Generative AI & Journalism: Mapping the Risk Landscape

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CRIB SHEET ~ ii

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GENAI IS PRIMARILY AMPLIFYING LONG-STANDING CHALLENGES FACING JOURNALISM

Key risks areas include:

1. BUSINESS MODEL & MARKET DISRUPTION
   GenAI products and services that mediate the consumer-news publisher relationship such as generative search and summarisation are likely to further disrupt news organisations' efforts to remain sustainable and this is exacerbated by legal tensions and lack of consensus over intellectual property
2. PROBLEMATIC BUSINESS PRACTICES AND APPLICATIONS
   News organisations that mobilise GenAI in ways that degrade audience experience and trust in journalism and fail to address complex labour issues or editorial risks will likely amplify current issues with significant cumulative impact
3. INFORMATION DISORDER, DISCLOSURE UNCERTAINTY AND TRUST DESTABILISATION
   GenAI lowers barriers to producing and sharing mis- and dis-information at scale, which risks polluting the information ecosystem. This, and uncertainty around impacts of transparency concerning journalistic GenAI use have knock-on effects for public trust
4. LACK OF (GEN)AI LITERACY AMONG JOURNALISTS AND PUBLICS
   Poor understanding of GenAI risks a combination of inappropriate use, automation bias, algorithmic aversion and poor organisational decision-making, alongside uncritical reporting. It also hinders the public's ability to navigate the information ecosystem
5. LACK OF STRATEGIC AND LONG-TERM THINKING
   Short-term thinking and fear of being behind the curve stimulated by GenAI hype and market pressures risks narrow and blinkered decision-making, and a failure to leverage professional imagination, expertise, and values to shape the future of journalism

Risks stem from use of GenAI by both news organisations *(endogenous)* and by other actors that impact the news ecology *(exogenous)*, including (Gen)AI companies, intermediaries like social and search platforms, and members of the public

THERE IS AN APPETITE FOR ACTION AND INTERVENTION TO RESPOND TO THESE CHALLENGES

The responsibility for creating the conditions for sustainable public interest journalism amid and with GenAI is distributed and lies with news organisations, legislators, policymakers and regulators, and (Gen)AI companies

Recommendations include:

1. DEEPEN AND DIVERSIFY UNDERSTANDING AS A PRECONDITION FOR ACTION
2. DEVELOP (AI) LITERACIES AND CAPABILITIES
3. ENSURE RESPONSIBLE DEVELOPMENT/USE/DEPLOYMENT
4. DEVISE NEW RULES, REQUIREMENTS & STANDARDS
5. STRENGTHEN PUBLIC POLICY RESPONSES

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BRIEFING

Why study GenAI and journalism - what's at stake?

High quality public interest journalism is recognised as fundamental to well-functioning democratic systems underpinned by well-informed civic participation. The growing use of generative AI (GenAI) systems by a wide range of actors in society, including members of the public, political actors, workers across industries, and news providers themselves, makes it important to identify and understand the risks they pose. This includes risk of harm and adverse impacts for journalism as an industry, an institution, a practice and a product; for the wider information commons to which it contributes; and ultimately for people and society. Such knowledge is a necessary foundation for evaluating and mitigating those risks [1] and for fostering a healthy journalism ecosystem in a changing landscape.

The rush to build applications, products, and services capitalising on developments in foundation models has created a burgeoning marketplace of business- and consumer-facing systems with widely differing standards and safeguards. Desire to exploit purported opportunities for improved efficiency, productivity, and creativity has incentivised take-up across industries, including in large parts of the news media in the UK and around the world [133]. But fast-moving changes in underlying models and the applications they enable, coupled with significant uncertainty around legal, regulatory and ethical requirements makes this an area ripe with risks, our knowledge of which remains limited. Domain-agnostic risk categorisation in the field of GenAI has matured in the past five years [1-10] but there is a lack of domain-specific risk mapping for socially significant areas such as journalism. This work contributes to filling this gap.

The ability of lawmakers, policymakers, institutions, organisations and publics to manage risks associated with GenAI will be central to ensuring benefits can be realised effectively and securing the health of the information ecosystem in the UK and beyond. As the UK government acts to ramp up AI adoption and position the country as a global leader in AI [138] using a pro-innovation approach that requires regulators to apply cross-sectoral principles to their specific context [139], deeper context-specific understanding of risks from GenAI is urgently needed. Moreover, as GenAI deployment gathers pace, the landscape is changing. Evidence-based and anticipatory work is required to identify the range of manifest and latent risks for journalism and the information ecosystem, understand how perception of these risks can drive decision-making, and make sense of their relationship to a healthy democracy. There is equal need to better scope out potential responses and interventions from a range of different vantage points that could help mitigate these risks and cultivate the conditions for public interest journalism to flourish amid, and with GenAI. This report adds to the knowledge in this area with rich qualitative insights.

Key Findings

GENAI IS PRIMARILY AMPLIFYING LONG-STANDING CHALLENGES FACING JOURNALISM

Key risks include:

1. BUSINESS MODEL & MARKET DISRUPTION

GenAI products and services that mediate the consumer-news publisher relationship such as generative search and summarisation are likely to further disrupt news organisations' efforts to remain sustainable and this is exacerbated by legal tensions and lack of consensus over copyright and intellectual property

2. PROBLEMATIC BUSINESS PRACTICES AND APPLICATIONS

News organisations that mobilise GenAI in ways that degrade audience experience and trust in journalism and fail to address complex labour issues or editorial risks will likely amplify current issues with significant cumulative impact

3. INFORMATION DISORDER, DISCLOSURE UNCERTAINTY AND TRUST DESTABILISATION

GenAI lowers barriers to producing and sharing mis- and dis-information at scale, which risks polluting the information ecosystem. This, and uncertainty around impacts of transparency concerning journalistic GenAI use have knock-on effects for public trust

4. LACK OF (GEN)AI LITERACY AMONG JOURNALISTS AND PUBLICS

Poor understanding of GenAI risks a combination of inappropriate use, automation bias, algorithmic aversion and poor organisational decision-making, alongside uncritical reporting. It also hinders the public's ability to navigate the information ecosystem

5. LACK OF STRATEGIC AND LONG-TERM THINKING

Short-term thinking and fear being behind the curve stimulated by GenAI hype and market pressures risks narrow and blinkered decision-making and failure to leverage professional imagination, expertise and values to shape the future of journalism

Recommendations

THERE WAS AN APPETITE FOR ACTION AND INTERVENTION TO RESPOND TO RISKS

Key recommendations include:

1. DEEPEN AND DIVERSIFY UNDERSTANDING AS A PRECONDITION FOR ACTION

The need to deepen and diversify understanding of GenAI was a thread that ran through our data as a precondition for all forms of effective intervention. The apparent obviousness and simplicity of this recommendation should not belie its criticality.

- *Demand greater transparency from GenAI companies*

There is an asymmetry of knowledge between GenAI companies and their users (including journalists and the public), the companies that contract with them for their services (including news organisations), and the institutions that regulate them. In journalism, this imbalance inhibits the opportunities to advance *responsible* innovation, to ensure accountability and redress, and to build public trust – challenges mirrored in a governance context. Addressing this will require mandating transparency by GenAI companies.

- *Invest in multidisciplinary work that values non-technical expertise*

Knowledge continues to be siloed at times in unhelpful ways. In part, addressing this problem requires proactive building of collaborative multidisciplinary and multistakeholder work within and beyond news organisations – an enduring call to action. But to be effective it also requires a reappraisal of the types of knowledge deemed central to developing (Gen)AI in the public interest with more attention paid to non-technical expertise from the humanities and social sciences. For a step change in collective understanding, this necessitates a recalibration of investment to match the challenge.

2. DEVELOP (AI) LITERACIES AND CAPABILITIES

The vital role of sustained education, training, and skills development to enculture critical AI literacies amongst journalists and other newsworkers was the most regularly cited recommendation for dealing with a raft of risks related to GenAI. Nearly all interviewees suggested that GenAI literacy should be an extension of existing media and information literacy, and must be developed in the context of existing literacy initiatives.

- *Develop complementary literacies for newsworkers*

The need to provide journalists with more than instrumentalist training about how to use GenAI was clear and experts highlighted the role of "critical" AI literacy - leveraging skills of critical analysis to contextualise these systems, covering bias, limitations, legal and ethical implications etc., and linking it to professional and internal organisational (Gen)AI rules and guidance.

- *Extend literacy efforts to the public*

Respondents wanted literacy efforts extended to educating the public about (Gen)AI broadly, and of GenAI use by news organisations, to stem the erosion of public trust in news and help people develop a more nuanced and critical understanding. News organisations also have an important role to play here in helping audiences make sense of (Gen)AI and its role in the world and holding to account the companies developing it and organisations deploying it.

3. ENSURE RESPONSIBLE DEVELOPMENT/USE/DEPLOYMENT

Many respondents foregrounded the broad need for responsible and ethical practice in development, deployment and use, by AI companies and by news organisations. This included appeals to ensuring the now common call for a human in the loop and human oversight of AI in news work alongside the design of human-centric AI, but also emphasised the application of journalism ethics to AI.

- *Assess impact and alignment*

Impact assessments to evaluate the social, economic, and environmental impacts of GenAI technologies in journalism were suggested, the outcomes of which could be used for the purposes of industry-wide governance and to help make responsible procurement decisions.

- *Improve accountability & redress*

Several respondents suggested the need to enable routes for complaint, feedback and rectification, sanction, and penalty. This included reinforcement of self-regulation, with new accountability systems in newsrooms to mitigate degradation of standards and quality, agreed standards among industry regulators, and clear pathways for audiences and impacted parties to file complaint and seek redress.

- *Avoid techno-solutionism*

Developing and deploying technical systems will be crucial for effectively responding to challenges but respondents reiterated that although technology is part of the toolkit to address issues around GenAI, any kind of reductionist technological solutionism was itself a risk.

4. DEVISE NEW RULES, REQUIREMENTS & STANDARDS

Experts recommended devising new, or iterating on existing, editorial policies and guidelines by thinking through use cases as they develop, necessary guardrails as capabilities change, and associated requisite levels of journalistic control. Respondents pressed the need to hear from the professionals and members of the public being impacted by GenAI.

- *Collaborate and strengthen community organising*

Interviewees were more likely to discuss the responsibilities of news organisations, policymakers, AI companies and other stakeholders in distinct and separate ways rather than propose collaboration and cooperation, however the need to cooperate to find common ground and share common standards was highlighted as was the role of unions.

- *Rethink/reposition journalism for an era of (Gen)AI*

As the environment in which journalism is produced and consumed is shifting to accommodate GenAI, respondents saw a need for journalism to change too. Suggestions included explaining journalism's added value in a GenAI-saturated environment and consulting the public about their diverse information needs and how inequalities in society shape their relationship to news.

5. STRENGTHEN PUBLIC POLICY RESPONSES

Enforcement of existing law and regulation, and changes to them, were both considered necessary to address the multiplicity of GenAI related challenges. Forcing big tech companies to comply with existing EU regulation was recommended to counter news organisations' growing dependence on them, as was creating policies for ensured open access and data transparency for their LLMs in public-interest journalism contexts.

- *Improve resourcing and funding*

Lack of resource was seen as a key barrier to transitioning effectively to deal with GenAI. Financial support and funding model changes were proposed as interventions to create an economic situation where news organisations do not have to cut costs and could innovate.

How did we conduct the research?

We wanted to find out what risks generative AI poses for journalism and the information ecosystem and how a range of relevant experts perceived those risks. We conceptualise risk as (exposure to) the possibility of harm, loss, injury, or other adverse or unwelcome circumstance. Characterising a risk involves an object deemed to pose the risk (in our case GenAI), a putative harm, and a linkage alleging some form of causal relationship between them, whether direct or indirect. We asked:

- What are the views and concerns of experts in relevant fields around GenAI?
- What challenges and risks are being covered in the academic literature?
- What can a review of grey literature tell us that is missing from scholarly work?
- What practical recommendations can be formulated on the basis of this information?

We chose a research methodology that bridges the gap between in-depth academic research on GenAI in relation to journalism, and up-to-date industry/practitioner accounts of GenAI on the ground. This wider scope enabled us to capture elements not (yet) present in peer-reviewed texts in order to unpack the breadth of risks GenAI pose and better understand how those risks were perceived by relevant experts. Each round of data collection informed the next in an iterative process employing the following methods:

1. **Literature review:** We conducted a targeted review of academic and grey literature to identify research about the intersection of GenAI and journalism in order to identify manifest risks (of which we already have evidence of harm) and latent risks (with potential to manifest).
2. **Interviews:** Our semi-structured interviews (n=29 with 21 experts) enabled deep dives into experts' specialisms, including journalism research and practice, media and digital policy, and AI research and practice. The questions and topics were informed by insights from the literature review and interviews ranged between 30-60 minutes.
3. **Survey:** Our targeted survey (n=57) allowed us to gauge experts' perception of a set of risks and mitigations derived from the literature and interviews. We collected quantitative data from Likert scale fields and rankings and qualitative data from open text boxes.

