 61% respectively). Radio and social media engage respectively: 49% and 45% of the audience. It is important to note the low level of use of fact-checking services (only 5%), although 22% of respondents declare that they have come across the activities of fact-checking organisations.

Figure No 102. Sources of current information about Poland and the world

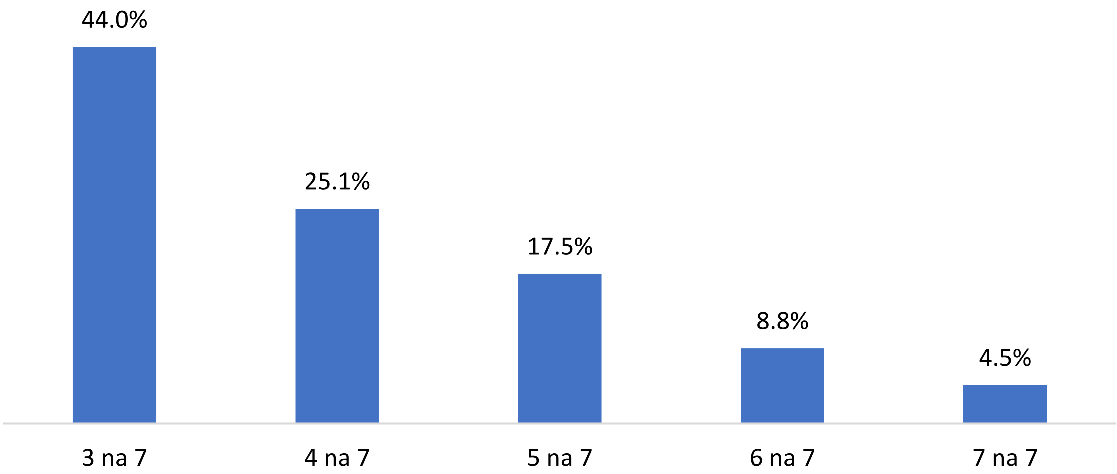


Source: Compiled by the KRRiT Bureau on the basis of data from the report Digital Poland Dezinformacja oczami Polaków, February 2022.

Research on resistance to disinformation phenomena[169] shows that Polish Internet users have relatively low competence in distinguishing fact from opinion. Only 4.5% of respondents were able to correctly distinguish between fact and opinion in the seven test questions asked.

[169] https://akademia.nask.pl/badania/RAPORT_BezpWyb_ONLINE.pdf

Figure No 103. Correct answers of respondents in terms of distinguishing fact from opinions (in %)

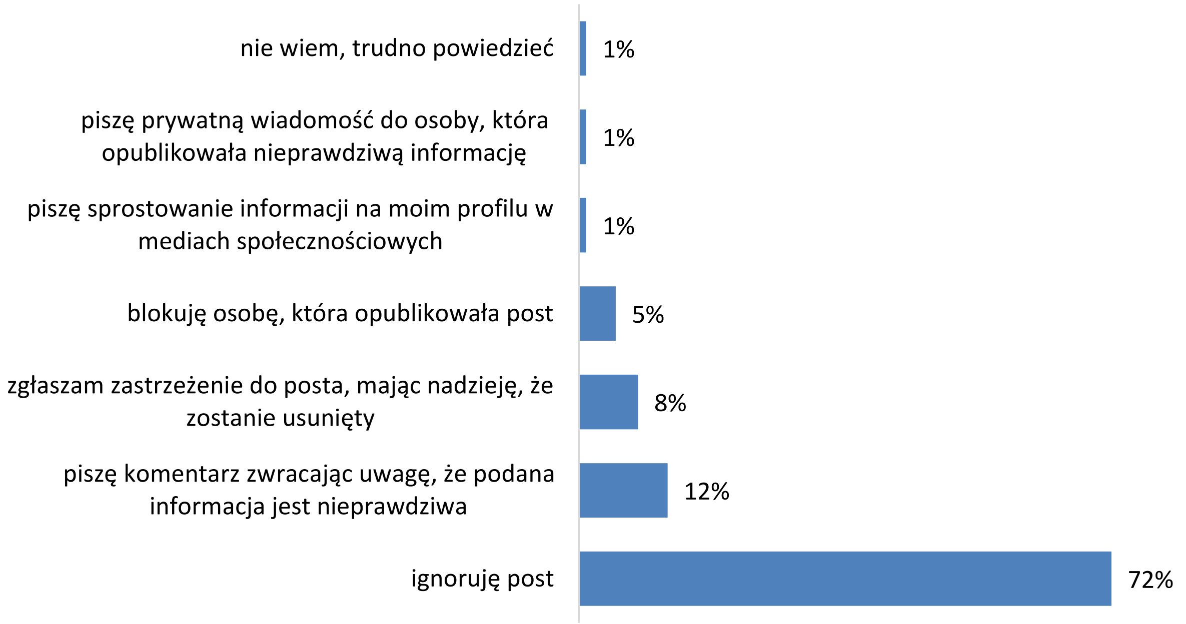


Source: compiled by the NCRB Office based on the report Safe Elections. Survey of opinions on (dis)information online, NASK and PBS, March/April 2019.

In January 2022, a report entitled *Research on susceptibility to disinformation was* published, prepared on behalf of the Academic Centre for Strategic Communication[170] by the Foundation Institute for Market and Social Research - IBRiS, which presents the results of the impact of disinformation on society depending on the place of residence. The study was prepared in the context of the events taking place on the Polish-Belarusian border. Its aim was, among other things, to gather knowledge about the perception of fake news and true information by two groups – people living in the border zone under the state of emergency and the rest of the society. According to the report, when reading false information on social media, users from the national group are most likely to ignore the post (72%). Only 12% of respondents from the nationwide group post a comment, pointing out that the reported information is fake news.

[170] https://www.wojsko-polskie.pl/aszwoj/u/74/20/74208706-a1a3-43d3-8c2c-52e34b222dc5/biuletyn_nr_3.pdf

Figure No 104. Response to the question: what action do you take when you read false information (fake news) on social media?



