



ChatGPT



Copilot

How Artificial Intelligence Is Changing Media and Journalism in Central Europe

A study mapping the use of AI by newsrooms in the Czech Republic, Hungary, Poland and Slovakia

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1. Introduction

The European elections held on 6-9 June 2024 carry significant weight. They mark the first European elections following the Russian invasion of Ukraine and are also notable for being heavily influenced by Artificial Intelligence (AI). The impact of AI on our lives and businesses is so substantial that it feels as though it has been a presence for years, despite OpenAI's ChatGPT only being introduced in November 2022.

The significance of these elections cannot be overstated when considering the future of European societies and their unity. The European Parliament, which is composed of candidates elected in this election, plays a crucial role in approving the EU budget, overseeing its expenditure, electing the President of the European Commission, and appointing and holding commissioners accountable. Moreover, Members of the European Parliament (MEPs) bring attention to vital political, economic, and social issues and uphold the core values of the European Union.¹

Although many people across Europe ignore the impact of these elections, the configuration of the European Parliament is crucial for each of the EU's nations.² This is especially true for the Visegrad Group, a cultural and political alliance of four Central European countries. The Visegrad Group is both influenced by EU decisions and holds significant power within the EU government. In total, the Visegrad Group elects 110 MEPs, with Poland having 53, the Czech Republic and Hungary each having 21, and Slovakia having 15.³

Like in any election, the media plays a crucial role in influencing people's voting preferences, the behaviour of politicians, and the dynamics of power between political parties. Over the past decade, technological advances have fundamentally altered political communication. The rise of social media has given political actors numerous options to communicate with their voters directly, influence their opinions, and engage with their constituencies. While the internet has largely democratised political debates, it has also opened the doors to nefarious players who try to manipulate opinions and debates through disinformation, manipulation techniques, and propaganda. Media outlets continue to be affected by these changes, with their business models undermined by the power of tech companies and their audience shifting to other sources of information. Nevertheless, journalism still plays an important role in the communication mix.

Yet, with the rise of AI, media and journalism face both new opportunities and threats. The AI revolution is also expected to significantly impact the media sector by enabling unprecedented scale in content production and dissemination. However, AI also provides ample space to create false content, further polluting the communication space.

It is the convergence of significant developments—a major EU-wide election, a turning point in the media field, and the lack of data on how media outlets in Central Europe are responding to the latest technological advancements—that has prompted this research. The findings of this study, which are summarised here, were obtained through desk research, audience analysis, and interviews with journalists from a sample of media outlets in the four Visegrad countries (see Methodology). The aim of this study was to identify the main changes in newsrooms prompted by AI in anticipation of a highly newsworthy moment. Despite some limitations in the research, the most

¹ See more in *How European elections work* (2024), available at: <https://elections.europa.eu/en/how-elections-work/>.

² European Parliament elections involved an electorate of 373 million voters in 27 EU countries. Based on provisional results from 10 June 2024 and national estimates EPP won 25.7% seats, S&D 19% seats, Renew 11.1% seats, Conservatives and Reformists 10.1% seats, Identity and Democracy 8.1% seats, Greens 7.2% seats, Left 5% seats and Nonaligned 13.8% seats. Key developments of election results are: 1) The European People's Party scored a clear victory, 2) French parliament dissolved following Macron's party's crushing defeat at the hands of the far-right National Rally, 3) A withering result for Germany's ruling coalition, 4) Ursula von der Leyen is closing in on a second term as Commission chief but needs to clinch a tricky deal to win support in the EU Parliament, 5) Voters turned against Europe's Greens and voted their representatives out of the Parliament and 6) The Renew group got thumped predominantly as a result of loss of Macron's party and Ciudadanos in Spain. See more at: <https://www.politico.eu/article/european-elections-2024-live-updates/>

³ In **Poland**, the Civic Coalition of Donald Tusk took first place with 38.2% of the vote, while the opposition conservative party PiS of Jarosław Kaczyński got 33.9% of the vote. In the **Czech Republic**, the largest number of votes, 26.1%, was won by the opposition party ANO of former Prime Minister Andrej Babiš, and the conservative coalition (Spolu) of Prime Minister Petr Fiala came second with 22.3% of the vote. The surprise is the success of the new radical right coalition The Oath and Motorists. The liberal party Progressive Slovakia received the most votes in **Slovakia** - 27.8%, followed by the ruling Smer party of Prime Minister Robert Fico with 24.8%. In **Hungary**, the ruling coalition around Viktor Orbán's Fidesz party took first place with 44.76% of the vote, and the new opposition party Tisza (led by a new Orbán's rival Peter Magyar) with 29.61%.

notable being the exclusion of state-controlled organisations that typically do not participate in such projects, this study offers the most comprehensive understanding of how AI is transforming newsrooms, journalistic practices, and media operations in Central Europe, providing a broad and in-depth analysis of key aspects related to political life, the media sector, and technological advancements.

2. Executive summary

The comparison across the V4 countries reveals a nuanced picture of AI's integration into newsrooms. **The key finding of this research is that journalists are discovering the substantial benefits of AI for efficiency and data management.** By automating technical and repetitive tasks, AI allows journalists to focus on more important topics, which is particularly beneficial for small and independent media outlets with limited resources. These advances created by AI align with global trends in its embracement. According to a 2024 survey among 314 media leaders in 56 countries, news industry leaders have identified back-end automation responsibilities, such as transcription and copyediting, as their primary focus when using AI in the media industry (56%). This is followed by recommender systems (37%), content creation (28%) with human supervision, and commercial applications (27%).⁴

However, **the adoption of AI in the region is progressing slowly**, with newsrooms cautiously embracing AI tools. The level of adoption remains moderate at the most in all V4 countries (see Table 6.1. Overview of AI use in newsrooms in V4 countries in this report). Instead, there are widespread concerns among media in the region regarding **ethical challenges related to the adoption of AI tools**. These concerns necessitate careful consideration and proactive management. As AI continues to advance, newsrooms must balance innovation with the need to uphold journalistic integrity and democratic values, which can be an opportunity for regional collaboration and shared learning. Yet, accomplishing that is easier said than done due to the diversity and differences among the four Visegrad countries.

The V4 countries present a unique field to understand the deployment, challenges, and impacts of AI within media operations. As newsrooms across these countries adapt to AI's possibilities, several crucial lessons have emerged, reflecting not only the technological opportunities but also the ethical considerations, human oversight requirements, and future implications of AI in journalism.

The integration of AI in newsrooms within the V4 countries reflects varying national perspectives, media independence, and the influence of political landscapes. Czech journalists approach the use of AI with caution, while Hungarian government-aligned newsrooms, bankrolled by hefty state subsidies, closely align with government narratives to amplify specific political agendas. On the other hand, Polish media are progressively embracing AI to enhance journalistic practices and combat disinformation, with a focus on ethical implications. The Slovak media industry is also beginning to show interest in AI, mainly concentrating on operational efficiencies such as translation and data processing. To some extent, these reflect broader global trends that balance technological advancements with ethical journalism practices.