Sampling: We curated a selection of expert participants identified through academic and practitioner networks, searches on organisational websites, LinkedIn, and other social media. We targeted experts in journalism research and practice, and AI research and practice, alongside those with policy, governance and civil society roles at the nexus of AI and journalism. We aimed for quality and richness of contribution based on relevant expertise.

FULL REPORT

1. Context: GenAI and Journalism

GenAI is the latest in a chain of advances in data-driven computational systems to impact the news industry. However, it remains an area of nascent and limited research, in which controversy and debate exist alongside a lack of clarity about the implications for journalism. A wide range of actors in society, including members of the public, political actors, workers across industries, and news organisations themselves have moved to exploit the potential benefits of this new genre of AI. If uptake continues to grow as predicted [133], the need to anticipate, better understand, and mitigate the risks GenAI poses for journalism and the information commons becomes increasingly urgent. Our starting assumption is that the provision of high quality and trustworthy public interest news and information is a public good that underpins a well-functioning pluralistic democracy [58] Our work then seeks to identify emerging threats to such public interest news stemming from the growing use of GenAI.

The news and information ecosystem is always changing as various social, economic and technological forces shift the structural dynamics and on-the-ground realities of news production, distribution, and consumption. New actors in the digital era have challenged traditional and legacy news media's dominance in the provision of news and civic information. They now must compete for attention with digital platforms (e.g. Substack, Medium), social media platforms (e.g. TikTok, YouTube, Instagram, X), and news aggregators (e.g. Google News, Microsoft Start), whilst simultaneously using these same platforms to publish content and cultivate audiences. On these platforms, news sits alongside and in competition with all other genres of content, from entertainment to activism to propaganda - collapsing contexts and blurring boundaries for users. Lowered barriers to production have enabled NGOs, bloggers, influencers and citizen journalists (amongst others) to engage in acts of journalism without traditional institutional apparatus [95] With increased choice, audiences have fragmented further and some show patterns of increasing (selective) news avoidance [18] This is against a backdrop of interest and trust in news falling in many countries, including the UK, and a tough business climate characterised by rising costs and falling revenue [55] [22] Journalism's traditional two-sided market business model, where it

Defining GenAI

Generative AI is an umbrella term for a subset of AI technologies that can create content including text, images, audio, video, and code, based on the system's training data combined with prompts provided by users.

A core component of the GenAI tools released to publics is the natural language user interface enabled by recent advances in large language model (LLM) architectures, which reduces the need for technical proficiency to use them and widens accessibility.

A GenAI system comprises a whole infrastructure, including model, data processing and interface components. Differences in these components can help distinguish GenAI from other forms of AI. For instance, regarding model, prior generations of AI have often been based on discriminative modelling, whereas GenAI aims to infer data distribution based on generative modelling. This means GenAI can create novel data samples drawing upon the patterns and relationships observed in training data [96]

Common model architectures include diffusion probabilistic models for text-to-image generation and the transformer architecture for text generation (as in the generative pre-trained transformer – GPT – of ChatGPT).

acts as a platform connecting audiences with advertisers, has been disrupted by programmatic advertising and platform economics [17]

Artificial intelligence has been central to many of these changes and has long been a growing part of the technological infrastructure in many news organisations [30] This has been both to the benefit of news providers - for instance by improving subscription models, personalising news content and delivery, and improving large-scale data analysis capabilities - but also to their detriment - for example, by enabling the algorithmic profiling and personalisation that drive network effects for platforms to dominate ad markets and distribution channels, and by lowering barriers to the generation of mis- and dis-information[1]. These factors create a challenging environment for the provision of public interest news[2], exacerbating concerns raised in the 2019 Cairncross Review [43] that industry contraction and an inability to invest in necessary substantial innovation would jeopardise the news industry's most democratically significant outputs. In turn, this poses risks to democratic legitimacy, community cohesion, and public accountability. Globally, the news media in many countries are increasingly challenged by rising mis- and disinformation, low trust, attacks by politicians, and an uncertain business environment [55] It is in this broad context and ambivalent history that the arrival of generative AI must be considered.

Following the public release of the conversational agent ChatGPT by OpenAI in late 2022 and its success in rapidly engaging extensive user numbers, competitors quickly released their own models, including Google's Gemini (formerly Bard), Anthropic's Claude, and Meta's LLaMA (an open-source model). There has since been a panoply of new products and services released that are built on and with pre-existing GenAI models, such as search engines (like Perplexity, the new Microsoft Bing, or Komo AI), summarisation features (e.g. Google's AI Overviews), web browsers (like Arc, or the new Microsoft Edge), followed by a varied array of agents (described as custom GPTs when built on OpenAI's models), designed to completed a variety of specific tasks [29] In just two years, GenAI systems have begun to impact industries across the board, including in the knowledge economy and creative industries of which journalism is part [27].

1.1 Applications, Benefits and Unknowns

GenAI models promise a range of possibilities to support knowledge work and media production, as a growing body of literature attests. Journalistic applications span the news production process, from gathering, production, and distribution to business activities [133] [26] [27] [40] [128] Newsrooms are experimenting with using LLMs for brainstorming, ideation and news discovery [19] [20] [25] research, summarisation [31] drafting and writing assistance [53] content creation and re-versioning [54] translation, and data interrogation [26] [27], to distribution, personalisation [101] interaction and audience analytics. They are also using image models for stock image generation [38] audio models to read articles and detect deepfake voices [41] and

[1] Disinformation is content that is intentionally false and designed to cause harm… Misinformation also describes false content, but the person sharing does not realise that it is false or misleading. [97]

[2] The News Futures 2035 report describes public-interest news as "news and other information from identifiable producers and distributors committed to high ethical standards and best practices in journalism, who can be held to account by the public. This content must be accessible to the public, who should be able to understand it, and assess for themselves its benefits." [42]

experimenting with new video models. Journalists have begun developing their own custom GPTs [35] and putting them to task for watchdog journalism [36] Very few news organisations are developing their own language models [109] but more are using retrieval augmented generation (RAG), fine tuning and prompt engineering to harness LLMs to better suit their purposes in more cost-efficient ways [110] Meanwhile, corporate software providers are increasingly offering GenAI integration into enterprise software, like Microsoft 365 incorporating Copilot and Google services building in Gemini, with a view to aiding everyday organisational activities, which some news organisations are adopting. The accessibility and low requirements for technical skills are the big differentiator from other AI systems that generally require deep specialist expertise in areas like programming [26]

Globally, there is wide variation in extent of use and disparities in use and benefits between minority and majority [3] world contexts due to economic, infrastructural, language and accessibility challenges as well as social and political conditions [26] Even within European nations, there appear to be clear differences between regions and individual nations regarding rate and nature of newsroom experimentation and adoption, though it should be noted data is patchy and unsuitable for robust comparison. For instance, the Nordic countries have been recognised for strong AI in media networks leading to effective knowledge exchange and quick prototyping and learning - a model providing inspiration elsewhere (e.g. among German language media [142]). Meanwhile there appears to have been slower progress in Central European countries where AI usage broadly does not exceed 15%, and research suggests integration reflects varying national perspectives, media independence, and the influence of political landscapes [141]. There is also inequality between the capacity for large and small, well-resourced and under-resourced newsrooms to benefit [26] [27] [55] though this will be a complex picture in that although incumbents have more resources to plough into licensing tools, training, and prototyping, they may also see the least marginal benefits [140]. It may be that large organisations that have already reliably automated many areas of the news production process with non-generative AI and existing technology gain least overall, while GenAI can enable small newsrooms to spend less time on many tasks and open new revenue streams, e.g. from making the back catalogue accessible where this has to-date been too expensive and difficult by aiding classification, metadata generation, a conversational interface etc. Public service media (PSM) and commercial media alike are experimenting with and adopting GenAI, though at different rates and with different outcomes reflecting their contexts – PSM have tended to be more risk averse and spent time identifying strategic applications [92] while (some) commercial news media have been quicker to deploy. For example, in the UK, the BBC launched 12 pilots looking to: maximise the value of existing content (e.g. translating and reformatting); create new

Insight

The risks and challenges GenAI systems pose for journalism stem only in part from deployment and use by news organisations and their journalists *(endogenous)*.

Deployment and use by other actors in society *(exogenous)*, including AI companies, intermediaries like social and search platforms, and members of the public shape the conditions in which journalism operates.

They are equally important to understand in order to anticipate threats to journalism and the information commons.

[3] The term majority world denotes those countries combined which hold most of the world's population and is used in place of the terms like 'developing' or 'third' world, or more commonly now the 'Global South'. [98]

audience experiences (e.g. chatbot learning assistance for educational content and personalised marketing); and make how they do things quicker and easier (e.g. journalistic tools like a 'headline helper' and better content labelling) [45] Newsquest developed the News Creator AI tool to function as a copywriter and has claimed it had produced more than 10,000 AI-assisted articles by May 2024 [53]

In line with other industries, hopes of efficiency and productivity gains are driving adoption. Much experimentation has been propelled by the promise GenAI can improve back-end processes and streamline the business operations of news organisations, from data analytics, subscription and paywall processes, and customer service to advertising and marketing. Within news production processes, the same core drivers are efficiency and productivity gains but also include anticipation of enhanced investigative and creative capacities [27]. These are not unrelated since the oft-stated goal of freeing up journalists' time and newsroom resource is to reallocate it to such endeavours towards high-quality content. Some early adopters have indicated some success recouping time using in-house tools built using LLMs [52] though it is yet to be seen if this will be the case across the industry and if that time will be allocated to the promised public interest activities, given the imperative for profit-making news organisations to extract value for shareholders and the competing demands for resource across all news publishers.

Potential benefits to applications of GenAI could also include improved accessibility features (e.g. audio features for the visually impaired) and greater engagement among harder to reach audiences (e.g. automatic translation of news into minority languages, chatbot interactions with news content and news providers in varied languages, informal and engaging formats for youth audiences [39] Being able to query large datasets using natural language could help news organisations with knowledge management, such as better understanding and mining their archives and surfacing biases in coverage. It could also help investigative journalists who have little or no programming skills to interrogate troves of public documentation and multimodal data for public interest investigations [37] bringing benefits to audiences and society more widely. Intermediaries between news producers and their audiences such as news aggregators, social media and search platforms are also using GenAI to develop new ways for audiences to access and engage with information, including news, through generative search and automated news summaries [24] [28] [44] This could in theory make news information more easily accessible to wider publics and in more engaging conversational and question-answer formats that could potentially enhance information retrieval and knowledge acquisition. It is not yet clear whether vaunted benefits are materialising in practice, with promises of creativity under question [33] and strong evidence for widespread productivity gains [34] or transformational capacity [140] yet to be seen. Empirical data on the extent of use remains patchy. An early survey in mid 2023 of 101 participants globally found half of newsrooms were already using GenAI [134] while another conducted in Jan-Feb 2024 suggested almost half of journalists globally were using GenAI for work but just 5% used them often [25] News organisations appear to have been quick to experiment but slower and more cautious in adoption due to a complicated set of reasons including identifying clear business value and successful technology transfer into production, fear and lack of trust in the newsroom, and provision of, and time for training [135]. When used, quality issues such as inaccuracy and bias coupled with reliability and control issues, can lead to GenAI use costing more time than they save and creating more work than they are worth [27].

Meanwhile, members of the public are using largely free-to-use publicly available versions of GenAI systems for personal activities and self-expression, including to help publish their own

media content. A 2024 study suggested public awareness and use of GenAI was growing but using it to access news remained low, representing just 5% across a nationally representative sample in six countries and only 2% in the UK [23] Our knowledge of public attitudes to GenAI in news contexts also remains limited, as does understanding of how people respond to GenAI-created synthetic material in journalism. A 2024 Reuters Institute for the Study of Journalism survey found less than one-third trusted news media to use GenAI responsibly, with UK respondents indicating lowest trust levels across countries at 12%, and displaying notable negativity about the likely effect of GenAI on journalism [23] A BBC study found people were nervous about GenAI use in media and wanted reassurance from publishers [118]

This report focuses on risk as a necessary counterweight to a dominant discourse around the opportunities and proposed benefits of GenAI, which often neglects to meaningfully consider potential and manifest harms and problematic impacts. It seeks to add nuance to AI hype [100] [102] and to polarising narratives of (Gen)AI as the solution to journalism's problems and even the first step to Artificial General Intelligence (AGI) on the one hand, or uncontrollable and purely harmful to journalism while posing an inherent danger to humanity on the other hand [103] [117]. The nature, likelihood and impact of risks arising from GenAI for journalism and the information ecosystem is still subject to much debate.

1.2 Key Concepts

Public Interest Journalism and the Information Commons

In this study, the underlying assumptions are that **public interest journalism** and robust **information commons** are inherently valuable to healthy democracies; the former providing useful and accurate knowledge about the world for citizens, which feeds the latter - a public resource for collective sense-making and decision-making. This genre of journalism creates public-interest news, which the News Futures 2035 report describes as "news and other information from identifiable producers and distributors committed to high ethical standards and best practices in journalism, who can be held to account by the public. This content must be accessible to the public, who should be able to understand it, and assess for themselves its benefits" [42] It is a core part of the information commons, which we use to refer to informational resources belonging to or affecting the whole of a community. Though much news content is not available to all and inequality of access persists, it becomes part of the commons by virtue of being a resource which does not deplete upon consumption – news travels and is shared between people. We know news use helps people become more informed and, in some cases, more resilient to misinformation [56] [57] and more knowledgeable about politics and public affairs [58] which contributes to civic participation and functioning democracy.

