

The media sector on its Al journey: directions for experimentation & implementation

White paper - September 2024

Authors: Rasa Bocyte, Netherlands Institute for Sound & Vision

Johan Oomen, Netherlands Institute for Sound & Vision Kelly Hazejager, Netherlands Institute for Sound & Vision

Chaja Libot - Flemish Public Broadcaster VRT

Reviewer: Kara Van Malssen, AVP

Executive Summary

This report explores the complexities and potential of AI integration in the media sector, drawing on insights from leading experts and practitioners.

It dives into four aspects that inform organisational engagement with AI:

- The media sector in the AI development value chain we reflect on the critical role that media organisations can play as co-developers of AI solutions.
- Approaching Al integration: five organisational paradoxes –
 discussions with experts reveal paradoxes facing media organisations,
 such as balancing rapid technological experimentation with slower
 organisational adoption and the uneven distribution of Al knowledge
 across teams.
- Managing organisational paradoxes: practitioner insights to support AI integration - media experts share good practices and lessons learnt from AI integration that can lead to more effective evaluation strategies, long-term R&D partnerships and successful knowledge mobilisation across the organisation
- Towards an organisational AI strategy we propose eight key elements that could serve as a foundation for a comprehensive AI strategy aligned with organisational values and principles.

Acknowledgements

We would like to thank everyone who participated in consultation sessions and reviewed this publication. This work is part of the AI4Media project – a centre of excellence that delivers next-generation AI research and training in service of media, society and democracy, funded by the European Union's Horizon 2020 research and innovation programme under grant agreement no 951911.

The views and opinions in this document are those of the authors and do not necessarily reflect the official opinion of the European Union, European Union institutions or bodies, or any individuals acting on their behalf.

This report is published under the terms of the Creative Commons Attribution License.

Contents

Lieconve Sommary	
Introduction	۷.
What - a landscape of open questions	L
Why - trials and tribulations of AI integration How - a dialogue with media experts	
	-
The media sector in the AI development value chain	,
Media organisations as co-developers Role of R&D capacities	5
Potential for localisation	Ç
Approaching AI integration: five organisational paradoxes	10
Fast individual experimentation versus slow organisational response	10
Pockets of concentrated knowledge versus lack of organisation-wide understanding	1
Managing resistance versus fear of missing out (FOMO)	1
Need for specific solutions versus resistance to give away too much	12
High-quality expectations versus encouragement of criticality	12
Managing organisational paradoxes: practitioner insights to support AI integration	13
Evaluation & benchmarks	13
Al Charter: ethical guidelines]/
Measuring the promise of Al	12
Al expert teams supporting responsible adoption Investment in long-term partnerships	15 16
Towards an organisational AI strategy	17
Defining the role of our organisation in Al development	18
Processes to support responsible experimentation and deployment Changing roles and skill development	19 20
Ecological sustainability	2
Use of data for training (internally or by third parties)	2
Transparency and accountability towards users and the public.	22
Ethical and legal considerations	22
Navigating risks	23
Concluding remarks	24
Resources	25
Consulted experts	25



What - a landscape of open questions

It is fair to say that media organisations¹ have mixed feelings towards artificial intelligence (AI). Excitement about new techniques and an eagerness to improve workflows exist alongside uncertainty, frustration – and reluctance.

While the landscape of AI tools tailored to the media sector is maturing and organisations are starting to work with increasingly complex solutions, including Generative AI (GenAI), the sector still grapples with some fundamental questions. Over the past three and a half years, within the context of the AI4Media project, the authors have engaged with numerous practitioners, identifying key challenges that continue to impede the integration of AI in media workflows:

How do we get started with AI? With so many options available across a multitude of use cases, how do we choose the right one, and what must be in place before we start experimenting and implementing?

- Our systems have not been set up to support AI workflows - what will it take to integrate AI tools? Will they meet our needs and align with our content? Will this shift affect our relationships with long-term service providers?
- We've been working with AI for a while, but do we have the right competencies, strategies and policies in place to continue doing so responsibly and ethically?