When comparing V4 practices with global standards, disparities become apparent, particularly in the implementation of robust ethical guidelines. While Western media giants are increasingly adopting ethical AI practices, such as the BBC's clear guidelines on AI engagement, in the V4 countries, some media are just starting to explore this area.

Globally, calls for transparency regarding the use of AI are intensifying. Some major leading newsrooms are disclosing AI's role in content creation to foster public understanding and trust. However, media in the V4 countries are still in the process of developing such practices. For example, independent Czech media outlets are starting to reveal their AI engagements, but they lack the consistency seen in more developed media landscapes. This need for increased transparency is a common challenge faced by media in all V4 countries as they strive to meet public expectations that are shaped by global trends.

⁴ Nic Newman, *Journalism, Media, and Technology Trends and Predictions 2024*, The Reuters Institute for the Study of Journalism, 2024.

3. Context

The countries of the Visegrad Group experienced the repercussions of the Russian war in various ways, including politically, economically, and through the media, particularly due to the influence of disinformation. While the governments of Slovakia and Hungary openly support the Kremlin, Poland and the Czech Republic are strongly critical of Russia, with most major political parties in agreement on this stance.

Governments in the V4 region are typically led by centrist, centre-right, or conservative-nationalist political groups. A notable example of an enduring regime is the government of Viktor Orbán in Hungary. Orbán has held the position of head of government for 14 consecutive years and a total of 18 years. Since coming into power after the 2010 elections, the Hungarian government has implemented policies that are hostile towards migrants⁵ and the LGBTQ+ community.⁶ Additionally, they have passed legislation that restricts the activities of opposition groups, journalists, universities, and critical NGOs.⁷

A similar power-grabbing trend was also observed for a significant period in Poland under the rule of the Law and Justice party (Prawo i Sprawiedliwość, PiS). In the Czech Republic, party life and the ruling majority are fragmented, while major changes occurred in Slovakia during the most recent parliamentary and presidential elections.

Table 3.1. Ruling parties in the governments of the V4 countries

Country	Ruling party /coalition	Political leaning	Prime Minister
Czech Republic	Spolu	Centre-right	Petr Fiala
Hungary	Fidesz	National conservative	Viktor Orbán
Poland	Civic Coalition, Third way and New Left	Centre	Donald Tusk
Slovakia	Social Democracy (SMER), Hlas and Slovak National Party	(Social) conservative	Robert Fico

Source: Media and Journalism Research Center, Thomson Foundation, CeSID

As noted, major changes were brought about through the latest national elections in Poland and Slovakia. In December 2023, a new Polish coalition government was formed under the leadership of Donald Tusk, comprising the previous opposition parties (Civic Coalition-PO, the Greens, Modern, the Polish Initiative, Polish Peasant Party, Polska2050, and The New Left). The new administration has prioritized holding the previous government accountable for alleged abuses of power, which included initiating audits across government units and making personnel changes.⁸ One of its first decisions was to reform the public service media to ensure diversity of voices, independent governance, and impartial news content.⁹

In Slovakia, Robert Fico, leader of the Social Democracy (SMER) party, became prime minister, heading a coalition government, after the general elections in autumn 2023. The opposition has regularly organised large protests against the governmental plans to decrease criminal punishments for corruption and economic crime, as well as against the plan to establish direct political control over the public service media. The Slovak government has been

⁵ Biró-Nagy, András. "Orbán's political jackpot: migration and the Hungarian electorate." *Journal of Ethnic and Migration Studies* 48, no. 2 (2022): 405-424.

⁶ "Hungary's Fidesz moves against LGBT community with 2022 vote in sight", Reuters, 11 June 2021, available online at <https://www.reuters.com/world/europe/hungarys-fidesz-moves-against-lgbt-community-with-2022-vote-sight-2021-06-11/>.

⁷ Lily Bayer, "Hungarian plan to target foreign influence fuels NGO and media fears", *The Guardian*, 13 November 2023, available at <https://www.theguardian.com/world/2023/nov/13/hungary-plan-target-foreign-influence-ngo-media-fears-sovereignty>.

⁸ Saskia O'Donoghue, "Can Tusk disentangle Poland from its last 'authoritarian' rulers?", *Euronews*, 8 January 2024, available online at <https://www.euronews.com/2024/01/08/can-tusk-disentangle-poland-from-its-last-authoritarian-rulers>.

⁹ Shaun Walker, "Battle over Polish TV station just the start in Tusk's bid to remake Poland", *The Guardian*, 22 March 2024, available online at <https://www.theguardian.com/world/2024/mar/22/battle-over-polish-tv-station-donald-tusk-bid-to-remake-poland>.

described as pro-Russian¹⁰ and copying strategies and procedures from Viktor Orbán.¹¹ In April 2023, Peter Pellegrini, chairman of the Hlas party (social democrats, in a coalition government with SMER and the right-wing Slovak National Party), won the presidential election in Slovakia.

Since the 2021 parliamentary elections, the Czech Republic has been governed by a diverse centre-right coalition comprising five parties. In the last three years, the country has faced significant economic challenges, particularly with high levels of inflation, which at times reached up to 18%.¹² The atmosphere in society was further worsened by fierce political clashes between the government and opposition parties, including the populist party ANO and right-wing extremists from the Freedom and Direct Democracy Party (SPD). The result of the 2024 presidential election seemed to bring balance and stability to the country, with retired general Petr Pavel winning a victory over former Prime Minister Andrej Babiš, the chairman of the ANO party.

4. Media landscape in Central Europe

4.1 Latest trends in the media

Despite the differences in the media landscape, these four countries have also shared some significant similarities in recent years. Firstly, according to respondents in a qualitative survey conducted for this report in the V4 countries, there have been frequent mentions of pressures or influence on public service media. Secondly, there is a notable reliance on major media companies or media conglomerates, which in turn exert a strong influence on both the media and the public. Moreover, media polarisation takes on various forms, and independent media outlets face numerous challenges in their day-to-day operations. Economic barriers for smaller media organisations and the issue of their long-term sustainability are prevalent across all countries.

Key traits of **Hungary's media landscape** include a). regulatory capture, b). control of public service media, c). the use of state financing as a control tool, and d). ownership takeover in private media.¹³ Digital media comprises approximately 58% of all outlets in this landscape. National mainstream media accounts for 49%, while local media controlled by municipalities makes up 15%. Pro-government local media constitutes 18% of the landscape, while independent local outlets represent 8%. The media landscape is divided between pro-government outlets at 53%, pro-opposition entities at 10%, and balanced sources at 37%, according to data collected in this research.

Recent trends in **Poland's media landscape** include a). market consolidation with the dominant role of TV and online media, b). technological embracement of digital media users' practices, c). the rise of high-tech and data-driven media, and d). organizational and management challenges among established media outlets.¹⁴ Approximately 60% of the media in Poland is considered pro-government, while 20% has a pro-opposition bias and 20% is balanced, according to analysis carried out as part of this research. The ongoing transformation of Poland's public service media has significantly impacted this division, particularly because it was previously the primary source of pro-government (conservative) media.