Risk and Resilience

Two interconnected concepts around which this research revolves are that of risk and resilience: **risk** is "(exposure to) the possibility of loss, injury, or other adverse or unwelcome circumstance"; **resilience** is the quality of "being able to recover quickly or easily from, or resist being affected by" such a misfortune [47] Characterising a risk involves an object deemed to pose the risk (in our case generative AI), a putative harm to someone or something of value (in our case high quality journalism and a healthy information ecosystem), and a linkage alleging

some form of causal relationship between them, whether direct or indirect [48] Risk analysis is particularly useful in moments of change when the range and significance of potential and manifest threats and issues are not yet fully understood, and responses are still being devised – as is the case with GenAI systems. A classical (positivistic) view of risks posits them as concrete, knowable and quantifiable and holds that the probability and magnitude of consequence can be effectively defined and assessed. However, risk is a socially constructed phenomenon [21] and different actors, who inhabit particular contexts, have differing perceptions of risk as a result of social, organisational, and political factors. As such, perceptions of risk, rather than risk as an objective value, can drive decision-making and action and must be considered for a more comprehensive understanding of risk [49] The concept of resilience is inherent to the endeavour of risk analysis in that the ultimate aim is to protect or reinforce something of value, i.e. make it less vulnerable and more resilient against potential harms. Of particular interest to this study is the epistemic resilience of societies [93] to new challenges.

2. Methodology

We begin from a qualitative paradigm that values richness, complexity and relevance of insights but also a pragmatic position that recognises the value of varied methods for generating complementary data and reaching wider groups of participants. We combined three methods in an iterative data collection and analysis process, whereby each data collection stage informed the development of the next, and insights were incorporated successively throughout the project. This tripartite methodology was best suited to studying a rapidly evolving landscape in which significant changes to important contextual factors (technological, economic, social and political) were occurring regularly. The iterative approach enriched our dataset and nurtured a nuanced understanding of the field from multiple perspectives.

This work did not aim to quantify exposure to risk, nor did it aim to be representative of all stakeholders' concerns, instead we sought depth and meaning from selected expert contributors about their perception of risks. Our goal was to a) identify the widest range of pertinent risks to journalism and the information commons, b) describe, categorise and analyse them, and c) identify responses and recommendations for risk mitigation and for the flourishing of public interest journalism in an era of GenAI.

2.1 Literature Review

We conducted a targeted literature review to identify research about the intersection of generative AI and journalism in order to identify manifest risks (of which we already have evidence of harm) and latent risks (which have potential to manifest), and to understand how risks were being perceived by experts in relevant academic and practitioner communities. Insights from this varied literature informed our interview protocol and survey design and is incorporated into our report findings.

Academic Literature: Our search covered English-language articles from the period 2021 to 9 April 2024. We used the following Boolean operators to search Google Scholar to capture most common terminology used to describe GenAI: *("generative artificial intelligence" OR "generative AI" OR GenAI OR GAI OR "large language model" OR LLM OR GPT OR Midjourney OR DALL OR Whisper OR Synthesia OR deepfake OR GANS) AND (journalism OR journalist OR newsroom OR news)*.

We deliberately did not use the umbrella term AI as it would generate too many false positives and dilute the relevance of results. Non-peer reviewed pre-prints were included due to the nascency of the field and are listed separately in the reference list for ease of identification. We excluded material which mentioned but did not have a significant focus on journalism or GenAI.

Insight: What does the GenAI & Journalism literature cover?

Academic research focused specifically on the intersection of GenAI and journalism to-date remains limited.

It has looked at: use cases [60] [61] experiments [62] , technical tools [81] ethical and social assessments [50] [71] news coverage analysis [80] [117]and policy recommendations [84] [88] It has focused primarily on text with few studies on visual, audio or multimodal GenAI (e.g. [94] .

These studies provided fresh insights into the domain-relevant challenges and issues raised by GenAI but were most useful when assessed alongside the more mature field of research into journalism and AI in the context of broader digital transformation, and work into the socio-technical capabilities and affordances of AI. This required reviewing cross-disciplinary literatures and engaging with grey literature.

Grey Literature: We complimented this with selected English language grey literature from the period 2021 to 9 April 2024. This comprised a variety of reports, articles, blog posts, and non-academic papers written by a variety of actors including industry and trade bodies, civil society organisations, and academics.

Risk Mapping: We then drew together insights from the above literature with further contextualising literature to gain a holistic view and generated taxonomies of risk in order to conduct a bi-directional risk mapping exercise, whereby we:

- took known risks of GenAI models and identified instances where those risks had manifested or been discussed as latent in relation to journalism
- took known risks to journalism and the stability of the information ecosystem in democracies and identified instances where GenAI has, or threatens to, exacerbate them.

2.2 Interviews & Survey

Sample: We identified experts across (and at the intersection) of the fields of AI and journalism, whether working in academia, the news industry, civil society, or other key domains such as law and regulation. We contacted 100 experts, of which 21 agreed to be interviewed and 57 engaged with our survey.

Interview approach: We conducted 29 semi-structured interviews with 21 experts, each lasting between 30-60mins. We conducted five pilot interviews with experts from the breadth of our range of desired fields (January-February 2024) to test the pertinence of insights derived from the literature and refine our interview protocol. We then interviewed a further 16 experts and returned to nine of them for a follow-up interview to explore deeper insights and confirm the persistence

of observed patterns. At this point, we began to observe a level of data saturation whereby interviews ceased to yield substantially new information, which suggested the adequacy of our dataset for analysis and we ended interviewing.

Analysis: We conducted axial coding as part of an abductive approach to thematic analysis [91] Our approach draws from a qualitative paradigm in which *interpretive depth* lies in the skill of the researcher-analyst and researcher positionality is recognised as a valuable resource for knowledge production. We generate *descriptive findings* in which data patterns are summarised alongside and within *themes*, which are patterns of shared meaning underpinned by a central concept. Both are the output of skilled *interpretation*. We contextualise our interview findings within broader literatures.

Qualitative Analysis

The duty of the qualitative researcher is to condense, synthesise, and restructure complex reams of transcribed narratives into meaningful information so a reader can comprehend the theoretical and practical implications of the findings [90]

Abductive analysis is a conversation between empirical data from the social world and a set of theoretical propositions [91] through which we can capture patterns in raw data and structure it into meaningful themes.

Survey Approach: We conducted a part quantitative, part qualitative online survey to gauge experts' perceptions of a set of risks derived from the literature and sensitising interviews. We designed the survey as a complementary mechanism to a) cross-check the risks identified from the literature and sensitising interviews with members of the expert community, b) identify overlooked risks and recommendations, c) solicit perspectives from experts who were unable or unwilling to take part in interviews. The aim was not to garner large numbers of respondents or identify statistically significant correlations. As such, this data should be read as a snapshot of risk perception at a point in time (the survey was open 12 April to 27 May 2024) amongst a small group of experts.

Analysis: We asked respondents to: rate the impact, likelihood and timeframe of 13 key risks; provide suggestions to prevent and mitigate those risks; rate a set of 15 suggested potential responses and recommendations; and to describe their own thoughts and suggestions in relation to the topic. We visualised trends in the cohort (see **Figure 1**. by working out arithmetic averages of responses but we also show the range and diversity in responses (see **Figure 2.**). We do not claim this to be representative of the wider expert community's views or to be statistically significant. For the qualitative data, we conducted abductive coding [90] [91] of responses from open text boxes to identify themes.

3. Findings: A View from the Experts

The following analysis summarises and explains the main concerns, risks and challenges raised by our interviewees and survey respondents, grouped under six key insights. We use direct quotes to illustrate insights and provide nuance to our discussion and we provide context and critique to their contributions using academic and grey literature.

1. Amplification of journalism's long-standing challenges

TAKEAWAY: Renewed consideration is required of *known* risks to journalism and how such issues are being exacerbated to determine whether and where the need to intervene has become more acute.

An overarching insight is that **GenAI primarily amplifies existing challenges**, serving as an extension of long-standing issues within the news industry. The concerns raised by our interviewees strongly highlight this while also indicating that **paying attention to the new dimensions of old problems** that GenAI introduces will be crucial to responding effectively and to anticipating potential changes that may occur in the longer-term. This is important because there is significantly **less clarity about the long-term implications** of GenAI and the uncertainty this generates coupled with the rapidity of technological change, the prevalence of AI hype, and knowledge asymmetries between AI companies and all other stakeholders, has led to a **sense of volatility and vulnerability** which may be hampering clear-eyed and strategic decision-making. There was a sense from respondents that **incremental and aggregate impacts** associated with GenAI will accumulate over time to **culminate in substantial implications for journalism and the information ecosystem.** Dealing with this after the GenAI frenzy and hype dies down will require sustained and targeted attention to risk areas.

Systematic literature reviews of AI and journalism (e.g. [108] analyses of specific genres (e.g. visual journalism [143]), and our risk mapping exercise indicate the consistency of many concerns over the past decade. They include: problematic business practices and applications; changing consumption habits; (dis)trust in journalism; unstable business models and threats to the sustainability of journalism as an industry; mis- and dis-information; diversity and inclusion (in coverage and in newsrooms); working conditions; professional literacy and preparedness; journalist and source safety (e.g. targeting, surveillance); risks to freedom of speech and expression. Given this continuity, respondents felt that **GenAI must be understood within the wider digital media context and its history - not in isolation**. This echoes insights about the wider impact of LLMs from the UK House of Lords' Communications and Digital Committee [127] which concluded they may act as "a force multiplier enhancing malicious capabilities… rather than introducing qualitatively new risks" and may amplify existing societal problems, including "inequality, environmental harm, declining human agency and routes for redress, digital divides, loss of privacy, economic displacement, and growing concentration of power."

Some experts perceived the journalism industry to be better prepared to integrate GenAI than it was with previous digital innovations thanks to lessons learned from earlier adaptations in the platform era and to a recent track record of innovation work on automation [111] Others expressed fears that the institution of journalism as we know it would not survive expected shifts GenAI is contributing to, without significant support and intervention.

➢ Appetite for action and intervention

There was an appetite for action from our experts, focusing not solely on GenAI as an isolated issue but on the underlying systemic problems plaguing journalism[4]. Respondents felt that while GenAI undoubtedly extends and amplifies existing issues within journalism, it also presents a unique **opportunity to address these challenges**. The overriding sentiment was that if these issues are tackled proactively, the journalism industry could **leverage GenAI responsibly and effectively and respond appropriately to the external risks it raises,** in order to improve rather than compromise the quality and integrity of journalistic work, paving the way for a more informed and engaged public. However, as risks are both exogenous and endogenous to the industry, **the responsibility for action is distributed** – it rests with more than just the industry itself, necessitating legal, regulatory and policy-level interventions alongside action from (Gen)AI companies, civil society and trade unions, and (to a lesser degree) individual news consumers and members of society.

2. Business model & market disruption

TAKEAWAY: The political economy of news will shift with new GenAI products and services and stakeholders invested in promoting public interest news should focus on designing frameworks and mechanisms to fairly allocate value.

The provision of new GenAI products and services that mediate the consumer-news publisher relationship, such as generative search and summarisation, present a serious risk of destabilising prevalent news industry business models through extensive market disruption. This could exacerbate existing issues engendered by intermediaries like social media and other platforms, including: substituting for direct engagement with news and diminishing traffic to news websites; cutting off publishers from consumer data need to understand their audience; and impacting visibility as algorithmic filtering and moderation take on a new dimension with language models involved in determining what is considered newsworthy. This shift will **exacerbate dependence on very few large platform companies for infrastructure, products, and services** [134] deepening centralisation of power over news production on top of existing control over distribution and **limiting news organisations' autonomy** [114] It also adds new risks, for instance of reputational damage through inaccuracy, misattribution, fabrication ("hallucination"), and mis-contextualisation of publishers' proprietary news content. Additionally, GenAI in the hands of people everywhere will likely amplify the trend

> *"A great deal here depends on platforms and the way they integrate GenAI into things like search. If we are misrepresented in ways we cannot track or monitor the threat is very severe.*
>
> *There is a happy path here - that people move back towards direct relationships with trusted news providers. But it is only one possibility. If platforms begin to intermediate and summarise more and more, there is a direct threat to business models."*
>
> Public policy lead at large UK news organisation (survey respondent)

[4] All interviewees raised the need for interventions and in the survey, each of the suggested recommendations were, on average, considered to be highly relevant and to require attention, ranking min 6 on a scale of 0 > 10 (see **Figure 3:**)

towards disintermediation whereby the power of news organisations with institutional standards declines as creators have access to previously inaccessible media production capabilities.