This white paper aims to help the media sector navigate these questions.

^{1.} In this context, by "media organisations" we refer to mainstream actors responsible for the creation, distribution and publication of news and entertainment (e.g., news outlets, broadcasters, publishers, and digital media platforms), as well as organisations archiving the created content.

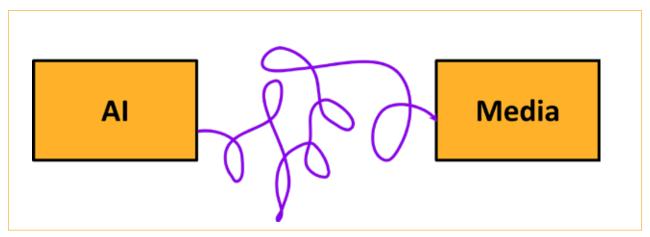
Why - trials and tribulations of AI integration

The idea for this white paper emerged during the course of the AI4Media project, where media organisations - including the Netherlands Institute for Sound & Vision and Flemish public broadcaster VRT, who are the authors of this publication - worked alongside universities, research centres and technology providers on the development and implementation of various AI solutions into media workflows. What followed was a complex process of negotiating user needs, technological capabilities and organisational capacities.

The path to integrating AI technologies into media workflows is far from straightforward. While there is a plethora of potential AI tools for the media sector to choose

from - ranging from open-source solutions available via libraries like Hugging Face to proprietary solutions offered by big tech companies - their suitability is not guaranteed. Media organisations operate complex digital workflows, relying on a variety of interconnected tools to manage their media assets, with media asset management systems being the most critical of them. Simply deploying an AI service in isolation on a local server is usually insufficient to make a sustainable and positive impact on the organisation's operations.

Therefore, in this white paper, we aim to capture lessons learnt - including both good practices and mistakes - to guide future AI integration efforts in the media sector.



In this context, AI solutions cannot operate in a vacuum – they need to fit into existing workflows and align with the values that define them, such as privacy, security and transparency.

How - a dialogue with media experts

To prepare this white paper, in June 2024, we conducted two online consultation sessions with representatives from 16 media and technology organisations across Europe. All of them have experience with AI integration and have been navigating questions related

to the topic. Using brainstorming techniques, we discussed organisational approaches for AI integration, good practices for overcoming integration barriers, and the scope of operational AI policies.

































It is worth noting that for the purposes of this exercise, we primarily consulted organisations that have R&D capacity or those that are active players in the AI development field. Media organisations with little to no experience in this domain might have a very different experience and might not find all the insights from this white paper relatable. However,

as we will discuss later, it is clear that an ecosystem-centric approach - where solutions, knowledge and skills are co-developed and shared between multiple organisations - is key to success in the media sector. Therefore, we hope this paper will inspire organisations starting their AI journey to build relationships with more advanced players and vice versa.



The media sector in the Al development value chain

Al solutions in the media sector support the various steps in the value chain - from inspiration, to production, distribution and impact assessment.

In addition, AI solutions are utilised for transversal activities related to content management, such as search and retrieval. So what does the current integration of such media content-centred AI tools look like in organisations? During the consultation sessions, participants classified how they currently approach AI tools - see the results captured in Figure 1.

Purchasing off-the-shelf solutions that are immediately ready for use is rare. This is because existing tool libraries are not tailored to work with the specific content of each organisation and require significant customisation to deliver good results. There is rarely a situation where an existing solution could be adopted without initial tailoring through iterative experiments - for instance, a computer vision tool might first need to be retrained using an annotated dataset

created by the media organisation;

- As a result, most of the consulted organisations opt for approaches that start with research and experimentation, with the goal of improving these solutions over time and supporting their full integration into operational contexts;
- This does not mean, however, that all experiments lead to full integrations. In fact, there is often a reluctance to fully integrate experimental AI solutions into core organisational workflows. In such cases, 'lite' integrations (e.g. a Slack plugin), experimental interfaces or deployment within specific projects can help signal to users that this technology is still being tested;
- Off-the-shelf AI tools can fulfil a role in preliminary research before full integration.