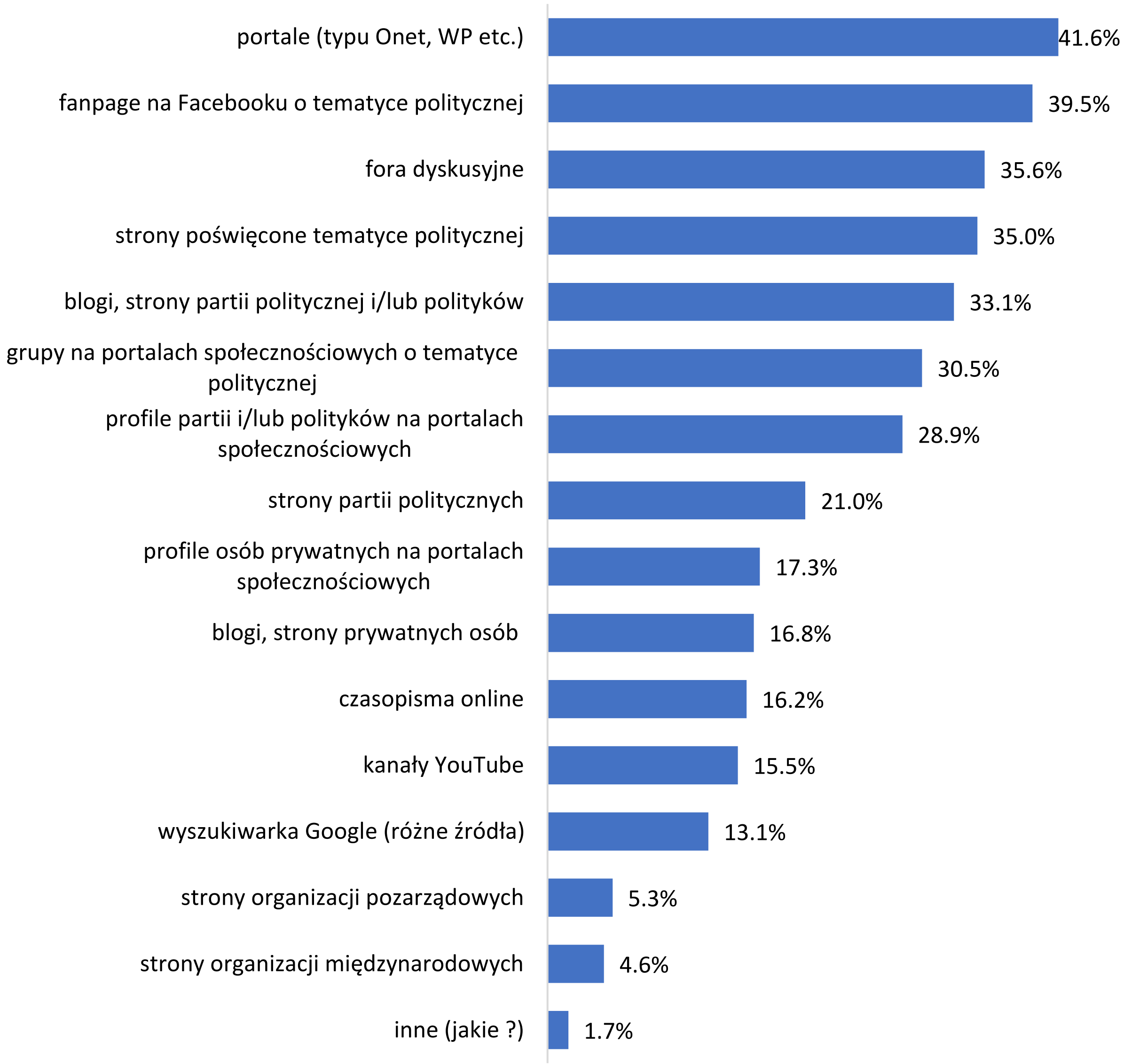
Source: compiled by the NCRB Office based on data from Survey of Vulnerability to Misinformation, Academic Centre for Strategic Communications, January 2022.

Those who ignore false information appearing on social media do so primarily because they are reluctant to engage (36% - national sample) or disbelieve that their actions will be effective (26% - national sample).

The results of the survey *Safe Choices. Survey of opinions on (dis)information on the web,*[171] prepared by NASK and the *Pracownia Badań Społecznych* (PBS) in March/April 2019, indicate respondents' perceptions of the sources on the internet where disinformation activities or those aimed at influencing the outcome of democratic elections in Poland can most often be encountered.

[171] https://www.nask.pl/download/30/2599/RAPORTBezpWybONLINE.pdf

Figure No 105. Percentage distribution of respondents' answers to the question: where can you most frequently encounter disinformation activities on the Internet aimed at influencing the outcome of democratic elections in Poland?

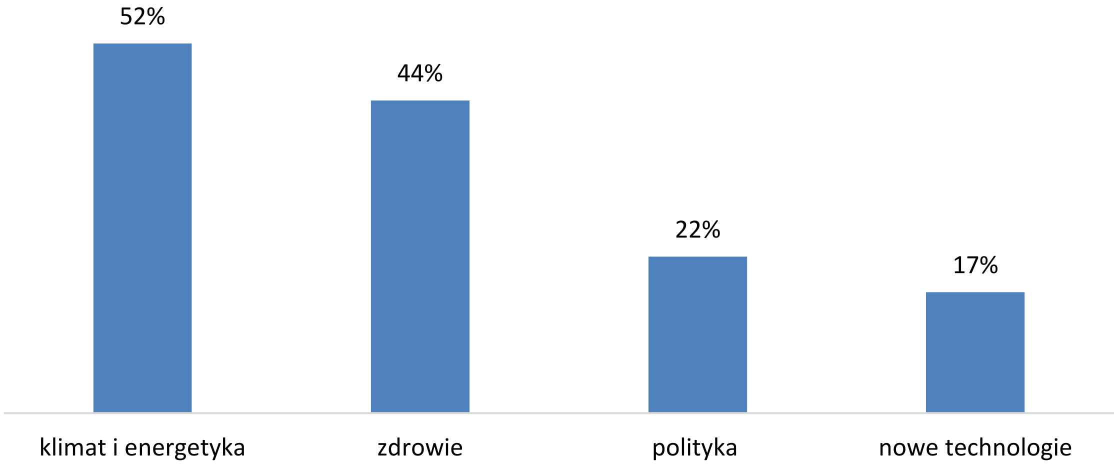


Source: compilation by the NCRB Office based on the report Safe Elections. Survey of opinions about (dis)information on the web, NASK and PBS, March/April 2019.

A Digital Poland study conducted in February 2022[172] shows that too much fake news on the internet is one of the key problems facing our country. As many as 84% of Poles believe so. Respondents in this study indicate the following areas where at least one false information was perceived.

[172] Digital Poland, *Disinformation through the eyes of Poles,* February 2022.