This is not to ignore the potential benefits of improved news user experience and the promise of reaching previously marginalised and under-served audiences for informing and empowering the public. But rather to point to the need to actively shape the conditions in which GenAI search and summarisation will be deployed. In this context, the political economy of news will shift and stakeholders with an interest in ensuring public interest news thrives, will need to work out **how to fairly allocate value in this new environment and ensure a framework for the ongoing creation of quality news**. This is vital not only for publishers but for AI companies who need high-quality content to ingest for future models, whether developers move towards smaller data sets for optimised models or continue on the path of ever larger data needs.

➢ Legal tensions and lack of consensus over intellectual property

At the heart of this disruption is the way GenAI generates now well-documented issues around intellectual property (IP). This revolves around two hotly debated and critical policy questions: 1) the training of GenAI models using scraped data from the web and whether data creators or owners should be compensated and 2) the ownership and copyright protectability of outputs generated by, or with the help of (Gen)AI [120] [121] Courts (mostly in the US where 'fair use' makes for a less restrictive climate than UK and other EU contexts) are in the process of trying to establish how IP laws should be applied to GenAI and several cases have been filed, including by news organisations, but experts are not united on how to proceed. This challenge is not unique to journalism and affects other creative domains such as art, literature, and academic publishing, indicating the need for a broader dialogue about differentiated IP protections across sectors. In each of these areas, workers and their employers are seeking the protection of content from unauthorised use by GenAI companies and/or compensation for data use, as well as clarity about the status of outputs created using GenAI. Differences in national legal regimes around concepts like 'fair dealing' (UK), 'fair use' (US) and 'transformative use', as well as divergences in text and data mining exceptions, could lead to significant international discrepancies in how GenAI is regulated in relation to IP. Additional contractual terms in publishers' terms and conditions complicate the legal situation further.

> *"I think we [the news industry] have a very, let's say 'defence' position, rather than 'offence' exploring opportunities, and I think the IP issue is a clear example of that."*
>
> AI strategist, journalist, AI developer

In the journalism context, there are inherent tensions between the need for news providers to ensure their news circulates widely and reaches the audience wherever they may be accessing media content, including through generative search and summary, and: 1) the need to protect the copyright that underpins the financial sustainability of news enterprises; 2) the need to protect reputation and integrity (when such GenAI products have no fidelity to truth and accuracy). The pressure for more high-quality training data to build bigger and better models, coupled with desire for live news data to answer user queries with up-to-date information, now arguably places news content data owners in a position with some leverage to press for remuneration. Big publishers have already made deals exchanging data from their archives for

money and citations with links back to them as the source within GenAI responses, sometimes supplemented with use of AI technology to build their own products [122]

The risks here are manifold:

- People substitute directly accessing news with getting GenAI summaries, even if citations and links are provided, **seriously damaging news publishers' business**.
- Failure to appropriately value the worth of data in negotiations with GenAI companies **leaves news publishers poorly recompensed** while contributing to the success of a new competitor without adequate remuneration, **slowly diminishing their viability.**
- Deals for data serve the interests of the largest industry players which are already most likely to weather the market changes, and disadvantages smaller organisations. This could lead to **increased centralisation of power in the hands of news media giants and accentuate inequalities between small and large publishers**, ultimately reducing pluralism in the market if smaller operators fold or shrink.
- Moreover, if the business model that develops becomes trade data/pay for prominence/preferential treatment in GenAI products, this will **skew the information ecosystem** in favour of wealthy outlets and **open the door for manipulation by vested interests.** Those blocking web crawlers may risk invisibility in a new news ecosystem.
- **Increasing consolidation of power** to determine what is considered newsworthy and what users see as more control rests in the hands of a select set of large AI companies who can afford to pay for the data and strike deals. These companies are not motivated by the same public interest goals and have opaque decision-making practices, **diminishing accountability and potentially degrading the quality and plurality of available news.**

> *"What I think we'll see is that despite people being in the same field, they might start arguing for different legislative developments and approaches because not always will the small companies' interest align with those of the big ones and the other way around"*
> Academic, AI copyright expert

> *"The risk to journalism is that they get pushed into the corner of news gathering and production, which is the most expensive corner to be in. That's the least lucrative part of the information production process and I'm worried as a risk to news organisations that they will continue to not be profitable. They'll continue to be expensive to run. Their ability to capture resources through subscriptions and so on maybe eroded further and I think that poses a real risk for the industry."*
> Academic – computational journalism, HCI, blogger on GenAI in journalism

According to interviewees, there has been little indication of a unified voice or meaningful cooperative action across the industry. Rather, many news organisations are taking a pragmatic and individual approach to contracting with GenAI companies amid the unresolved tensions and ongoing legal uncertainty around IP and copyright. Interviewees with a legal background suggested ensuring that GenAI serves the interests of a free and fair press requires a regulatory approach that better balances opportunities for innovation with clear rights and responsibilities of all stakeholders involved. Current safeguards and protections for news organisations and other creators are proving insufficient: long-standing conventions such as the robots.txt web crawling exclusion and opt-outs appear to have been disregarded by some AI companies and lack enforcement.

It should be noted that predicted changes to consumer behaviour and the legal and policy landscape are unclear and will influence how these changes play out. The counter proposition is that people turn to legacy and reliable news providers directly and they benefit from growing subscriptions, sales and advertising revenue. Some smaller newsrooms, particularly in less economically affluent regions, also express optimism that GenAI technologies could level the playing field by enhancing their capabilities, visibility and competitiveness. Resource-challenged news organisations may see gains across the value chain as they become able to do things like graphic design and other visuals, or multi-format re-versioning for very little cost with GenAI tools.

3. Problematic business practices and applications

TAKEAWAY: The impacts of GenAI are highly dependent on business decisions made by news organisations and AI companies and without public policy intervention, current market incentives are likely to lead to worsening of several existing issues.

The use of GenAI systems *could* be a competitive factor in the digital marketplace with positive repercussions for the resilience of journalism in that marketplace but a number of issues raised by respondents demonstrate the concern GenAI will be used in ways that extend problematic business practices and harmful industry dynamics. For instance, **worsening the attention economy by enabling personalised 'clickbait'** that drives engagement and associated ad revenue but could overshadow public interest news provision. Interviewees perceived the dynamics of hyper-commercialisation at mainstream search engines as a potential contributor to this shift, degrading experience for profit and forcing users to navigate numerous advertisements and sponsored content before reaching the answer to a query, which could drive them to seek GenAI answers. In this scenario, if advertising revenue were to then shift towards GenAI-driven platforms offering summarisations and alternative formats, traditional news outlets would face increased financial pressures. Another example was the perception that **GenAI stirs the ongoing debate around "filter bubbles"** – a contested theory that posits users of online platforms and services become isolated in their informational echo chambers, primarily exposed to homophilic news that reinforce their existing beliefs [99]. There was a dual perception that GenAI could either worsen these bubbles by enabling hyper-targeted news or even manipulative content or alternatively, serve as a tool to burst filter bubbles if deliberately designed to offer a balanced array of perspectives – and that how this plays out depends largely on managerial decisions more often incentivised for short-term financial gain than long-term goals or positive societal externalities.

> *"I think the biggest risk is that LLMs are used to pump out so much poor content, ranging from disinformation to just low quality content, that it impacts the perception of the news and of credible mainstream publishers in general, so that it's the industry rather than specific publishers that takes a knock."*
>
> AI lead and audience engagement expert in large UK news organisation

- **Complex labour issues beyond job losses**

There was a sense that the complexity of labour issues GenAI raises has been overshadowed by simplistic narratives of imminent job loss and that it is incumbent on newsrooms and policymakers to identify where changes may cause particular harm and proactively intervene before the worst effects are felt. Experts recognised that GenAI tools may be used to automate specific tasks, decisions, or aspects of workflows previously performed by journalists, which

would likely impact the availability and nature of jobs and the way human labour associated with journalism is valued. Whether this in fact becomes problematic and results in undesirable outcomes for journalists and journalism depends on how the process is managed, including which values and outcomes are prioritised by those making decisions about resource allocation, quality assurance, and the editorial and ethical direction of news production.

Job displacement was seen as the least immediate risk in our survey but was considered an important medium-term risk, reflecting experts' perception of the likely aggregate and incremental nature of job market shifts and uncertainty about how news organisations will manage change. Experts pointed to likely impacts on entry level news jobs typically made up of tasks GenAI helps automate (e.g., summarising documents, writing briefs). If fewer novice journalists are required, it could result in barriers to entry into the newsroom via the more traditional development and progression paths for younger people - particularly those from non-elite or traditional backgrounds - or a deskilling and undervaluing of certain types of journalistic work and skills which are important for the role. This then impacts the skills development ladder whereby fewer hires could make it to intermediate and advanced level positions. Some roles may also evolve into more mundane or repetitive 'factory line' functions of overseeing, checking and reviewing GenAI output, which could be less fulfilling or attractive positions. There were also calls to ensure policymakers are alerted to job loss risks in supporting roles, including producers, camera operators, and people working in the journalism distribution chain.

> *I do think that there's a very real threat to jobs and a disruption that could happen there. Not because the AI is so good - it can't replace humans - but because managers and executives want it to be that good, and it might be good enough to do some things, so there are real risks, real harms going on."*
>
> Historian of technology, columnist for large US newspaper

- **Not adequately addressing editorial risks and their cumulative impact on trust**

Early experimentation identified a wide range of editorial risks posed by integrating GenAI into news work, including: inaccuracy and fabrication, plagiarism, lack of source transparency, bias and discrimination, libel and defamation, data privacy breaches, data leaks, as well as undermining editorial values and standards and breaching audience expectations [50] It is now widely recognised that GenAI can discriminate unfairly, perpetuate stereotypes and social biases, and overrepresent hegemonic viewpoints, which could feed downstream into journalistic outputs and cause representational harms that may be damaging to marginalised populations if not mitigated effectively. However, few newsrooms have experience and expertise in managing these issues and biases are not always easy to identify, meaning there is a particular risk of compounding representational harms over time that for instance, reinforce subordination

> *"Really, what they're doing is they're cleaning up after the machines when the machines don't work right, when they have an error, when they run up against something that they don't know how to handle - the human steps in to take over. That's the model I think is most closely what will happen with generative AI."*
>
> Academic specialising in political economy

of certain groups, erase or fail to recognise certain groups or perspectives, stereotype, demean or stigmatise certain people.

Many news providers have taken seriously the potential damage that could occur if safeguards are not put in place and have devised prototype editorial policies and guidelines alongside new processes of assessment and mechanisms to retain appropriate chains of accountability [85] [45] This is just the first step in what will need to be a longer-term project and there is still much work to be done to understand how use of GenAI may impact core editorial principles such as impartiality, fairness, balance, diversity (and for public service media, universality) and to create new protections for them. Others have eschewed these responsibilities and opted for rapid deployment with few guardrails.

> *"In journalism, which is a business based on truth and correctness, introducing Generative AI could lead to some really embarrassing mistakes that could discredit the industry more widely in a time when that is definitely not what we need".*
>
> Senior reporter for technology magazines

The risks here go beyond organisational damage. If journalism fails to live up to public expectations and professional standards are lowered as a result of inappropriate GenAI use and failure to prevent harms, people's trust in news content and the institution of journalism could diminish. This could engender growing disengagement and news avoidance, increasing levels of scepticism and/or distrust in news organisations, which in turn risk undermining the social contract journalism has with audiences and news providers' legitimacy and viability in society. Wider negative impacts include diminished levels of informed public debate and collective understanding, which could in undermine engagement with important public issues and democratic processes.

- **Lack of transparency and explainability**

Companies providing (non-open source) GenAI systems share very limited details of how their systems work and allow even less scrutiny and auditing of them. Many of the techniques they use are not interpretable and create black box systems that even experts find difficult to accurately explain, which makes it difficult for news organisations to fully understand the tools they are using or interrogate the underlying training data, models, or algorithms. This then pushes the responsibility for undertaking checks and balances to understand and mitigate risk onto news organisations and creates a challenge to accurately explaining how the systems work to journalists and the audience, describing how/why exactly certain outputs were generated, or creating mechanisms for recourse following complaints. Additionally, it restricts their ability to ensure legal and regulatory compliance.

Snapshot from Survey

Averages of responses (n=21) suggest:

- **Mis- and dis-information perceived as most critical risk**
  Followed by factuality challenges, erosion of public trust and lack of AI literacy
- **Disruption to critical and creative thinking perceived as least critical risk**
  Followed by poor quality control and standardisation, job degradation, and job displacement
- **Lack of AI literacy was perceived as nearest term risk**
  Followed by factuality challenges, harms from algorithmic bias, and poor quality control and standardisation
- **Job displacement seen as least immediate risk**
  But still considered a medium-term rather than long-term risk. Followed by disruption to critical and creative thinking and job degradation
- **Clustering of risks in the short to medium-term**
  None were considered long-term
- **Clustering of risks around high and very high risk**
  None were considered lower than moderate risk

However, the range of responses suggest:

- **No clear consensus on either risk criticality or timeframe**
  The high variation in experts' responses suggests a wide variety of contrasting opinions on what risks are likely to manifest and when.
  Averages are useful for illustrating trends - see **Figure 1**. but obscure the range of difference between experts for many of the risks - see **Figure 2.**

4. Information disorder, disclosure uncertainty and trust destabilisation

TAKEAWAY: GenAI lowers barriers to producing and sharing mis- and dis-information at scale, which risks polluting the information ecosystem and creating challenges for journalists verifying and fact-checking information and communicating their own GenAI use to audiences. This has serious knock-on effects for public trust.