The **media landscape in the Czech Republic** is characterised by a high level of centralisation, with several large media holdings dominating the industry. These holdings encompass various types of news outlets. Public

¹⁰ Jon Henley, "Robert Fico doubles down on pro-Russia stance after Slovakia election win", The Guardian, 1 October 2023, available online at <https://www.theguardian.com/world/2023/oct/01/robert-fico-doubles-down-on-pro-russia-stance-after-slovakia-election-win>.

¹¹ "Report: Orbán's advisers helped Smer and Hlas before this year's election", The Slovak Spectator, 22 December 2023, available online at <https://spectator.sme.sk/c/23260387/report-orbans-advisers-helped-smer-and-hlas-before-this-years-election.html>

¹² Source: Czech National Bank, see more at <https://www.cnb.cz/en/public/media-service/the-cnb-comments-on-the-statistical-data-on-inflation-and-gdp/inflation-picks-up-slightly-in-september-2022/>.

¹³ Marius Dragomir, *Media Capture in Europe*, Media Development Investment Fund (MDIF), 2019, available online at <https://www.mdif.org/wp-content/uploads/2023/10/MDIF-Report-Media-Capture-in-Europe.pdf>.

¹⁴ Głowacki M., Gajlewicz-Korab K., Mikucki J., Szurmiński Ł., Łoszevska-Ołowska M. (2022). POLAND. Critical junctures in the media transformation process. In: *Country case studies on critical junctures in the media transformation process in Four Domains of Potential ROs (2000–2020). Approaching deliberative communication: Studies on monitoring capability and on critical junctures of media development in 14 EU countries, CS2, D-2.1*, pp. 399–427. <https://www.mediadelcom.eu/publications/d21-case-study-2/pol/>.

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broadcasters, such as Czech TV and Czech Radio, play a crucial role in the information space. However, the media industry has been grappling with long-term economic problems, which have resulted in recurring waves of staff redundancies in the past. Financial constraints, combined with the concentration of major newsrooms in Prague, the capital city, have contributed to the decline of local newsrooms, which has created “news deserts” in rural areas, where access to local news is limited. Overall, the Czech media landscape faces challenges in terms of centralisation, economic stability, and the availability of local news coverage.

Finally, in Slovakia, the media landscape is characterised by a mix of oligarchic and independent media, leading to an increasing polarisation. The largest publisher of print media in terms of audience and ad revenue is Penta, a financial group. Penta holds a practical monopoly over printed tabloids, dominates the printed magazine market, and has a strong presence in the digital information space.¹⁵ The most influential television channel, Markiza, is owned by PPF, a Czech oligarchic group that has secured several multi-million contracts with the Slovak state.¹⁶ Additionally, there is an ongoing political struggle surrounding the public service media. The government has announced plans to completely dissolve the public service broadcaster RTVS and replace it with a new entity that would be more politically controlled, known as Star.¹⁷

Table 4.1.1. Media landscape in V4 countries

Country	Number of media outlets*
Hungary**	611
Poland***	8,400
Slovakia	1,600
Czech Republic****	5,809

*estimate: in all Visegrad countries, there is a lack of clear and methodologically precise records regarding the number and types of media. The primary issue lies in accurately recording the expanding presence of online portals; **thematic magazines excluded; ***over 8,400; ****figure not including all online media

Source: Media and Journalism Research Center, Thomson Foundation, CeSID

4.2 Key media players

In the V4 region, media fragmentation is a prevalent phenomenon, with the exception of Hungary to some extent. However, if we consider the inclusion of specialised magazines, the number of media outlets in Hungary also increases. The major players in these markets are centralised and often part of large and influential media holdings. Despite the rise of digital and online portals, television channels continue to maintain their influence in all countries within the region. Additionally, public service media outlets remain strong players in the media landscape. Although the role of leading daily newspapers is still significant in most countries, the influence of digital and online portals is steadily growing.

¹⁵ Dragomir, M. (2020). Media Influence Matrix: Slovakia. Funding Journalism. Center for Media, Data and Society (CMDS): Budapest. 2nd updated edition.

<https://cmds.ceu.edu/sites/cmcs.ceu.hu/files/attachment/basicpage/1324/mimstlovakiafunding2020.pdf>

¹⁶ David Tvrdon, “It’s not looking good. Independent media in Slovakia 2024 is taking a lot of beating”, The Fix, 1 March 2024, available online at <https://thefix.media/2024/3/1/its-not-looking-good-independent-media-in-slovakia-2024-is-taking-a-lot-of-beating>.

¹⁷ Peter Dlhopelec, “Slovakia’s public broadcaster: ‘Star’ Wars”, Balkan Insight, 26 March 2024, available online at <https://balkaninsight.com/2024/03/26/slovakias-public-broadcaster-star-wars/>.

Table 4.2.1. Main media players in V4 countries

Country	TV players	Daily newspapers	Digital media
Hungary	RTL, TV2, MTVA	Nepszava, Magyar Nemzet, Blikk and Bors	Index, 24, Telex, Origo, Blikk (website of the tabloid), HVG, 444
Poland	TVN, Polsat, Telewizja Polska	Fakt, Super Express, Gazeta Wyborcza, Rzeczpospolita, Dziennik Gazeta Prawna	Onet.pl, WP.pl, Interia.pl, gazeta.pl
Slovakia	Markiza, RTVS, TV JOJ	SME, Denník N	Aktuality.sk, Denník N, Pluska.sk, SME
Czech Republic	Czech TV News, TV Nova, CNN Prima News	Blesk, MF Dnes, Sport	iDnes, Aktuálně, Forum 24, Echo 24, Deník N, Seznam Zprávy, Novinky.cz

Source: Media and Journalism Research Center, Thomson Foundation, CeSID

4.3 Digital media and social networks

The average internet penetration in the V4 countries is nearly 91%, indicating widespread availability of internet access to households. Poland and Hungary have the highest percentages at 93.3% and 92.7%, respectively. However, it's important to note that the data may not be fully comparable due to slight methodological differences in measuring internet coverage.

Table 4.3.1. Internet penetration in V4 countries

Country	Penetration, in %
Hungary	92.7
Poland	93.3
Slovakia	90.0
Czech Republic	87.0

Source: Data from national statistical offices (Hungary and Poland), Eurostat (Slovakia) and Digital News Report (Czech Republic)

Facebook remains a vital network in this region despite a downward trend. In each of the four countries, Facebook is either at the top or near the top in terms of consumption. YouTube is also popular in these countries, but the measurement of its popularity is not straightforward. Twitter/X has little influence in this region.¹⁸ Instagram, which is part of the same group as Facebook (Meta), is experiencing growth. Notably, TikTok, as the youngest network targeting users under the age of 24, often under 18, is gaining traction. A platform that has increasingly used its outreach in the region is Telegram, which has been found to be a conduit for disinformation and propaganda spreading.¹⁹

In Hungary, individuals spend an average of 2 hours, 3 minutes, and 48 seconds on social media, 14 minutes and 9 seconds on news portals, and 51 minutes and 1 second on streaming services.²⁰ Social network usage is pervasive, with 81% of the population²¹ being active on platforms such as Facebook (76%), YouTube (72%), Instagram (34%), TikTok (28%), and Twitter (12%).²² In Poland, the average time spent daily on Internet portals is

¹⁸ In the Czech Republic, Twitter/X has a small reach, but it is known as a highly elitist network used by politicians and journalists.