Figure No 106. Popularity of selected fake news among Poles (%)

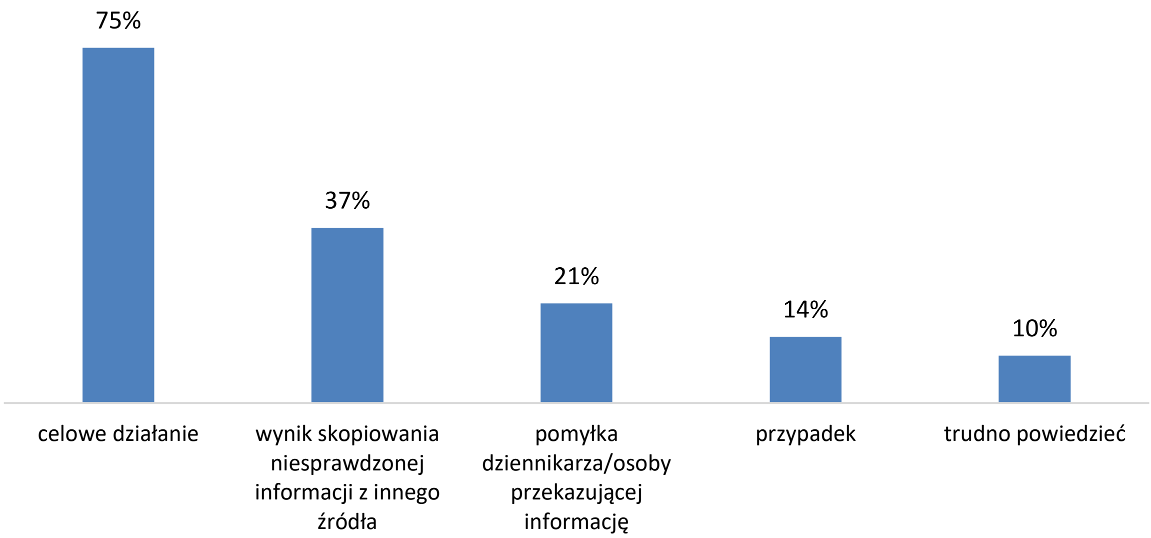


Source: The KRRiT Bureau compilation based on data from the Digital Poland report Disinformation through the eyes of Poles, February 2022.

86% of respondents have encountered the concept of disinformation. Women (76 per cent), young people (74 per cent), rural residents (75 per cent) and people with primary education (66 per cent) have the most problems in recognising disinformation.

According to respondents, in ¾ of the cases false information is spread intentionally. A significant percentage of respondents indicate that the reason for the presence of fake news may also be the copying and sending of unverified information from another source (37%). One-fifth of respondents believe that fake news may be the result of a mistake or error on the part of the journalist or the person providing the information.

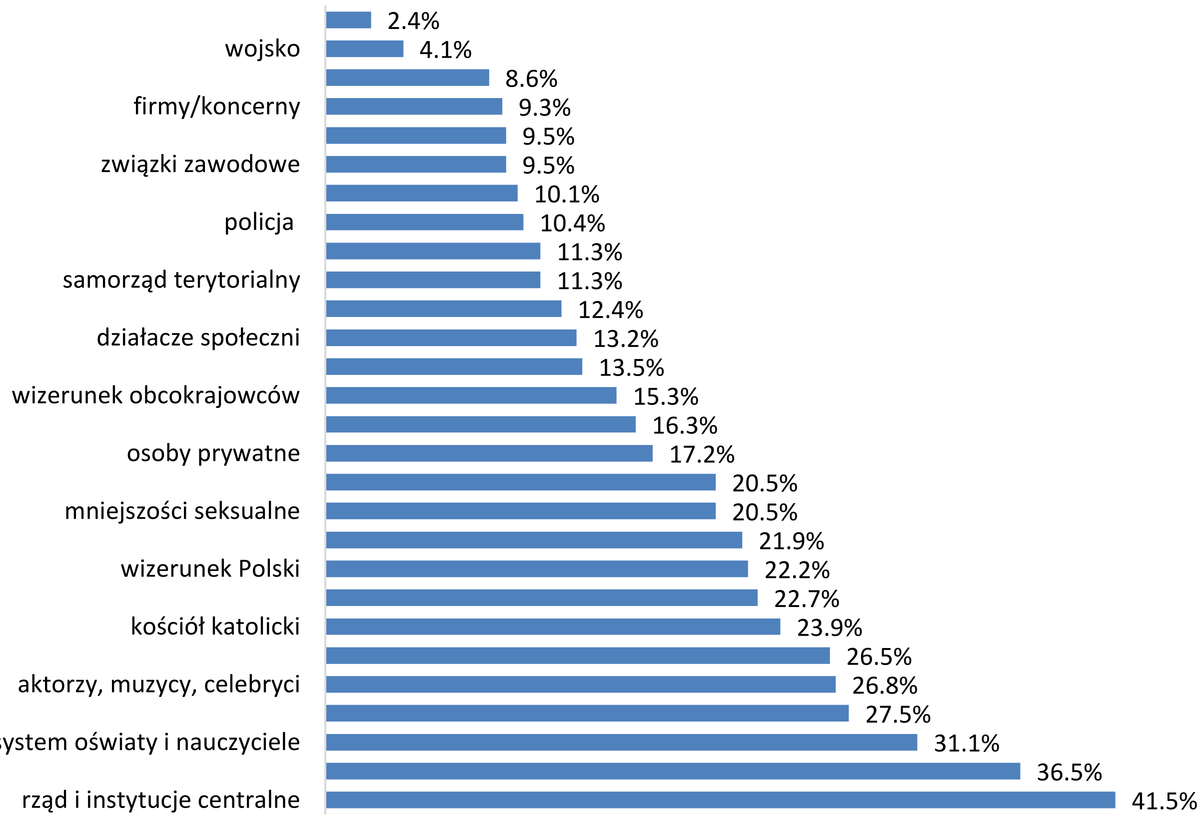
Figure No 107. Reasons for the appearance of fake news in the media (%)



Source: KRRiT Bureau compilation based on data from the Digital Poland report Disinformation through the eyes of Poles, February 2022.

The targets of disinformation or manipulation attacks on the internet are indicated in the chart below.

