LSE THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Google News Initiative

POLIS Journalism at LSE

Generating Change

A global survey of what news organisations are doing with AI

Charlie Beckett and Mira Yaseen

Preface

Our news media world has been turned upside down again. As always, serious technological change produces both dystopian and utopian hype. Much of this has been generated on social media by corporate PR and politicians. News coverage and expert commentary has also veered from excited coverage of positive breakthroughs in fields such as medicine to much more frightening visions of negative forces unleashed: Generative AI (genAI) is producing a tidal wave of automated, undetectable disinformation; it will amplify discrimination, extreme speech and inequalities.

And its impact on journalism? Again, much of the coverage has focused on the unreliability of many genAI tools and the controversy over its rapacious appetite for other people's data to train its algorithms. As the initial storm of hype turns into more practical considerations we have been talking to news organisations around the world about this new wave of technological change. What are they doing with AI and genAI; what might they do in the future; and what are their hopes and fears for its impact on the sustainability and quality of this hard-pressed journalism industry?

Whether you are excited or appalled at what genAI can do, this report makes it clear that it is vital to learn and engage with this technology. It will change the world we report upon. It needs critical attention from independent but informed journalists. But our survey shows it is also already changing journalism. It brings exciting opportunities for efficiency and even creativity. As one respondent told us, "Freeing up time for journalists to continue doing their job is the greatest impact achieved."

But it also brings specific and general hazards. The good news from our respondents, at least, is that they are aware of the opportunities and risks and are beginning to address them. The best organisations have set up structures to investigate genAI and processes to include all their staff in its adoption. They have written new guidelines and started to experiment with caution.

This is a critical phase (again!) for news media around the world. Journalists have never been under so much pressure economically, politically and personally. GenAI will not solve those problems and it might well add some, too.

Responsible, effective journalism is more needed than ever. We hope this report and our work at JournalismAI contributes to that mission. We look forward to hearing from you. Let us know what you are doing and how we can help.

Professor Charlie Beckett
Director Polis, LSE, leader of the LSE's JournalismAI project

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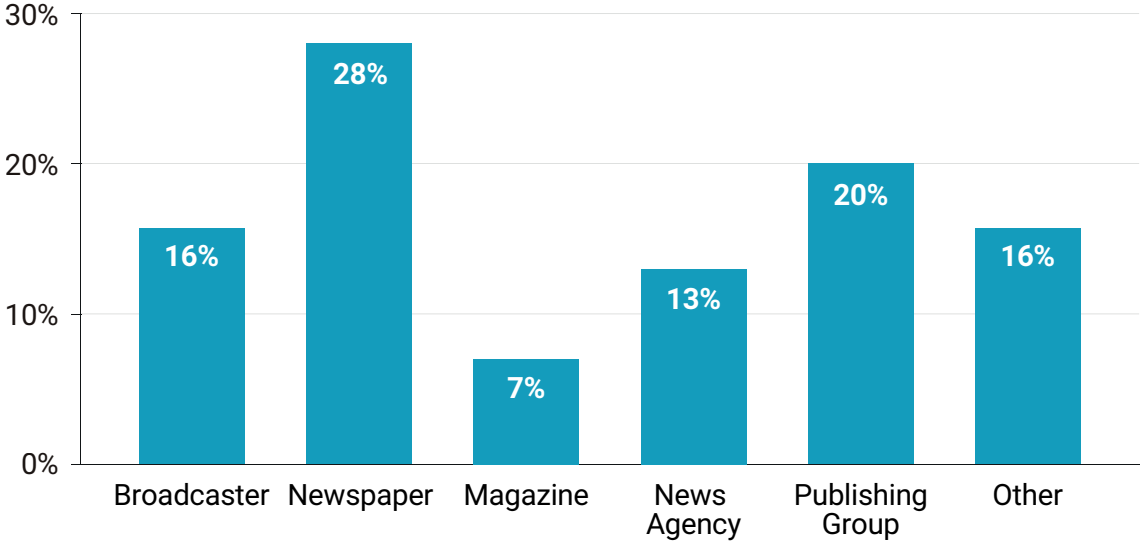
The JournalismAI Survey

This report is the second global survey that we have conducted. The sample for this report is bigger with a greater emphasis on geographical diversity. It is based on a survey of 105 news and media organisations from 46 different countries regarding AI and associated technologies. In 2019 we surveyed 71 news organisations from 32 different countries, of which only 16 have participated again in this 2023 survey.

This year, we made it a point to reach a more diverse group of participants in terms of the size of their organisations. We invited small and large newsrooms, including emerging and legacy organisations. In addition to this, contributions came in from Latin America, sub-Saharan Africa, the Middle East and North Africa (MENA), Asia Pacific, Europe, and North America. This necessitated an additional chapter, focusing on regional challenges to AI adoption.

News Organisations That Completed The Survey By Type

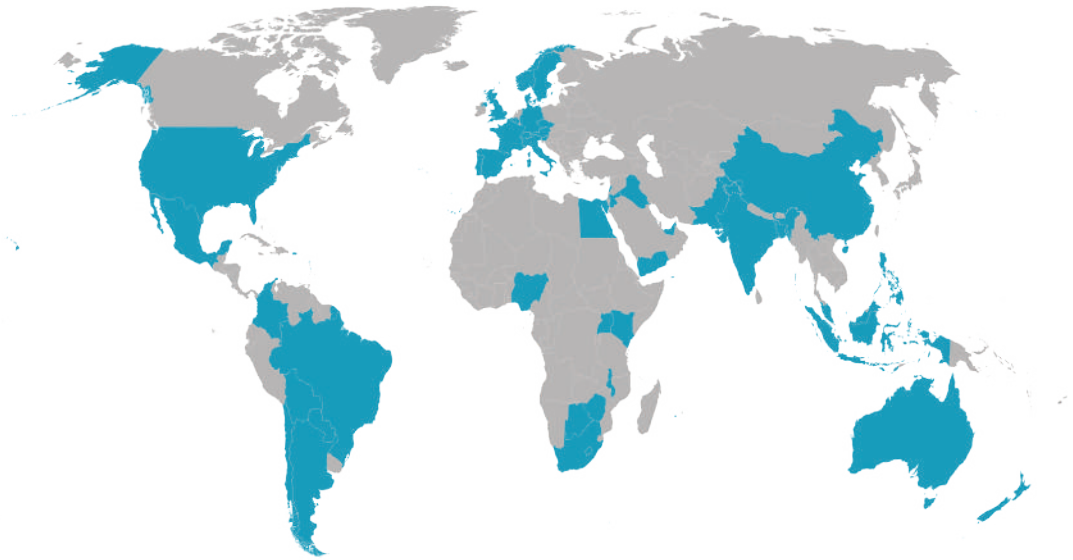


The purpose of this report is the same as the first: to give a sense of what is happening with AI and what risks and opportunities it offers. We asked participants how they are engaging with generative AI (genAI) technologies and its implications for the future of journalism. We hope it informs the debate, helps news organisations chart their way forward, and guides us to develop our programmes to support that process.

The survey was supplemented with interviews, and conversations at journalism conferences. We are very grateful to everyone who has shared their thoughts and experiences with us. The surveys and interviews were conducted between April and July, 2023.

We do not claim that the survey is representative of the global industry – that would be almost impossible on an international scale – nor does it equally reflect all viewpoints within the different parts of news organisations. But it does give an unprecedented insight into how these technologies are perceived by those people leading their development or application inside news organisations.

Our respondents represent diverse roles and expertise within their organisations; they include journalists, technologists, and managers. We encouraged news organisations to gather representatives from different departments to complete the survey collaboratively.



NB: The list of organisations that completed the survey can be found in the acknowledgments.

The published quotes have generally been anonymised. Some organisation names were added for context after receiving permission from the authors. Some quotes were edited lightly to correct literals and for sense. The editorial responsibility for the report lies entirely with the author.

Executive Summary & Key Findings

1. Artificial Intelligence (AI) continues to be unevenly distributed among small and large newsrooms and regionally among Global South and Global North countries.
2. The social and economic benefits of AI are geographically concentrated in the Global North, which enjoy the infrastructure and resources, while many countries in the Global South grapple with the social, cultural, and economic repercussions of post-independence colonialism.
3. More than 75% of respondents use AI in at least one of the areas across the news value chain of news gathering, production and distribution.
4. Increasing efficiency and productivity to free up journalists for more creative work were the main drivers for AI integration for more than half the respondents.
5. Around a 1/3 of the respondents said they had an institutional AI strategy or were currently developing one.
6. Newsrooms have a wide range of approaches to AI strategy, depending on their size, mission, and access to resources. Some early adopters are currently focusing on achieving AI interoperability with existing systems, others have adopted a case-by-case approach, and some media development organisations are working towards building AI capacity in regions with low AI literacy.
7. Around a 1/3 of respondents believe their organisations are ready to deal with the challenges of AI adoption in journalism, while almost half said they were only partially ready or not ready yet.
8. Many respondents said AI integration is changing existing roles within the newsroom through training and upskilling. Along the same lines, AI is changing the nature of a journalist's role and sought after skills.
9. As we saw in our 2019 report, financial constraints and technical difficulties remain the most pressing challenges for integrating AI technologies in the newsroom.
10. Ethical concerns are still significant for our respondents; many advocate for explainable AI and setting ethical guidelines to mitigate algorithmic bias.
11. Setting de-biasing techniques emerged as a highly challenging area for most respondents.

12 Cultural resistance and fears of job displacement and scepticism of AI technologies cannot be discounted.

13 Across the board, respondents noted that mitigating AI integration challenges requires bridging knowledge gaps among various teams in the newsroom. Similarly, cross-department collaboration was seen as necessary for achieving effective AI adoption.

14 The challenge of keeping pace with the rapid evolution of AI was consistently mentioned throughout the survey.

15 About 40% of respondents said their approach to AI has not changed over the past few years, either because they are still in the beginning of their AI journey or because AI integration remains limited in their newsrooms. Concurrently, around a 1/4 said their organisation's approach to AI has evolved; they have gained hands-on experience that helps them think more realistically about AI.

16 More than 60% of respondents are concerned about the ethical implications of AI integration for editorial quality and other aspects of journalism. Journalists are trying to figure out how to integrate AI technologies in their work upholding journalistic values like accuracy, fairness, and transparency.

17 Respondents called for transparency from the designers of AI systems and technology companies, and the users, namely newsrooms, with their audiences.

18 Journalists and mediamakers continued to stress the need for a 'human in the loop approach,' in line with the results in our 2019 survey.

19 There are fears that AI technologies would further commercialise journalism, boosting poor quality and polarising content, leading to a further decline in public trust in journalism.

20 Tech companies are driving innovation in AI and other technologies, but survey participants voiced concerns about their profit-driven nature, the concentration of power they enjoy, and their lack of transparency.

21 Around 80% of the respondents expect a larger role for AI in their newsrooms in the future.

22 Survey participants expect AI to influence four main areas:

1. Fact-checking and disinformation analysis
2. Content personalisation and automation
3. Text summarisation and generation
4. Using chatbots to conduct preliminary interviews and gauge public sentiment on issues

23 There are concerns that AI will exacerbate sustainability challenges facing less-resourced newsrooms which are still finding their feet, in a highly digitised world and an increasingly AI-powered industry.

24 Almost 43% of responses emphasised the importance of training journalists and other personnel in AI literacy and other nascent skills like prompt engineering.

25 The vast majority welcomed more collaboration between newsrooms and other media organisations and academic institutions, hoping it would help lessen the disparity between small and large newsrooms, as well as regionally between newsrooms in Global North and Global South countries.

26 The need for a balancing act between tech and journalism, a theme that also emerged in our 2019 survey, remains imperative to a future where AI technologies are leveraged to serve journalism and its mission.

27 The vast majority of respondents, around 85% have at least experimented with generative AI (genAI) technologies in a range of ways such as writing code, image generation, and authoring summaries.

28 Some are apprehensive about using genAI in editorial tasks, while others are using them regularly in coding, headline generation, and search engine optimisation.

29 There was a high level of agreement among participants that genAI presented a new set of opportunities not provided by traditional AI. They highlighted some of the affordances of genAI, such as accessibility and low requirements for advanced technical skills.

30 Respondents were much more divided – almost 1/2 were not sure – as to whether genAI also presented a new set of challenges. Some believe genAI presents similar challenges to traditional AI, such as algorithmic bias, but raises the risk ceiling to a new level.

31 Newsrooms globally contend with challenges related to AI integration, but the challenges are more pronounced for newsrooms in the Global South. Respondents highlighted language, infrastructural, and political challenges.

Introduction
How Did We Get Here?

Artificial Intelligence in journalism has been significant for some years. The LSE JournalismAI project started back in 2019 and our first global report published in the same year showed that it was a key emerging set of technologies. AI was producing efficiencies for newswork and it was also creating opportunities for new practices and products or services.

We showed in that previous report that a range of news organisations were using AI across the journalism process from newsgathering, content creation and distribution, to marketing and revenue-gathering. A varied set of technologies were being used, with programmes based on training software to manipulate data. Advances in machine-learning and Natural Language Processing (NLP) enabled newsrooms to build or adapt tools and systems to support their journalism.

Generally, these were large-scale but relatively basic functions such as scraping social media or automating very simple content creation. It was used by investigative journalists to comb through large document leaks or to help automate paywalls and to personalise content in straightforward ways. Some uses of machine learning – such as search – were so routine and universal they were taken for granted.

In 2019 we found that news organisations were facing various challenges in adopting AI. There was a lack of general knowledge, specific skills, and resources. There were also inequalities between big new organisations and smaller ones, especially those in non-English speaking or less developed markets.

Working with news organisations over the last five years, we could see that the impact of AI was systemic and accelerating, just as it was in other industries and sectors. The most successful organisations were those that took a strategic, holistic approach and who recognised that these technologies required fundamental self-analysis of the organisation's capabilities and future planning.

In the wider context it is possible to see AI as a third wave of technological change for journalism. The first wave was going online, accompanied by the digitalisation of tools and the shift to mobile. The second wave was the arrival of social media and the impact that had on content creation, consumption and competition. The technology platforms now provided much of the infrastructure for journalism and the 'user' was central to its dissemination.

The arrival of generative AI (genAI) in the last year has accelerated all these trends and created new disruptions. This report is a survey of how news organisations have continued to develop 'traditional' AI and how they are approaching the new challenges of genAI. Clearly, it presents fresh opportunities, but it has special risks and characteristics. There are continuities. Most news organisations we spoke to were taking a more strategic approach to genAI, often based on the lessons from dealing with AI and other technology beforehand.

It is important to stress that genAI is probably the most rapidly emerging technology for media in this digital era. Some of the more extreme dystopian critiques and over-heated marketing hype have distracted from a proper debate about immediate concerns. It is good that we are now all aware of AI and able to interact directly with it and explore its force and flaws. It is hoped that we will have a more inclusive debate about what it means for society in general and journalism in particular.

Journalism is a special practice. On the one hand it is around the world a sector under great commercial, political and competitive pressure. It is weak in resources compared to the giant corporations developing this technology. The potential for deep structural threats to journalism in the future must be part of our thinking now. On the other hand, news organisations have shown remarkable resilience and innovation in sustaining and sometimes thriving despite the challenges they have faced. It might even be that in a world where genAI is such a power, for ill as well as good, public interest journalism will be more important than ever.