¹⁹ Natália Tkáčová, *Disinformation on Telegram in the Czech Republic: organizational and financial background*, Prague Security Studies Institute, January 2024, https://www.pssi.cz/download/docs/10984_disinformation-on-telegram-in-the-czech-republic-organizational-and-financial-background.pdf.

²⁰ *Így internetezünk mi – online tartalomfogyasztási szokásaink* (How we use the internet - our online content consumption habits), National Media and Infocommunications Authority (NMHH), 2023, <https://nmhh.hu/cikk/238531/igy-internetezunk-mi-online-tartalomfogyasztasi-szokasaink>.

²¹ Source: Eurostat, 2023.

²² Judit Szakacs, Eva Bogнар, Hungary in *Digital News Report 2023*.

6 hours and 17 minutes for all Internet usage.²³ The number of social accounts in Poland is as follows: 17.10 million Facebook users, 11.00 million Instagram users, 5.81 million X/Twitter users, and 11.52 million TikTok users.²⁴ According to data from the PR company AML Digital for 2023, in the Czech Republic, 90% of respondents use Facebook, 70% use Instagram, 40% use Pinterest, 35% use TikTok, and 25% use Snapchat. In Slovakia, individuals spend an average of 1-2 hours online daily, according to data from the Slovak Academy of Sciences. Regarding social networks, 76% of Slovaks use Facebook at least once a month, of whom 55% use it daily; YouTube is used by 78% monthly, and 31% use it daily; Instagram is used by 42% at least once a month, and 22% use it daily. The prevalence of Twitter and other social media use is very low in Slovakia.

5. AI and elections

5.1 Disinformation and AI in the Visegrad countries

Disinformation is a significant issue in the Central European region.²⁵ It impacts various sectors, including media, civil society, politics, and the general public. The spread of false information, particularly during elections, has become more frequent and is influencing voting patterns and public perceptions.²⁶ While traditional forms of misinformation are still widespread, the emergence of deepfake technology introduces new and more complex challenges in the distribution of deceptive content.²⁷

According to the research conducted for this study, the main disseminators of disinformation in the V4 countries are:

- 1) **Political parties, particularly ruling political parties**
- 2) **Pro-Russian propaganda from the obscure media, websites and social networks**
- 3) **Far-right and generally nationalist parties**

These sources of disinformation often overlap, making it difficult to distinguish one from another. They aim to promote an anti-European, anti-liberal, and anti-migrant narrative within the mentioned states. Disinformers use patriotic, nationalistic, and sovereigntist narratives to conceal the true meaning of their messages. These narratives significantly impact older populations, less educated citizens, and those who nostalgically recall the "good old times."

Social networks, obscure single-use websites, and often state-controlled media outlets serve as the primary channels for disseminating disinformation. Independent journalists and editors remain the main defence against disinformation in the V4 countries. The role of AI as a disinformation tool is still in the experimental phase. Currently, AI is perceived as a potential source of disinformation rather than a tool to fight against it.

Country overview

Czech Republic

The Czech Republic is grappling with disinformation²⁸, particularly with the rise of deepfake technology. Although there is recognition of the potential misuse of AI in spreading disinformation, the actual occurrence of AI-driven campaigns is relatively low. Journalists play a vital role in combating disinformation by engaging in fact-checking

²³ Kemp S., *Digital 2024: Poland*, DataReportal 2024, <https://datareportal.com/reports/digital-2024-poland>.

²⁴ Kemp S., *Digital 2024: Poland*, cit.

²⁵ Dragomir, Marius, and Minna Aslama Horowitz. "Epistemic violators: disinformation in central and eastern Europe." *Epistemic Rights in the Era of Digital Disruption*. Cham: Springer International Publishing, 2024. 155-170.

²⁶ James Thomas, "Why is Central Europe at heightened risk of fake news ahead of European elections?", Euronews, 22 May 2024, available online at <https://www.euronews.com/my-europe/2024/05/22/why-is-central-europe-at-a-heightened-risk-of-fake-news-ahead-of-the-european-elections>.

²⁷ Kaur, Achhardeep, et al. "Deepfake video detection: challenges and opportunities." *Artificial Intelligence Review* 57.6 (2024): 1-47.

²⁸ "The most widespread disinformation in the Czech Republic has reached more than a fifth of the population", Central European Digital Media Observatory (CEDMO), 22 February 2024, available online at <https://cedmohub.eu/one-in-five-people-in-the-czech-republic-was-reached-by-fake-news-about-the-ukrainian-origin-of-the-murderer-from-klanovicky-forest-near-prague/>.

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initiatives and using AI tools to detect and counter false narratives. However, despite these efforts, the landscape remains complex, with ongoing debates among experts regarding the risks associated with AI-generated content.

Hungary

In Hungary, the government's propagandistic activities significantly impact the dissemination of false information.²⁹ This influence is particularly evident in the state-controlled media³⁰, which plays a prominent role in spreading misinformation. Additionally, there are numerous misinformation websites that are often associated with far-right politicians or Russian narratives, further contributing to the problem. Social media platforms, especially Facebook, also play a major role in the spread of disinformation. Government-linked influencers and troll networks coordinate efforts to disseminate false information through these platforms. While concerns have been raised about using AI for disinformation, there is currently a lack of conclusive evidence. Instead, it is the prevalence of inexpensive fake content that dominates political campaigns.

Poland

Poland is confronting significant disinformation threats, mainly from Russia and Belarus, which are aimed at different sectors of society.³¹ Despite these challenges, ongoing efforts are being made to counter disinformation through fact-checking programmes and discussions about the possible use of AI. Although AI tools are not widely used, there is recognition of their potential to enhance transparency and combat fraudulent AI-generated content. However, human involvement remains essential due to AI's limitations in understanding context.

Slovakia

The spread of disinformation has a significant impact on elections in Slovakia.³² The governing parties are actively involved in spreading Russian propaganda and conspiracy theories. One of their tactics is using deepfake videos to discredit politicians. However, these videos are of low quality and relatively easy to debunk. Despite this, there are concerns about the advancing deepfake technology, which presents challenges for detection and mitigation. While there is limited experience with AI tools in election campaigns, media outlets plan to use AI to generate election-related content. However, there are currently no specific labelling or usage strategies in place.

²⁹ Bajomi-Lázár, Péter, and Kata Horváth. "Two Journalistic Cultures in One Country. The Case of Hungary in the Light of Journalists' Discourses on Fake News." *Journalism Practice* (2023): 1-19.

³⁰ Urbán, Ágnes, and Gábor Polyák. "How public service media disinformation shapes Hungarian public discourse." *Media and Communication* 11.4 (2023): 62-72.

³¹ Wenzel, Michal, et al. "The penetration of Russian disinformation related to the war in Ukraine: Evidence from Poland, the Czech Republic and Slovakia." *International Political Science Review* (2024): 01925121231205259.