Figure No 108. Targets of disinformation or manipulation attacks on the Internet. Percentage of respondents' answers

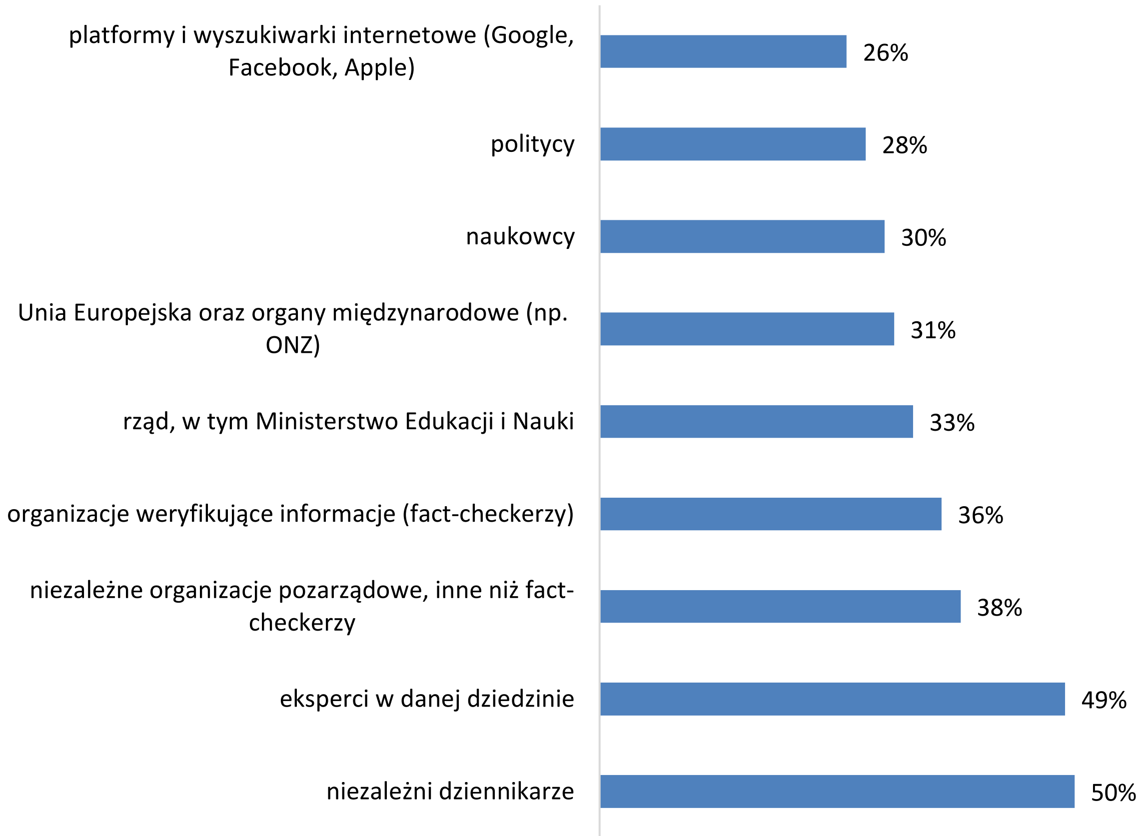


Source: compilation by the NCRB Office based on the report Safe Elections. Survey of opinions about (dis)information on the web, NASK and PBS, March/April 2019.

The distribution of attack targets may change due to the current political, social and international situation, but regardless of these changes, the institutions of the state and the people responsible for them will be subject to disinformation and manipulation. This poses a real threat to information security and can have a negative impact on perceptions of the current and future situation, causing social unrest, antagonising social groups or a sense of insecurity in the face of a lack of trust in the actions of the state and its bodies.

In response to the question of who should be involved in the process of curbing the spread of false information, respondents point first to independent journalists, experts and independent NGOs. Twenty six percent of respondents indicate the responsibility of online platforms and search engines to stop disinformation processes.

Figure No 109. Responses to the question of who should be involved in curbing the spread of false information (%)



Source: KRRiT Bureau compilation based on data from the Digital Poland report Disinformation through the eyes of Poles, February 2022.

According to a report by the Demagogue Association and the Institute of Media Monitoring (IMM), one of the most important issues related to the spread of disinformation is the war in Ukraine.

In November 2022, more than 73,000 Polish-language posts and comments appeared online that referred negatively to Ukraine and Ukrainians. The estimated reach of the anti-Ukrainian narrative was over 34 million contacts. As many as 92% of all anti-Ukrainian posts during this time were published on Twitter. This service generated 36.4% of the total reach of the narrative against Ukraine and Ukrainians on social media. Demagogue and IMM identified 10 Twitter accounts in November 2022 that are most active in reproducing anti-Ukrainian propaganda online. Some of them run a constant anti-Ukrainian narrative. Comments under articles (even those on weather services) and posts on forums also have the highest reach. Fake news is usually accompanied by hate speech.

Systematic monitoring of disinformation is also carried out by the Polish Press Agency as part of a fact-checking project called Fake Hunter.[173] Since the outbreak of the war in Ukraine, an average of 20-25 entries per month are identified as disinformation in various languages, related to the war and refugees, as well as to Polish-Ukrainian relations in every sphere (political, economic and historical). The subject of disinformation is also the actions of local governments, governments and the Parliaments and Presidents of both countries, as well as other countries involved in the conflict on the side of Ukraine. Tags examined include: #ukraine, #Russian invasion, #war in Ukraine, #Ukrainian refugees.

Almost 15,000 messages of pro-Kremlin disinformation have been collected and verified since 2015 by the EU's East StratCom Task Force, which publishes its material on the EUvsDisinfo portal.[174] More than a thousand of the verified messages concerned Poland, of which more than 140 appeared online in 2022,[175] and this is only a slice of what could actually be found online after Russia invaded Ukraine.