- **Newsroom Definitions of AI + Generative AI**

We continue to refer to AI as an umbrella term for a wide variety of related technologies and to acknowledge that many processes described as AI often incorporate more conventional technologies. We borrowed the same simple definition of AI we used in our 2019 report:

> "Artificial intelligence is a collection of ideas, technologies, and techniques that relate to a computer system's capacity to perform tasks normally requiring human intelligence.[1]"

As for generative AI (genAI), which we discuss in detail in Chapter 5:

> "It is a subfield within Machine Learning (ML), a subfield of AI in its own right, that involves the generation of new data, such as text, images, or code, based on a given set of input data.[2]"

We wanted to know if our respondents had an operational definition of AI. As they did in 2019, the responses reflected quite varied understandings of AI, echoing once again the fluidity of the term and the complexity of the topic.

Some respondents offered a clear operational definition of AI as the use of machines or computer systems to perform tasks that traditionally required human intelligence. Many offered technical definitions that centred around the concepts of "automation", "machine learning" and "algorithms." Almost half the respondents used one or more of those terms in their definitions:

> It entails the creation of algorithms and models that allow machines to carry out operations like speech recognition, visual perception, problem solving, and decision-making that ordinarily require human intelligence.

Other respondents related their operational definitions of AI to its potential benefits and their motives for integrating it in the newsroom, such as increasing efficiency, or better serving the newsroom's audience and mission:

> For us, AI represents a group of technologies that can assist and empower [our team] by providing insights and automated support across a range of editorial, operational and communications tasks.

> Technologies used to automate gathering and analysis of data that serve our editorial niche and mission.

Some highlighted the capacity of AI technologies to "learn" or improve themselves:

> AI is the use of advanced algorithms that are able to process, interpret, classify and find patterns in complex and/or large amounts of data in such a way that infers 'intelligence' or 'human-like' learning.

Several respondents emphasised the importance of ethical considerations in AI development, while others mentioned concerns about the opacity of AI systems or the need for human oversight:

> “The set of technologies, tools, processes... that make it possible to emulate human capabilities in order to automate or improve them, not always for an ethical or lawful purpose.”

A few respondents said they did not have a working definition of AI yet:

> “We do not have a collective working definition yet. Mine, as the person in charge of exploring AI within the newsroom, is that AI is a set of processes that a computer does to aid and facilitate human’s work, adding intelligence to it. By no means it replaces human presence and it should always be checked and accompanied.”

This report is presented in seven chapters. In order to facilitate comparisons between this and the 2019 report, we kept the majority of the chapters the same, with the exception of two new chapters.

The Introduction gives a brief background of the findings from the 2019 report, and summative overview of the technological changes seen in the journalism industry over the past years, to date. We define key issues and a summary of what you can expect in this report.

Chapter One focuses on how AI is currently being used by newsrooms. The chapter looks at how newsrooms are using AI across the new value chain as well as what has been working and what has not been working.

Chapter Two unpacks the AI strategy or lack of, in newsrooms. We look at the types of AI approaches newsrooms have undertaken, some of the key challenges and what impact the technology can have on them.

Chapter Three is also similar to the previous report as we expand on ethics and editorial policy.

Chapter Four looks to the future and role of AI in journalism.

Chapter Five touches on generative AI and journalism. It is a new chapter that looks at the current use cases of genAI, as well as its opportunities and challenges.

Chapter Six reflects on the global disparity in AI development and adoption as well as the challenges faced by the majority of the world's population in the Global South.

The Conclusion ties all the above-mentioned chapters together and gives a brief analysis of what all this means for journalism. We conclude the main body of the report with a six-step roadmap towards an AI strategy that newsrooms could borrow from. You will also find a glossary, endnotes, references and a list of suggested readings and resources.

This work was funded by the Google News Initiative and carried out by a team led by Professor Charlie Beckett, director of the LSE's international journalism think-tank, Polis.

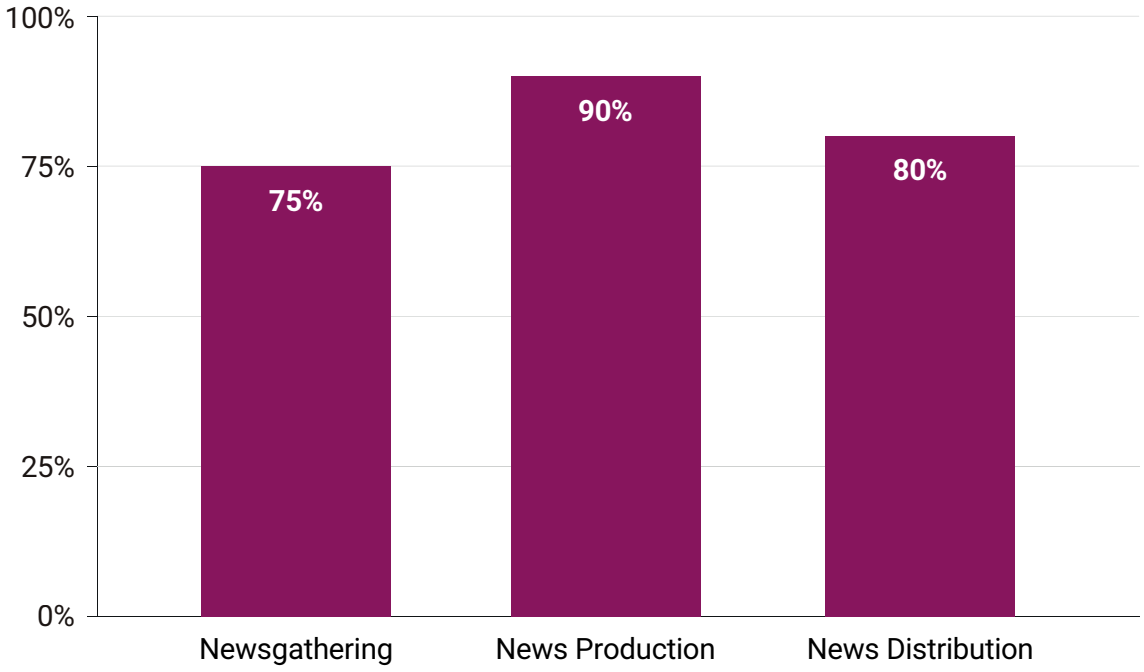
We would like to thank all the journalists, technologists and researchers who took part in the project. The project was managed by Tshepo Tshabalala and the lead researcher and co-author was Mira Yaseen

Chapter 1

How AI is Being Used in Journalism Today

1.0 How Are Newsrooms Using AI?

We asked newsrooms how they are using AI technologies today. These areas – newsgathering, news production and news distribution – cover all the content creation stages from ideation to publishing. These three areas often intersect given the nature of "contemporary 'networked'[3] or 'hybrid'[4] journalism. For instance, fact-checking chatbots are leveraged in news production to validate or refute certain claims. At the same time, the data collected could assist in detecting misinformation trends and inspire a topic for a feature article, thus contributing to the newsgathering process.



1.1 Newsgathering

AI applications can assist newsrooms in gathering material from various sources and helping the editorial team gauge an audience's interests as part of a data-driven production cycle. The responses revealed that a large majority, almost three quarters of organisations, use AI tools in newsgathering. The responses focused on two main areas:

1 **Optical character recognition (OCR), Speech-to-Text, and Text Extraction**: Using AI tools to automate transcription, extract text from images, and structure data after gathering.

2 **Trend Detection and News Discovery**: AI applications that can sift through large amounts of data and detect patterns, such as data mining.

We list more detailed examples below of these two main areas of application of AI in newsgathering.

1 Optical character recognition (OCR), Speech-to-Text, and Text Extraction:

The use of AI-powered tools for speech-to-text transcription and automated translation, such as Colibri.ai, SpeechText.ai, Otter.ai, and Whisper, was a widely cited area of use. They help streamline the production process and allow newsrooms to engage with content in different languages:

> "Transcription services like Otter are invaluable for reporters on deadline, and our tag tool streamlines production processes for editors."

For others, inaccuracies related to accent or language limitations mean the benefits of transcription tools are not yet as accessible:

> "I tried to use an automatic transcription service like Otter.ai to transcribe my interviews but it was very inaccurate. It struggled to transcribe interviews where people had an accent."

AI technologies provide a universal set of challenges pertaining to ethical and other considerations that apply to industries and to newsrooms globally. However, early on in the survey, we began to see an additional set of challenges, such as AI tools' language limitations. Newsrooms in Global South countries must contend with these constraints from the first stage of newsgathering to news production. (More on this in Chapter 6).

2 Trend Detection and News Discovery:

AI applications help journalists uncover issues of interest to audiences in different regions and get a sense of what they think about particular issues. Several respondents mentioned using tools like Google Trends, web scraping, and data mining services like Dataminr and Rapidminer to identify trending topics, detect news of interest, and gather data from various sources to uncover stories. Here are some examples from our survey:

> "CrowdTangle is one of the tools we use regularly. It searches various social media posts for 'viral' or talked about posts."

> "We use softwares like Rapidminer and other Google initiatives to mine data to detect trending and news of interest around the world."

> "We use speech-to-text algorithms to monitor public discourse, mainly on the bigger broadcasters from the country (radio, TV, streaming). We also monitor viral social media posts to identify possible disinformation circulating on these platforms."

In addition to text automation and trend detection, respondents provided various other uses of AI technologies that help streamline routine, daily processes, previously performed manually or through lengthy processes, such as data classification and content organisation. Examples from our respondents include tag generation, notification services, chatbots and language models that assist in automating responses and extracting data.

The responses reflected a general inclination to use third-party tools in newsgathering. Few newsrooms, however, mentioned developing their own in-house built automation tools like web scrapers, or crawlers to meet their specific needs:

> "Mostly automations by webhooks feeding into Slack. We have also built our own scraping services feeding us information when a certain threshold is reached in the data that we scrape."

> We have an internal tool that includes an automated tagger for news websites articles and social media posts (which tags articles with topics/keywords) to collect specific discourses on issues of accountability and classify them by topics. We use neural networks for natural language sentiment analysis of refugees related data using Google Cloud APIs. Other APIs for analytics such as Lebanon protests platform to collect data on protest discourses and analyse main influences (genders and job positions in profiles).

These tools do not necessarily use AI technologies. Many processes described as AI often incorporate more conventional technologies. These are systems that are created or 'trained' by humans.

Sometimes endeavours take on the form of collaborative projects with other organisations:

> We have developed a tool with the OCCR [Organized Crime and Corruption Reporting Project] team to "Arabize" their engine by extracting hundreds-of-thousands of pages to the ARIJ [Arab Reporters for Investigative Journalism] datadesk using Google Optical Character Recognition (OCR) services, and we build [our own] crawler to collect the data from specific resources to be cleansed by researchers and journalists, then we uploaded to our domain.

1.2 News Production

AI can be a valuable resource in content creation at a detailed level. The rise of publicly accessible generative AI (genAI) technologies like ChatGPT has opened new possibilities (and challenges) for the ways in which AI can be leveraged in content creation, as the responses demonstrated. Around 90% said they used AI technologies in news distribution in a variety of ways, such as fact-checking and proofreading, using natural language processing (NLP) applications, trend analysis, and writing summaries and code using genAI technologies.

For instance, NLP applications are assisting with factual claim-checking. They identify claims and match them with previously fact-checked ones. Reverse-image search is also used in verification:

> We are starting to use NLP algorithms to assist journalists in finding fact-checkable statements. This system includes collecting the most recent official data to assist journalists during the fact-checking process.

Newsrooms are already experimenting with and using genAI technologies like ChatGPT in content production tasks, including the production of summaries, headlines, visual storytelling, targeted newsletters and in assessing different data sources:

> Our CMS has a Watson-powered tagging engine. We're working on a ChatGPT-powered headline suggestion tool, as well, but it's in the early phases.

> [We use] GPT-4 to create summaries and translation of articles written by journalists for use on various platforms. We are also experimenting with AI-generated images, headline alternatives, tagging articles, audio and video production.

GenAI tools like ChatGPT are also being used to assist with code writing and source assessments:

> For production I am using ChatGPT to help with code writing. I have made a few games/quizzes where even though the code is not completely written by ChatGPT, it has certainly written quite a few functions.

> We have also used either the ChatGPT interface or the OpenAI API to rationalise different data sources.

AI technologies like Grammarly and spell checking tools are employed for editing, proofreading, and improving the quality of written content.

1.3 News Distribution

Around 80% of respondents reported using AI technologies in news distribution, a slightly smaller percentage compared to production, but the range of use cases was the widest. Overall, the aim of using AI in distribution is to achieve higher audience reach and better engagement. News distribution was also the most frequently mentioned area impacted by AI-powered technologies in the newsroom, with 20% of respondents listing it as one of the areas most impacted by AI technologies.

Respondents shared examples of using personalisation and recommendation systems to match content more accurately and at scale with interested audiences. Or the other way around, tailoring content to a specific medium or audience:

> We have a multi-layered set of rules for customising our content to individual news outlets, so it meets all of their internal rules for word-use from British or American spelling, to rules regarding biassed words, opinionated words, cliches, hyphenated words, and so on.

> Recommender system for podcast episodes, using the EBU Peach engine.

Speech-to-text technology is another AI technology used to optimise content to other mediums, such as converting text to audio:

> We are using voicebots to convert our text stories to audio format.

AI-powered social media distribution tools like Echobox and SocialFlow were mentioned by several respondents, who said they used them to optimise social media content scheduling.

Respondents also mentioned using **chatbots** to create more personalised experiences and achieve faster response rates:

> The WhatsApp chatbot is also used for news distribution, as users immediately receive a link to our debunk if we have already verified the content they sent. Also, it sends daily text and audio summaries with Maldita's top stories.[5]

Enhancing the visibility of content in searches is key for all digital content, not least for newsrooms. AI-driven **SEO tools** can help newsrooms boost discoverability and better understand their audiences' interests:

> We mostly make use of SEO to help increase the visibility of our stories on our website. We have found that human interest local stories tend to do better than stories about celebrities or other topics.

> Ubersuggest[6] helps me see which keywords are highly searched online, Google Discover shows me which stories and keywords are trending, CrowdTangle shows me which social media posts are over performing. This helps me create relevant news stories that people are interested in. Using SEO keywords that are searched often increases the likelihood of the stories reaching a higher number of people.

We asked our respondents to share some of the impressive applications of AI technology they have come across which are used by media organisations. Here is a selection of the most common examples:

1. **BloombergGPT**: A large-scale language model trained on financial data to support various NLP tasks such as summarising financial documents, generating reports, and providing insights on market trends.[7]
2. **The Washington Post's Heliograf**: automates the process of generating short news articles from structured data, such as sports scores and earnings reports to allow journalists to focus on more in-depth reporting.[8]
3. **The Times of London's JAMES:** An AI-powered content management system that uses ML algorithms to analyse user behaviour and interests to deliver personalised news content.[9]
4. **Czech Radio's Digital Writer**: An AI-powered tool that generates news articles from structured data, helping automate news production by converting data into human-readable news stories.[10]
5. **Reuters's Lynx Insight:** This platform utilises AI algorithms to analyse massive data sets and provides journalists with valuable results and background information to support investigative reporting.[11]
6. **Washington Post's Arc XP**: A suite of tools for content management, publishing, and audience engagement that enables enterprise companies, retail brands, and media and entertainment organisations to create and distribute content, drive digital commerce, and deliver powerful multi-channel experiences.[12]
7. **Newtral's Claim Hunter:** The platform listens to and transcribes audio content, detecting statements that need fact-checking and automates the process of identifying claims made in speeches, interviews, or other audio sources, enabling efficient fact-checking.[13]
8. **The Reuters News Tracer:** It utilises machine learning algorithms to rapidly identify breaking news stories and verify their credibility. It helps journalists by sifting through massive amounts of data, social media posts, and eyewitness reports to deliver reliable and real-time news updates.[14]
9. **Newtral's automated fact-checking tool:** The platform uses NLP and machine learning techniques to identify potentially false or misleading information. This tool aims to improve the efficiency and accuracy of fact-checking processes.1[5]
10. **Duke Reporter's Lab's FactStream:** FactStream is an automated fact-checking system developed by Duke Reporter's Lab which identifies false claims in live speeches, debates, and public events by comparing them to previously fact-checked claims to provide instant feedback on their accuracy.[16]

1.4 Why Newsrooms Use AI

Clearly, the integration of AI applications has the potential to streamline various aspects of journalistic work. However, we sought to delve into the underlying incentives of the respondents in employing AI. More than half cited increasing efficiency and enhancing productivity as core objectives driving their adoption of AI. They said they hoped to automate monotonous and repetitive tasks, thereby streamlining workflows and allowing journalists to engage in "more creative, relevant, and innovative work":

> Many of our traditional news processes can be quite laborious and are reliant on human instinct that can vary drastically from person-to-person. Machine learning (or AI) should ideally streamline many of those newsroom processes, give insight into the viability of current processes and ultimately free up the 'human element' to focus on other areas.