Figure 1: Mapping of approaches towards AI tools development and integration from the consultation sessions

Participants mentioned buying readily available solutions or using AI tools integrated by software providers (e.g. AI tools in Adobe suite) as a way to evaluate their potential and limitations. Based on the results, they then build a solution with similar capabilities in-house, allowing them to maintain more control. This process also helps develop and maintain AI knowledge and capacities internally;

• While there is a clear preference for a path

that starts with project-based experimentation, most organisations do not have a systematic approach for this. Instead, they use a combination of different strategies, adapting based on the AI solution at hand.

To explore this topic further, let us examine three specific aspects: media organisations as codevelopers, the role of research and development capacities, and the potential for localisation.

Media organisations as co-developers

In media organisations, AI solutions must be customised to specific content types that are usually much more diverse and complex than those found in commonly used training datasets. A single media organisation might require workflows that accommodate multiple languages or dialects, as well as a range of media quality – from old archival materials to high-quality TV productions – and creation contexts, from professionally produced content to user-generated or crowdsourced collections.

This content diversity uniquely positions the media sector as critical co-developers of multimodal AI solutions. The complexity of application scenarios and media types helps to push AI development in new directions. Rather than simply being buyers or consumers of AI products, the integration

challenges have enabled the sector to forge a role for itself within AI R&D ecosystems.

There is, however, a risk that over time the media sector might shift from active co-developers and users to passive data providers for training generative AI models. We are already seeing signs of this trend, as big tech companies eagerly forge deals with media organisations to access historic archives, while promising to co-develop new products.2 One aspect of this was emphasised repeatedly during the consultation sessions there are many anecdotes about such deals being signed by individual organisations, but no sector-wide consensus on what might be gained or lost in these situations. We will return to this topic in the final chapter of this paper.

Role of R&D capacities

The strong focus on project-based experimentation highlights the critical role of internal R&D capacity in media organisations. This includes both human capital (such as technical project leads and data engineers) and digital infrastructures (e.g. APIs that provide easy access to data and safe digital environments where experiments could be executed). Given that AI innovation is a field with constantly moving targets and

new techniques constantly being introduced, this internal R&D capacity enables media organisations to be entrepreneurial and seize emerging opportunities.

Project-based experimentation is key to building internal R&D capacity. Through such projects, organisations form partnerships with established research institutes and technology companies, benefiting from their knowledge and infrastructures. This is

^{2.} Licensing deals, litigation raise raft of familiar questions in fraught world of platforms and publishers - Columbia Journalism Review (cjr.org).

fundamentally different from a buyer-supplier relationship that results from purchasing a digital product from a third-party provider.

Crucially, the focus on project-based implementation also underscores that limited access to internal R&D resources determines who currently benefits from content-specific AI tools, who participates and – more importantly – who is excluded from defining application use cases. While it is common

to speak of power imbalances between the media sector and the tech industry, it is equally important to recognise that these imbalances exist within the media sector itself. Smaller, regional organisations with limited resources are often left on the fringes. Therefore, it is important to consider new partnership models that enable knowledge, capacities and resources to be shared more equitably.



Potential for localisation

The preference for experiment-driven integration reflects the status quo, which may change over time. In fact, as more AI tools co-developed by media organisations enter the market, we might see a shift in this trend, with a greater focus on off-the-shelf solutions. Rather than simply buying "off-the-shelf" products, media organisations can, through co-development processes, help put AI products on the shelf, making them more accessible to others.

In the long term, this could help reduce

existing barriers that currently prevent access to AI tools within local ecosystems. For example, imagine a speech detection tool developed by a regional broadcaster that could then be deployed by a wide range of smaller local organisations and SMEs in the media sector and beyond. This can be a particularly effective strategy in cultural contexts that are currently underrepresented in AI R&D ecosystems - for instance, in development of techniques tailored for non-latin languages.