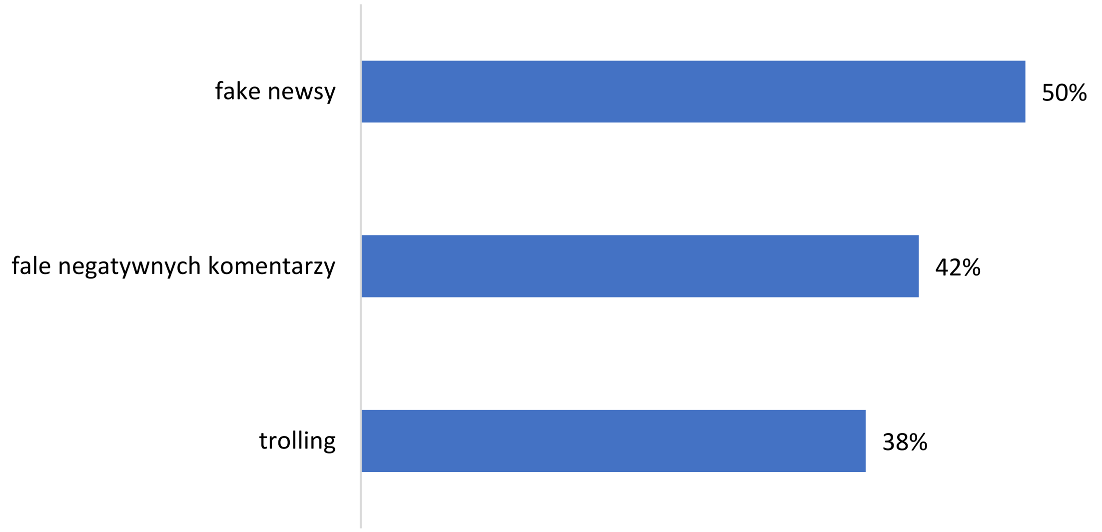
Already in the first weeks of the Russian aggression against Ukraine, careful observers of the internet noticed that social media accounts previously known for publishing anti-pandemic or anti-vaccine content began to feature messages replicating the pro-Kremlin narrative about the war in Ukraine. The fact-checking site Konkret24 in early April 2022 published the results of an analysis of Twitter accounts that had achieved reach through anti-vaccine content a few weeks earlier, but switched to an anti-Ukrainian and pro-Russian war narrative after the war broke out.[176] This 'automatic' change in the theme of posts on many profiles has been analysed by various centres. This is confirmed, among others, by research by the Institute for Internet and Social Media Research (IBiMS). They show that as many as 9 out of 10 social media accounts that had already become active in pro-Russian propaganda about Ukraine on 21-22 February 2022 had previously spread anti-vaccine content.[177]

In a survey carried out as part of the *Kryzyzsometr* expert panel by Warsaw-based public relations agency Alert Media Communications in November 2022, more than 100 PR professionals (spokespersons, PR directors and managers from Polish companies, state and local government

[173] https://fake-hunter.pap.pl/
[174] https://euvsdisinfo.eu/
[175] https://euvsdisinfo.eu/disinformation-cases/?disinfo_keywords%5B%5D=77563&date=01.01.2022+-+27.12.2022&disinfo_countries%5B%5D=77563
[176] https://konkret24.tvn24.pl/polityka/konta-antyszczepionkowe-pracuja-dla-kremla-potwierdzilo-sie-ze-paliwo-bylo-ze-wschodu-ra1100795
[177] https://www.rp.pl/konflikty-zbrojne/art35762701-trolle-dezinformuja-na-temat-ukrainy; https://konkret24.tvn24.pl/raporty/wojna-w-ukrainie-trendy-w-dezinformacji-2022-roku-nowe-fronty-6551446

institutions and NGOs),[178] were asked what the sources of crises on the internet will be in 2023. According to the respondents, these will be fake news, waves of negative comments and trolling in the following proportions:

Figure No 110. Response to questions on what the sources of the crisis will be in 2023 (in %)



Source: compiled by the KRRiT Bureau on the basis of Kryzyzsometr survey data, Alert Media Communications, November 2022.

According to the report's authors, the problem of crises caused by fake news is growing. Favourable conditions for the emergence of entire 'breeding grounds' of fake news and falsification of reality have historically been created by the pandemic and the war in Ukraine, and even earlier by Donald Trump's disastrous standards of policymaking. Some respondents also point to the growing phenomenon of fake news in traditional media: *"if the falsification of reality is carried out by large, socially entrenched editorials, their impact is devastating. We can see, for example, in Russia, where a de facto large part of society lives in a virtual reality created by the media there, how much social havoc this can cause."*

Public broadcasting activities

In the fight against disinformation, the activity of radio and television broadcasters cannot be overlooked. Among them, the public media have a special role, due to the tasks and obligations arising from the fulfilment of their mission.[179]

[178] https://cyberdefence24.pl/social-media/kryzysy-w-sieci-w-2023-zagrozeniem-fake-newsy-fale-negatywnych-komentarzy-i-trolling

[179] The Broadcasting Act indicates that the public media have the task of promoting media education (Article 21.1a.11 of the Broadcasting Act), and the programmes and other services of public radio and television should serve this purpose (Article 21.2.10).

As part of these activities, the phenomena of disinformation, fake news or the specifics of the functioning of deep-fake on the example of the Russian-Ukrainian war were discussed in the programmes of public broadcasting stations, most often in news, journalistic and educational programmes. Experts, scientists were invited to explain these issues and show how to separate the truth from information lies. They talked about disinformation, manipulation and propaganda in the media. Data protection awareness was pointed out. The issue of artificial intelligence was raised, pointing out the need to know the importance of targeting, positioning and sequencing, and the importance of being able to use the media consciously and critically.

In addition to programme activities, public radio broadcasters were involved in a number of non-antenna activities. Most often, public radio companies were the organisers of meetings, debates, study visits or workshops aimed at educators, high school and university students, during which the issues of disinformation, fake news, threats in the digital world and obstacles to critical media reception were discussed.

Particularly noteworthy among the projects carried out is the opening of Radio Kielce SA's Centre for Media Education (CEM)[180] – the first facility in Poland to prepare a place for media education and media literacy, in particular how to distinguish disinformation from information and how to react in such cases.

An equally important project is the Radio Academy of Polskie Radio Koszalin S.A., which is carried out in cooperation with the Koszalin University of Technology and the Pomeranian Academy in Słupsk. The aim of this initiative is to train journalistic staff. Classes, both theoretical and practical, cover, among other things, the ability to verify information obtained, knowledge of the electronic media – history, scope of activity, division by means of financing, legal issues – protection of personal data and image, copyright or knowledge of professional ethics in the work of a journalist.

Like public radio, TVP SA also pointed out in its programmes (both national, specialised and regional) the problem of disinformation and effective defence against it. These topics were present in the following programmes: information, journalistic, educational, documentary and entertainment.

TVP SA has also supported and implemented social campaigns on disinformation or threats from the world of new technologies, including:

- "Stop Fake News Enable Verification," pointing out the phenomenon of fake news;
- "Pheicoresistant," making the public aware of what disinformation and fake news are, the dangers they pose and how to defend against them;
- "Unplug, connect," making parents aware of how much damage is done by a child who is constantly staring at a screen.

Disinformation activities also included the programmes of the field divisions of TVP SA. As in the regional radio stations of Polish Radio, the subject matter appears most frequently in news and current affairs programmes.