> Almost all our use cases for AI are to speed up news production. It's always about speeding up, I don't think I've had one conversation about using it to improve quality.

For the fact-checkers at Madrid-based Maldita, the impact of AI tools was felt strongly during the Covid-19 pandemic, as they helped accelerate and scale the organisation's response to Covid-19 misinformation:

> By automating some tasks we are able to dedicate more time to other important things like fact-checking or investigations. It also allows our readers to receive quick answers when they inquire about a potential hoax. For instance, during the first weeks of the Covid-19 pandemic, our WhatsApp service was manual, meaning that a Maldita journalist would have to filter through all messages and count how many times content had been sent to us. We went from receiving 200 daily queries to over 2,000 during lockdown, which meant that we could simply not get back to all users at a time when they desperately needed answers (some of the disinformation they were receiving could be seriously harmful for their health).

Around a third of respondents said they hoped AI technologies would help them reach a wider audience, personalise reader experiences, and enhance audience engagement, a theme that featured strongly in the previous section about AI uses in news distribution:

> We hope to gather more insights in understanding our audiences as well as wide distribution of our newsletters.

> To increase audience engagement on all social media platforms and on the news site itself. There are specific pageview targets to hit every month and monitoring analytics and what people are interested in helps me do so.

1.5 What is Working and What is Not

Overall, the successful use of AI technologies varied widely among respondents, though transcription and audio-editing tools were seen as advantageous by many. Web scraping, social media monitoring, image generation, recommendation systems, and other distribution tools were also mentioned as successful AI applications:

> Scraping web pages and creating Slack alerts based on filters have been the most successful applications so far.

> Proofreading and basic copy editing have been very successful; video production using stable diffusion has also worked well.

> Recommender systems and NLP systems affecting distribution have been the most significant success.

> Automated transcription and claim-checking have proven to be successful.

Respondents highlighted that even with successful AI applications, testing and improvement are continuous, reflecting the evolving nature of AI and the consistent need for human intervention:

> We've successfully categorised hundreds of thousands if not millions of communications, so that was particularly successful but we did hit a limit with traditional machine learning approaches, and we're interested to see if we can develop a stronger strategy that integrates a range of approaches.

> We have been very successful in the part of automatically monitoring Twitter and in the part of detecting phrases extracted from audio/video. However, we are having some difficulties in detecting political tension/polarisation and we are still trying to improve our claim matching system, since sentence similarity models have some challenges, such as temporarity (maybe one claim that was false in the past is true now) …We are working on it.

Many respondents, often smaller, emerging newsrooms, are still in the early stages of AI adoption:

> It is still too early to ascertain any failures, we have been testing many individual tools and integrations, most of them have been helpful but none of them are heavily integrated into our workflow.

Newsrooms in Global South countries expressed challenges related to language or accents, when for instance a tool is used outside of its intended market. We will deal with this in more detail in Chapter 6.

Other than language challenges, very few respondents mentioned failures in specific AI-applications. However, when discussed, some respondents attributed any failures to organisational issues, rather than to technical limitations:

> “The biggest failure has been slow progression on already identified use cases because of organisational issues, lack of focus and resources.”

> “For some of our third-party available machine learning offerings, we found that we didn’t have a strong onboarding process or clear explanations, so uptake has been slower than anticipated.”

One respondent explained how their organisation decided to discontinue their work on an “automated service to write short stories about companies performance in the stock market,” because it did not gain popularity with the audience:

> “[It] did not create enough user value (the users rather looked at the stock graph), and when the pandemic hit and all stocks went south, our thresholds were reached for almost all companies spamming our users.”

Chapter 2

AI Strategy

2.0 The Need for Strategy

We have seen how AI technologies are being used or explored in newsrooms in various ways across the production process. To ensure their best use, newsrooms need to develop a more strategic approach to adoption. Our survey showed that many newsrooms had not yet evolved a more formal strategy. And where they had, these varied according to organisational circumstances and policies. Generally, newsrooms are adopting a more strategic approach, partly in reaction to the challenge of genAI, but this is still a fluid area and strategies have to be flexible.

2.1 Newsrooms' AI Strategies

Around 1/3 of the respondents said their organisation had an AI strategy or were currently developing one, similar to the results we saw in our 2019 survey. Responses to this question reflected strongly the diversity among the participants; in terms of experience with AI, strategy building objectives and approaches. Some newsrooms have had integrated AI technologies at an institutional level for some time now, and are conducting strategy reviews to better leverage AI across the organisations.

For instance, The Associated Press (AP) is conducting a strategy review to better understand areas for opportunities in AI and where it is not necessarily the required solution:

> "We are currently developing a plan for an AI strategy that cuts across all departments at AP. We have one working group that has been tasked with reviewing aspects of the news operation for opportunities and avoidance of AI. A tool or service needs to meet our journalistic standards and business mission to support AP members and customers."

Some organisations take on a two-pronged approach in their AI strategy, working with technology partners while enhancing their own in-house capabilities:

> We partner with vendors that are moving fast, so we can move quickly, too. Meanwhile, we are building in-house capabilities so we can have control and ownership.

Jordan-based ARIJ, a media development hub in the Arab region, recently launched its AI strategy to guide the organisation internally, but they plan to make it accessible to help guide other Arabic-speaking media organisations in their own AI integration efforts:

> [We] will provide this strategy in a playbook style to all Arab speaking newsrooms so they can benefit from it, in developing their own strategy.

Depending on many factors, having a strategy might not be needed at all. Some respondents said they adopt a case-by-case approach to AI, without necessarily developing a particular institutional level strategy. They focus on how AI technologies can help them achieve their objectives through AI or other conventional technologies:

> It will very often be deployed as a feature of an existing product (ie, via an upgrade); in other cases we will build our own models. These different use cases do not necessarily need to be joined up in an overall "strategy" just because they involve the same underlying technology.

Even those with comprehensive AI strategies, such as AfricaBrief, highlight the need to incorporate training and to continuously evolve their strategy to adapt to nascent AI technologies, such as generative AI. Their responses reflect the challenge of keeping up with the fast-paced evolution of AI technologies, a consistent theme throughout the survey:

> AfricaBrief's vision is to enhance news production using AI technologies, with objectives including news aggregation automation, data analysis for insights, and personalised content. Their roadmap includes phased implementation of ChatGPT for news gathering and NLP for data analysis. Resource allocation is dedicated to AI investments and talent development. Data management follows regulations for privacy and security. Ethical considerations are addressed, including bias mitigation. Monitoring and evaluation are performed using performance metrics. Collaboration and partnerships are sought for staying updated with advancements and best practices in AI for news production.

> Right now we are fine-tuning our strategy in order to take into account the recent development of GPT.

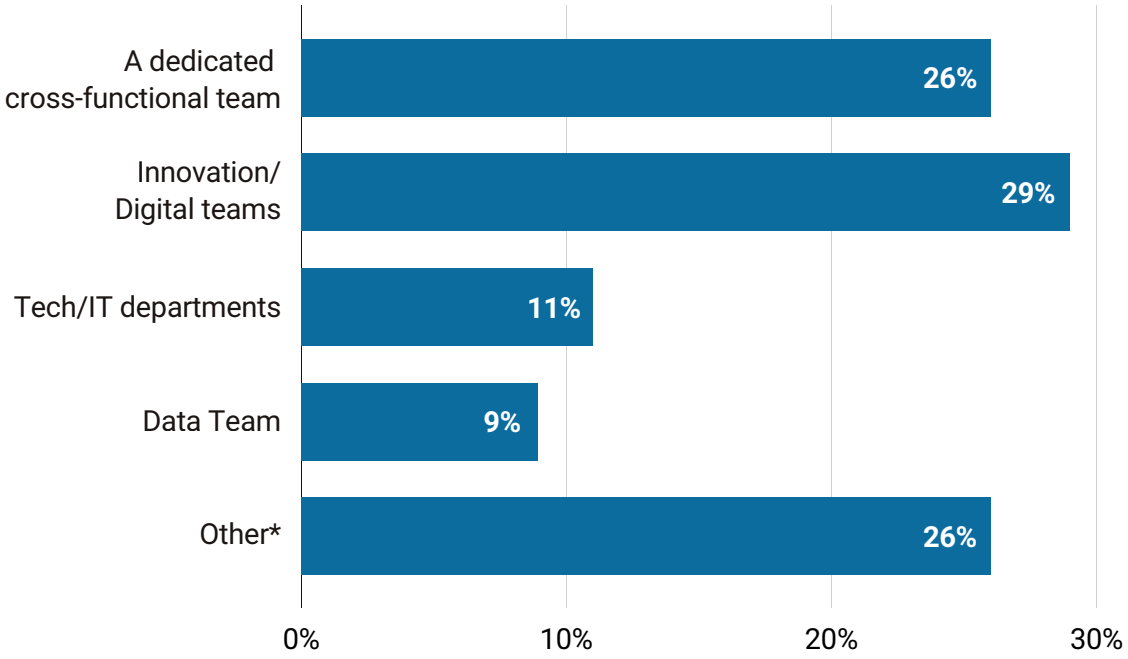
Several newsrooms that have not developed an AI strategy said they plan to do so in the near future. For some, the absence of an AI strategy seems to be the result of competing newsroom priorities and a lack of resources, rather than a lack of interest. Respondents expressed their newsrooms' support for individual efforts in experimentation, reflecting the fact that many newsrooms have not reached an institutional level of AI integration:

> "Our organisation does not have a formal strategy for AI-related activities. We rely on the initiative and enthusiasm of some of our colleagues who are interested in AI."

> "Not yet. We have been training some team members and searching for funding to design and develop products that involve."

The responsibility to develop and lead AI integration differs from one newsroom to another:

Who Leads on AI Strategy and Implementation?



**Includes other departments, such as IT, business, management, editorial and product.*

2.2 How Newsroom Processes and Roles are Affected by AI

Whether they are at the beginning of their AI integration journey or have more experience with AI technologies, we found newsrooms are dedicating time and resources to building their AI capacities. We asked respondents if AI integration efforts had impacted their workflows and processes, as well as existing roles in the newsroom.

Around a quarter of respondents said the impact of AI adoption on their workflows and processes in the newsroom has been significant. It has helped cut costs; streamlined and scaled processes; and increased efficiency in fact-checking, social media monitoring, content distribution, and accounting:

> We saved more than 80% in the process of monitoring and searching for verifiable phrases … We are convinced that this field will have a more positive impact in the future.

> AI has impacted our news production processes, automating tasks like news gathering and content creation with ChatGPT. It has also streamlined internal workflows, improved productivity, and holds potential for advanced tasks like NLP and data analysis.

One respondent explained how the automation of some processes using AI technologies changes the nature of their work, rather than replaces it:

> AI optimises distribution onsite and on social media. While we are no longer scheduling all posts individually or curating every part of every homepage, that work has shifted. We are more easily able to think big-picture, and to change outcomes more swiftly by adjusting broader rules that may affect dozens of posts or positions on a page. Put another way, AI streamlines workflows, but it doesn't replace work entirely. It changes the nature of the work and expands our impact.

Respondents seemed to appreciate how AI technologies have allowed them to reallocate journalists' time to more complex editorial tasks:

> Freeing up time for journalists to continue doing their job is the greatest impact achieved.

The vast majority of respondents, almost 75%, who are still in the early stages of AI adoption, have not witnessed a noticeable impact yet, but expect to in the future:

> [It] will definitely have an impact in the future as AI takes over more of the mundane tasks of newsgathering.

> Currently, the impact of AI is not yet significant and widespread, but it already emerges as an enabler, for sure.

Like more experienced news organisations, they hope AI integration will enable journalists to spend more time on field work and special projects:

> Right now, it does not have a significant impact. However, the impact may be quite significant if we embrace AI… This will free the journalists to work on other sectors, especially when they go in the field and remote areas to conduct very unique interviews and videos for very unique stories that our audiences are interested in.

Responses to whether AI technologies impacted existing roles in newsrooms followed a similar pattern; around 60% said AI integration has not done so. Many, however, expected this to change in the future:

> Not yet, but we are working on new vacancies for AI that include Prompt engineers, AI and ML engineers, and data scientists.

> Not yet because it's a transition still in early stages. AI is augmenting rather than totally changing roles.

> I could see us creating more AI-specific roles in the future, likely as news technologists who work closely with journalists.

Some newsrooms said AI integration has led to the creation of new roles related to AI in a variety of areas, such as data analytics:

> AP's NLG of earnings reports nearly a decade ago liberated our reporters from the grind of churning out rote earnings updates and freed them up to do more meaningful journalism. More recently AP has created three new roles that focus on AI across news operations and products.

> Yes, we have created at least one new role focused on managing AI experiences, and expect we may have more, but the growth is slow and deliberate. As much as we can, we are leveraging the talent we have already. For instance: Our real estate and development editors lead our real estate AI content creation. One of our leading digital audience producers is overseeing our social media optimisation.

> Yes there was a need to allocate a dedicated data analyst within the team.

Noticeably, many organisations underscored that AI integration is changing existing roles within the organisation, through training and upskilling in AI literacy and specific skills like data analysis or prompt engineering, rather than creating entirely new roles:

> Overall, even though the adoption of AI-powered technologies has not always resulted in the development of new, AI-specific roles, it has prompted the evolution of current roles and the acquisition of new skills by the staff in order to effectively use AI technologies in their journalistic endeavours.

Some have already begun building prompt engineering capabilities, but not only within the IT department:

> We are convinced our IT department that while prompt engineering does require a certain technological understanding, IT staff are not equipped to assess the result when it comes to journalistic production. On the other hand, designing a successful prompt, "getting the machine to tell what I want it to tell", has some similarities with journalistic processes. We are already training a journalist in prompt design.

Other responses echoed a similar need to engage journalists and build on their capabilities in AI and digital skills, as opposed to relying solely on having the expertise within the IT department:

> Yes, there are new AI-specific roles. The digital team helps us monitor trends, but as the digital editor, I do that too. Newsgathering and distribution have also changed. I check trends and write content based on that.

> Yes, the journalist had to train the algorithms and, for doing so, they received training about how the algorithm works, what kind of data do we need and how to gain accuracy. On the other side, the journalistic team have shared the editorial criteria that guide their decisions to the engineers team, by providing keys on why and what is considered a factual claim.