Approaching Al integration: five organisational paradoxes

In the conversation with media practitioners, we identified five paradoxes – organisational forces that pull and push in contradictory directions, influencing AI integration. These paradoxes highlight obstacles that may slow down AI adoption or expose it to significant risks.

Fast individual experimentation versus slow organisational response

On the one hand, the representatives consulted noted that some individuals within organisations are quick to test emerging AI technologies and incorporate them into their personal workflows. This is particularly true now that Generative AI and LLMs are accessible through various products (e.g. Adobe Suite or ChatGPT). These frontrunners and early adopters are used to experimenting, often lowering expectations for the product. However, they do not always consider risks or ethical dilemmas when beginning their explorations.

"It makes a lot of sense for individuals to start playing with AI/GenAI, and rightfully so – it's exciting. But then as a company, do you want to take ownership of what

is happening in your company?" – Project and access manager at a technology development company

The organisation as a whole, however, often cannot keep up with this pace of adoption and experimentation, and lags behind in providing the necessary foundations to explore AI solutions in an efficient and sustainable way that aligns with the institutional strategy.

Both approaches – swift experimentation and cautious evaluation – are needed, but there also needs to be a meeting point where individual practices inform organisational policies and vice versa, especially given the current vacuum of AI policies.

Pockets of concentrated knowledge versus lack of organisation-wide understanding

Where does knowledge about AI reside in a media organisation? Most of it is concentrated in teams that are directly involved in R&D activities. These teams monitor the latest developments in the field and regularly exchange knowledge with other organisations active in this domain. They are also exposed to debates about legal and ethical aspects, as well as discussions that critically reflect on AI.

However, such knowledge is not evenly distributed across organisations. Developers and data specialists, for instance, might have a much better understanding of emerging Al legislation and its impact on the media sector than legal departments. Similarly, R&D teams

might be much better equipped to reflect on potential business risks than managers and procurement specialists responsible for acquiring AI tools for organisational use.

While these pockets of concentrated knowledge are unavoidable - and, in fact, desirable - this knowledge should be actively used by different parts of the organisation. To facilitate this, new organisational processes are needed to support more effective knowledge diffusion.

Managing resistance versus fear of missing out (FOMO)

The lack of clarity about the impact of AI is causing fear and resistance among media professionals, who may be reluctant to outsource creative work or worry about ending up working in more complex processes when AI is integrated. At the same time, organisations feel that they are already falling behind and that any integration work is not progressing fast enough to keep pace with the constant release of new AI solutions.

This paradox often leads media organisations to seek ways to quickly integrate new AI solutions and get employees on board. However, as with the introduction of any new systems or tools, employees need to see and experience the benefits before they will support them in the long term. Learning how to use a new AI integration takes time and effort, and may temporarily slow down their work before yielding benefits.

An expert from a public broadcaster shared a good practice for encouraging employees to work with new AI tools - introducing new integrations on a voluntary basis. In their case, an 'AI assistant' was introduced to help users access and navigate multiple AI models, including both open-source and commercial solutions. The 'assistant' also provided access to a prompt library or ChatGPT. "Instead of us pushing some new ways of working, they discover it and they spread the word." Employees who were initially afraid or resistant to using AI saw their early-adopting, experimental colleagues benefiting from the tools and wanted to try it out themselves. Fostering such an organic process of self-discovery and word-of-mouth support can help build employee acceptance.

Need for specific solutions versus resistance to give away too much

Media organisations face a persistent dilemma: the need for customised AI solutions tailored to specific content types versus the inherent uncertainty and risks surrounding data sharing.

Al tools, particularly those designed for media content, frequently require extensive customisation to be effective. Off-the-shelf solutions often fall short or do not fit the media organisation's business processes or user requirements, especially when dealing with unique or challenging data sets. For instance, a manager of a film archive encounters significant hurdles with the performance of generic AI solutions due to poor visual or audio quality of older materials. Standard speech or object recognition tools fail in this context, requiring additional training to improve their performance. For this, companies developing these algorithms need access to media content. Here two aspects are worth attention:

Should the data be shared for training purposes? These are uncertainties about

security, especially when dealing with sensitive datasets, as well as concerns over copyright protection. There is still a lack of frameworks to ensure appropriate attribution and remuneration for content owners. Many organisations also fear that the data they provide for training purposes might be misused in the future – for instance, to develop AI solutions they are ethically opposed to;

What will it take to provide sufficient training data? All models need access to high-quality annotated datasets to be trained effectively. This is often an unforeseen resource and time investment for media organisations. Therefore, at least in the short term, the promises of time-saving and increased efficiency are not always fulfilled.