The public broadcaster with a message on disinformation and protection against it is also present in its multimedia offer. Last year, TVP SA, in cooperation with Professor Agnieszka Ogonowska, prepared a series in the series 'Media Education' devoted to the aims, opportunities and dangers of

[180] https://www.youtube.com/watch?v=-nKyV8ZSrWs

this topic. The material covered such aspects as what critical thinking is and how to develop it, what cyber-security is and how to protect oneself from fake news, how to consciously use various media.[181]

Fact-checking: Code of Good Practice

As noted in the introduction to this year's *Information*, the problem of disinformation and fake news, to which the NCRT drew attention in the study *Fake news - online disinformation,*[182] definitely intensified with the outbreak of the COVID-19 pandemic. At that time, a significant increase was noticed in publications, especially in online and social media, which misled users and reproduced unverified and unconfirmed information about the causes of the outbreak of the pandemic, ways to combat the disease, as well as the possible effects on entire societies. By the time of the pandemic outbreak, a number of institutions had addressed the risks of disinformation by examining the resistance to it of different social groups, describing the problem and even mentioning it as one of the main elements of so-called hybrid warfare and cybercrime.

The study, published in the American Journal of Tropical Medicine and Hygiene,[183] found that the fake news analysed by the researchers had the appearance of credibility in the general public, as the linguistic construction resembled medical advice that internet users often search for online.

Once again, the phenomenon of disinformation intensified after the outbreak of war in Ukraine. At the time, the Institute for Internet and Social Media Studies (IBIMS) recorded 120,000 disinformation attempts in just one 24-hour period (1-2 March 2022), an increase of 20,000% compared to 1 February 2022. The distribution of content of a negative nature towards helping Ukrainians takes place mainly on Facebook groups, many of which have several dozen and sometimes even tens of thousands of members.[184]

At the same time, the Media Monitoring Institute noted that between 18 and 28 February 2022, more than 6,000 pieces of material were published in online media, including portals and social media, containing mentions of the need to verify messages posted online.

In Poland, there are at least a dozen organisations, associations or projects dealing with fact-checking on a daily basis. The most important of these include: #FakeHunter, Demagog.org, odfejkuj.info, Konkret24.pl, cyberDefence24.pl, zglostrolla.pl, sprawdzam.afp.com, NASK or the Pravda Association.

In June 2022, eleven organisations and institutions signed the Code of Good Practice on Disinformation.[185] The creation of such a document was requested by both Janusz Cieszyński, Minister in the Prime Minister's Office responsible for digitisation, and the National Broadcasting Council.[186] The document contains key findings on how to combat disinformation and indicates recommended actions. The signatories of the Code are: the creators of the *Crazy Nauka* channel*, CyberDefence24, FakeHunter, Zamenhof Institute, Foundation for Lifelong Development, Foundation Science. I Like It,*

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[181] Information on TVP SA programmes in the form of videocasts was also published on the KRRiT website, https://www.gov.pl/web/krrit/edukacja-medialna-w-tvp-we-wspolpracy-z-krrit. Material prepared on the basis of information from TVP SA.
[182] https://www.gov.pl/web/krrit/fake-news--dezinformacja-online
[183] https://www.cyberdefence24.pl/fake-newsy-o-covid-19-przyczyna-smiercia-ponad-800-osob.
[184] https://www.wirtualnemedia.pl/artykul/wzrost-dezinformacja-polski-internet-atak-rosja-na-co-uwazac
[185] https://www.nask.pl/download/30/4421/Kodeksdobrychpraktyk.pdf
[186] https://www.gov.pl/web/krrit/edukacja-medialna--glos-organizacji-pozarzadowych2

Spider's Web+, Demagog Association, Pravda Association, Association of the Civic Network Watchdog Poland and the Research and Academic Computer Network - National Research Institute (*NASK-PIB).*

The authors of the Code, not wishing to remain indifferent to the phenomenon of disinformation, have prepared a study that helps to understand the processes occurring in the information space, characterises them and indicates ways to prevent the spread of harmful content. Among other things, the Code includes: a description of tools such as trolls or bots, with the help of which disinformation content is spread, the most popular methods of disinformation activities are listed and described, as well as tips on how to distinguish information and opinions in the context of disinformation and how to inform about the appearance of such content. The authors of the publication draw attention to fact-checking, i.e. detailed verification of information, e.g. by checking and comparing content sources and images.

The signatories emphasise the importance of reporting and blocking disinformation content through the relevant authorities and organisations and highlight the key role of social media platforms in this process. Although social media declares to fight disinformation, their actions are insufficient, according to experts. There is a need for regulation at the legislative level, public pressure and transparency of platforms in terms of how algorithms work.

In the opinion of the National Broadcasting Council, although the Code does not have all the features ascribed to codes of good practice referred to in the Act on Counteracting Unfair Market Practices[187] (e.g. the manner of resolving disputes, monitoring the implementation of the Code by signatories, the application of sanctions in the event of violations), it is a welcome measure aimed at unifying the principles of verification of information, mutual verification of information by various organisations and integration of the entire environment responsible for combating disinformation.

Education and information campaigns

In the wake of recent events such as the war in Ukraine and the COVID-19 pandemic, several campaigns prepared by both the state administration, government agencies and NGOs have been conducted.

- *"Fejkoodporni"* **- a** public awareness campaign launched at the end of January 2022 by the Operations Centre of the Minister of National Defence and the Academic Centre for Strategic Communications. It shows what disinformation and fake news are, what threats they pose and how to defend against them. The campaign was accompanied by the publication of the previously described report, *Testing Vulnerability to Disinformation*;
- *#FakeHunter - Edu*[188] - a nationwide educational campaign aimed at secondary school students and teachers implemented in June 2022. The aim of the project was to raise awareness of the problem of disinformation, fight against fake news and teach young people to verify content published online. The project was implemented by: Polish Press Agency, the Ministry of Education and Science, the GovTech Poland Centre and the Educational Research Institute. As part of the campaign, educational classes were held, during which students learned, among other things, about the mechanisms behind fake news, how to recognise fake news, where to

[187] Act of 23 August 2007 on counteracting unfair market practices, JoLaws 2017, pt. 2070

[188] https://pap-mediaroom.pl/nauka-i-technologie/fakehunter-edu-rusza-ogolnopolska-kampania-edukacyjna-na-temat-przeciwdzialania; https://fakehunter.pap.pl/

check questionable information, who produces and distributes it and for what purpose, and how to use social media consciously. Schools in Poland were to receive an educational package consisting of a lesson plan, practical exercises and video training prepared by PAP's social fact-checking portal team #FakeHunter.