³² Škarba, Mgr Tomáš, and Ján Višňovský. "Pro-Russian Propaganda on social media during the pre-election campaign in." Book 1 | VOLUME 6(2023): 211.

Table 5.1.1. Overview of disinformation sources and types and anti-disinformation tools in V4 countries

Country	Disinformation source	Type of disinformation	Anti-disinformation tools
Czech Republic	<ul style="list-style-type: none"> ⇒ Daily newspapers ⇒ Chain e-mails ⇒ Politicians ⇒ Social networks (Telegram channels, Facebook pages, mainly promoting pro-Russian narratives) ⇒ AI generated web site Xfit with junk news 	<ul style="list-style-type: none"> ⇒ Fake news ⇒ Fake information through e-mail ⇒ Deepfake videos 	<ul style="list-style-type: none"> ⇒ Human based, journalists and editors ⇒ Fact-checking projects such as OVĚROVNA! run by the public broadcaster iRozhlas ⇒ AI tools to identify problematic content in discussions on news sites such as alvi.ai created by a Slovak startup for Czech media outlets
Hungary	<ul style="list-style-type: none"> ⇒ Ruling political party and far right politicians ⇒ State media and private pro-Government media ⇒ Social networks, Facebook dominantly 	<ul style="list-style-type: none"> ⇒ Fake news ⇒ Official announcements, “national consultations,” billboards, and state advertisements ⇒ Deepfake video (one case) ⇒ Cheap fake (swiftly produced manipulated content pieces of low quality) 	<ul style="list-style-type: none"> ⇒ Human based, journalists and editors ⇒ Lakmusz, a fact-checking site, which uses Crowdtangle for monitoring the spread of misinformation, and sometimes facial recognition software, but always with human oversight
Poland	<ul style="list-style-type: none"> ⇒ Politicians ⇒ Social media, dominantly Twitter (X) and Telegram ⇒ Foreign countries (Russia and Belarus) ⇒ Websites 	<ul style="list-style-type: none"> ⇒ Fake news ⇒ Anti-Ukrainian narratives ⇒ Deepfake videos (couple of cases) 	<ul style="list-style-type: none"> ⇒ Human based ⇒ Fact-checking organizations (Demagog Association, Konkret24 of TVN24, OKO.Press, Polish Press Agency’s FakeHunter, Pravda, AFP Sprawdzam, FakeNews.pl); ⇒ External tools (Google Fact Check Explorer, DataMinr, RapidMiner and DALL-E 3 for educational purposes)
Slovakia	<ul style="list-style-type: none"> ⇒ Politicians, mainly governing political parties ⇒ Social media accounts, dominantly Facebook and Telegram ⇒ Facebook in general ⇒ Websites such as hlavnespravy.sk ⇒ Catholic church clergy 	<ul style="list-style-type: none"> ⇒ Fake news ⇒ Anti-Ukrainian narratives ⇒ Religious conservatism narratives, along with anti-western, anti-liberal, anti-LGBTIQ sentiments ⇒ Deepfake videos 	<ul style="list-style-type: none"> ⇒ Human based, journalists and editors ⇒ TrollWall

Source: Media and Journalism Research Center, Thomson Foundation, CeSID

In conclusion, it can be asserted that disinformation poses **significant challenges to democratic processes and societal cohesion in countries across Central Europe**. Efforts are being made to combat disinformation through various means, including fact-checking initiatives and discussions about AI integration. However, the landscape remains complex and evolving. Media outlets that participated in the survey conducted for this project highlighted AI's role as part of the problem, creating disinformation content such as deepfake videos, messages, and fake news. The deepfake content currently being made using AI is still low-quality and can be easily recognised as false news. However, media professionals anticipate that the technology will continue to advance, making it increasingly difficult to distinguish between AI-generated content and reality. As a result, the media will need to incorporate more technology into its work and use more AI tools to combat this type of disinformation.

5.2. Elections and Artificial Intelligence: what next?

The discussions on elections and artificial intelligence (AI) in the Czech Republic, Hungary, Poland, and Slovakia highlight a **common worry regarding the potential influence of false information on election outcomes**.

In the Czech Republic, journalists interviewed for this report are concerned about the potential impact of AI on the creation and spread of disinformation. They worry that this could divert public attention from important matters and manipulate voting behaviour. There is also concern about external influences, mainly from Russia, which aims to influence Czech elections. While some journalists speculated that the 2024 European elections may not be targeted, others emphasised the need for vigilance. They expected some political parties to exploit those elections as an opportunity to test manipulation tactics.

Similarly, in Hungary, the EU 2024 elections were perceived as significant due to political upheaval and the prevalence of disinformation campaigns. Pro-government forces, supported by state resources, are actively spreading false narratives, often promoting pro-Kremlin viewpoints. Social media platforms have become battlegrounds flooded with propaganda, worsened by the proliferation of fake profiles. Although efforts have been made to combat disinformation, concerns persist regarding the erosion of trust in democratic processes.

In Poland, the socio-political landscape is highly polarised, with past elections marred by misleading narratives and confrontational campaigns. Disinformation narratives often target sensitive topics such as international conflicts, COVID-19 vaccines, and LGBTQ+ issues. In the EU elections, disinformation was expected to focus on climate change, social tensions, and anti-EU rhetoric. Efforts to counter disinformation involve fact-checking initiatives and media watchdogs, with AI tools showing promise in tasks like comment moderation and content analysis.

In Slovakia, the role of AI in elections is limited. Media outlets primarily use AI to generate simple articles based on real-time results. However, there is recognition that generative AI, specifically deepfakes, could harm public trust in elections. Media outlets are less concerned about AI unless it directly affects their content production processes. Projects involving AI in Slovakia vary, ranging from automated weather forecasts to AI-driven SEO recommendations and automated translation tools. While AI is expected to streamline certain aspects of news production and distribution, its transformative impact on serious journalism remains uncertain.

Overall, there is optimism about the potential of AI to expedite tasks and enhance news distribution. However, there are also concerns about its role in facilitating disinformation and its transformative impact on traditional journalism. The research carried out for this project shows that, although efforts to counter disinformation involve a combination of human expertise and AI solutions, the battle against disinformation remains primarily human-driven.

6. AI and the newsroom: changes, impact and challenges

The role of AI tools in information is particularly significant, as the information disseminated to the public through the media shapes the world. Although there is an apparent acceptance that AI is here to stay and is constantly advancing and evolving³³, many questions arise about its role in the world of media and journalism in general.

AI tools for journalists are rapidly advancing. They help with writing, creating visuals, and generating audio versions of text articles, allowing newsrooms and journalists to save time and reduce costs.³⁴ AI is now being used to write news articles distributed to citizens, taking on the role of journalists. This is mostly tested on service-oriented information that doesn't require much analysis of the news nature or the expression of views. However, there have been experiments with AI writing more complex news for some time now.³⁵

This section of the report summarises our research findings on the current use of AI technologies in newsrooms in V4 countries, their impact on editorial work, and the potential challenges that arise as a result.