In line with these responses, it is no surprise that the hiring criteria in newsrooms is changing, as one respondent remarked:

> I think the impact has been more felt in considering who to hire and who not to hire. I would need less writers once AI is deployed.

The responses reflect the ongoing challenge of balancing technical and journalistic skills throughout AI integration in the newsroom.

2.3 Ready for AI?

Back in 2019 our report said that:

> These are still relatively new, diverse and complex technologies, coming in the wake of a series of other digital challenges. So it is not surprising that respondents are deeply divided on AI readiness. They split approximately in half between those who felt they were catching the wave and others who hadn't done more than dip their toes in the water. There was a vein of optimism, especially as many of our respondents were early-adopters who feel they have already made the first steps.

This year's report also showed a disparity in AI readiness across newsrooms. Over the last five years we have observed a broad increase in preparedness but the arrival of genAI means news organisations have a fresh set of challenges.

Many newsrooms, around a 1/3, expressed confidence in their readiness to deal with the challenges of AI adoption in journalism. They emphasised their efforts in advancing tools and technologies to facilitate their work, as well as their ability to adapt quickly to changing technologies. They believe they have inquisitive skilled personnel capable of utilising AI effectively:

> Yes, we are an online-only organisation and are used to quickly changing technologies and adapting fast.

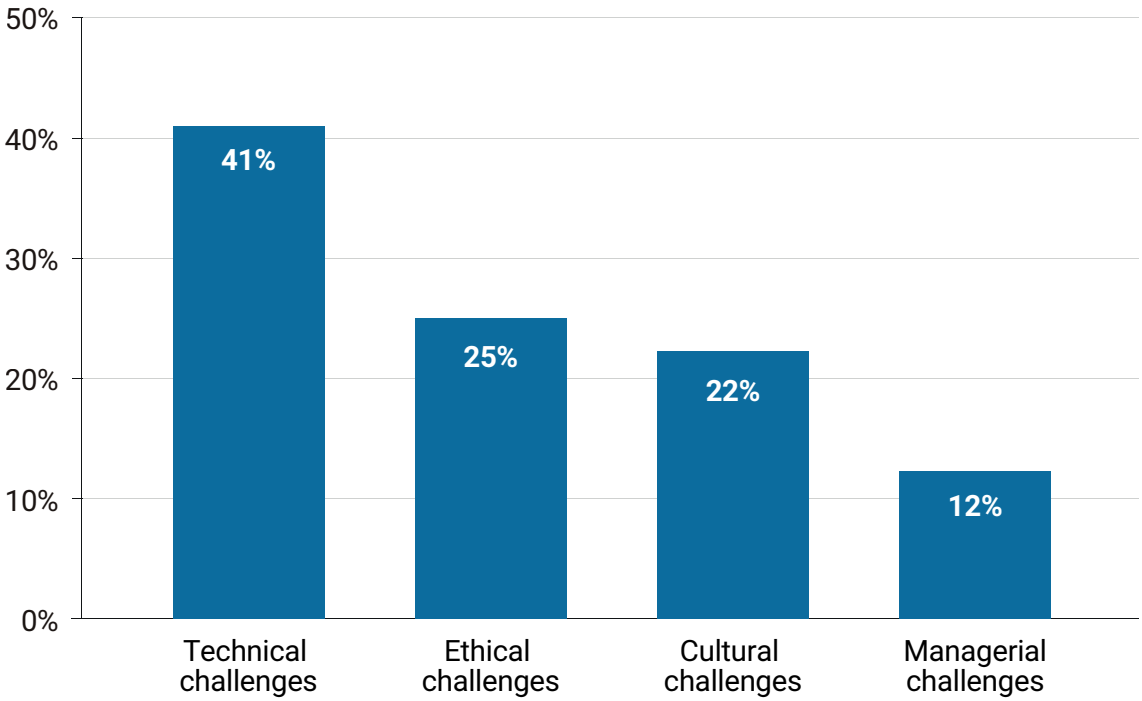
> We have quite a few people who are interested in AI and skilled in using technology. I don't see a problem in the technical challenges.

A large proportion, around 53%, said they were not ready yet or only partially ready to deal with the challenges of AI integration in the newsroom. They cited financial constraints and the lack of technical expertise as key challenges. The next section explores this in detail.

2.4 The Strategic Challenges to AI Adoption

Financial constraints and technical challenges were identified as primary challenges to AI adoption. Sometimes, one leads to the other. For instance, technical issues sometimes stem from a lack of resources. Smaller and emerging news organisations often struggle to allocate the necessary funding to hire qualified personnel to implement and maintain AI systems. Similarly, newsrooms face challenges in dedicating time and resources to designing and implementing upskilling programmes in AI.

The most Pressing Challenges for AI Integration in the Newsroom



Newsrooms were not entirely sure which skillset(s) to look for in **technical personnel**. Newsrooms with several years of experience with AI integration in the newsroom mentioned specifically the challenge of achieving compatibility and interoperability with existing systems and platforms:

> The main blocker to deploying an ML-based tagging system, for example, is technical; it needs to be integrated with other systems.

> Tested tools have to be implemented into current business structures, which requires quite a lot of development and testing.

These responses highlight the huge strides some newsrooms have made in AI adoption at an institutional level. In our 2019 report, many of the respondents, including early adopters, were at the beginning of their AI journeys. Technical challenges focused on which projects to prioritise, how to demystify AI and providing general AI literacy training to personnel.

The responses also highlight a disparity between smaller, emerging newsrooms in Global South countries on the one hand, and large, well-resourced, more experienced news organisations in Global North countries. While responses by the former focused on finding the resources to hire the technical experience needed, the latter have already deployed AI technologies in various areas and are now focused on achieving interoperability:

> We are a mid-sized regional nonprofit startup with a strong engineering team and an innovative organisational culture… But, we have nowhere near the technical power of large national organisations.

Mitigating AI integration challenges goes beyond hiring the right technical staff. It requires bridging knowledge gaps that exist among various teams in the newsroom, a challenge that is more consistent across the board. Responses reflected a need to enhance AI literacy and technical skills among journalists and technical staff alike:

> [We] have varying levels of understanding on what AI is. In a team of about 20 people, less than a ¼ have training on it and we have yet to get everybody up to speed. I think my organisation will be equipped to take advantage of its potential once we are all on the same page.

> One of the greatest challenges we have is that the Innovations/Technical team is not very informed on AI and the solutions AI can bring to journalism. We don't have in-house experts who can help in AI coding and training. But some have shown interest in learning and we hope soon they will be well versed with AI.

Some organisations expressed a desire to collaborate with other, more experienced organisations, to fill the knowledge gap:

> Our greatest challenge lies in the technical expertise and understanding [what's] needed to introduce and create AI systems. We may not have to create the system from scratch, but we do need to have trustworthy partners if we will be outsourcing them.

The challenge of keeping pace with the rapid evolution of AI is also experienced more evenly by most newsrooms, and is testament to the need for continuous adaptation, a theme we have seen consistently in the survey:

> The technologies are evolving so quickly it's difficult to know what technology to take on for fear it will soon be outdated.

> On technical challenges: Given our lean technical resources, it's always challenging to support new integrations that may not have immediate ROI. AI implementations take a lot of setup work, so we're continuously looking at ways to increase speed-to-market.

Ethical challenges were also prominent in discussions around AI adoption in newsrooms. Our respondents raised concerns about the transparency and explainability of AI algorithms:

> The ethical question is the most important because you have to keep it transparent for the readers.

Algorithmic bias is another concern:

> If not properly addressed, AI algorithms can perpetuate biases and discrimination, amplifying societal inequalities.

Respondents stressed the need for guidelines, standards, and regulations to ensure the ethical use of AI in newsrooms and to address the potential risks associated with its implementation:

> As a news organisation, we are wary of the ethical implications and believe we need to have clear guidelines in place before rolling it out widely in terms of newsgathering and production.

Despite a general enthusiasm for AI integration, **cultural challenges** remain a noticeable hurdle. Some respondents noted scepticism, resistance to integrating AI technologies in their work, fear of job displacement and concerns about the way AI is changing the nature of the journalistic profession:

> Our newsroom managers are great allies, and there are many champions for experimentation among our ranks. In our newsrooms, there is some fear about the implications of AI – the impact on jobs, products and subscribers.

> Most people understand the big changes happening with AI, but changing workflows is always hard for any given profession.

Managerial challenges revolved around organisational structures and competing newsroom priorities:

> The larger the organisation, will have multiple layers or management, the harder it is to experiment without lots of meetings and presentations.

> No overarching management strategies or training being shared with the editorial team, and a general fear that using AI will contribute to our own future redundancy.

Resistance to, and over enthusiasm about AI were also mentioned:

> Management seems to want to insist on the use of AI even when it is not necessary.

2.5 Have Newsrooms' Approaches to AI Integration Changed?

Around 40% of organisations said their approach to AI technologies in the newsroom has not changed much since our last report in 2019. Many are still in the early stages of implementation while in others AI use remains limited in the newsroom to one department or a small number of staff, which was not sufficient to steer the institutional approach to AI:

> Not yet, because so far it has mainly involved the IT department and just a handful of journalists dedicated to testing and validating them in limited contexts.

> No, we have not because we are still at the pilot stage.

> There are no significant changes since we have very limited use of AI.

> I think we do not yet have the collective consciousness that the tools that we use are AI, so no, it has not changed.

However, around a quarter of respondents said their organisation's approach to AI has evolved. Experimenting and learning by doing has helped organisations gain a deeper and more realistic understanding of the potentials of AI integration in journalistic work:

> Completely. I've been working on little AI projects as part of my innovations remit for a few years now but they have just been curiosities really. But the moment ChatGPT was launched, the upper management suddenly [became] really enthusiastic about AI.

Generally, they feel more confident about their engagement with AI, and better equipped to handle the challenges posed by continuously emerging AI technologies:

> Yes, our organisation's approach to and use of AI-powered technologies in the newsroom has evolved… as we gained more hands-on experience and explored various use cases, we have likely gained insights into the capabilities, limitations, and ethical considerations of AI technologies in the newsroom.

Their experiences have helped them set reasonable expectations of AI technologies:

> Our approach became more realistic taking into consideration our resources and the very fast involvement in the industry. We became more focused on AI technologies that can complement the work of journalists in gathering and aggregating data that is relevant and to help them identify trends and conduct in-depth analysis.

> Editors who lead AI implementations have a deeper understanding of the potential of AI — how the tech falls short. For those who have hands-on experience, there is more enthusiasm about the future, and less fear about AI replacing journalists' work, at least in the near term. And having case studies/success stories makes it easier to build trust with those who are more sceptical.

Hands-on experience with AI technologies in the newsroom has helped some uncover benefits they were not expecting when they started out:

> “Although our AI tools were first implemented as a way to save time and be more effective, we have discovered that the data they gather is very useful to understand how disinformation works as well as other research uses.”

Others noted that more departments are now involved with AI integration efforts in the newsroom with the goal of adopting an institutional approach to AI, compared to when AI experimentation efforts were considered the domain of technical experts only:

> “Since we first began using AI in 2017, it has moved from the engineering team to the newsroom.”

Chapter 3

Ethics and Editorial Policy

3.0 AI's Impact on Editorial Quality

Ethical concerns are central to the debate about AI in all industries and journalism is no exception, particularly as a profession meant to serve the public interest. More than 60% of respondents expressed concerns about the ethical implications of AI integration for **editorial quality and other aspects of journalism**. For journalists, the central question is, how do we integrate AI technologies in journalism while upholding journalistic values like accuracy, fairness, accountability, and transparency? The examples below provide a summary of the breadth and depth of ethical concerns related to AI integration in the newsroom:

> The adoption of AI in journalism raises potential concerns related to bias, editorial independence, transparency, verification, data ethics, and human judgement. It is important for journalists and news organisations to carefully consider these concerns and take necessary steps to ensure responsible and ethical use of AI in their editorial work, while upholding journalistic principles of accuracy, fairness, and integrity.

> Upholding trust, accuracy, fairness, transparency, and diversity in news content, while mitigating biases and maintaining journalistic integrity, is a priority for us in the era of AI-powered technologies.

3.1 Algorithmic Bias

Since AI systems mirror societal biases, respondents worried that a reliance on AI technologies could exacerbate biased news coverage and misrepresentation of marginalised groups:

> AI systems are trained on vast amounts of data, and if the training data contains biases, those biases can be amplified in the AI outputs. This can lead to biased content recommendations, skewed perspectives, or unfair representation in news coverage. It is essential to address and mitigate algorithmic biases to ensure fair and inclusive journalism.

> I don't trust the current technologies to include perspectives of people who tend to be marginalised.

Algorithmic bias is a potentially larger problem for content in languages other than English:

> AI generated models are built on databases that include bias especially when it comes to content in Arabic and this will be reflected in the AI generated content.

We asked respondents if they employed any debiasing techniques. Few organisations provided solid examples:

> We are employing rudimentary (i.e. not advanced) de-biasing techniques for recommender systems and classification focused natural language processing (NLP) systems. Firstly, we check both recommender systems and NLP applications for basic types of bias via an evaluation framework. Secondly, we mitigate unwanted bias e.g. by changing training data for NLP systems or introducing rules that override the raw output of recommender systems. We are not yet far enough into our work with generative AI (genAI) to know what biases we need to mitigate for in practice. But I expect that this will be a concern in the future and more advanced methods might be required here. Ideally, however, this should be a community effort focusing on the large foundation models out there – but this is increasingly impossible as transparency in training data and learning methods is eroding (also allocating more responsibility to the news organisations that choose to use genAI anyway – that is organisations like us).

> We have tested an approach where a red-team analyses the algorithms in order to find biases on them. Another interesting approach is to have an ethical committee to supervise all the workflow of the algorithms from its inception, data annotation, etc. However this kind of work is resource-consuming and it is very difficult to implement it properly in newsrooms because of the small size of the AI teams involved.

Respondents largely agreed about the significance of addressing algorithmic bias by establishing debiasing techniques, but the responses suggest that building and implementing ethical guidelines for AI adoption is one of the most challenging areas for media organisations, in terms of complexity and time:

> Although I understand the concept of de-biasing, I don't even know the steps of doing so or even how to implement such a strategy.

> I can't say we've done that yet but debias training is being talked about. That is the aspect of AI that we've found is the most time consuming so I do worry that it might not be prioritised.

Designing de-biasing techniques often requires multidisciplinary collaboration:

> Journalism should address algorithmic bias with bias elimination techniques to guarantee equity. Journalists, news organisations, ethics and academic experts are involved in establishing these ethical techniques and practices in the use of AI in journalism.

Several respondents said they did not know whether their organisation deployed any, while others said their use is still "too limited" for them to develop such techniques.

It is important to keep in mind that our respondents come from journalistic and technical fields with widely ranging tech expertise which might explain why they did not offer many examples of de-biasing techniques.

3.2 Newsroom Approaches to Ethical Concerns

In addition to debiasing techniques, respondents suggested measures that would help mitigate some of the ethical concerns discussed. Their responses focused mainly on transparency, considering the "black box" nature of AI systems and the need to maintain roles performed by humans when AI technologies are part of a process:

> The automated nature of AI algorithms raises questions about transparency, accuracy, and potential biases. Audiences might doubt the authenticity once they know info is AI generated.

> AI systems often operate as black boxes, making it challenging to understand how they make decisions or why specific content is recommended.

They called for transparency from the designers of AI systems as well as transparency from those who apply the systems, such as newsrooms. They argued that audiences should be made aware when AI systems are used in content creation or other tasks:

> We need to understand how the algorithm works to be able to trust it. Regimes are sometimes closely tied with tech companies. So we need transparent AI.