The video training courses are available free of charge to all internet users under a special tab on the #FakeHunter website.[189] The fact-checking reports are also available here. The site's journalists check every day for information sent by internet users that they believe may be false. #FakeHunter has been in operation for more than two years and has verified more than 2,000 fake news stories.

- *"Don't be a bot. Switch on your thinking!"*[190] – an educational campaign by the Demagogue Association being implemented in January 2022. It is designed to help users effectively distinguish between facts and fake news. The most important element of the educational campaign is the talks with experts and popularisers of knowledge. The talks cover topics such as fact-checking, the causes of fake news or the popularity of conspiracy theories. Experts talk about what to look out for when reading, commenting and sharing information, how bots or trolls operate and what the popularity of some, not always true, content on the internet is all about.

Other activities to combat disinformation

A number of initiatives have been developed to combat disinformation, among others:

- The handbook "With a shield! How to protect yourself from disinformation"[191] intended for secondary school students. Among other things, the publication describes the disruption of the information environment and the negative impact of disinformation on society. It also shows trends in the development of fake news on the internet. The second part contains examples of manipulative tactics occurring on specific social media platforms, such as Facebook, YouTube, TikTok or Wykop. Among other things, the authors write about the economy of attention, point out why people believe in fake news and explain in accessible language what are bots, cyborgs, astroturfing,[192] fake accounts, troll farms[193] or organic disinformation.[194] They also suggest how to distinguish real information from fake information

[189] https://fake-hunter.pap.pl/edukacja; https://fakehunter.pap.pl/
[190] https://demagog.org.pl/
[191] https://ik.org.pl/
[192] Astroturfing – "seemingly spontaneous, civic actions or initiatives taken to express support or opposition to an idea, policy, service, product, event, when they are really driven by PR professionals"; https://mfiles.pl/pl/index.php/Astroturfing
[193] Troll – "a contemptuous name for a person who deliberately spreads false opinions on the internet, sowing confusion, often on someone else's behalf". https://obserwatoriumjezykowe.uw.edu.pl/hasla/7170-2/. A troll farm (or troll factory) "is a company or organisation that employs or associates trolls who are commissioned to publicise a particular propaganda message, sow disinformation, etc. on the internet (especially social media)"; https://obserwatoriumjezykowe.uw.edu.pl/hasla/7192-2/
[194] Organic disinformation – disinformation spread by users through clicks, likes, shares, leading to an increase in the reach of a given piece of information; based on the manual "With a shield! How to protect yourself from disinformation";https://cyberodporni.pl/wp-content/uploads/2021/12/Podrecznik-Z-tarcza-Jak-chronic-sie-przed-dezinformacja.pdf

and what alternative news portals there are.[195] They also give examples to identify deep fake.[196] The project was developed in cooperation with the US Embassy in Poland, and the publication's partners were the Demagog Association and the School with Class Foundation. The handbook has received the honorary patronage of Janusz Cieszyński, Government Plenipotentiary for Cyber Security;

- an expert seminar on the impact of fake news on children and young people, organised in June 2022 by the Polish Safer Internet Programme Centre, the Dajemy Dzieciom Siłę Foundation and the NASK National Research Institute together with the Orange Foundation. At the event, a group of educators, parents and people interested in online safety discussed how to deal with fake news online and methods for teaching students how to verify information and how teachers can protect children from fake news;
- The competition entitled 'Detektor ' - in response to the wave of false information appearing in the public space, the Institute of Media, Journalism and Social Communication at the University of Gdańsk organised an academic fact-checking competition 'Detektor,'[197] aimed at students of journalism, social communication and other media-related majors. Its aim was to identify talents in the field of fact-checking in Poland. The tasks in the competition consisted in detecting fake news online and verifying it in any way possible. In preparation for the final, the authors of the best entries took part in workshops organised by the Demagog Association. The then Chairman of the National Broadcasting Council, Witold Kołodziejski, assumed honorary patronage of the competition;
- Facebook and Twitter profiles #EnableVerification (@VerificationNASK), launched after the outbreak of war in Ukraine by the Scientific and Academic Computer Network NASK. On both profiles, experts from NASK verify false information and point out potential manifestations of disinformation activities. Examples of attempts to influence public sentiment in Poland in this way are collected and analysed, e.g. through actions aimed at causing panic (e.g. by spreading, in the eastern regions of Poland, information about an impending blockade of oil imports from Russia, which will result in fuel shortages at petrol stations).

In addition to the verification action, the #EnableVerification page on both social media platforms lists profiles that may have been knowingly or unknowingly used in a disinformation campaign, along with a recommendation to their users to be particularly careful about the content published there.

An email address was also made available on the profiles to report questionable content. These activities were supported by an information campaign conducted by the Prime Minister's Office of the Council of Ministers.[198] As part of it, between June and July 2022, advertising spots[199] warning against

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[195] Alternative news portals - sites or blogs that create themselves as a reliable source of information. Most often used to spread disinformation and conspiracy theories. Content is distributed via Facebook profiles and in closed groups. https://cyberodporni.pl/wp-content/uploads/2021/12/Podrecznik-Z-tarcza-Jak-chronic-sie-przed-dezinformacja.pdf

[196] Deepfake – (deep learning and fake) – an image processing technique that combines images of human faces using artificial intelligence techniques. The resulting deceptively realistic moving images are used in film footage, creating opportunities for manipulation; https://pl.wikipedia.org/wiki/Deepfake

[197] https://www.gov.pl/web/krrit/konkurs-detektor-wyloni-mlodych-factcheckerow

[198] Radio Eska, Polskie Radio Wrocław + Radio RAM, Polskie Radio PR1, PR3, TV Echo24 Wrocław Radio RFM FM, Polskie Radio Rzeszów, Polskie Radio Lublin / Radio Freee, TVP 1,TVP2, Polsat, TV TRWAM,TV Puls, TV Puls2, TV Echo24 Wrocław, TVP3 Wrocław, TVP3 Lublin, TVP3 Rzeszów

[199] https://www.youtube.com/watch?v=0GBk8g9KZ2I

disinformation were aired on radio and television, while also promoting the aforementioned profiles launched by NASK on Facebook and Twitter.