6.1 AI in V4 countries: current state and impact

Research conducted for this report on newsrooms in the Czech Republic, Hungary, Poland, and Slovakia reveals that media outlets in the V4 countries are ready to embrace AI in their work. However, they acknowledge that the use of this technology is still in its early stages. Respondents agree that AI is the future of media and believe that significant advancements in human and technological capabilities will be necessary to make progress in this field.

The primary focus should be on improving employees' skills to work with AI technology effectively. It is important to raise awareness about the most effective ways to use AI, whether as an auxiliary tool or as a media content creator. According to journalists interviewed as part of the research, there are noticeable variations in the level of IT and AI skills among employees in media organisations, regardless of their country of origin.

Regarding IT use, employees are highly skilled and often rated as very good or excellent. However, when it comes to AI skills, the ratings are lower and rarely exceed moderate.

Currently, very few media organisations employ AI experts. There are several main reasons for this:

- a). AI is still a relatively new tool for many media outlets, and its possibilities are not yet fully understood.
- b). Some outlets lack the necessary human resources to implement AI effectively.
- c). Insufficient financial resources hinder the development of proper AI tools tailored to the outlet's needs.
- d). Ethical concerns regarding the quality and precision of AI-generated content in the newsroom.

Respondents in our survey gave a somewhat lower rating for their newsrooms' knowledge of AI technologies. This is likely because AI teams have only recently been formed in most newsrooms, and concrete results from these teams are expected in the future.

The use of AI in media work primarily includes:

- a) *Personalised content delivery to users*
- b) *Speech-to-text conversion*
- c) *Video content creation*
- d) *Social media analysis*
- e) *Text editing and moderation*

³³ Stahl, Bernd Carsten, et al. "A systematic review of artificial intelligence impact assessments." *Artificial Intelligence Review* 56.11 (2023): 12799-12831.

³⁴ Dhiman, Dr Bharat. "Does Artificial Intelligence help Journalists: A Boon or Bane?." *Available at SSRN 4401194*(2023).

³⁵ Arguedas, Amy Ross, and Felix M. Simon. "Automating democracy: Generative AI, journalism, and the future of democracy." (2023).

On the other hand, while there are advanced AI technologies for content creation, most research participants are not using them, or their use is still in the experimental phase. There is a cautious approach to AI-generated content in Hungary, but there are more adventurous attempts in Poland (see below).

Wyborcza.biz experiment with AI-generated content

In early April 2023, Boleslaw Breczko asked ChatGPT to write an article titled “Elon Musk vs. OpenAI: The race to create a new human-computer interface”.³⁶ The piece was published on Gazeta Wyborcza’s website under Breczko’s byline without explicit disclosure that it was AI-generated.

Although Breczko attempted to insert hints about the article’s AI origin, it went largely unnoticed by its readers. Even most of Breczko’s colleagues were unaware that the article was AI-written, except for Sebastian Ogórek, the chief editor of Wyborcza.biz. Breczko later revealed the truth in a subsequent article titled “Are journalists still needed? My last article was written by ChatGPT”, where he reflected on the implications of his experiment.³⁷

The average percentage of AI usage in the media does not exceed 15% in the sample of outlets selected for this research. This indicates that AI technologies in V4 countries are primarily used for technical tasks, while journalists and editors continue to handle more complex operations. This is particularly evident in small newsrooms that lack the necessary human and technical resources to make more extensive use of AI tools, even though they would benefit most from them.

Table 6.1.1. Use of AI in the newsroom in the V4 countries

Country	Summary of AI implementation in the newsroom
Czech Republic	Czech News Agency (ČTK) and media platforms such as E15, iRozhlas, and Seznam Zprávy are at the forefront of AI integration. Collaborations between news agencies, universities, and businesses are driving progress in this area. ³⁸
Hungary	Varying levels of digital and AI proficiency exist among journalists and digital teams, with limited AI adoption in smaller newsrooms and content creation experimentation mostly tried by large ones.
Poland	Limited AI integration due to challenges in technical solutions and reluctance to disclose AI usage.
Slovakia	Minimal AI expertise among employees and cautious experimentation underway.

Source: Media and Journalism Research Center, Thomson Foundation, CeSID

6.2. AI in V4 countries: challenges

Although, for the moment, AI is primarily used for simple tasks such as gathering information, writing basic news based on existing data, editing, and moderating texts in newsrooms across Central European countries, some challenges may arise.

Those challenges can be of: a) ethical, b) cultural/linguistic, c) generational, and d) technical nature.

³⁶ Boleslaw Breczko, “Elon Musk vs OpenAI: Wyścig do stworzenia nowego interfejsu człowiek-komputer” (Elon Musk vs. OpenAI: The race to create a new human-computer interface), Gazeta Wyborcza, 4 April 2023, available at <https://wyborcza.biz/biznes/7,177150,29627002,elon-musk-przegrywa-wyjscig-w-ktorym-bierze-udzial-jako-jedyny.html>

³⁷ Boleslaw Breczko, “Czy dziennikarze są jeszcze potrzebni? Mój ostatni artykuł napisał ChatGPT” (Are journalists still needed? My last article was written by ChatGPT), Gazeta Wyborcza, 17 April 2023, available at https://wyborcza.biz/biznes/7,177150,29639137,czy-dziennikarze-sa-jeszcze-potrzebni-moj-ostatni-artykul-napisał.html?_ga=2.141020146.1308389590.1683578462-1595807631.1682344503.

³⁸ More about this cooperation: <https://aijournalism.fsv.cuni.cz/en/tacr-2/about-tacr/>

Ethical issues mainly relate to the ownership rights and ethical boundaries of AI technology use, specifically concerning the creation and distribution of fake news or deep-fake videos and audio messages intended to cause confusion among the public.

The use of AI in media is still **facing linguistic and cultural barriers**, which are causing resistance from some media outlets. One major challenge is that AI-generated content is not yet tailored to the language and style of specific countries. This lack of customisation is leading to resistance from both media professionals who use AI and consumers of media content. However, as AI technologies continue to develop rapidly, it is expected that these barriers will diminish or even disappear.

In the context of cultural and linguistic resistance, there is notable **resistance among various generations** towards the adoption of new technologies, especially those that are complex, such as AI. This resistance is evident in the media, where older journalists and editors exhibit reluctance to embrace AI technology. Additionally, potential users of AI content harbour doubts regarding its utility.

Technical difficulties arise when human oversight is necessary for AI content. Relying solely on AI tools can lead to an increase in low-quality content, fake news, and misinformation. These technical challenges are often accompanied by financial obstacles, particularly for small media outlets. These outlets may struggle to afford high-quality AI technology, which hinders their ability to compete effectively.

Table 6.2.1. Ethical dilemmas and challenges in AI usage in V4 countries

Czech Republic	Journalists emphasise human oversight to mitigate errors and maintain credibility, with debates sparked by AI-generated content.
Hungary	Concerns over reliability and mistakes hinder chatbot adoption, while ethical dilemmas focus on transparency and ownership rights.
Poland	Emphasis on human oversight and quality control, with guidelines developed for ethical AI use.
Slovakia	Initiating a discussion on ethical guidelines and transparency, with reliance on foreign media companies to lead.