> How does AI know what it knows? We must be sceptical of these systems, and as transparent as possible with editors and readers when we use them.

It is important to note that today it is almost impossible to perform journalistic duties without using AI technologies in some way, however minor. So it is not clear where the line is drawn between an AI-assisted production process that requires disclosure and one that does not. Most of our respondents seemed to refer to the explicit use of AI in content production, i.e. using ChatGPT or other genAI technologies to summarise or author pieces, as areas where disclosure was needed.

An emphasis on the need for a 'human in the loop approach' has not changed much since our 2019 survey. Newsrooms continue to view human intervention as crucial to mitigating potential harms like bias and inaccuracy by AI systems:

> No matter how advanced AI becomes, human criteria will always be essential in the whole fact-checking process.

> The constant and mandatory intervention of the human factor in [AI] integration is necessary.

Contextualisation is key in journalism and AI systems cannot perform it (yet):

> Context and interpretation is everything in our industry, and this is something that AI technologies will struggle to duplicate. We cannot let our audiences think that we have outsourced this critical function to technology.

It is not always clear how "human" values can be integrated with AI, which explains why it is difficult to develop and implement ethical guidelines and de-biasing techniques. Aligning metrics with human values can be complex, as one respondent said:

> ... Most alignment procedures require translation of values into metrics that can be operationalised within data science/ML – and something might be lost in translation here, even when we try to integrate values in our AI systems.

Some respondents suggested keeping editorial tasks AI-free for the time being:

> For now, we believe that it is best to keep AI out of direct editorial roles in any manner, way or form. Editorial decisions are based not just on ethics but on a variety of factors like real-time situations which can change any minute. AI, we believe, is not yet equipped to make decisions, however, we do think that in the coming days, AI could assist the editorial chalk out strategies related to distributing workflow.

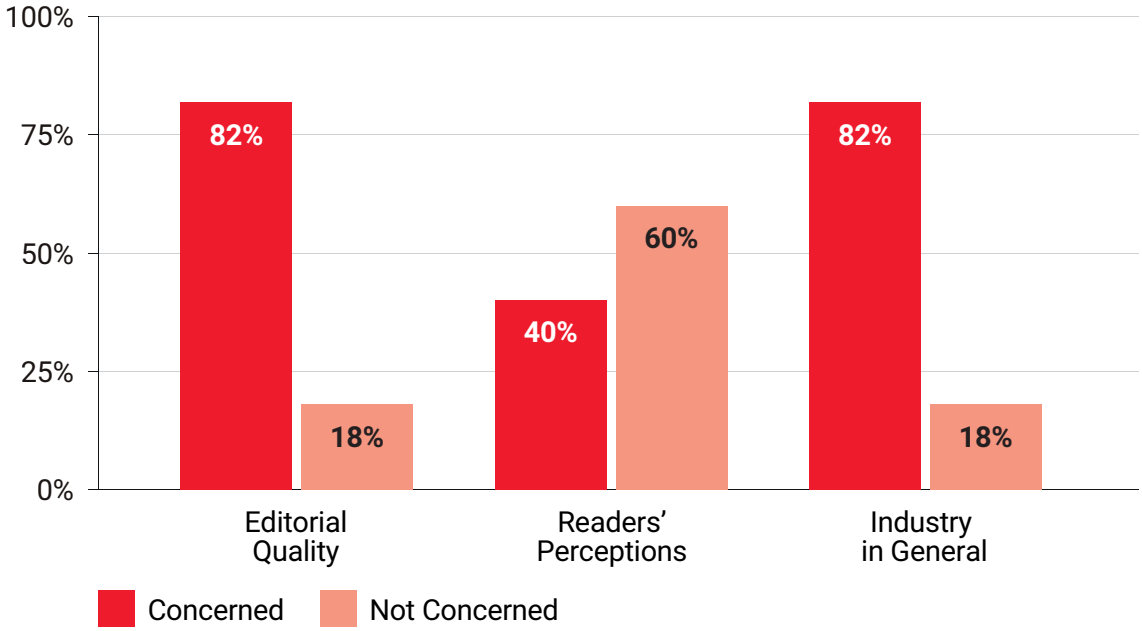
> I think the focus of AI in journalism should be on fact-checking, data analysis and content distribution, not on fields that will decrease the human role in the journalism field.

Ethical implications for using generative AI technologies are addressed in Chapter 5.

3.3 Ethical Implications for Journalism at Large

We wanted to know if our respondents thought AI technologies are changing the public's perception of journalism and if there are other implications for journalism as an industry. Their responses centred around two interrelated concerns: The concern that AI technologies would further commercialise the journalism industry which would likely lead to the second concern, a decline in public trust in journalism.

Newsroom Concerns for AI's Ethical Implications



Respondents feared that AI technologies would heighten competitive pressures on newsrooms, leading to the mass-production of poor quality journalism. Here are some examples from the survey:

> "I think it's going to result in a lot of mass-produced clickbait as news organisations compete for clicks. We will not be participating in that contest. Most of the public already have a very poor opinion of journalism, and that seems unlikely to change either way as a result of this technology."

> "If journalists rely on AI for content creation the same way as influencers do, it will be a huge threat to the industry. There have to be rules and boundaries."

> "If the industry seeks to only maximise revenue then it could have a negative impact on editorial standards and ethics at large."

According to some respondents, the risk of disenchanting audiences is happening at a time when public trust in journalism generally appears to be eroding:

> I am concerned that the public already has declining trust in the media and a decreased appetite for news. I am not entirely sure what the public's attitude is toward AI, but if they are largely sceptical of it, I worry that this might have negative effects for newsrooms that do use AI in their work.

> I worry about how the reader will react if they hear that a story in the newspaper or website was written by a robot. I worry about the lack of trust of machines and the apparent absence of a human touch to news gathering, writing, gathering and distribution.

3.4 The Role of Technology Companies

Research and development at technology companies is driving innovation in AI and other technologies. With the emergence of generative AI (genAI) technologies that use large language models (LLMS) like OpenAI's ChatGPT and Dall-E and Google's Bard, a plethora of dependent tools were created and made accessible to the public. These tools can automate a large number of tasks in almost all industries, presenting great potential for increasing efficiency and productivity. The opportunities they present for journalism are still being explored, but may be transformational. At the end of the day, content creation is the bread and butter of journalism. The relationship between technology companies and journalists is increasingly significant.

Many respondents agreed that technology companies foster innovation and develop useful tools:

> Tech companies are at the forefront of AI R&D, driving innovation and pushing the boundaries of what AI can achieve. This has the potential to automate processes, improve efficiency, and solve complex problems .

They also raised concerns about the profit-incentive driving these innovations and the concentration of power technology companies enjoy.

> Existing information is already biased, reflecting the patriarchal, euro-centric world we already live in. I believe AI will only exacerbate this phenomenon, especially because the tech world producing these technologies also tends to be hegemonic and profit-driven more than anything else.

Many respondents demanded more transparency from tech companies around the data used and how the systems are designed. They hoped technology companies would play a more proactive role in training journalists on AI tools and collaborate with civil society, media, and government to ensure technical innovations are aligned with humanistic values.

Several respondents appreciated the accessibility and affordability of some tools they provide. At the same time, respondents voiced concerns about the ethics of technology development. They mentioned algorithmic bias created through black boxed AI-systems, privacy concerns, and accountability issues:

> They also face the risk of neglecting ethical issues and social impacts, such as privacy, fairness, accountability and transparency, in their pursuit of competitive advantage and profit.

> Tech companies often collect and analyse massive amounts of user data to train their AI systems.

Some highlighted that technology is advancing at a rapid pace that journalism cannot keep up with:

> As a negative, the urgency and eagerness, speed, with which they want these advances to be adopted, in many industries and at all levels. Your market/ commercial fight ends up affecting everyone.

Other respondents worried that tech innovations create a dependency on technologies that become industry norms which newsrooms are forced to embrace:

> The worst problem is the monopoly, the absence of control, the black boxes and the fact that they develop tools and technologies that they want us to use without first asking if we want them or how we want them.

> They can enforce a news dependence, as we have also seen with other waves of new technologies. They can become gatekeepers with a worldview that users of their technologies have to adapt (an example is the bias controls that OpenAI have put in place in the GPT models which are aligned with their commercial values and a certain set of American values).

With these critiques in mind, many respondents called for more transparency from technology companies pertaining to the AI systems they develop and the training data they use:

> I would like to see technology companies be more proactive in communicating to the public how they are using their systems. People have a right to know and understand what they're being subjected to when they use these platforms.

> We would like to see AI tools focus more heavily on explainability. AI art bots should develop ethical credit-sharing processes.

They also hoped technology companies will provide more training to journalists on AI tools that can enhance their work, especially in small newsrooms and organisations in less-resourced regions:

> I would like to see them collaborating with small news agencies such as ours. We need technology companies to offer free extensive training to community journalists. Most of the time, community media organisations don't have the resources and funding to offer relevant AI training programmes.

They also called on technology companies to pursue more collaboration with journalists, civil society and governments to ensure the technologies they develop are aligned with humanistic values:

> I would like to see them adopt a more responsible and collaborative approach to AI, engaging with stakeholders and regulators, and ensuring that their products and services are aligned with human values and rights.

> Also I would like them to engage in informed conversation with journalists all over the globe even in markets that are not interesting for them and especially where information gaps are affecting the most vulnerable.

Other respondents highlighted the opportunities tech companies have in leveraging AI for "social good":

> Tech companies have the opportunity to leverage AI for social good, such as improving healthcare, addressing climate change, and assisting in disaster response. They can also contribute to bridging the digital divide by making AI more accessible and inclusive.

3.5 The Role of Universities and Intermediary Companies

Around 90% of respondents welcomed a stronger role being played by universities, journalism schools and other intermediary companies in assisting with the adoption of AI in newsrooms through research, training, and collaboration:

> Universities, intermediary companies, journalism schools, and research institutions can contribute to AI adoption in newsrooms through research and development, education and training, intermediary solutions, and collaborative partnerships. They can conduct research, provide training programmes, offer customised solutions, and collaborate with newsrooms to accelerate the adoption of AI in journalism, shaping the future of the industry in the AI era.

Some explained that academia can play an important role in a much-needed critical examination of AI and in addressing the ethical question:

> They have to do more research on how AI can be used more effectively in public interest journalism and also come up with a guide on how to use AI.

> I believe schools and universities can serve as key catalysts in the adoption of AI in newsrooms by providing education, research, ethical guidance, and fostering critical thinking skills.

While welcoming a larger role being played by academic and other institutions in AI adoption, respondents from various regions said that journalism study programmes have not effectively evolved to reflect significant technological developments that have drastically impacted journalism i.e. digitisation and the emergence of data journalism:

> From our experience, journalism schools in the MENA are not coping with the digital changes even (before talking about AI). Curricula of most schools do not equip journalists with necessary knowledge and skills to use digital tools for fact-checking, for data journalism, digital security etc.

ARIJ (MENA)

> Universities, especially journalism schools, need to start integrating AI learnings in their teachings much sooner. Most journalism graduates I see coming into our newsrooms have very little understanding, unless they themselves are naturally inquisitive.

South Africa-based newsroom

> Journalism schools should be core in educating a new generation of tech and AI knowledge journalists (even though most J-schools are lagging massively behind which is a real danger for both effective and responsible adoption of AI among legacy publishers).

Ekstra Bladet (Denmark)

Chapter 4

The Future of AI and Journalism

4.0 Where is This All Going?

The vast majority, around 80% of respondents expect an increased use of AI in their newsrooms. Four main areas for future AI integration were mentioned:

1. **Fact-checking and disinformation analysis**
2. **Content personalisation and automation**
3. **Text summarisation and generation**
4. **Using chatbots to conduct preliminary interviews and gauge public sentiment on issues**

1 **Fact-checking and disinformation analysis**: Many respondents highlighted the importance of AI in combating misinformation and polarisation. They mentioned using AI protocols to enhance fact-checking processes, analyse false narratives, identify hate speech, and monitor social media platforms for disinformation:

> “We are rethinking our media and social media monitoring programmes and methodologies to rely more on AI automation tools and to integrate the analysis of the role of algorithms in mis and disinformation and hate speech.”

> “So much time of ours is spent looking for eligible claims to fact-check – whether it be from social media posts in various platforms, speeches, interviews, news reports, among others. I think that within the next two to five years, my organisation may introduce more AI-powered technologies for monitoring disinformation.”

2 **Content personalisation and automation**: Several respondents mentioned the potential for AI to personalise news content and optimise distribution. This includes personalising the home stream for readers, implementing AI functionalities in content distribution, and utilising machine learning for customised metered paywalls. The aim is to enhance user experience and deliver tailored content:

> “Personalisation/automation are part of the main home stream. This is something we are already working on and have deployed to some of our smaller sister sites already, but not quite ready to deploy on to a site of our size. However, we are hoping to have something in the next few years.”

> We are exploring AI-powered technologies, including chatbots like ChatGPT, to enhance newsroom operations and engage with the audience through personalised news updates on messaging platforms.

3 **Text summarisation and generation**: AI-powered technologies for text summarisation and generation were mentioned as valuable tools for newsrooms. This includes using generative language models to produce summaries, titles, and push messages for articles. Here are some examples from the survey:

> We hope to create a service using GPT-4 to "eat " through stock market announcements creating easy to understand article drafts from them, and by training the model with our feedback we would make it better and also teach it to tell us what is important and not, hopefully. It's in the experimentation phase so far, but we hope to have a prototype by the summer and then expand on that further.

> We will be using generative LLMs for summarisation tasks (e.g. proposal of titles or push messages).

> We are experimenting with using chatbots for headline and SEO title generation, and summarisation.

> We hope to integrate AI tools into the newsroom to help on more high-end editing tasks, such as suggesting headlines and creation of multiple versions of stories. We are also exploring new types of news products and forms.

4 **Using chatbots to conduct preliminary interviews and gauge public sentiment on issues**: Some respondents expressed interest in utilising chatbots for conducting preliminary interviews and gauging public sentiment on specific issues, allowing journalists to identify interesting cases for further investigation and in-depth interviews:

> "I foresee the application of more AI powered technologies in our newsroom. For example, a chatbot that explains our products/packages to our readers and also a chatbot that can help the newsroom to monitor social media platforms and send us alerts when key sources or personalities or organisations post on their social media handles like Twitter, Instagram or Facebook.

> I see the use of chatbots to perform interviews as something we could use on some projects. If there is a specific issue that affects lots of people, a chatbot could perform rudimentary interviews to get a general feel for what people are saying and out of those basic interviews, the more interesting cases could be followed up with an interview by a journalist.

AI tools for social media monitoring, content curation, news verification, and language translation were also mentioned as areas of interest. These tools would aid in monitoring social media platforms, curating relevant content, verifying information, and translating content across different languages. The goal is to improve news production, content quality, and audience engagement.

Others, especially smaller newsrooms are assessing their use of AI and working on aligning their future strategy with the resources available to them:

> For us now it is very important to evaluate what we have done so far and rethink what we can realistically invest in in terms of human resources, financial resources and technology. AI powered technologies are evolving faster than the capacities of small newsrooms and organisations. We are currently conducting an internal discussion to strategise our next steps in terms of AI related activities both in our newsrooms and training and support programmes for other small independent media in the region.