Think Tanks

With technological developments, as well as the rise of geopolitical threats (e.g. the war in Ukraine) and hybrid warfare, analytical and expert facilities, so-called think tanks, play a significant role in identifying, predicting and educating in the infosphere. These include the centres operating at the Academy of Military Arts (Centre for Security Studies Academic Centre for Strategic Communication and Academic Centre for Security Policy)[200] , which aim to conduct training, research and analysis, debates and develop thinking in the field of broadly understood national and international security[201]
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The tasks of these centres include:[202]

- the organisation of scientific conferences, seminars and workshops on information security;
- analysis of web user behaviour;
- diagnosis of threats to information protection and preparation of recommendations and proposals for legislative solutions – taking into account the factual context specific to individual industries, environments and society as a whole;
- creating a catalogue of risks and preparing guidelines presented using modern means of outreach;
- exploring the extent of the impact of electronic media on the public sphere under digital conditions;
- defining the new role and importance of the content provider in the context of the implementation of state policy towards the protection of national security and related information security;
- the organisation of training;
- an examination of how information policy, a policy of crisis under the development of new technologies in the media, performs in the face of tasks concerning cybercrime and threats to national security, whether it represents the only way forward.

In addition to analyses and studies, as part of the activities of the Academy's Centre for Strategic Communication, the second edition of the conference , 'Independence of Information,' was organised in 2022, during which the Minister of National Defence stated: *disinformation must be fought against, there is a need for institutions that separate lies from the truth. In the 21st century, with the use of social media, we have, on the one hand, a great opportunity to reach a very wide audience with real reliable information, but on the other hand, social media are under attack, they are used to sow disinformation*.

During the conference, representatives of the Operations Centre of the Ministry of Defence, the Academic Centre for Strategic Communication, the Centre for Countering Disinformation of the

[201] https://www.wojsko-polskie.pl/aszwoj/o-centrum-cbb/
[201] Ibid.
[202] https://www.wojsko-polskie.pl/aszwoj/cyberbezpieczenstwo-laboratorium/

National Security and Defence Council of Ukraine signed an agreement aimed at jointly countering disinformation, exchanging knowledge and experience, and providing mutual expert support.[203]

Another group of experts is gathered around the Defence24.pl portal, which publishes up-to-date information, analyses, commentaries, interviews in the field of cyber security and social media, among others. Special tabs on these topics provide studies and information on threats and activities related to the virtual world. Edited by a group of experts, the portal is a source of knowledge on the latest technologies and phenomena related to the infosphere.

EU Code of Conduct on Disinformation - selected reports by Code signatories (TikTok, Meta, Google) [204]

Social media platforms are one of the main arenas for the theatre of war. As the data shows, tweets containing false information were 70% more likely to be 'passed on' than fact-based posts.[205]

TikTok, in its report on the implementation of the EU *Code of Conduct on Disinformation* for the period 16 June-16 December 2022, reported that since the start of military action in Ukraine, the emergence of information that denied the existence of the Ukrainian state, misrepresented the warfare, events or countries' involvement in the conflict had been observed. Illustrating the events described in the posts, there were also videos or photos that depicted other war conflicts or were taken from films or games.

According to TikTok, the greatest disinformation activity mainly targeted European countries such as Germany, Italy and the UK. France and Poland came next. Those behind the attacks created fake accounts aimed at amplifying content presenting a pro-Russian point of view of conflict-related discourse. Illustrating the scale of disinformation-related violations in this area, TikTok indicated that it removed 1,292 videos. There were 1,027 proactive video removals, and twenty nine videos as a result of fact-checking with words related to Russia and Ukraine. There were also two accounts impersonating prominent Ukrainian and Russian politicians.

In the case of Poland, data shows that during the period indicated,[206] material were identified and removed for violation of the disinformation policy: 43,388 fake accounts, 2,006 videos and 498 accounts were blocked. As the data in the report indicates, the deleted videos were viewed 19,713,692 times, which shows the scale of the spread of harmful information. TikTok also reports that during the period under review, a fact-checking organisation working with the platform checked 44 videos for the veracity of the content presented.

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[203] https://www.wojsko-polskie.pl/aszwoj/articles/aktualnosci-acks/ii-edycja-konferencji-niepodleglosc-informacji-za-nami/

[204] Code concluded in agreement with the European Commission in 2018 and revised in June 2022; reports produced for the internal work of the European Commission and ERGA (European Regulators Group for Audio-visual Media Services).

[205] https://cyberdefence24.pl/cyberbezpieczenstwo/cybermagazyn-media-spolecznosciowe-teatrem-dzialan-wojennych.

[206] Disinformation that incites hatred or prejudice, misinformation related to emergency situations that causes panic, medical misinformation that may cause physical harm, misleading content related to civil litigation, conspiracy theories that may incite hatred or prejudice, attack a specific person or protected group, call for violent action, deny that a violent or tragic event has occurred or linked to violence, misleading the public.

In the case of Meta, the report indicates that in Q3 2022 alone, action was taken against the 1.5 billion fake accounts (99.6% of which were proactive) available on Facebook. According to the company's estimates, this represented approximately 5% of global monthly active users. In addition, more than 1.7 million pieces of information were labelled "fact-checking" on Facebook and more than 52,000 on Instagram during the period under review. According to Meta, however, 95% of people do not click on content that bears this type of label.

As for the Google report, more than 8 million posts relating to the invasion of Ukraine had been blocked by May 2022. And as of 24 February 2022, more than 9,000 channels and more than 80,000 disinformation videos on the Ukraine crisis had been removed from YouTube for violating the company's policy on disinformation, hate speech and violence. YouTube has also blocked more than 800 channels and over 4 million videos related to the Russia/Ukraine conflict.

Alongside the obvious benefits, changing technology has opened the door more widely to undesirable activities, such as disinformation, manipulation and lack of information about the origin of the news presented. The amount of false information appearing especially in social media creates a false image of the world and differentiates social groups, creating fear and distrust in public institutions.

A key element in combating these undesirable phenomena is raising public awareness. Therefore, the need for media education of all social and age groups is becoming increasingly important. Coordinated cooperation and the sharing of best practices between different public and non-governmental institutions, as well as state bodies, can bring real social benefit. The role of the journalistic community and the editors of individual media is particularly important. It is becoming necessary to formulate a code of good practice for information and journalistic journalism as a joint initiative of all circles present in the Polish media that carry out such activities, regardless of the method of content distribution. Without common standards and principles, hate speech and disinformation increasingly appearing in the media will not be curbed. The KRRiT will promote such a solution and counts on the activity and cooperation of all media in this matter.