"The paradox of openness: can archives still be opened if we know that there's no way to stop big tech from using our data?" - Development manager at a public broadcaster

High-quality expectations versus encouragement of criticality

Due to the recent proliferation of AI tools, professionals in media organisations approach their workflows with certain preconceptions and expectations. Products released by OpenAI, Google and other large technology companies offer a very smooth and fast experience, with sleek designs intended to evoke a sense of quality and trust, often discouraging critical judgement. In contrast to this, tools developed in publicly funded R&D environments may seem clunky, slow and less user-friendly, leaving users disappointed and less eager to adopt them.

In this context, it is important for organisations to invest in building digital literacy and fostering user criticality towards AI. The media professionals consulted agreed that building sleek interfaces that convey unquestioned trust is not the goal. On the contrary, they advocated for designs that encourage users to critically interrogate the results produced. Additionally, these interfaces should educate users on the ethical, cost-related and infrastructural factors that might limit the performance and speed of the tools.

4

Managing organisational paradoxes: practitioner insights to support Al integration

Considering the paradoxes that create hurdles in the path of AI integration, media organisations are identifying processes and practices that help overcome them. In this chapter, we discuss some of the good practices that emerged during the consultation sessions.

Evaluation & benchmarks

There is a need for systematic evaluation of AI tools within media organisations to ensure their effective deployment and integration into business processes. This is necessary to determine whether there is a tangible benefit from using AI tools and to ensure they meet the required criteria for successful integration. For example, an AI-based transcription tool should be evaluated to determine whether it is helpful in processing interviews, thereby saving journalists time in writing articles by providing accurate quotes.

These evaluations must be tailored to specific contexts or use cases, requiring clear objectives and indicators. It is important to begin evaluations at an early stage before significant effort has been invested in full integration. However, these early evaluations can be challenging, especially when an AI tool is still exploratory or not fully integrated. This is common with other (digital) innovations, but specifically with AI: evaluation does not always generate consistent results. A tool that performs well

in one scenario may not work satisfactorily with other data types. It is also important to recognise that not every user has the 'early adopter' mindset, as highlighted in the first paradox. To overcome these challenges, start by testing these services with early adopters and then gradually involve other users.

Defining specific use cases and tasks and setting boundaries on the usage in collaboration with the tool's user helps measure the AI tool's performance accurately and evaluate whether there is a real 'gain' from using these tools. For example, in the case of an AI tool designed for automatic video editing, a specific use case could be editing sports highlights for social media purposes. The boundaries might include the types of sports, video quality and editing style. By collaborating with editors to set these parameters, the organisation can accurately measure the tool's performance in creating highlight videos and determine if it significantly reduces editing time while maintaining quality.

Al Charter: ethical guidelines

As mentioned in the first paradox, there is a disparity within media organisations where some employees are experimenting with AI individually, while others are not. This is partly due to uncertainty about whether and how they can use A and whether they should communicate its use to the audience.

There is a demand for a clear framework around the use of AI. AI charters, formalising the use of (generative) AI, help media organisations uphold ethical standards, promoting transparency and trust among both employees and the audience. Consider the publicly available charters from media organisations such as the BBC,³ Voxeurop,⁴ Canadian Broadcaster CBC⁵ and Wired.⁶ These charters reveal commonalities in how media organisations approach AI, with some even joining forces, such as in the Paris Charter on AI in Journalism.⁷

Even though overarching principles and common practices apply across the industry, individual media organisations have unique values, goals, and operational contexts that require tailored guidelines. Custom guidelines ensure that AI implementations align with the specific ethical standards, audience

expectations and strategic objectives of the organisation, thereby promoting effective and responsible AI use.