GenAI contributes to the growth in scope and sophistication of mis- and dis-information by enabling the creation of increasingly persuasive manipulations of textual and visual imagery, and more efficient targeting and personalising of such content at scale. It also offers a way to detect and moderate concerning content, though AI detection methods are currently inadequate for the scale of the challenge and may never be fully effective. The availability of GenAI has lowered the cost of creating false news as well as websites to host it [106] which GenAI chatbots spread [107] and GenAI search and summarisation have a high propensity to repeat, as seen in recent prototype iterations [104]. GenAI is being used for influence campaigns, propaganda, partisan sites disguised as neutral local news outlets, as well as by individuals creating and sharing false content for political expression, money, satire and fun – increasing the scale and speed at which this content can be created and spread. This creates new resource demands for journalists to be able to fact-check and mitigate the impacts of this higher volume of problematic content at similar speed and scale. It also enables people to rip off real news sites to game search engines and flood the Internet with low-quality content and grammatically correct nonsense [123]. This

could also be an inadvertent impact of general use e.g., automating content production jobs such as public relations, advertising, and (non-news) information dissemination, and of content farms making money by imitating news outlets whilst distributing unverified and false information. However, there is debate over the extent to which predicted consequences, particularly around global elections in 2024 were overstated (e.g. disinformation as top global risk in World Economic Forum assessments [129]) and critique of 'alarmist' predictions leading to unbalanced media narratives and panic, and potentially worsening journalistic freedom by feeding into problematic legislative intervention [130]. It is perhaps not a surprise given the widespread coverage then, that our **survey respondents perceived mis- and dis-information as the most critical risk** for journalism and the information commons

The overarching risk raised was that people would find it increasingly hard to know what is true and trustworthy. This amplifies existing challenges of the weaponisation of information by bad actors and manipulation of digital media environments, for instance adding noise around a topic in an attempt to drown it out or distort the narrative, or people in positions of power profiting from seemingly plausible denial of real wrongdoing, profiting from the 'liar's dividend'. The speed and scale of automated content generation afforded by GenAI also raised concerns about the **exacerbation of targeted cyberattacks and harassment and against journalists and their organisations**, risking a worsening of safety and security of journalists – particularly female journalists and those from marginalised communities who are already disproportionately targeted.

> *"What's new? It's what I call the Four V's: volume, velocity, virality and verisimilitude. [...] When you put these together, you have something that is really for the first time. If the digital ecosystem that is also navigated by journalists is so compellingly undermined by this kind of content, we might be in a situation - and unfortunately, it's already happening - that there is no trust in these professionals that are telling the story. So there is an existential risk for journalism here.*
>
> *That is the risk that no one will keep believing or understanding that journalism is an essential tool for the machinery of checks and balances. Just because the system is so polluted with everything else, and the role of generative AI here and its potential negative role is precisely putting these in exponential scale."*
>
> United Nations official specialising in freedom of expression

Interviewees pointed to the aggregate and indirect impacts of the way GenAI availability may aggravate existing mistrust among certain populations and lead to an 'authenticity crisis' in which broad swathes of people lose trust in news media and potentially other institutions in society. They speculated that a context of extreme information disorder would destabilise people's abilities to assess and understand the news and worsen existing inequalities amongst publics, including digital and generational divides. Concerns that GenAI could influence societal understanding of history through manipulation of digital archives and imagery highlights the importance of maintaining secure and accurate historical records, for which news is a key resource. The integrity of these archives becomes not only a cultural and educational imperative but also a resource for AI researchers seeking untainted data for training models devoid of AI-generated content. Interviewees referred to the influence of modified historical images through GenAI becoming overshared and viral, tacitly modifying the perception about actual historical facts sourcing the modified version often being prioritised in search engine results even when searching for the original images.

➢ Transparency, disclosure and provenance

As GenAI becomes integrated into reporting, debates on whether journalistic outputs crafted with the aid of (Gen)AI should be explicitly labelled have become prominent and centre around the practicality and impacts of such transparency. Proponents argue that clear labelling is in accord with transparency, fostering trust by making the audience aware of the tools behind the content. Sceptics caution that labels may lead to unintended consequences, including greater mistrust and audience reluctance to consume or pay for automatically produced content perceived as less valuable or reliable.

> *"I think there are unforeseen risks we need to start dealing with and one of them is gradual destruction of a shared narrative of our time.*
>
> *With generative AI, we have the opportunity to hyper-personalise information experiences, news experiences. Journalism is not a one-size-fits-all product. In the future, it will probably be hyper-personalised. [...] but there is a great risk of that movement leading to societies, groups of people, not having a shared view of what's going on."*
>
> AI strategist, journalist, AI developer

A significant hurdle in this debate is the ambiguity surrounding what exactly constitutes meaningful (Gen)AI involvement and how to communicate it without overburdening or misleading the audience. The spectrum of GenAI application ranges from minor editing assistance to full content generation, complicating efforts to standardise how use is declared. This lack of clarity not only impedes transparent communication but also muddles audience understanding of GenAI's real capabilities and limitations. Heightened excitement and hype around AI technologies creates conditions ripe for misunderstandings. It is not yet clear how audiences will respond to GenAI-produced news content, though research indicates there will be a diversity of reactions dependent on audience member preconceptions and background. Some may perceive it as less credible, or label it as 'AI-made fake news,' especially if it contradicts their preconceived notions, whilst others may see it as more objective than human reporting.

> *"Not only is [GenAI-generated content] going to get harder to detect, there's going to be more of it because the tools to make this stuff are being rapidly dispersed to the general population.*
>
> *What used to be something that only a state actor or somebody with a Hollywood studio or in a really good R&D lab could do, you're now having high school kids do too. So the sheer volume of the noise is going up."*
>
> Business strategist, AI partnership committee member/policy advisor

Audience conceptions of authenticity and journalistic integrity remain highly based around human creation of news. It remains unclear what audience reactions will be to incorporation of GenAI or how their expectations will change. As such, there is a lack of clarity currently over best practice concerning disclosure and disclaimers on news. If widely differing approaches emerge across news organisations regarding whether and how they disclose GenAI use and synthetic content this could prompt unease or mistrust among audiences. This also has implications for the public's ability to hold journalists and organisations responsible for the news they produce, as tracing human accountability through AI-human infrastructures is complex and auditing processes are not yet mature.

Strategies like invisible watermarking have been proposed as alternatives to overt labelling. While these methods could technically signify the use of GenAI without alerting the audience, they lack standardisation and are vulnerable to tampering by dedicated actors, thus falling short of solving the core issues of transparency and trust in the longer term. Disclosure techniques such as watermarking, digital fingerprinting, labelling, and embedded metadata need more refinement to address issues with their resilience, interoperability, and adoption. They can only ever be one part of a larger effort to help people make sense of the provenance and trustworthiness of news.

5. Lack of (Gen)AI literacy among journalists and publics

TAKEAWAY: Challenges to meaningfully understanding GenAI hinders responsible and effective development, deployment, use, and journalistic reporting of these systems and is an urgent concern with clear opportunity for short-term improvement.

Lack of AI literacy was perceived as the nearest term risk for journalism and the information ecosystem in our survey and has become a serious concern across sectors of the knowledge economy and creative industries. Currently, most news organisations are faced with challenges to both practical *(technê)* and theoretical/conceptual knowledge *(episteme)* about (Gen)AI[5]. The risk of inappropriate use stemming from lack of understanding amongst journalists, editors and decision-makers could lead to negative impacts on output, workforce and audiences. For instance, uncritical use and anthropomorphising of GenAI systems by newsworkers leads to an overestimation of their capabilities, overreliance (automation bias), complacency, and unsafe/inappropriate use. The opposite extreme of this lack of understanding is algorithmic aversion and fear or blanket mistrust of AI tools, hampering efforts to responsibly integrate GenAI in safe, secure and helpful ways. This risk is heightened by recent moves towards integrating GenAI into enterprise and publicly available software which raises questions of knowing where and when GenAI is at play and concomitant issues of newsrooms recognising when and where it is impacting their staff and work. The capabilities of these systems increasingly resemble those of humans but they work in ways that are fundamentally different from how humans work and this important distinction can get lost when terms previously reserved for describing people, such as “knows”, “believes”, and “thinks”, are used to describe AI. This is important because journalists many GenAI tools assume responsibility for the output accuracy according to provider terms and conditions, which release the company from accountability. Lack of understanding also hampers effective AI accountability reporting, undermining efforts to hold the powerful AI companies developing systems, and those deploying them, to account – including governments and public bodies.

> *“The overselling of the capabilities of the understanding of AI systems is a problem because once you think an AI system understands the world, you're going to trust it more, you're going to rely more on whichever information comes out of it.”*
>
> Legal academic and philosopher, digital technology and AI

[5] Epistemological studies differentiate between “knowledge-that”, “knowledge-why”, “knowledge-how” and the ability to perform a task, which can be helpful for determining useful approaches to literacy development.

Poor organisational understanding hinders the ability to make informed decisions about what valuable elements of journalistic craft must be protected from automation and/or augmented through wise application of (Gen)AI in news production and which (often routine, repetitious and low-level) tasks are suitable for deploying GenAI. We can look to the history of previous AI and algorithmic integration, including how online search removed much of the time-consuming labour of research, to show where efficiency and capacity can be improved, and look to best practice by organisations augmenting, supporting, and upskilling staff rather than replacing them to show how change can be accomplished humanely and responsibly.

> *"A more pressing risk is that journalists who don't get involved in the AI shift, who don't upskill, who don't learn these tools. They will have a very hard time finding employment in an AI-powered newsroom."*
>
> AI strategist, journalist, AI developer

➢ Cognitive offloading and loss of critical skills

Interviewees raised the need to consider long-term risks associated with the excessive journalistic deployment of, and news consumption through, GenAI in terms of cognitive and social functions both for journalists and audiences.

On the production side, journalists' relationship to their work and colleagues is undergoing transformation; interviewees were concerned about 'cognitive offloading', where basic journalistic tasks such as writing summaries or creating headlines are delegated to AI systems and expertise associated with those skills are diminished. There were concerns about ontological shifts of how these practices could potentially shape human skill development over time. For instance, it could lead to skill ladder gaps in the professional development of journalists, potentially devaluing essential journalistic skills and undermining comprehensive skill acquisition. Furthermore, the implementation of GenAI tools is creating knowledge silos within newsrooms, separating those who are adept at using these technologies from those who are not. Such divisions can inhibit effective communication and collaboration among journalists.

> *"The really difficult [risks] are the ones that are subtle, like here's an example: a gradual loss of agency among humans where more and more humans just are not involved in major aspects of their own lives. Right? And that's something that would happen, year after year, maybe decade after decade."*
>
> AI innovation consultant, developer, and newsroom product manager

On the consumption side, interviewees suggested excessive summarisation and personalisation of news content could lead audiences to lose direct connection with the original sources or the intricacies of full-length reporting. This shift raises concerns about the transformation of traditional news artefacts like the news article into more fragmented, perhaps less substantive forms like summaries or multimedia snippets. These developments raised questions about how such information should be categorised and treated in relation to regulation and policy. There was however a lot of uncertainty about whether these were legitimate concerns and the risk of disruption to critical and creative thinking was perceived as the least critical of all risks in the survey.

6. Lack of strategic and long-term thinking

TAKEAWAY: Short-term thinking and fear of missing out or being behind the curve stimulated by GenAI hype and market pressures risks narrow and blinkered decision-making and failure to leverage professional imagination, expertise and values to shape the future of journalism.

GenAI brings with it the temptation for early adoption within the journalism industry, driven by the allure of innovation and competitive advantage. However, this eagerness to incorporate GenAI can lead to considerable risks, primarily due to an incomplete understanding of the technology's limitations and real-world implications in the journalistic context. Interviewees were concerned that not only might early adopters make mistakes that harm the reputation of the profession, but they might overlook substantial elements such as the high costs associated with training, maintaining, and moderating GenAI systems, leading to financial harm, or ignore the significant environmental impacts of these resource-intensive technologies, undermining sustainability goals. There was also concern excessive concentration on this one 'shiny new thing' will detract resources for more prosaic but vital maintenance of existing infrastructures and of other promising emerging technologies and processes of social/ organisational change that could deliver equally important benefits. For others, the bigger risk was short-term thinking that fails to leverage professional imagination to conceive of the deep structural changes the advent of GenAI may bring - and how best to prepare for that and build resilience through adaptation, or more proactively shape the direction of travel.