4.1 The Need for Education and Training

The first report produced in 2019 described newsrooms' struggles in building AI literacy across the organisation. This continues to be an objective for less-resourced newsrooms and ones at the beginning of their AI journeys. Almost 43% of responses emphasised the importance of training journalists and other personnel in AI literacy skills and technologies:

> We aim to spread AI literacy widely among our community of journalists and fact-checkers.

> We will invest in basic training for all members of my organisation, focusing on how AI works and how data-for-AI-tools works.

At the same time, this year's discussions around training were more focused on specific and nascent skills like prompt engineering, advanced technologies like large language models (LLMs), and multidisciplinary training across various departments to enhance interoperability:

> We will train journalists on new skills such as prompt engineering and create workshops where they could play with new AI advances.

Respondents noted the need for a holistic approach to AI training that goes beyond technical skills, asserting the need for cross departmental collaboration so various functions are more in sync:

> I would allocate resources to inter-departmental collaboration on innovation. I'd offer courses in applied AI to any employee (journalist and developer) who is interested. I'd establish well-funded data science teams in the editorial rooms – and a unit dedicated to value alignment, as lacking alignment with editorial values is both intrinsically wrong and will result in the brakes being pulled (rightfully) before AI-prototypes are employed at any real scale in most legacy newsrooms.

> We are implementing initiatives to promote interoperability between departments to share processes and information. Subsequently a training plan is envisaged to help overcome technical gaps.

> ... I would tear down most siloes so that journalists, developers, data scientists and so on work closer together.

Around a 1/4 of responses highlighted the need to hire AI specialists, data scientists, and developers with expertise in AI technologies. These experts would bridge the gap between journalism and technology, working closely with journalists to integrate AI tools into newsroom processes. Here are some examples from our survey:

> Hire an AI manager with an understanding of both editorial and tech.

> Hire data scientists and developers.

> Recruit more tech-savvy IT graduates.

> Hire more engineers with experience in building AI tools and project managers.

The vast majority of responses, more than 90%, highlighted the need for training in a variety of skills and competencies:

> We seek to give training in AI-augmented journalism for competences including data literacy, AI literacy, digital storytelling, and ethical considerations. This includes skills in data collection, analysis, visualisation, understanding AI principles and ethical implications, crafting narratives with AI, and responsible reporting with AI-generated content.

> Building AI literacy is urgently needed. Everybody in our newsroom should have at least a basic understanding of how AI systems – as far as they are relevant for our field of work – come about and work. They should also know about legal, ethical and business implications.

Some emphasised how the type of training needed depended on the role:

> The competencies would be different from different teams and job roles – for example, a product manager might need training on how to improve reader experience on the site, whereas a news producer might need training on how to use AI to better produce articles, videos, podcasts and other multimedia projects.

4.2 Newsroom Collaboration

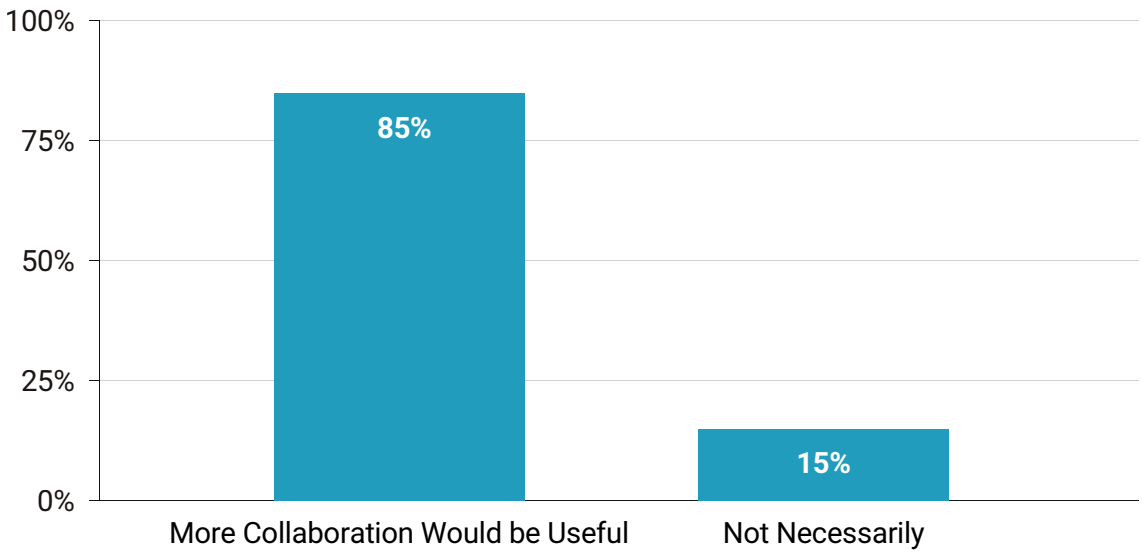
Almost half the respondents think there is not enough collaboration between newsrooms and other entities, such as academic institutions, media development organisations, and tech companies, owing to several challenges, such as newsroom competition as well as competing priorities within the newsroom:

> I think collaboration is always nice, but most organisations are currently busy trying to find themselves within the maelstrom of digital transformation – too much collaboration and talking about what one is doing can also hinder actual progress.

> Competition amongst newsrooms will be a challenge for [collaboration].

As discussed in Chapter 3, a large majority, 85%, welcomed more collaboration between newsrooms and other media organisations and academic institutions as this can be useful in lessening the disparity between small and large newsrooms:

How Newsrooms Feel About More Collaboration Among Newsrooms on AI



> More exchange between advanced newsrooms and small newsrooms can be beneficial to bridge knowledge and resources gaps.

Similarly, respondents highlighted the potential of collaboration between newsrooms in Global South countries as well as between Global South and Global North-based newsrooms as a step toward enhancing AI adoption globally and bridging the global AI adoption gap. (More on this in Chapter 6).

4.3 How Will AI Change Journalism?

As discussed throughout this report, overall, respondents acknowledged the transformative potential of AI to automate tasks, personalise content, improve productivity, and enhance audience engagement:

> AI will transform the news industry through increased personalised products, generation of news in multimedia, intensified verification functions, increased productivity. However, small media organisations that will not be able to cope with this transformation will not be able to sustain themselves.

They discussed their ethical concerns as we demonstrated in Chapter 2, as well as how AI could impact media viability. Many respondents expressed concerns about AI exacerbating sustainability challenges facing less-resourced newsrooms who are still finding their feet in a highly digitised world and an increasingly AI-powered industry:

> AI may empower the smallest of the newsrooms to experiment and reach further than has been possible. AI could also help the large, fortified newsrooms become larger and stronger, snuffing out the little guys.

> AI could become a crossroad and an insurmountable hurdle for news organisations that do not realise that AI is just a new aspect of the constant progress of digital transformation. … some news organisations have been very slow in digitising their business models (or haven't even succeeded in doing so) – now the next shock is just around the corner.

Several newsrooms expected AI to make them "leaner," as an increasing number of tasks become automated:

> It may mean job losses because the work is currently being done by say five people, and may only need one person.

> It will have a drastic impact…If machines can write stories, edit them and distribute them, it follows that newsrooms have to be leaner.

Others said that AI will not "replace jobs." Rather, AI will redefine the role of journalists; "steering AI… requires new competencies and new functions."

Another respondent said:

> We believe AI isn't a threat to jobs. But people who learn to effectively use AI to leverage their work will be in demand, and soon many roles will expect people to be able to use these tools.

The need for a balancing act between tech and journalism, a theme that emerged in our 2019 survey, remains imperative to a future where AI technologies are leveraged to serve journalism and its mission:

> It will involve a rethinking of the entire workflow and, at least during the adoption phase, additional work to adapt to this new approach. There will be more collaboration and intersection between journalistic and technical figures.

Others worried that the reliance on AI technologies will undermine journalistic values, for instance by pushing polarising content. This in turn would reduce public trust in journalism, which many think is in decline as noted previously:

> It might facilitate the path for some newsrooms but it can threaten core values of journalism, negatively affecting the news industry. It can make our work more efficient but less reliable if used badly.

> At the moment I am too pessimistic because too many media are forgetting that public interest and voyeurism are not the same thing.

> I think it's going to change what we even consider news. Unfortunately, it might create a greater pivot to biased political and social commentary as humans feel the need to differentiate themselves.

How organisations are affected by AI depends on various factors, including size, region, and access to resources:

> Different types of news organisations may have different opportunities and threats from AI, depending on their size, resources, audience and goals. AI will not explode the classic organisation, but it will require adaptation and innovation from news professionals and stakeholders.

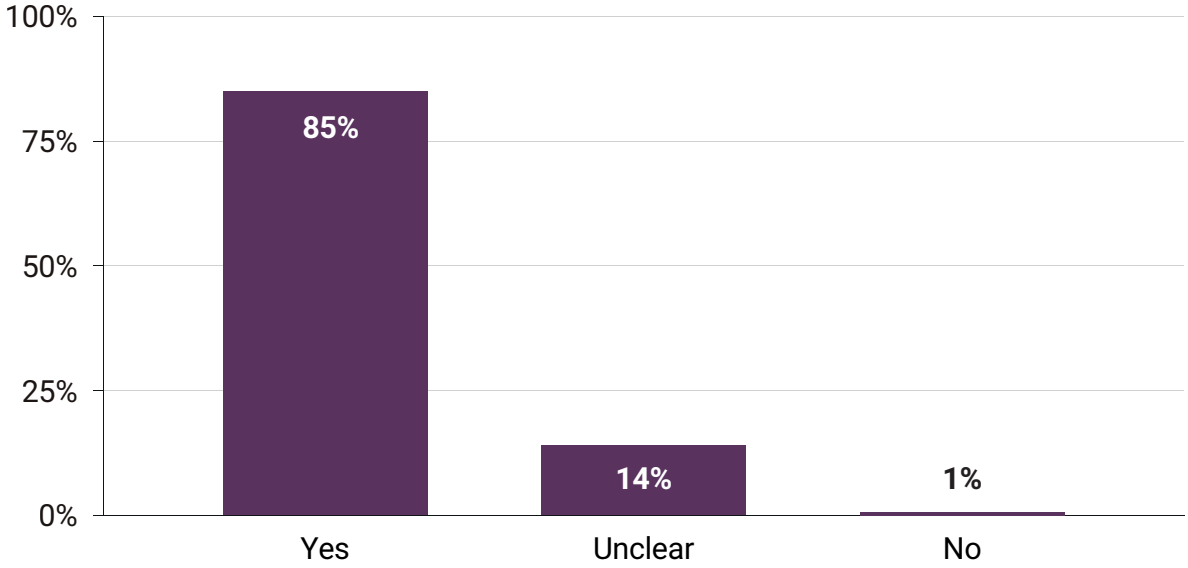
Chapter 5:

Generative AI and Journalism

5.0 Current Use Cases

Generative AI (genAI) has been facilitated by technological advances such as the creation of Large Language Models (LLMs), increased server space and processing power producing programmes that have accelerated learning power to process 'language' as text, audio and imagery.[17] They are not 'sentient' or 'intelligent' in a genuine human way, but they give the appearance of being intelligent. They are sometimes inaccurate and even make up facts ('hallucinations') because they are language machines, not 'truth' machines. They can accelerate or amplify existing AI abilities and with prompts or adaptations can provide new tools and services. There are continuities with 'traditional' AI but they also represent a new – and somewhat unpredictable – phase for news organisations. So generally our respondents described engagement with genAI, understandably, as an experimental process.

Newsroom Experimentation with Generative AI Tech



The vast majority of respondents, around 85% at least, have experimented with genAI technologies at varying degrees and in a range of ways as you'll see in the responses below. Some examples include writing code and image generation and authoring summaries. Others are more project-oriented and on the extreme end of the spectrum, some newsrooms said they already use genAI technologies regularly:

> "I have used them to construct emails, get code snippets and rephrase a sentence I feel just isn't right."

> "We have experimented with natural language processing, Open AI's ChatGPT. We use it to generate content that we use to develop infographics for our socials."

Some respondents made sure to indicate that their uses of genAI technology have not included content generation, reflecting an apprehension to using genAI technologies in editorial tasks:

> "We are using it but not to generate content. We have experimented with ChatGPT for analysing large swaths of data. Graphic designers have tried tools like DALL-E as a reference/source of inspiration in the brainstorming process."

Some mentioned specific projects their organisations are working on that use genAI technologies:

> "We're working on a range of GPT-3/4 techniques for data extraction and code development."

> "We have created a presenter and his programme 100% with generative artificial intelligence, the image, what he looks like, what he says, the voice... everything is AI, but supervised."

Several respondents said they are now using genAI technologies regularly in their newsrooms in various ways, such as headline suggestions, search engine optimisation, and producing summaries:

> We are encouraging everyone to experiment with these. For example, our social media team uses ChatGPT to summarise articles. Our newsletter team creates infoboxes to use in newsletters, etc.

> We use them on a daily basis for various tasks, such as summarising articles, evaluating content quality, search engine optimisation, and generating copy.

> We use Bing Co-Pilot for suggesting headlines and sublines for topics, gathering background information and generating unique images for an article.

The use of genAI by newsrooms depends on their mission, size, experience and many other factors. Unlike the examples we just mentioned, media development organisations in MENA are using ChatGPT not for the purpose of integrating AI in their work. Rather, they are using it in media literacy training to demonstrate its shortcomings, including inaccuracies and bias in Arabic content, for example:

> ChatGPT or Bing AI is used by our journalists for example to generate texts used in our production and also to detect biases to be used as examples in training on media information literacy. E.g. Generating speech of women candidates in Arabic. Terminologies were not gender sensitive. Journalists had to re-edit. Another example is related to testing the accuracy of the answers to fact-check claims of politicians in Arabic. The answers do not provide critical information especially when it comes to the economy and banking sector that are sponsoring the media content in Lebanon while they are a main driver of the economic crises.

Though newsrooms are largely still experimenting with ChatGPT and other genAI technologies, most have not had enough time to build comprehensive assessments. This is expected given that genAI tools became accessible to the public in late 2022 with the launch of OpenAI's ChatGPT. Despite their novelty, many respondents expect a larger role for genAI technologies in content creation, including in writing summaries and headlines, content customisation, and coding:

> AI can help journalists generate summaries, headlines, captions and other types of content using natural language generation techniques. AI can also help journalists create engaging and personalised stories for different audiences and platforms using natural language understanding and recommendation systems.

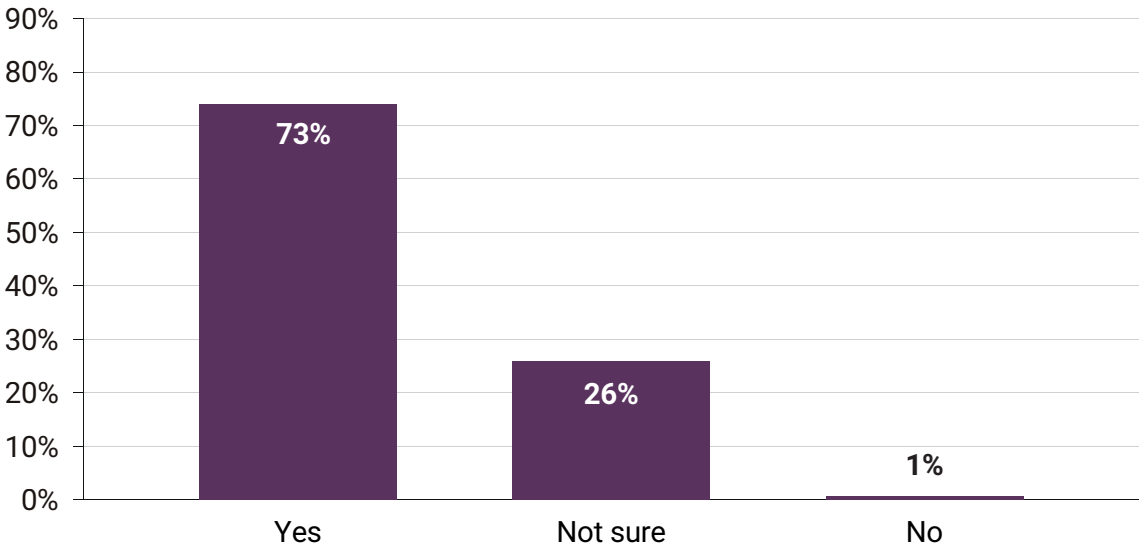
> ...Offload the work of content generation and adaptation to what the user is looking for and focus on more core journalistic functions (curation, investigation, analysis).