Internal guidelines are important, but so is external transparency regarding how the organisation uses AI. While the AI Act does not currently require media organisations to communicate their use of AI to the public as long as editorial control is maintained, there is an expectation among media practitioners that such guidelines or restrictions (similar to the GDPR) may be introduced in the near future. Even if this does not become a legal requirement, each organisation may want to introduce additional transparency mechanisms as a way to maintain public trust.

Additionally, during our research for this white paper, we found no charters that specifically address how broadcasters intend to handle the use of their (archival) content for AI algorithm training. This suggests that the integration of AI in media is still in its formative stages, and broadcasters have not yet developed clear strategies or policies for this emerging area.

Measuring the promise of Al

At present, measuring whether AI tools deliver on what is promised remains a significant challenge for media organisations. While these tools are often marketed as time-saving solutions that offer a competitive advantage, the reality is that they frequently require substantial 'hidden' manual work to function correctly.

Therefore, when implementing any AI solution, it is important to set up processes

(as early as possible) to monitor and measure the resources invested against the benefits gained:

- Monitor efforts required to prepare systems and data for AI integration (e.g., manually annotating data, training models, building workflows to enable data processing.);
- Consider the costs associated with change management, employee onboarding and upskilling;

^{3.} https://www.bbc.co.uk/mediacentre/articles/2023/generative-ai-at-the-bbc/.

^{4.} https://voxeurop.eu/fr/politique-editoriale/.

https://www.theguardian.com/help/insideguardian/2023/jun/16/the-guardians-approach-to-generative-ai.

^{6.} https://www.wired.com/about/generative-ai-policy/.

^{7.} https://rsforg/sites/default/files/medias/file/2023/11/Paris%20charter%20on%20Al%20In%20Journalism.pdf?utm.medium=Email&utm.source=Newsletter&utm.campaign=11172023.

Evaluate the impact of newly created tasks as new solutions are implemented. In the media sector, AI is often sold with the promise of giving employees more time for creative work, but experts reflected that this is not often the case - at least not in the short term. In fact, AI tools frequently create additional workflows that require workers to perform repetitive, mundane tasks.

Therefore, while technical performance and quality of a tool may be high, it may not align with employee satisfaction.

Monitoring these costs over time might help media organisations optimise their processes (e.g., by investing in creating more scalable digital infrastructure for AI processing to simplify integration work) or decide not to use AI tools in certain workflows.

Al expert teams supporting responsible adoption

While AI integration often relies on R&D teams, the discussions above highlight that it needs to be viewed as a process that cuts across the entire organisation. To support this, the consulted media professionals suggested creating "AI task forces" with representatives from different parts of the organisation, particularly involving those who are not engaged in day-to-day discussions about AI tools. These include:

- Researchers, ethicists and DEI (diversity, equity and inclusion) advisors who can advocate for critical approaches and help to demystify AI discourse for internal employees;
- Managers who can oversee change management processes when AI solutions are introduced and implement strategies that encourage responsible and critical usage of AI;
- Representatives from legal departments who need to translate European regulations into concrete organisational policies and processes;
- Procurement, marketing and business development specialists who need to be aware of the risks as well as organisational and public concerns about the use of AI tools;

• Human Resources (HR) professionals who design and implement training programs that guide the evolution of job roles. For example, documentalists, who were once primarily recruited for their broad general knowledge, will now need to develop expertise in algorithms. It is important to ensure that employees are equipped with the necessary skills to adapt to these changing demands.

One important role of such an AI task force would be overseeing and identifying actions that need to take place from initial (experimental) integration to fullscale adoption. The professionals consulted observed that the top-down imposition of new Al-powered processes across an entire organisation often faces challenges. They noted that a more effective approach is to start with smaller teams or individual projects and gradually integrate new tools into existing user interfaces or familiar processes. This method allows organisations to build up processes, habits, and skills more organically, leading to smoother adoption and greater overall success.