Source: Media and Journalism Research Center, Thomson Foundation, CeSID

6.3. AI in V4: what next?

There is a firm belief among our respondents that the integration of AI in Central European newsrooms represents a transformative shift, offering efficiency gains and innovative possibilities. However, the current impact of AI tools in V4 country media is relatively small, considering their potential capabilities.

The usage of innovative technologies in the media participating in the research is still limited, accounting for less than one-fifth of their total work. However, respondents are aware that this situation will change in the future, and they believe that enhanced AI tools will be necessary for the success of the media.

Respondents in the survey for this research believe that these tools will continue to develop and advance. This implies that the role of journalists will also change, and journalists themselves will need to become much more familiar with IT technologies, skills, and ways of using such tools in the future. Additionally, if used appropriately, AI could liberate journalists from many technical and tedious tasks they currently perform, allowing them to focus on topics that are significant for their mission and for the media they work for. From this perspective, **AI could represent an extremely important innovation**, especially for small and independent media, which often lack sufficient human and financial resources to operate as media do today.

But AI can also serve as a formidable adversary. While independent media outlets can benefit from AI tools in terms of efficiency and productivity, they must also be wary of the potential dangers they pose. AI can propagate unrest, fake news, and disinformation, thereby undermining the media's credibility. Consequently, newsrooms should exercise caution and avoid overreliance on AI technologies, as this could result in the creation and dissemination of news without proper oversight.

Therefore, it is necessary to **develop further AI tools** to adapt them to local content, characteristics, and styles. Additionally, **specific training** for media workers, editors, and journalists is needed **to use AI potential in an adequate and ethically acceptable manner**: this is a priority for further modernisation of the media in all V4 countries. Moreover, **deeper cooperation between newsrooms, the IT sector, and regulatory bodies** to ensure the responsible integration of AI into journalism in the future is needed.

7. Lessons learned

The V4 countries provide a unique field to understand the deployment, challenges, and impacts of AI within media operations. As newsrooms across these countries adapt to the possibilities of AI, several crucial lessons have emerged. These lessons not only highlight the technological opportunities but also emphasise the ethical considerations, human oversight requirements, and future implications of AI in journalism.

Ethical considerations and trust

In the area of news production, trust remains a central issue when it comes to AI. There is a universal concern about the erosion of trust caused by potential mistakes in AI-generated content. Czech journalists, for example, interviewed for this study are particularly worried about AI's role in manipulating public opinion during elections. Although they hold varying views on the risks of disinformation during European elections, they unanimously believe that the upcoming US presidential elections in autumn 2024 will reveal the most recent trends in AI-facilitated manipulations. These trends are expected to have an impact on subsequent elections, including those in the Czech Republic.

Transparency in the use of AI is crucial. In Poland, while some media outlets actively combat disinformation through AI tools like fact-checking initiatives and AI-generated content labelling, concerns about the spread of fake news and deepfakes continue to rise. AI is being used in newsrooms, with AI bots responding to disinformation and in fact-checking initiatives like the Demagog Association. However, challenges arise in distinguishing between real and fake news as media organisations navigate the complexities of AI-based tools for content moderation and combating disinformation. Notable examples of media outlets, such as moja-ostroleka.pl, and initiatives like the European Project AI4TRUST, underscore the importance of responsible AI use in upholding journalistic standards and fostering public trust. This is particularly crucial in the lead-up to elections, where the authenticity of information is vital for informed decision-making.

Human oversight and AI limitations

In handling large datasets and repetitive tasks, AI proves to be invaluable. However, across all V4 countries, the necessity for human oversight is consistently emphasised. There is a consensus that AI cannot fully replace the understanding and contextual analysis provided by human journalists. Amidst concerns about AI-generated disinformation and manipulation of public opinion, election coverage in Slovakia, Czech Republic, Poland, and Hungary underscores the need for human oversight and ethical AI application. Slovak newsrooms are open to AI training and workshops, while Polish outlets emphasise the importance of fact-checking and debunking. The European elections in Hungary were expected to be heavily influenced by disinformation campaigns, necessitating cautious use of AI and prioritising human control.

But while all news media surveyed in this study highlight the crucial role of journalists in creating content, equally important is to provide education to journalists and media professionals on identifying and countering disinformation spread through AI-generated content. These newsrooms aim to strengthen their ability to combat the spread of disinformation, ensuring the integrity of their reporting and upholding journalistic standards in the digital era.

Differences between mainstream media and smaller media

Mainstream media outlets, equipped with greater resources, are increasingly embracing AI technology to improve both content generation and operational efficiencies. Research suggests that these outlets are particularly interested in using AI for these purposes, as it can result in capturing a larger audience and fostering enhanced engagement. However, it is important to note that in certain Central European countries, most of the mainstream

media are government-controlled and serve as a source of state propaganda and disinformation. Consequently, adopting advanced AI tools by these outlets amplifies the risk of further disseminating misleading information.

On the other hand, independent media organisations in the V4 countries, although typically small, can greatly benefit from AI technologies. AI tools such as transcription, translation, and content generation can save time and resources, enhancing efficiency and reducing costs. Moreover, AI analytics can offer valuable audience insights, enabling independent media to tailor content more effectively, as demonstrated by certain global practices.³⁹ These organisations play a vital role in protecting independent journalism across the region.

Table 7.1. Overview of AI use in newsrooms in V4 countries

	Czech Republic	Hungary	Slovakia	Poland
Adoption level	Moderate. Despite noticeable advancements in the integration of AI tools across various tasks, challenges persist, and the adoption rates vary among different newsrooms. This indicates a steady, yet not fully widespread, implementation throughout the industry.	Moderate. AI tools are currently being used in a variety of ways, including speech-to-text transcription, translation assistance, and social media analytics. However, it is important to note that the integration of AI for content creation is still limited. Many media outlets are hesitant to fully embrace AI for tasks that require a more creative or investigative approach to journalism.	Low to moderate; gradual increase in interest and exploration.	Moderate, with room for growth and further integration of AI technologies to enhance news production, combat disinformation, and improve overall media quality
Tools used	AI tools in Czech newsrooms have been used for tasks such as researching, summarizing articles, analysing documents with fixed structures, and monitoring news from different sources. AI has been used in creating transcript-oriented news articles, generating audio versions of news, and providing assistance during the content creation process. AI tools like DeepL are used for translation tasks, while platforms like Seznam Zprávy and	AI tools like Alrite and Imprion are used for speech-to-text transcription and automated social media analytics, respectively. Media organisations have explored AI-powered content creation, seen in initiatives like AI-produced podcasting by outlets such as Hirstart and introducing an AI-generated anchor for a scientific program by the public service broadcaster. Additionally, AI tools are used for fact-checking, as demonstrated by	Slovak newsrooms are integrating AI tools to streamline operations. For instance, they use AI for speech-to-text conversion (like BEEY and Microsoft Azure) and image generation (Canva AI, Midjourney). AI algorithms are also used to create articles on election results. Some outlets employ AI in fact-checking (.tyzden) and distribution, offering personalised subscription deals.	Polish newsrooms commonly use AI tools like ChatGPT, Microsoft Copilot, and Midjourney for various tasks such as generic content creation, back-end solutions, advertising texts, and more. Examples of AI usage in Polish media outlets include transcribing interviews and videos, generating article headlines, creating summaries, and automating content creation tasks.