> *"I think the larger risk is being overly focused on, maybe, short term efficiency-based opportunities and insufficiently focused on the longer-term structural changes that may be in place in the information ecosystem as a whole. [...] perhaps news organisations would be well-placed to spend more time thinking about what all this adds up to three, five, 10 years from now, because it's probably going to be a fundamentally different ecosystem and if you're just focusing on things like optimising SEO [search engine optimisation], or copy editing or these little tasks, yes, there are little bits of savings here and they're important, but it all might be different. So yeah, that would be the big one."*
>
> AI innovation consultant, software developer, and newsroom product manager

Interviewees also raised the question of the influence of private lobbying on the pace and nature of GenAI adoption in journalism and the public sector. Linked to this, there looms the risk that overpromised capabilities of GenAI, a consequence of the prevailing hype, could lead to a failure to recognise important medium or long-term challenges, including public scepticism or outright rejection. The possible public rejection of GenAI-produced journalism should not be dismissed. One interviewee highlighted research from Switzerland, a country leading in early adoption, illustrating a clear reluctance among audiences to pay for news content generated by machines. This resistance is rooted in the perception that while human-written journalism warrants compensation due to the intellectual labour involved, GenAI-generated content does not incur comparable human costs, and thus should not command a similar economic value. This sentiment underscores a deeper need for the journalism industry to navigate the introduction of GenAI technologies transparently and thoughtfully, ensuring that technological advancements do not eclipse the value of human contribution.

Figure 1. Graph plotting average risk level against average timeframe for surveyed risks (n=21)

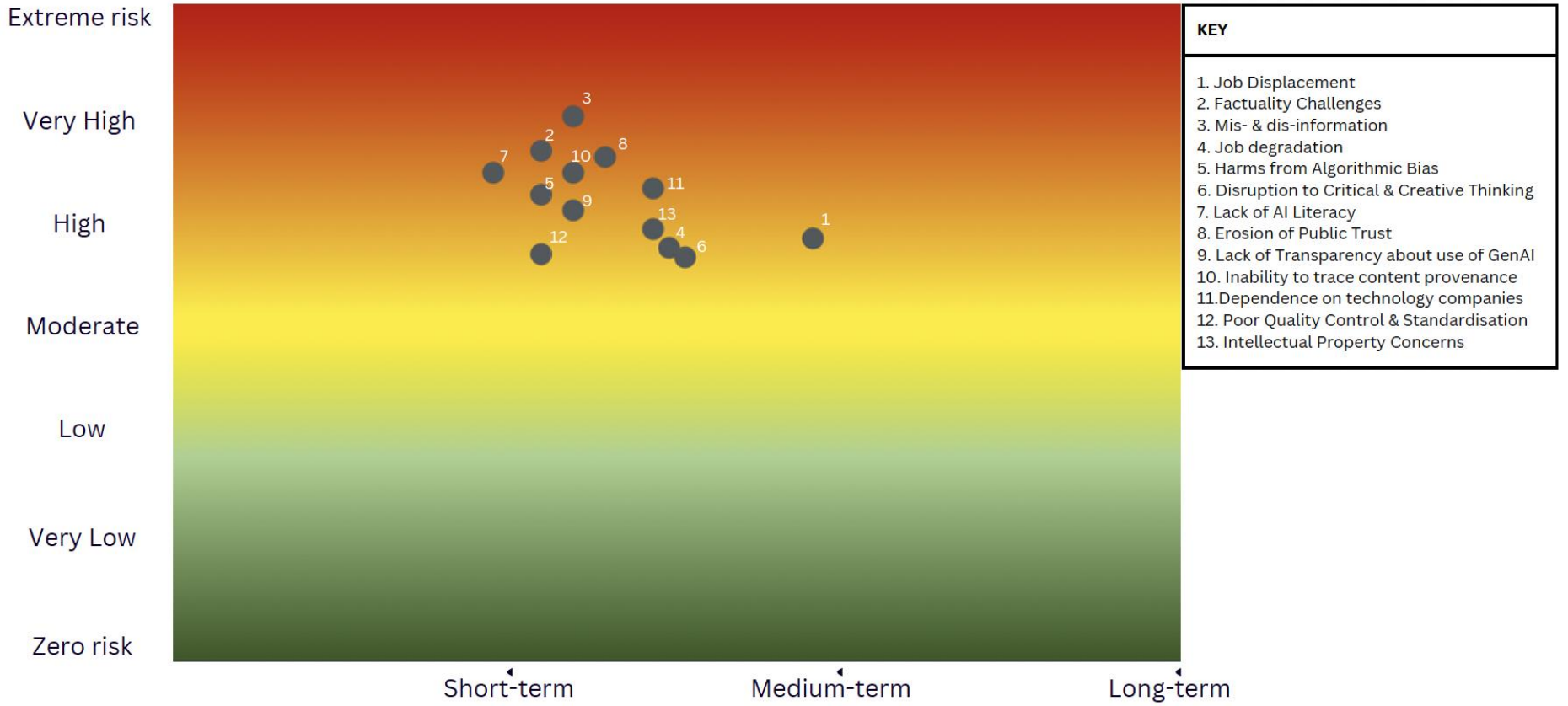
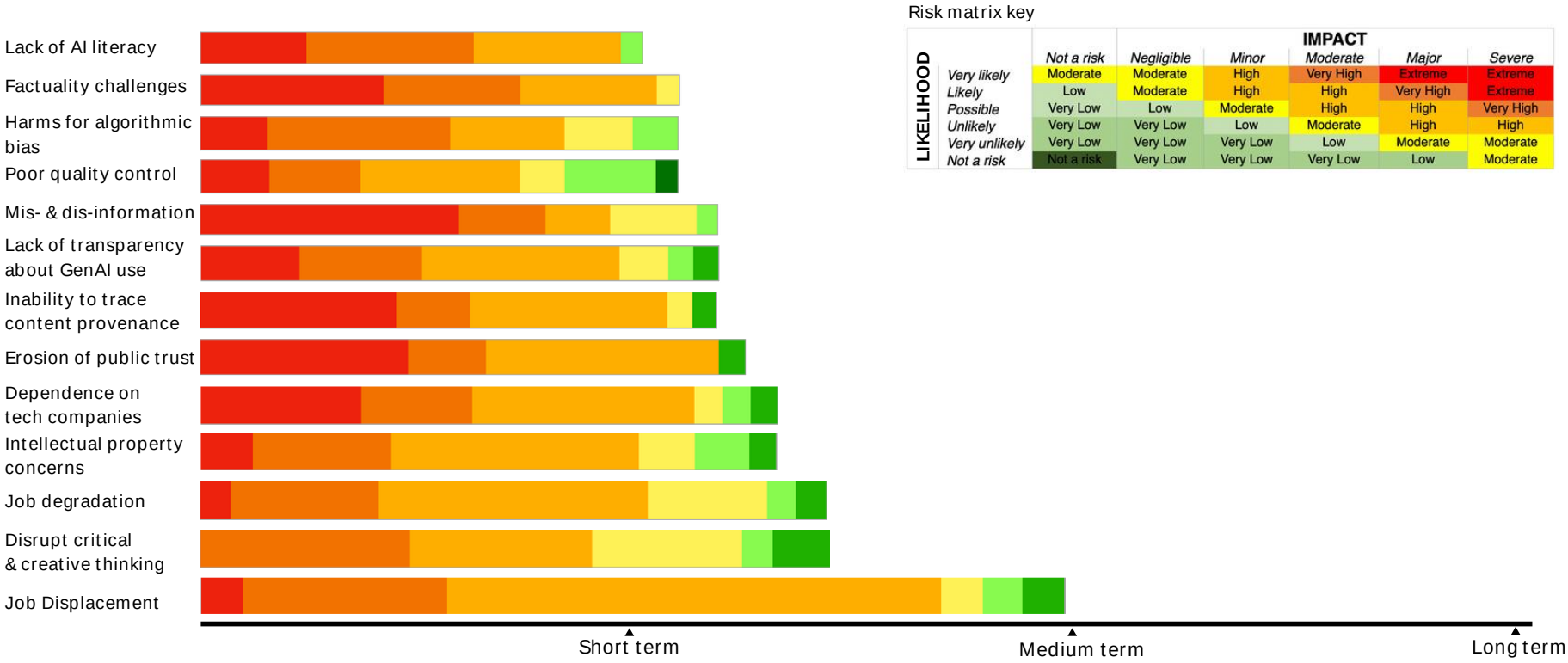


Figure 2. Graphic illustrating diversity of perception of each risk, ordered by timeframe (Survey n=21)



Risk matrix key

LIKELIHOOD	IMPACT: Not a risk	Negligible	Minor	Moderate	Major	Severe
Very likely	Moderate	Moderate	High	Very High	Extreme	Extreme
Likely	Low	Moderate	High	High	Very High	Extreme
Possible	Very Low	Low	Moderate	High	High	Very High
Unlikely	Very Low	Very Low	Low	Moderate	High	High
Very unlikely	Very Low	Very Low	Very Low	Low	Moderate	Moderate
Not a risk	Not a risk	Very Low	Very Low	Very Low	Low	Moderate

4. Recommendations and Responses

The appetite for action and intervention to proactively shape the future of news was clear and the following section dives deeper into recommendations and responses from our experts. The question of *who* is responsible for which actions was not always so clear-cut. However, in our survey, the top four recommendations in terms of need for urgent action relate to **the responsibility of news publishers**: 1. to ensure human oversight, 2. to establish rules and regulations, 3. to support education and training, 4. to mandate labelling and public acknowledgement of GenAI use. This was followed by recommendations pertaining to the **responsibility of government, policymakers and regulators** to 1. address harmful impacts of GenAI on news dissemination, access and consumption, and 2. Ensure intellectual property rights are respected and copyright law adhered to (see **Figure 3:** for full list).

Often, experts saw a role for each stakeholder group to contribute and the **need for co-ordination** to make sure their actions result in more than the sum of their parts. It was clear that ensuring **distributed responsibility** will be necessary between (Gen)AI and technology platforms and companies, news creators and publishers, legislators, policymakers and regulators, alongside (to a lesser degree) trade unions, community organisations and individuals. The following section outlines key recommendations and suggestions for action.

1. Deepen and diversify understanding as a precondition for action

The need to deepen and diversify understanding of GenAI was a thread that ran through our data as a precondition for all forms of effective intervention. The apparent obviousness and simplicity of this recommendation should not belie its criticality. It should also not be conflated with the need for AI literacy (see point 2.) which describes educating and learning processes rather than generating knowledge[6]. The following suggestions address how such understanding might be achieved:

➢ Demand greater transparency from GenAI companies

There is an asymmetry of knowledge between GenAI companies and their users (including journalists and the public), the companies that contract with them for their services (including news organisations), and the institutions that regulate them. In journalism, this imbalance inhibits the opportunities to advance *responsible* innovation, to ensure accountability and redress, and to build public trust – challenges mirrored in a governance context. For example, when trying to make responsible and accountable procurement decisions, news organisations face barriers to accessing necessary information about system models and infrastructure, supply chains, and environmental footprint. Interviewees called for greater transparency from GenAI companies

> *"It's all knowledge […] once you know how the systems work and how you can audit them, these multiple risks don't fade away, but lessen somehow."*
>
> Former journalist, academic

[6] We recognise the overlaps here and that new knowledge is often generated in the processes of teaching and learning, but have separated these recommendations for clarity and to ensure the differences are elaborated.

regarding their data sources and methodologies, and argued that this is a foundational requirement for addressing a range of identified risks, including respecting IP rights and mitigating undesired biases. **Addressing this will require mandating transparency by GenAI companies,** likely stratified based on the information recipients' needs and disclosure considerations.

- **Invest in multidisciplinary work that values non-technical expertise**

Knowledge also continues to be siloed at times in unhelpful ways due to limited interdisciplinary work in research contexts, and limited inter-organisational/inter-team work in practice contexts. For journalism, this can lead to technical development and business applications divorced from editorial, ethical and professional imperatives and standards, as well as unrealistic expectations of what can be achieved using GenAI. At a governance level, this can lead to skewed decision-making due to gaps in intelligence and difficulty bringing disparate types of knowledge and expertise together in a timely way. In part, addressing this problem requires **proactive building of collaborative multidisciplinary and multistakeholder work** within and beyond news organisations – an enduring call to action. But to be effective it also requires a **reappraisal of the types of knowledge deemed central to developing (Gen)AI in the public interest** and for a real step change in understanding, it necessitates a resultant **recalibration of investment to match the challenge.** Prioritising technical expertise without concomitant social, cultural, ethical, legal, political and professional expertise will hinder progress. Importantly, enriching understanding by incorporating a diversity of vantage points will help counter AI hype, which is a core driver of incorrect and unrealistic expectations, inappropriate use, and poor decision-making [102] and can help strengthen accountability, by empowering news organisations and journalists to question and challenge GenAI providers. Ensuring a breadth of expertise can ensure we **build on existing knowledge that has not previously been effectively exchanged between communities of research and practice.**

> *"I think the biggest problem we have today with generative AI is knowledge silos… The knowledge about how the systems work is very compartmentalised within specific areas of the newsroom […]*
>
> *So you're asking people at the end of their career, who are managing editors or editors-in-chief, to have this huge kind of learning… it's going to create new hierarchies that do not necessarily align with editorial hierarchies."*
>
> Former journalist, academic of cultural anthropology & technology in newsrooms

2. Develop (AI) literacies and capabilities

The vital role of **sustained education, training, and skills development** to enculture critical AI literacies amongst journalists and other newsworkers was the most regularly cited recommendation for dealing with a raft of risks related to GenAI. This requires processes of **a) learning new and b) applying existing knowledge, skills and expertise**; the first, a recognition that in the current moment of flux there remain many unknowns about what will need to be taught and the second, a recognition that a foundational core of existing skills and established principles will be applicable to the new and emerging situations GenAI creates and should be re-articulated for this purpose. The point of educating journalists about (Gen)AI is not to

manufacture legitimacy for AI in the newsroom nor to disavow its potential utility but to develop critical capacity amongst editorial workers to develop informed perspectives and be able to bring their professional expertise to bear on discussions and decisions about (Gen)AI and their engagement and interactions with such systems in their daily work.