Investment in long-term partnerships

A question that is currently high on the agenda for many media professionals is who benefits long term from value generated during AI development. As already discussed, by sharing their data and knowledge, media organisations provide a competitive advantage to companies helping them implement AI solutions. But what if these resources are then exploited to develop tools that do not align with the values of media organisations?

While this risk might not be entirely avoidable, media organisations should carefully consider who they partner with and how these partnerships are structured when implementing AI solutions. For example, it is essential to ensure clarity on how data shared with a third-party AI developer will be used, particularly regarding its potential application in training models beyond the scope of the partnership. Similarly when choosing a commercial vendor, assess whether the partnership is likely to be a one-off transaction or if it has the potential to create long-term value and foster collaborations that benefit other stakeholders within the (local) media ecosystem. The latter approach is particularly advisable for AI solutions that raise many ethical and security questions. This is because such long-term partnerships develop shared values that can guide AI implementation towards an agreed vision over time.

Forging alliances between media organisations is equally important in supporting responsible Al implementation across the sector. A good example in this domain is the way public media organisations engage with commercial providers of media asset management systems (MAMs). These providers define what kind of AI functionalities will be made available and individual media organisations - especially smaller ones - often have little influence over these technologies. With very few specialist providers available on the market, organisations are often forced to stick with a solution that may not fully align with their values. There are notable exceptions, particularly among larger media organisations with substantial IT expertise, which actively engage in constructive dialogues about algorithmic recommendations. These organisations do not feel confined to merely accepting or rejecting proposals instead, they contribute meaningfully to the development process

More generally, by joining forces, media organisations can leverage their collective power to influence MAM providers, ensuring that the values and requirements these solutions adhere to align with their own. Additionally, designing flexible systems that can integrate with third-party APIs fosters greater transparency and adaptability, allowing for more tailored and responsive AI solutions.

Towards an organisational Al strategy

Throughout this white paper, we have highlighted the various dilemmas media professionals encounter as they navigate and scale their AI implementation efforts.

These discussions impact the entire organisation and underscore the importance of developing an AI strategy that is holistic and is kept up to date with emerging developments. While we recommend that organisations consider an AI strategy to guide responsible development, implementation and use of AI, it is essential that this strategy aligns with each organisation's unique values and objectives.

Rather than prescribing specific values, this paper encourages readers to critically evaluate their current practices and to develop a strategy that reflects and supports their individual organisational principles. To assist in this process, the following paragraphs outline **eight key elements** that could form the foundation of an organisational AI strategy:

- Defining the role in AI R&D: What role does our organisation want to play in the AI development landscape, and how do we ensure this aligns with our core values and long-term goals?
- 2. Processes to support responsible experimentation and deployment: What guidelines and ethical standards should govern our experimentation and use of Al to ensure responsible and transparent practices across the organisation?
- 3. Changing roles and skill development: What new skills and roles are necessary

- to support AI integration, and how can we effectively upskill our workforce to meet these evolving demands?
- 4. Ecological sustainability & impact monitoring: How can we monitor and minimise the environmental impact of our Al initiatives, ensuring they contribute to sustainable practices?
- 5. Use of data: How can we manage and protect data used for AI training and implementation, ensuring compliance with legal standards and ethical considerations?
- Transparency: How can we communicate our use of AI technologies openly to foster trust and accountability with our stakeholders and the public?
- 7. Ethical and legal considerations: How can we integrate ethical decision-making into every stage of AI development and deployment, ensuring alignment with our organisational values?
- 8. **Navigating risks**: What strategies can we implement to identify, assess and mitigate the risks associated with AI adoption across different areas of our organisation?

These elements are informed by the expert discussions summarised in the earlier chapters, AI charters we studied, and ongoing research within the AI4MEDIA project, particularly in relation to Generative AI.⁸ The authors

welcome feedback on the relevance and applicability of these elements.

Developing effective AI strategies requires domain-specific expertise that may not be readily available within all organisations. Therefore, it is highly recommended to engage in peer exchanges to compare and potentially adapt existing strategies.