5.1 Opportunities Presented by Generative AI

We have reviewed the diverse use cases of generative AI (genAI) technologies the respondents shared, but will these use cases and others in the future present new opportunities for journalism that 'old' AI technologies did not?

There was a high level of agreement among the respondents; almost 3/4 agree with this statement, particularly with respect to assisting journalists in "generating copy," like summaries and headlines, personalised distribution, and research and brainstorming:

Do Generative AI Technologies Present New Opportunities?



> ... Generative AI can help us create engaging and diverse content, such as headlines, summaries, captions, quotes, or even stories, based on data or information we provide… help us personalise and tailor our content to different audiences, platforms, and formats, using natural language generation and adaptation techniques … and enable us to explore new angles and perspectives on topics that we may not have considered before, by generating questions, hypotheses, or scenarios that stimulate our curiosity and creativity. In short, genAI can enhance our journalistic skills and values, and empower us to produce more relevant and impactful stories in ways that we can't even imagine.

They pointed out the affordances of genAI technologies, such as their accessibility, low requirements for technical skills, and what was described as their ability to understand "context", which make them stand out from other AI technologies that generally require deep specialist expertise in areas like programming. Here are some insights from our respondents:

> [T]heir ability to understand context offers a unique ability to create models that understand language much better and, in doing so, can bring us one step closer to automated fact-checking. Therefore, in the future, generative language technologies may be more of a help than a challenge.

> GenAI can help because of the democratic way in which they have arrived, that is: I don't need an intermediary, a developer to make me the application that I need, it's like a Chrome extension. I make my life easier, the ease with which today, in 2023, you can do artificial intelligence compared to 2020 is impressive.

> GenAI seems to require a lot less technical skills to the end user with much faster response times, allowing us to bring it to fruition quickly throughout the organisation.

> GenAI can change the way we interact with information, allowing us to grasp massive amounts of data, and level the playing field between high and low data skills. They can give us much more control on the information we use to write news, as they assist us in the time consuming writing tasks.

With all those affordances in mind and as the experimentation journey carries on, journalists are trying to find out how drastically genAI technologies could raise the productivity threshold. This is happening as these models continue to improve. As millions of people experiment with these tools, the models are ingesting massive data that is hoped will enhance them.

5.2 Challenges Presented by Generative AI

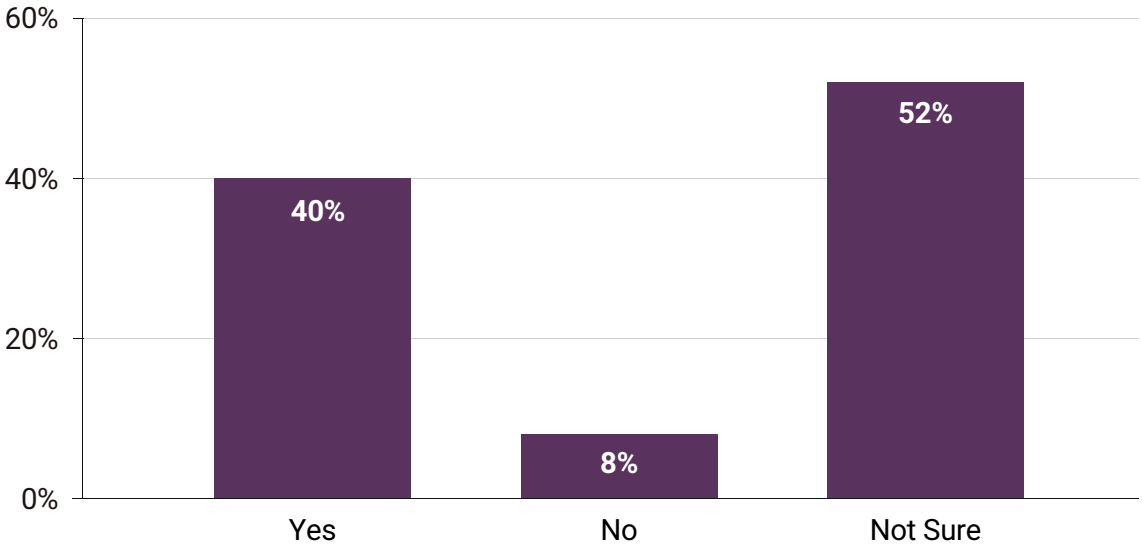
Interestingly, respondents were more divided over whether generative AI (genAI) presents a different set of challenges in the newsroom compared to other AI technologies. Slightly over half the respondents, 52%, were not sure if this was the case , whereas 40% did view genAI as presenting new challenges in the newsroom.

The respondents argued that the types of challenges genAI presents are not very different from the ones posed by other AI technologies (i.e. transparency, bias, inaccuracy, and privacy issues). However, they think genAI technologies exacerbate to a considerable degree those challenges, therefore potentially producing more harm:

> “GenAI has higher tendencies to produce biased outputs.”

> “How to approach transparency and trust in relation to genAI is really a big challenge.”

Do Generative AI Technologies Create New Challenges?



For some, genAI raises the risk ceiling to a new level:

> “The requirements for robustness (e.g. factuality and no harmful bias) is even larger in the case of genAI, as mistakes are potentially more harmful when they occur than with most other AI technologies.”

In particular, many respondents are concerned about the repercussions of genAI on misinformation and fake news. They expressed fears that it would exacerbate the problem even further, expanding in scale:

> GenAI will allow the production and distribution of disinformation at a scale we haven't seen before – this will potentially impact news consumption. but also send people to more trusted sources.

> Yes. So far, I can't rely on AI for fact-checking. Especially that the most common mass tool (ChatGPT) is faking data. In the current stage, AI can help me in writing, drafting, but I'd never trust the accuracy until a [human] editor reviews it.

> I am very concerned about the generation of content without verification. The generative models that we currently have do not have a stage to verify their content and that is worrying. We have already had some examples, even when we have done some tests, we have seen that there is a generation of random content, it is not even oriented towards something, but it directly obtains a solution that does not exist.

Some respondents believed genAI would produce more sophisticated manipulated content, requiring in return more sophisticated validation methods. Here are some examples from our survey:

> “... AI-generated content (photos, videos, audio, text) is trickier to debunk because there’s no reference material to cross-check it with. It’s completely a work of fiction as opposed to, let’s say, a photo that was manipulated -- with this kind of disinformation, you at least have an original photo with which to compare the false version. AI-generated content doesn’t work like that.”

> “Generating stories and copy using AI could reduce trust, increase inaccuracies and perpetuate editorial bias.”

> “I am worried about the power posed by genAI and there is a need to have tools that automatically fact check [content produced by] ChatGPT in real time.”

> “There is a need to ensure that journalists do not resort to ChatGPT for story analysis. AI software that can help identify stories written by bots will be very helpful in ensuring original content remains central in news production.”

Chapter 6

The Global Disparity in AI Development and Adoption

6.0 The Global North/South Divide

Currently, the social and economic benefits of AI are geographically concentrated primarily in the Global North.[18] This is due to various reasons, such as the affordance of technical infrastructure, the abundance of capital, and well-funded research institutions in these countries.[19] This chapter sheds light on the global inequality in AI development and adoption. As you'll notice, we took a more analytical approach to this chapter than the rest of the report. Why?

To collectively benefit from AI technologies in a more equitable manner, we ought to gain a better understanding of how and why global AI inequality exists. One step towards that is to pay close attention to the challenges of AI adoption faced by the majority of the world's population, which resides in Global South countries.[20]

Let's first clarify the Global North/South distinction and why we adopted it in this report. The Global North/South terminology does not refer to a "geographic region in any traditional sense but rather to the relative power and wealth of countries in distinct parts of the world"[21]:

> In the late twentieth century, the Global North and South terminology replaced previous descriptors of the global order. It was generally agreed that the Global North would include the United States, Canada, England, nations of the European Union, as well as Singapore, Japan, South Korea, and even some countries in the southern hemisphere: Australia, and New Zealand. The Global South, on the other hand, would include formerly colonised countries in Africa and Latin America, as well as the Middle East, Brazil, India, and parts of Asia. Many of these countries are still marked by the social, cultural, and economic repercussions of colonialism, even after achieving national independence. The Global South remains home to the majority of the world's population, but that population is relatively young and resource-poor, living in economically dependent nations [22].

We opted to use the North-South distinction to extend a power-conscious framing that considers the power dynamics governing AI development and adoption in newsrooms globally, while upholding that the Global North and the Global South are by no means monolithic; as each includes socially and politically diverse countries.

6.1 Economic and Infrastructural Challenges

As discussed in Chapter 2, AI technologies pose a range of ethical and other challenges to all industries, including journalism. These are experienced by newsrooms across the board, regardless of size, resources, or geographic location. For newsrooms in Global South countries however, the challenges are much more pronounced. Respondents in these countries highlighted knowledge gaps, resource constraints, language barriers, as well as infrastructural, legal, and political challenges.

A MENA-based respondent mentioned the political and economic realities low-resourced independent media operate under, emphasising the challenge of competing with AI-powered local and foreign state propaganda (i.e. bots, disinformation campaigns), amid low internet penetration rates:

> “We're talking about a war-torn region. You have millions of refugees and millions living in deep economic crises, from Lebanon to Egypt. In our region, millions are deprived of internet access, which should be a basic right, or have limited access to it. As an independent media outlet producing professional content, you are dealing with low internet penetration rates and repressive state propaganda dominating the digital sphere… This creates digital illiteracy, which is very difficult to confront, and this is a key challenge for us.”

Some challenges are shared across large areas of the Global South. Respondents in Sub-Saharan Africa, MENA, and the Asia-Pacific all mentioned low internet penetration rates and a difficulty in hiring technical experts:

> “Technology is not fully embraced in most media houses in Malawi. Part of the reason [being] their poor internet infrastructure and internet penetration [which is] quite low.”

> “Adequate technology infrastructure and widespread internet connectivity are essential for implementing AI solutions. In Egypt, there may be disparities in access to reliable internet connections, particularly in rural areas. Addressing the infrastructure gap and ensuring widespread connectivity is crucial to facilitate the adoption of AI technologies.”

6.2 Language and Accessibility Challenges

Other challenges are unique to local contexts. For instance, AI-related language challenges in India or in other countries which are home to hundreds of languages, are distinct:

> “The adoption of AI in India and especially northeast India faces a whole lot of challenges. We have over 200 tribes with their distinct languages and culture. There is a lack of skilled workforce, data quality and availability issues, evolving ethical and regulatory frameworks, infrastructure and connectivity gaps.”

Some challenges to AI adoption are interrelated. Low internet penetration leads to low digital literacy, which makes it easier for disinformation to thrive. Similarly, resource constraints make it difficult to hire or even find AI experts:

> Developing and implementing AI technologies requires a skilled workforce with expertise in AI, data science, and related fields. In Egypt we may face challenges in terms of the availability of professionals with the necessary skills and knowledge.

> [The] Botswana government does not promote transparency and does not have comprehensive data privacy laws and policies that promote access to information. This makes it difficult to promote dynamism in adopting AI-powered technologies in a country that is quick to repress online content.

Local developers are incentivised to work at foreign companies which are more likely to offer higher pay:

> Our newsrooms have limited resources and tech capacity is expensive.

> Scarcity of resources [is a challenge]. In Argentina (and in LatAm) developers tend to work for foreign companies that can pay high salaries.

Technology companies invest the vast majority of their resources in Western markets. Most tools are made for English speakers, which causes accessibility challenges to both non-English speakers and English speakers with non-Western accents.

A Philippines-based respondent summarised how resource constraints, knowledge gaps, and language barriers intersect:

> AI technologies developed have been predominantly available in English, but not in many Asian languages (with the possible exception of [Mandarin] Chinese). We have to catch up doubly to create AI systems, and AI systems that work with our local languages. There are also limited funding opportunities to allow us to explore using AI systems in our jobs. And lastly, some countries in Southeast Asia (like ours, the Philippines) aren't as advanced as our neighbours, so there are only a handful of AI experts in the country, much less AI experts in journalism.

Respondents gave us several examples where they discovered issues using AI tools in non-English languages or non-Western English accents:

> Coral has been very successful as a comment moderation tool, but we still find the 'grey' area comments require a human element, especially as it is an American tool not built for the South African audience in mind.

> Machine Learning (ML) for encoding is a real dealbreaker, Trint for speech-to-text is highly recommended, translation to any other language than English and Mandarin or Cantonese needs improvement."

> Voice AI tools do not sound like Africans, [they are] not authentic at all.

It is hoped that genAI technologies, which our respondents described as more accessible than traditional AI technologies, will help bridge the regional disparities in AI adoption. Cautious optimism is advised. If we look at ChatGPT for instance, the most famous publicly accessible genAI tool, we find that it is not available for a large proportion of the world's population for various reasons. OpenAI does not support the access of ChatGPT in Russia, Venezuela, Zimbabwe, Cuba, most likely due to US sanctions, or in China.[23] Egypt has reportedly banned ChatGPT for privacy concerns.[24] Most of these countries are among the most populous in the world.

> Tools like Chat GPT are not available in Zimbabwe unless you use VPN and you need to have a foreign number to get the code.

> There are limitations for our country in some platforms (i.e. ChatGPT doesn't work in Egypt) and most of the tools don't natively support Arabic.

GenAI technologies such as ChatGPT are also out of reach for hundreds of millions of people around the world due to accessibility issues such as internet penetration rates, particularly in rural areas.

6.3 Political Realities Affect Trust in AI

Algorithmic bias disproportionately affects marginalised communities, potentially causing serious harm, as research has shown (e.g. racial discrimination in facial recognition technologies).[25] Similarly, perpetuating bias is ostensibly a larger problem for content in languages other than English, as mentioned in Chapter 3:

> AI powered tools are more advanced in English language and experiments in technology that is contextualised to the MENA region are modest as well. This affects the accuracy of data collected and of analysis of sentiments for example.

AI scholars have warned that ignoring social, political and cultural contexts contributes to increasing algorithmic bias and widening global AI disparity.[26] Respondents noted how many AI tools and applications fail to understand local contexts and cultures:

> Most tools are not applicable to our language or contexts.

> Generative AI [technologies do not support] Indian languages or our cultural nuances in their responses.

Scepticism of AI technologies by newsrooms in Global South countries also stems from a distrust in the entities involved in the development and large-scale adoption of AI technologies, such as global technology companies and local, government funded technology and media institutions. For instance, in MENA, an alignment between technology companies and governments was seen as a major obstacle to trust. One respondent noted that newsrooms in MENA with resources for AI technologies were aligned with nondemocratic governments:

> “In the case of the MENA, big media organisations are mouthpieces of governments that are not democratic and thus do not invest in quality journalism that contributes to accountability and democratic change. Thus AI powered technologies will not reach the independent small media platforms that are reaching youth and contributing in fostering critical thinking.”