Nearly all interviewees suggested that GenAI literacy should be an extension of existing media and information literacy, and must be developed in the context of existing literacy initiatives. Journalists and their audiences need to not only understand the operational mechanics of GenAI but also its broader implications for media production and consumption, building on existing knowledge of contemporary digital media dynamics. This must begin with basic educational outreach that illuminates how these systems function, their appropriate uses, and their risks, including potential biases, data privacy implications, production of erroneous or fabricated information, legal and ethical issues etc.

➢ Develop complementary literacies for newsworkers

> *"We urgently need a level high level of AI literacy, kind of like media literacy, right? Everyone needs to understand at least the basic principles of how generative AI works, and maybe have some experience trying and playing around with it. And I think once you understand that, you also have to understand the risks related to it and how hallucinations, private data leaks, biases, how all these come into these systems."*
>
> Senior reporter for a technology magazine

The need to provide journalists with more than instrumentalist training about how to use GenAI was clear and experts highlighted **the role of "critical" AI literacy -** leveraging skills of critical analysis to contextualise these systems, covering bias, system limitations, legal and ethical implications etc., and linking this to professional and internal organisational (Gen)AI rules and guidance. This should include instruction on the responsible use of LLMs and other GenAI systems and the new editorial workflows their integration requires as well as the more functional skills such as prompt design – but also retraining of journalists "in the tasks only they, as humans, can perform" so that in understanding their own unique value, they can better gauge the appropriate utility of GenAI systems. A core condition of this learning was that it focuses on **how to *advance and augment* their skills rather than replace them**. Work requiring empathy, abstraction, conceptualisation, and the exercise of judgment and discretion must not be bundled in with tasks requiring calculation, speed, and iterative processing at scale, which (Gen)AI can usefully help. Researchers have pointed to the need for knowledge about AI, the ability to recognise instances where it might be usefully and creatively applied – and when it should be avoided, and skills to help, coach or teach others [119]

The need for practical hands-on experience with GenAI to foster a deeper understanding of capabilities and limitations, as well as strong conceptual understanding of the political economy and wider implications of AI such as labour and environmental costs, necessary for effective reporting of these technologies. Attention should also be paid to how 'outsourcing' certain tasks to GenAI could impact development of core skills, such as headline writing, summarisation, or angle ideation, and curricula should be attentive to the impact on implicit cognitive skills that may be diminished in light of such changes. Developing systems and interfaces that provide effective explanations of their algorithmic processes pursued in the field of explainable AI (e.g. communicating uncertainty estimates and performance metrics etc.) will be important additions

to future newsroom technologies. But it is clear that contextually relevant and communally constructed and shared understandings will be vital to situate the affordances of GenAI within the legal and professional rules, frameworks, and conventions of journalism. Journalism education goes beyond the newsroom to the classroom and interviewees insisted a new generation of students must be equipped with specific skills to navigate, research, and harness GenAI. Universities and professional qualification providers may need to update curricula to include these new dimensions. Rapid technological change and the expected shifting of social attitudes over time suggests **regular iteration of such learning materials will be required**.

➢ Extend literacy efforts to the public

Respondents wanted literacy efforts extended to educating the public about (Gen)AI broadly, and of GenAI use by news organisations, to stem the erosion of public trust in news and help people develop a more nuanced and critical understanding. Research indicates trust is relational, complex, and dependent on many factors, including perception of content, format, provider and platform/channel of delivery, and is shaped by pre-existing views and beliefs and social context [124] [125] . **A one-size-fits-all approach will therefore not be adequate** for achieving this. **Plugging into the existing foundations of media, digital and technology literacy work will be beneficial.** Media regulator Ofcom already has a mandate to research and promote media literacy across the UK [126] and could incorporate specific content addressing GenAI into existing activities.

> *"Forward-managing for this risk means providing at-scale media literacy programs to help news consumers make informed decisions about journalism/non-journalism information sources and know where to go at important touchpoint moments e.g. elections, disease outbreaks etc, for information they can rely on to take informed decisions."*
>
> Professional development manager at a journalism support organisation

News organisations also have an important role to play here in helping audiences make sense of (Gen)AI and its role in the world and holding to account the companies developing it and organisations deploying it, including in the public sector. This can be through specialised coverage, or engagement of both the public and industry specialists in structured open discussions about GenAI to help demystify the technology, address concerns and better understand public expectations. Public service media could spearhead longer-term AI literacy initiatives and play a key role in convening diverse stakeholders to inform strategies that reach all UK citizens.

However, there was also a recognition that pushing ever more literacy expectations onto members of the public and professionals could be an unfair burden and may lead them to feel overwhelmed and disengage. People not only have differential abilities to develop such skills but also significantly different opportunities dependent on their social contexts and these considerations must be incorporated into any approach.

> *"I think the unfortunate reality is ... that we oftentimes assign a lot of responsibility to the end user and say, well, you have to be literate, you need to be media literate, you need to be AI literate, you've got to be able to look at a video and determine if it's a deepfake, and really, that's a lot of responsibility on an individual."*
>
> Former journalist, academic of cultural anthropology and technology in newsrooms

3. Ensure responsible development/use/deployment

Many respondents foregrounded the broad need for **responsible and ethical practice** in development, deployment and use, by AI companies and by news organisations. This included appeals to ensuring the now common call for a **human in the loop and human oversight** of AI in news work alongside the design of human-centric AI, but also foregrounded the **application of journalism ethics to AI**. This tallies with the now numerous guidelines for AI in journalism which point to the ability to exercise human oversight and control as an important ethical and legal requirement (e.g. the Council of Europe's Guidelines [112] and RSF Charter [113]) and provide principle-based and practical advice for newsrooms [85] [115] [116] . Ways in which news organisations could show themselves to be acting *responsibly* included **careful experimentation to identify appropriate uses, engineering systems to counter bias, appropriate reporting and transparency practices, effective and holistic evaluation, improved accountability and governance mechanisms, and setting best practice and standards.** The importance of journalists not over-relying on GenAI tools and managers not enabling/allowing replacement of newsworkers by (Gen)AI but instead investing in developing suitable tools and fostering journalists' critical capacities was clear.

> *"A great deal here depends on responsible deployment. For us, the unreliability of GenAI means we cannot consider automating production or journalism tasks and require a human in the loop. But others in this space have moved ahead with more sweeping integrations and efficiency drives. [...]*
>
> *'Human in the loop' is an important aspect of mitigation but not enough on its own - too many people have launched projects explicitly with humans in the loop but have still fallen foul of errors and plagiarism."*

➢ Assess impact and alignment

Impact assessments to evaluate the social, economic, and environmental impacts of GenAI technologies in journalism were suggested, the outcomes of which could be used for the purposes of industry-wide governance and to help make responsible procurement decisions. Though this could be conducted at an organisational level to inform business decisions, **the greater benefit lies in collaborating and sharing findings across organisations, and in this way building industry-wide capacity.** Stakeholders would also benefit from deploying more holistic evaluations than are currently common, which should judge more than technical accuracy and efficiency and include ways of measuring social and environmental impact as well as how aligned with the public interest goals of news production GenAI systems and their applications are. Approaches like red teaming could be more strategically adopted by newsrooms or taskforces/consortia of journalistic stakeholders to probe failures and anticipate downstream issues. Growing research into social impact of GenAI [9] will be useful in guiding such endeavours but bringing this together with journalism specific analyses will be necessary to produce actionable insights [131].

> *"You can't manage what you can't measure, so you've got to measure the potential for these harms. [...] Obviously platforms have got to be responsible for that but we could also assign some responsibility to governments in terms of investing in research capacity [...] maybe that means training 1000 more PhDs in social impact assessment of AI and then you have that capacity in society to be constantly measuring, evaluating, feeding that back into improving those tools over time."*
>
> Academic of computational journalism, HCI

➢ Improve accountability & redress

Several respondents suggested the need to enable routes for complaint, feedback and rectification, sanction, and penalty. This included **reinforcement of self-regulation**, with new accountability systems in newsrooms to mitigate degradation of standards and quality, agreed standards among industry regulators, and clear pathways for audiences and impacted parties to file complaint and seek redress. There are few case studies or examples within the industry to-date to guide best practice here and clear opportunities for proactive development of standards in meaningful conversation with both professionals and publics.

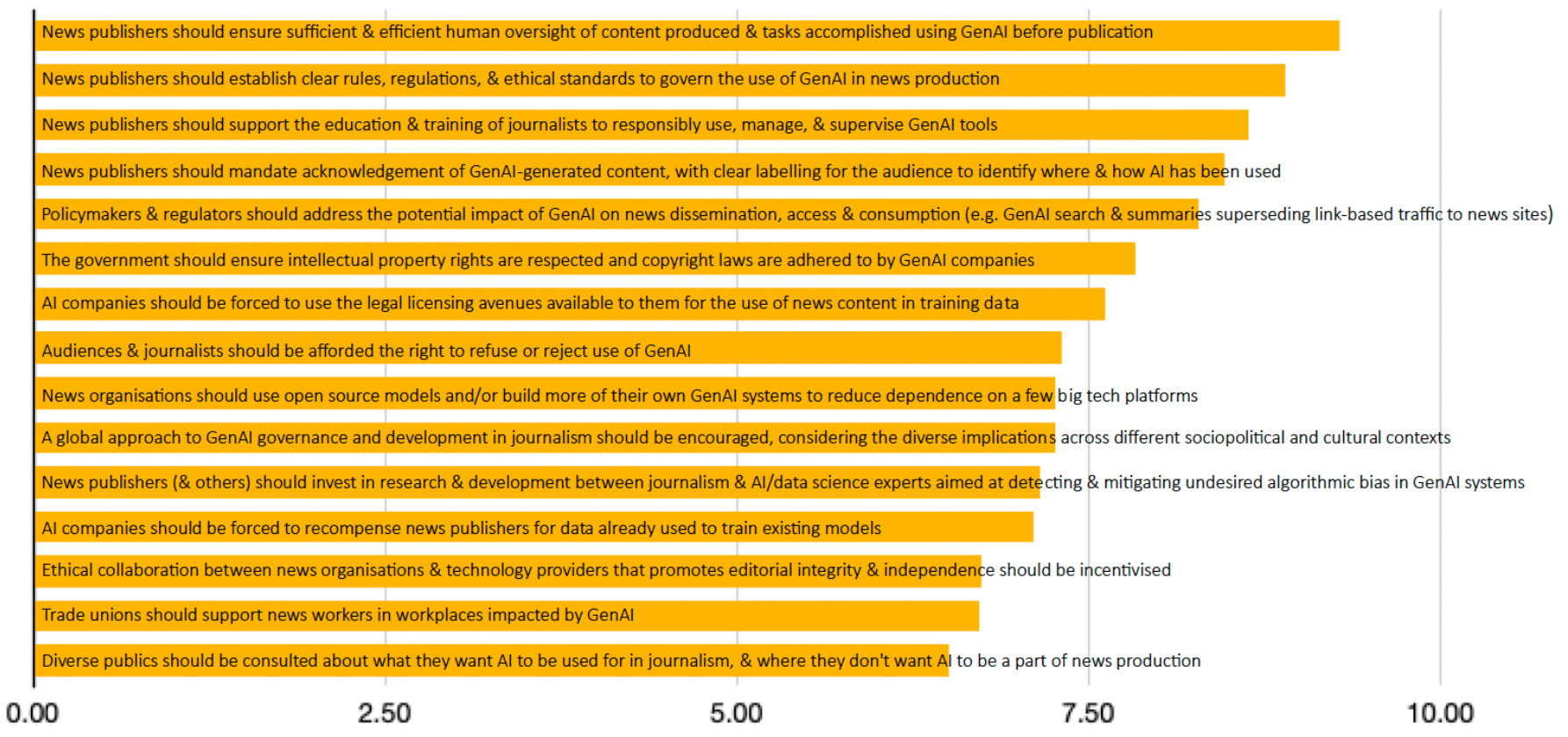
➢ Avoid techno-solutionism

Developing new, and deploying existing technical systems will be crucial for effectively responding to challenges including most prominently, mis- and dis-information, issues around IP, and disclosure and labelling of GenAI content. For instance, identifying copyright-safe models like Mistral or Firefly as a response to intellectual property concerns, or creating better AI detection software to help trace content provenance and to enable audiences to do the same. Interviewees also saw a growing role for technology to fully automate degrading work and suggested building and procuring tools that empower rather than replace journalists would be key to mitigating job displacement and degradation risks. Some suggested turning towards open-source models for this, investing in the open-source ecosystem, and investing in custom organisational LLMs and GenAI systems could counter the risk of over-dependence on a few big companies. However, respondents reiterated that although technology has to be a part of the toolkit for addressing the issues around GenAI, **any kind of reductionist technological solutionism was itself a risk**. This relates strongly to the need to ensure a sociotechnical lens on GenAI and invest in devising new social arrangements - rules, requirements, standards, norms, conventions and communities of practice – as discussed in the following recommendation.