³⁹ Beckett, Charlie. "How newsrooms around the world use AI: a JournalismAI 2023 global survey." *Polis Blog* (2023).

	radio FM Express employ AI moderators and robots for producing content.	Lakmusz using Crowdtangle for monitoring misinformation spread and facial recognition software to detect inaccuracies. In newsrooms, AI aids in data analysis, trend monitoring, SEO optimization, and content personalisation to enhance user engagement and experience.		
Challenges	Czech newsrooms, both big and small, face challenges in fully implementing AI tools due to issues like unreliable large language models, financial limitations, and variable quality of AI-generated content. The gap between newsrooms widens as larger ones invest in tailored AI solutions, while smaller ones rely on more generic tools. Journalists worry that AI may generate more errors, alter writing styles, and worsen problems like low-quality content and plagiarism.	AI use is politicised, with significant implications for press freedom and disinformation. Need for human oversight to mitigate errors and ensure balanced news presentation.	One major obstacle is the technical knowledge gap among journalists. Additionally, there is a lack of trust in AI for tasks like generating content, as journalists are hesitant to rely solely on AI due to concerns about factual accuracy and the reputational risks posed by potential errors in AI-generated content. There are also ethical considerations around AI usage, such as transparency in labelling AI-generated content and addressing concerns about the impact of AI on journalistic standards.	Challenges in AI adoption in Polish newsrooms include the lack of skilled personnel, data access issues, organisational adaptation, and financial constraints. Ensuring a human touch in content supervision, quality control, and maintaining editorial policies while leveraging AI tools is crucial. Navigating the ethical use of AI amidst widespread disinformation
Compared to global trends	Czech newsrooms are cautious, focusing more on potential risks than on active adoption. The Czech media landscape has shown advancements in AI integration, particularly in areas like personalised content delivery, content	Hungary's specific issues such as disinformation and foreign interference parallel broader global concerns about the impact of AI on democratic processes and media ethics. Higher engagement with AI-driven content manipulation mirrors	Globally, media organizations are increasingly adopting AI to streamline workflows, enhance content creation, and boost audience engagement—a trend reflected in Slovak newsrooms where AI tools are being	Although Poland has shown progress in using AI tools in newsrooms, the adoption level and integration of AI in journalism are still lower compared to global trends.

	<p>creation automation, and audio content generation.</p> <p>Journalists in Czech newsrooms have acknowledged the benefits of AI in saving time, automating tasks, and providing support during the writing process. However, they emphasise the importance of human supervision to avoid errors and maintain trust in journalism.</p> <p>Concerns have been raised about AI-enabled disinformation and its potential impact on elections.</p>	<p>some global practices in politically charged environments but lacks the ethical controls seen in other regions.</p>	<p>integrated for such tasks. However, Slovak newsrooms are at an early stage of adoption, grappling with challenges like technical knowledge gaps and concerns about AI's impact on content creation. While some global outlets are using AI for sophisticated applications like personalized recommendations and automated reporting, Slovak media organisations are currently focusing on basic AI tools such as transcription and image generation.</p>	
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Source: Media and Journalism Research Center, Thomson Foundation, CeSID

8. AI in the V4 countries media: future outlook

The V4 countries are at a pivotal moment in exploring the available tools for integrating AI in newsrooms. There is a growing emphasis on assessing the cost-effectiveness, deployment potential, and scope of actions supporting longer-term downstream interventions, especially in using AI solutions during elections. These countries have learned valuable lessons from their experiences with AI in journalism, paving the way for more effective implementation of AI technologies.

The **Czech Republic** has seen a gradual adoption of AI tools in newsrooms, with different levels of proficiency and integration. Journalists have started incorporating AI into their workflows, but challenges still need to be addressed in fully integrating these tools into daily processes. **Hungary's** media landscape is characterised by the use of AI tools for tasks such as transcription and translation. However, there is still a reluctance to embrace AI for content creation, especially in the context of election coverage. Moreover, the high level of state control in Hungary is problematic as large government-controlled media are likely to benefit the most, given their financial support from the state, from adopting AI. **Poland** takes a forward-looking approach to integrating AI, seeing it as a transformative tool in news production, disinformation detection, and verification. However, the need for systemic approaches to AI presents an opportunity for research collaboration and fact-checking initiatives to address this issue. Media in **Slovakia** are still in the early stages of exploring the potential of AI in newsrooms. The country's media are beginning to test AI applications for tasks such as speech-to-text conversion and chatbot usage. However, there is some hesitation regarding the role of AI in content creation, mainly due to concerns about the necessity of human oversight. Despite this, there are opportunities to leverage AI tools to improve operational efficiency, optimise sales and content delivery, and enhance audience engagement.

As the V4 countries navigate the complexities of deploying AI in journalistic practices, it is essential to focus on improving AI proficiency, ethical use, and strategic integration. These factors are critical for fostering innovation, ensuring journalistic integrity, and supporting democratic values in the digital age.

To enhance the use of AI in journalism across the V4 region, it is vital to foster a collective learning environment. This can be achieved through collaborative efforts that transcend national borders, such as organising workshops.

How Artificial Intelligence Is Changing Media and Journalism in Central Europe

A study mapping the use of AI by newsrooms in the Czech Republic, Hungary, Poland and Slovakia

By sharing best practices and insights, journalists from the V4 countries can contribute to elevating the standards of AI use in journalism.

Furthermore, agreeing on standardised ethical guidelines for AI deployment is important. Such guidelines can ensure consistency and transparency, enabling media outlets in each country to adhere to a common framework of ethical practices. Capacity-building initiatives focused on adopting AI tools for specialised functions, such as investigative journalism and fact-checking, are also important. These initiatives will equip journalists with the skills to leverage AI for accurate and reliable news reporting effectively. Additionally, training on ethical AI implementation is needed in all V4 countries. Finally, partnerships between media houses, technology companies, and AI experts can drive innovation and promote the development of tailored AI solutions that address the specific needs and challenges faced by newsrooms in the Czech Republic, Hungary, Poland, and Slovakia.

Research methodology

To conduct this study, a team of experts from the Thomson Foundation and Media and Journalism Research Center (MJRC) developed a research template. This template served as the common basis for data collection in the four selected countries: Czech Republic, Hungary, Poland, and Slovakia. In each country, local experts were hired to conduct the research in March-April 2024.

The research methodology involved both secondary research and interviews. The secondary research focused on gathering data about the latest developments in media, politics, and technology. Sources included academic studies, NGO reports, policy briefs, and audience datasets. Additionally, a total of 23 interviews were conducted with journalists in the four countries analysed in this study. These interviews primarily aimed to gather information about the adoption of AI tools by newsrooms in the Central European region, their approach to AI usage, and their plans and strategies for implementing AI. Respondents were also asked to complete a questionnaire providing context about their newsrooms, such as size and specialisation.

The collected data was used to draft four (unpublished) country reports, which formed the basis for this comparative overview.