It is feared that smaller newsrooms that advance public interest and accountability journalism will struggle to survive. This could have significant implications for the entire news ecosystem.

Even if local AI models were abundantly available, trust would remain an issue. Discussing mobile application “Allam”, a Saudi Government-developed chatbot similar to ChatGPT, one respondent explained how such projects remain tied to political considerations, diminishing user trust in such models:

> “This is a local model, do we trust the datasets used by Arab state institutions? [One wonders] if the datasets used were balanced or representative or if the data were manipulated? Unfortunately, this is one of the issues we deal with regionally. We don’t have pan-Arab models created by independent Arab institutions whose choices when it comes to training datasets can be trusted. You know how sensitive some of these contexts are … AI requires massive funding to be competitive … Arab political realities raise urgent questions about the reliability of [local AI] models. Are they going to be open source? Are they adaptable to Arab newsrooms’ needs? Can newsrooms add their own datasets, for instance?”

It is important to note that concerns about AI technologies’ enablement of government surveillance and control are not unique to the Global South and have been intrinsic to critical discussions of AI technologies in the Global North as well.[27] As early as 2013, Edward Snowden’s revelations exposed in detail the interdependencies between governments and technology companies.[28] The PRISM program illustrated how the US government utilised the surveillance infrastructure built by technology companies like Google and Facebook using the data they collected for marketing purposes to advance its own surveillance practices.[29]

Despite the myriad complex challenges newsrooms in Global South countries face, respondents from the region's newsrooms expressed enthusiasm for building capacity in, and sharing AI expertise. Arguably, they have to if they want to survive as AI is transforming journalism. This is particularly true for smaller funding-dependent newsrooms whose mission is rooted in public interest journalism and holding power to account.

When we asked respondents if they thought there was enough collaboration between newsrooms around the development of AI technologies, several respondents noted that collaboration could be especially useful for newsrooms in Global South countries that are experiencing similar challenges:

> We think that collaboration would be specially useful between newsrooms from Global South, such as us. We think that developing models in non-English languages (Spanish, in our case) is really important for newsrooms.

> This could involve joint efforts to create tailored AI algorithms for the African context and establishing industry standards for responsible AI use.

Collaboration between Global South and Global North newsrooms was also highlighted as a step toward lessing global AI disparity:

> There is a big gap between the Global North and South. Both of them need to be resilient together and collaborate to expose biases in AI, and have a serious conversation about AI regulations and policies.

Conclusion

What Does AI Mean for Journalism?

There is a caveat that this is all a reaction to a moving story. 'Amara's law,' the adage coined by American scientist and futurologist Roy Amara, applies here: "we overestimate the impact of technology in the short-term and underestimate the effect in the long run." Some new technologies take time. The first newspaper went online in 1980, but it took another 17 years before BBC Online went live. OpenAI only released ChatGPT in late November 2022 but by January 2023 they were claiming one million users. Things are moving fast and some things might get broken. Working practices will not be the same and some jobs will be replaced. New ones will be created with different skills and responsibilities. Many journalists who have experimented with genAI can see how it can make their work much more efficient and add new dimensions to what they offer to the public.

As this report has shown, this is a volatile technology for news organisations. Most are aware of the inherent risks in AI technologies generally and the dangers of bias or inaccuracy. They are discovering that applying AI in news production has immediate possibilities, but how it will shape future practice is uncertain.

It is important to understand the wider context. There are major issues around regulation, intellectual property and commercial competition. There are big societal concerns related to AI around misinformation, discrimination and bias as well as the dangers of media capture by corporations or even governments. We should not lose sight of the bigger picture that goes way beyond the news sector.

However, as journalists who report on the world, we should be much more aware of our role in critically reporting on how AI is changing our lives, in an informed and independent way. Our survey suggests that there is an awareness of this, albeit most people are putting most of their energy into understanding and working through the immediate practical challenges.

Whether this is a brave new world or not depends to a large degree on humans making policy and ethical choices within news organisations. If we want to make bland, automated clickbait then this technology makes that a lot easier. But it also offers the opportunity for 'good' journalists to do more 'human' work with the support of AI. In a world of machine-created information, much of it unreliable, responsible, public service journalism is in a great position to prove its value. AI also offers ways for journalism to reinvent itself in imaginative ways. GenAI has also however created the threat of 'disintermediation' for the news media. Why should people go to a news organisation for information if they can just prompt a chatbot? This survey suggests that many newsrooms are now working hard to answer that question in a way that affirms the utility and importance of journalism as part of our social, economic and political lives. We look forward to working with them on that journey.

Six Steps Towards an AI Strategy for News Organisations

1. **Get informed**. See the LSE JournalismAI website for online introductory training, the AI Starter Pack, a Case Study hub and a series of reports on innovation case studies. Other sources are available! (See Readings & Resources section)
2. **Broaden AI literacy**. Everyone needs to understand the components of AI that are impacting journalism the most, because it will impact on everyone's job – not just editorial, and not just the 'tech' people.
3. **Assign responsibility**. Someone in your organisation should be given the responsibility of monitoring developments both in your workplace but also more widely, such as assigning AI innovation and R&D leads, and keep a conversation going within your organisation about AI.
4. **Test, iterate, repeat**. Experiment and scale but always with human oversight and management. Don't rush to use AI until you are comfortable with the process. Always review the impact.
5. **Draw up guidelines**. They can be general or specific. This is a useful learning process when done inclusively to engage all stakeholders. And be prepared to review and change them over time.
6. **Collaborate and network**. There are many institutions such as universities or intermediaries like start-ups who are working in this field. Talk to other news organisations about what they have done. Generative AI technologies may present new opportunities for newsroom collaboration given the high enthusiasm about and accessibility of genAI tools.

Glossary

Algorithm:

"A procedure for solving a mathematical problem in a finite number of steps that frequently involves repetition of an operation". More broadly, "a step-by-step procedure for solving a problem or accomplishing some end."[30]

Artificial intelligence (AI):

"A collection of ideas, technologies, and techniques that relate to a computer system's capacity to perform tasks normally requiring human intelligence."[31]

Automation:

"The technique, method, or system of operating or controlling a process by highly automatic means, as by electronic devices, reducing human intervention to a minimum."[32]

Bias:

A systematic prejudice or error affecting the rationality and fairness of a decision. Rooted in decision theory, cognitive psychology and statistics, the notion of bias is extremely important as both journalism and artificial intelligence techniques ultimately rely on human decisions, and are as such subject to "cognitive" biases (confirmation bias, bandwagon effect, etc.). When mirrored in bad, incomplete or flawed data sets to train AI algorithms, this may result in equally flawed AI-powered decisions: "Algorithms can have built-in biases because they are created by individuals who have conscious or unconscious preferences that may go undiscovered until the algorithms are used, and potentially amplified, publically."[33]

Bot:

'Bot' is short for 'Robot' and usually refers to 'agent-like' software – ie, software that exhibits autonomy or autonomous characteristics. A bot is "a piece of software that can execute commands, reply to messages, or perform routine tasks, such as online searches, either automatically or with minimal human intervention."[34] Bots perform either perfectly legitimate (eg. smart assistants, search engine spiders) and malicious activities (eg., covertly spread false information and political propaganda in coordination with other bots, within a so-called "botnet").[35]

Data Mining:

"Data mining is most commonly defined as the process of using computers and automation to search large sets of data for patterns and trends, turning those findings into business insights and predictions. Data mining goes beyond the search process, as it uses data to evaluate future probabilities and develop actionable analyses."[36]

Deepfakes:

This is the negative form of a broader concept of 'synthetic media'. Audio and video altered through machine learning and deep learning techniques for maximum, real-time realism in fakery. The term originally comes from a Reddit user that, in 2017, used such techniques to realistically and dynamically add faces of celebrities to pornographic content,[37] and is now widely used for any kind of content, the politically charged included.[38]

Deep Learning:

"Deep learning is a subset of machine learning in artificial intelligence (AI) that has networks capable of learning unsupervised from data that is unstructured or unlabelled. Also known as deep neural learning or deep neural network", it is one of the most advanced contemporary applications of "AI", powering a broad range of image, voice and text recognition tools.[39]

Generative AI (genAI):

"Generative AI is a sub-field of machine learning that involves generating new data or content based on a given set of input data. This can include generating text, images, code, or any other type of data. Typically, genAI uses deep learning algorithms ['to learn patterns and features in a given dataset, and then generate new data based on the underlying input data.]'"[40]

Hallucinations:

"Hallucination is the term employed for the phenomenon where AI algorithms and deep learning neural networks produce outputs that are not real, do not match any data the algorithm has been trained on, or any other identifiable pattern. It cannot be explained by your programming, the input information, other factors such as incorrect data classification, inadequate training, inability to interpret questions in different languages, inability to contextualise questions."[41]

Large Language Models (LLMs):

"Large Language Models are a subset of artificial intelligence that has been trained on vast quantities of text data … to produce human-like responses to dialogue or other natural language inputs. In order to produce these natural language responses, LLMs make use of deep learning models, which use multi-layered neural networks to process, analyse, and make predictions with complex data."[42]

Machine learning (ML):

"Machine learning is an application of artificial intelligence (AI) that provides systems with the ability to automatically learn and improve from experience without being explicitly programmed."[43]

Optical Character Recognition (OCR):

"Optical Character Recognition (OCR) is the electronic conversion of images of text into digitally-encoded text using specialised software. OCR software enables a computer to convert a scanned document, a digital photo of text, or any other digital image of text into machine-readable, editable data. OCR typically involves three steps: opening and/or scanning a document in the OCR software, recognising the document in the OCR software, and then saving the OCR-produced document in a format of your choosing."[44]

Natural Language Processing (NLP):

"Natural Language Processing, usually shortened as NLP, is a branch of artificial intelligence that deals with the interaction between computers and humans using the natural language. The ultimate objective of NLP is to read, decipher, understand, and make sense of the human languages in a manner that is valuable. Most NLP techniques rely on machine learning to derive meaning from human languages."[45]

Natural Language Generation (NLG):

NLG is a subset of NLP. "While natural language understanding focuses on computer reading comprehension, [NLG] enables computers to write. NLG is the process of producing a human language text response based on some data input. This text can also be converted into a speech format through text-to-speech services. NLG also encompasses text summarisation capabilities that generate summaries from in-put documents while maintaining the integrity of the information."[46]

Neural Network:

"A programme or system which is modelled on the human brain and is designed to imitate the brain's method of functioning, particularly the process of learning."[47] "[A] computer architecture in which a number of processors are interconnected in a manner suggestive of connections between neurons in a human brain and which is able to learn by a process of trial and error."[48]

Prompt Engineering:

"Prompts are instructions given to an LLM to enforce rules, automate processes, and ensure specific qualities (and quantities) of generated output. Prompts are also a form of programming that can customise the outputs and interactions with an LLM."[49]

Search Engine Optimization (SEO):

"In simple terms, SEO means the process of improving your website to increase its visibility in Google, Microsoft Bing, and other search engines whenever people search for products you sell, services you provide, [or] information on topics in which you have deep expertise and/or experience. The better visibility your pages have in search results, the more likely you are to be found and clicked on."[50]

Synthetic Media:

"Synthetic media is an umbrella term that refers to digital content generated by AI or algorithmic means, often with the intention of appearing real."[51] Deepfakes are one type of synthetic media.

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Readings & Resources

JournalismAI resources

The JournalismAI Starter Pack – our guide designed to help small and local publishers learn about the opportunities offered by AI.

The JournalismAI Case Studies Database – our collection of 110+ examples of news organisations worldwide making use of AI technologies to meet different needs.

Introduction to Machine Learning for Journalists – our short course that covers the basics of machine learning for journalism.

The JournalismAI Report: New Powers, New Responsibilities
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Big Data from the South(s): Beyond Data Universalism (2019) Stefania Milan and Emiliano Treré – This academic article introduces the principles of a theory of datafication of and in the Global South(s) and calls for a 'de-Westernization of critical data studies.'

Data Colonialism: Rethinking Big Data's Relation to the Contemporary Subject (2018). Nick Couldry and Ulises Mejias. Television & New Media – An academic article that proposes understanding datafication processes through the history of colonialism. The authors view the processing of social data as a "new form of data colonialism" that normalises the exploitation of human beings through data, the same way historic colonialism appropriated territory and resources for profit.

Elements of AI – A free online course that helps demystify AI, by combining theory with practical exercises.

Generative AI In The Newsroom – A collection of articles written by journalists using generative AI in their newsrooms, published by Prof. Nick Diakopoulos.

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Reporting on artificial intelligence: a handbook for journalism educators

Maarit, J. (Ed). (2023). Unesco.

For a wider selection of articles about the applications and implications of AI in journalism, with case studies and practical insights, go to blogs.lse.ac.uk/polis. This will be updated regularly. Please send us suggestions for further readings and resources.

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NEWS ORGANISATIONS THAT COMPLETED THE JOURNALISMAI SURVEY

Sub-Saharan Africa

Africa Check

AfricaBrief

Alpha Media Holdings

CGTN

CITEZW

Daily Maverick

Dataphyte

House and Garden Magazine

INK Center for INVESTIGATIVE Journalism

Khwezi Times News

Nairobi News – Nation Media Group

Nation Publications Limited (NPL)

New Vision Printing and Publishing Company Limited

Newskoop Radio News Agency

NTV Uganda

Ohambileyo

Portal Publishing

Primedia Media Broadcasting

Radio Africa Group

Stears

The Post

Asia Pacific

EastMojo

Ekushey Television (ETV)

IE Online Media

Initium Media

KBR

Malaysiakini

NZME

SBS

Scroll.in

Stuff Limited

The Current Pk

The Paper

The Quint

Times Internet

UDN Group

VERA Files

Europe

AFP
Aftonbladet
ARTE G.E.I.E.
Austria Presse Agentur (APA)
Časoris
CMI France
Czech Radio
E24
Ekstra Bladet
Evangelischer Presseverband Für Bayern (EPV)
Group Nice-Matin
Maldita.es
Newtral
Observador
RTVE
Sveriges Radio
The Economist
VRT

International

OCCRP
Reuters
The Associated Press (AP)

Latin America

Abraji
Chequeado
Cuestión Pública
El Surti
El Tiempo
Folha de Sao Paulo
Il Sole 24 Ore
La Gaceta de Tucumán
La Nación – Argentina
Mutante
Perfil
PodSonhar
Rede Gazeta
T13
TN
TV Azteca
Unitel

Middle East and North Africa (MENA)

AlManassa

AlMasry AlYoum

ARIJ

Daraj

Jummar

Khuyout

Maharat Foundation

Masrawy

MBC Group, Egypt

Megaphone

Nawa Network – media platform of Filastiniyat

Raseef22

Scientific Arab

Ultrasawt

Welad ElBalad

North America

McClatchy

MuckRock

NPR

Semafor

The Texas Tribune

Zenger

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

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POLIS Journalism at LSE

Get Involved

The author welcomes feedback on this report at **c.h.beckett@lse.ac.uk**

If you have any questions about the project, or if you want to be involved in future JournalismAI initiatives, do not hesitate to get in touch with Tshepo Tshabalala at **t.h.tshabalala@lse.ac.uk**

blogs.lse.ac.uk/polis/2023/06/26/how-newsrooms-around-the-world-use-ai-a-journalismai-2023-global-survey/

JournalismAI, Polis
Department of Media and Communications
The London School of Economics and Political Science
Houghton Street
London WC2A 2AE

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