> *"I mean the kind of joking answer is to throw cold water on the hope that the data scientists are gonna be able to help you. When I talk to people in the policy circles, I think there's a real hope for what we call 'wizarding tools', you know, a magic tool that you can point it at a picture, and it's going to tell you if it's real or not, or something like that."*
>
> Data scientist and consultant at internet freedom nonprofit

Insights from the survey: Recommendations and responses

Figure 3: Average importance ratings for 15 suggested recommendations for responses to identified risks (n=21)



0 = least urgent and requires no action > 10 = most urgent and requires immediate action. Chart represents average for each response.

4. Devise new rules, requirements & standards

> *"Ensure newsrooms of all sizes - particularly those that are too small to have a dedicated post or team working in editorial policies - are supported to identify new areas of editorial policy and how to roll these out effectively to staff and communicate them to audiences".*
>
> Professional development manager at journalism support organisation

A number of specific organisational or institutional approaches to tackling specific risks and maintaining or improving quality were suggested. To tackle the factuality and fabrication challenges LLMs pose, improving the **fact-checking, verification, watermarking and labelling** GenAI produced content was recommended, and working to develop or refine systems to cite source material and reduce risk of hallucinations. A number of respondents recommended **devising new, or iterating on existing, editorial policies and guidelines** by thinking through use cases as they develop, necessary guardrails as capabilities change, and associated requisite levels of journalistic control. Many newsrooms are already doing this and taking quite similar approaches but paying less attention to questions of supply chain, legal compliance, personalisation and user feedback [82] This also requires clear communication of these principles and standards, tailored to the necessary audiences. A collaborative approach to supporting less well-resourced newsrooms in this endeavour could be important for building industry-wide capacity. It was also suggested that news organisations should be mandated to report AI output and be transparent about use of AI through sectoral self-regulation following agreement on new industry-wide standards.

Respondents pressed **the need to hear from the people being impacted by GenAI** on the information ecosystem and by its use in news organisations. There was a sense that rapid advancement in GenAI should be met with equally important social innovations to curb detrimental societal impacts, including improvements to labour conditions and worker's rights, and public redress. Ensuring safety and fairness, alongside benefits that accrue not only to companies and shareholders was an underlying theme. This echoes concerns being addressed within trade unions in relation to AI more generally, such as the Trade Union Congress' proposed Bill to regulate the use of AI systems in the workplace [105] The suggestion to involve and/or strengthen trade unions' role in the GenAI discussions was thought to be important for ensuring the risks of job loss and degradation, and diminished quality control and standards were addressed in newsworkers' interests. One respondent recommended a "strengthened role for national journalism unions in implementing/updating /enforcing journalistic codes of ethics".

➢ Collaborate and strengthen community organising

There were few explicit recommendations for collaboration and cooperation from interviewees, who were more likely to discuss the responsibilities of news organisations, policymakers, AI companies and other stakeholders in distinct and separate ways. Though varied stakeholders will inevitably have different motivations and priorities, industry and academic research has pointed to the need to collaborate to find common ground and share common standards [128] One interviewee suggested strengthening "ties between

> *"We really need to fight for the industry and the public to understand the meaning and value of journalism in an increasingly fractured information landscape".*
>
> Senior reporter for tech magazines

newsrooms, unions, and policymakers" could lead to sustainable solutions on jobs, or that media organisations "could agree on ground rules or a charter around AI transparency" to deal with questions of content provenance and the lack of transparency about use of GenAI.

Collaborative action coordinated through **joint working groups, collaborative forums and information sharing hubs** could help build resilience in the industry. It could be useful to have groups just for industry representatives, for instance those who may want to partner on GenAI research and innovation to help share development costs, or discuss collective bargaining routes, but also others that are multistakeholder to leverage wider expertise and build relationships. The inequality between news providers to take advantage of GenAI was raised by respondents who saw risks of widening gaps, with only a small number of large news organisations able to invest in serious research and development or hold power in negotiations with AI companies. As Caswell points out, these organisations (public service media like the BBC, news agencies like Reuters, and publishers with international reach like The Guardian) combine brand, social capital and scale with innovation resources and long-term investment horizons, giving them the potential to materially influence the direction in which AI-mediated news develops as a societal function [111] They could use their position to lead collaborative exploration of responsible innovation to adapt public interest news to a (Gen)AI disrupted information ecosystem in both incremental and radical/transformational ways.

New business models are emerging around 'clean datasets' – collections of data created and vetted for non-infringement and accuracy – which could present an opportunity for an industry consortium of small to mid-sized publishers to pool news data to license to GenAI developers. Revenue could be shared, ensuring smaller publishers also benefit, and it could additionally be made available to members of the collective to use as a 'commons' resource, providing additional benefit and incentive to join. This kind of resource could also be of value to the academic field.

➢ Rethink/reposition journalism for an era of (Gen)AI

As the environment in which journalism is produced and consumed is shifting to accommodate GenAI, respondents saw a **need for journalism to change** too. Though there was much uncertainty about what even the near future of the news and information ecosystem would look like, and some experts voiced their perceived lack of agency to influence the direction of change, others saw value in informed anticipatory work that could be mobilised to shape journalism for the better. Suggestions included working out, advocating and explaining the added value of journalism that makes it distinct. Engaging in self-reflection and **raising the bar within the profession** (e.g. of AI literacy, of critical and creative thinking, of workflows and investigatory work) to demonstrate the worth of good work, produced with or without GenAI, was suggested as a way to strengthen the position of quality journalism. Extending consultation with the public about their diverse information needs and better understanding how

> *"There are just whole sections of the country that are just not in this conversation, so I would say the people who need to be involved are ordinary people everywhere, of all kinds. That's the thing I would do if I was [whoever] the next Prime Minister is going to be - what I would do is the citizens assembly."*
>
> *AI innovation consultant, software developer and news product manager*

inequalities in society shape their relationship to news and new technologies like GenAI will be important for building a journalism ecosystem fit for future generations.

5. Strengthen public policy responses

Enforcement of existing law and regulation, and changes to law and regulation were both considered necessary to address the multiplicity of GenAI related challenges. Though few specific details of recommendations were given, it was clear that a mix of laws, regulatory measures, policies (sectoral, organisational etc.) with clear courses of action, and funding priorities would be needed. For example, both enforcing existing copyright law and updating/altering it were suggested to mitigate intellectual property concerns. Forcing big tech companies to comply with existing EU regulation was recommended to counter news organisations' dependence on them, as was creating policies for ensured open access and data transparency for their LLMs in public-interest journalism contexts. Regulating GenAI companies, their models and their outputs and ensuring appropriate oversight of compliance were posited as necessary to mitigate mis- and disinformation, inaccuracies and fabrication in LLM-generated content, bias in systems, impacts on jobs, poor transparency practices and lack of content provenance information. Experts wanted policy and organisational interventions to provide the conditions for editorial media to experiment while ensuring they are clearly differentiated from other forms of information providers and can be recognised by audiences as reliable sources despite new delivery formats that might blur the distinction.

> *"With this next digital revolution, because obviously that's what AI is, GenAI, it's the biggest thing to happen in journalism since the dawn of the Internet, it feels like we're better prepared this time, or at least we should be in terms of being aware of the risks and acting to address those earlier rather than later. But we definitely, definitely can't do it without a regulatory framework."*
>
> Audience engagement expert, AI lead in large UK news organisation

- **Improve resourcing and funding**

Lack of resource was seen as a key barrier to transitioning effectively to deal with GenAI. **Financial support and funding model changes** were proposed as interventions to create an economic situation where news organisations do not have to cut costs and could innovate. Investment in improved AI education/training, skilled staffing, technologies (custom LLMs and open-source models) and strategies for countering mis- and dis-information (e.g. fact-checking at scale) were seen as key to news publishers retaining or strengthening their credibility and ability to meet the challenges of GenAI.

> *"The media, that journalism, that reporting - these are policy issues. These are not market issues. These are not technological issues. These are policy issues.*
>
> *They are about the public investment into an essential part of infrastructure for a society... at least when bridges collapse and when roads are full of potholes, we understand that there's a failing of investment, right?*
>
> *I think we need to understand that when the news is collapsing, when it's degrading in quality, when it's disappearing, that's also a failure of investment. And it's a failure of public investment."*
>
> Academic – political economy specialist

Some interviewees raised the prospect of a greater role for state funding through innovation or transformation funds, or new models similar to that in academic research that enables independence and autonomy but directs resources to public goods in the form of public interest news. There was a recognition that allocating public money raises complexities regarding editorial independence and government involvement but a sense that the severity of risk to sustainable public interest news mean that serious attention should be paid to novel approaches with robust safeguards. Other suggestions included providing access to resources for smaller and local news providers to rebalance the inequality of opportunity. This could include providing fair access to necessary AI facilities, including computational power, cloud infrastructure and training programmes to counter co-optation by large AI and technology companies who are increasingly filling the vacuum [114] [35] Such provision could encourage or prioritise access for public interest news and business sustainability applications. It could also be constructed to facilitate collaborative working between larger players and smaller ones.

5. Conclusion

The growth of generative AI exacerbates existing risks to journalism and the information ecosystem and raises urgent concerns about ensuring the sustainability and integrity of public interest journalism in the UK and beyond. However generative AI, and AI technologies more broadly, are just one contributing factor challenging the resilience of the news industry and the ability of journalism to meet the needs of democratic society.

The risks and challenges GenAI systems pose for journalism stem only in part from deployment and use by news organisations and their journalists (endogenous) and are heavily connected to the actions of other stakeholders in society, including most importantly the AI companies, lawmakers, policymakers and regulators, alongside other intermediaries like social and search platforms, and members of the public (exogenous).

Stated as often as it is, the call for more multistakeholder and interdisciplinary work risks ringing hollow. However, it is clear from the recommendations in this report that mitigating a wide array of risks and ensuring a healthy information commons will require a good faith, multifaceted, and multistakeholder approach. This includes improved knowledge exchange, collaboration, and partnership between government and regulators, the news and technology industries, academia and civil society, and the people who will be impacted. Each party bears an element of distributed responsibility for building a resilient information ecosystem for future generations.

In this context, the degradation of public interest journalism and our shared information commons is not inevitable. By elucidating the aggregate and incremental implications of decisions taken (or not taken) in relation to generative AI by actors across the ecosystem we hope to make the case for a multifaceted approach to addressing these challenges. This report has covered many of the most prevalent risks but we recognise that much still remains unclear and that continued rapid changes in both technological development and societal responses will require sustained further exploration.

5.1 Further Questions

Our research indicated there is a poverty of understanding about how the novel affordances of GenAI coupled with social conditions of deployment translate into (potential and actual) harms in specific contexts like journalism, partly due to a lack of work drawing connections between the micro, meso, and macro levels of risk (and opportunity). **More empirical research is needed to track and evidence impacts** of GenAI on journalism and the conditions in which it operates over time, but the ability to act effectively (as policymakers, news organisations etc.) will also **require stronger conceptual work** to articulate the relationship between these impacts and shared normative goals of journalism in democracy and society. In particular, better understanding of epistemic risks for public knowledge [136] and dynamics of trust when relationships in journalism are further mediated [137][125] will be needed.

Empirical work should explore **whether vaunted benefits are materialising** in practice since strong evidence for widespread productivity, capacity and creativity gains are yet to be seen, and how (un)evenly they are distributed across the news sector. It should document negative impacts that news organisations would be less inclined to speak openly about and involve newsworkers, unions, trade bodies, audiences and communities to incorporate their experiences. It should seek to understand who is benefiting and explain how and why disproportionate benefits and disadvantages accrue and how policy interventions might address them where necessary. Cross-country comparison of adoption and impacts in their political and policy contexts will be instrumental. This will require more than oft-used survey data and should include embedded qualitative work which can garner rich insights over time and in context. It will also require 'studying up' to better understand **changing structures and dynamics of power and influence** among legacy incumbents and new entrants at the news-technology nexus. Empirical work should also dig deeper into **public attitudes to GenAI in news contexts** which remains limited, as does understanding of how people respond to synthetic material in journalism, areas which will continue to evolve. Beyond describing public perceptions, this should involve, where possible, researchers working closely with newsrooms and communities to elucidate *why* people feel the way they do, and comparative work to understand if, and why, there are differences between societal groups, nations, and regions. Trends will shift over time and there are likely to be further significant disruptions from development of multimodal GenAI, expansion of the open-source ecosystem, new intermediaries and service providers, alongside changing attitudes and aggregative impacts. Regular empirical (re-)investigation will be required that is independent of vested interests to inform timely and appropriate responses.

Reference List

References are divided into three categories to help readers rapidly situate the type of work being cited: A) Academic peer-reviewed; B) Academic non-peer-reviewed; C) Grey literature.

We include a hyperlink wherever possible to direct readers to the source.

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