International fora, notably the European Broadcasting Union (EBU), the International Federation of Television Archives (FIAT-IFTA), European Film Agencies (VAF) and the NEM Initiative, are ideal venues for facilitating these informed discussions and decisions.

Defining the role of our organisation in AI development

This topic covers how the organisation's core values will guide AI engagement, assess desired internal and external impacts, define strategic partnerships, and determine our organisation's role in the AI value chain. All of this must be considered while upholding ethical standards, accounting for the evolving nature of partners, and potentially supporting alternative AI ecosystems aligned with our organisation's mission and goals.

- Outline the values that will guide your organisation's engagement with AI. These values will likely correspond with those defined in the overall organisational strategy, but it may be worth introducing additional values that are relevant in this context (e.g., working only with technologies created ethically, ensuring new AI solutions do not endanger jobs, etc.)
- Consider the impact your organisation wants to make internally (e.g., introducing new services, automating repetitive tasks) and externally (e.g., steering AI development towards public good, determining under what conditions others may use our content for AI algorithm training).
- Based on the identified values and impacts, define the role of partnerships in AI-related activities – what type of external parties (commercial, academic,

- public, societal) your organisation wants to collaborate with and what can be gained from these partnerships (e.g., access to research infrastructures, knowledge exchange, internal capacity building, supporting public digital infrastructures that offer alternatives to big tech, etc.). The nature of these organisations may not always be stable. For example, OpenAI began as a not-for-profit but later transitioned to a commercial entity. The same applies to some academic research groups, which may evolve into commercial spinoffs. This raises important questions such as: What is the status of their research results and products, and can these be freely shared and transmitted?
- Determine criteria for partnerships your organisations may wish to avoid. Rather than focusing solely on the size or specific identity of a potential partner, consider evaluating partnerships based on how well they align with your organisation's core values and ethical standards. For instance, prioritise collaborations with entities committed to transparency, ethical data use, and shared public interest goals, ensuring that any partnership supports your organisation's mission and principles.
- Think about the roles your organisation can and wants to play in the AI value chain - for example, acting as a data

provider for publicly-funded local initiatives, contributing to experimentation with low-maturity-level solutions to guide their development, or co-developing mature tools with the goal of bringing them to the market.

Explore opportunities to support "AI commons" - an alternative AI ecosystem focused on developing small, task-specific

models governed by communities and the public. While decentralised and inclusive AI practices may align with certain organisational values (such as those of public service media), it is crucial to assess whether and how such initiatives fit within your own mission and strategic goals.

Processes to support responsible experimentation and deployment

Next, consider the processes needed to support entrepreneurial and responsible engagement with AI across the organisation:

- Encourage experimentation at both individual and department levels, but identify clear values and rules to guide it. The European Union's Guidelines for Trustworthy Artificial Intelligence¹⁰ is a good starting point - for instance, Dutch media organisations used this framework as a starting point to create their own guidelines.¹¹
- Put processes in place to ensure that insights from experiments and R&D activities reach a policy level and that knowledge is distributed across the organisation. For instance, arrange knowledge-sharing sessions, set up internal communication channels for trend monitoring, or establish the previously discussed AI task force to lead knowledge transfer across the organisation.
- Set up specific evaluation and impact assessment criteria before testing AI tools. These should include aspects that go beyond technical performance
 does the tool save time or create

- additional work for users who must oversee its quality? Can the tool handle edge cases? Are resources required to run the tool justified?
- Consider the digital and physical infrastructure (e.g. computing power, (cloud) storage, content delivery networks, etc.) needed to experiment with and deploy AI. When choosing what hardware, software or cloud services to use, evaluate how well they align with core organisational values (see Section 5.1). For instance, use the values as a lens to weigh the gains and losses of processing data using public versus commercial cloud services. This might require making compromises based on what the market can currently offer.

^{9.} https://codingrights.org/docs/Federated.Al.Commons.ecosystem.T20Policybriefing.pdf?_s=0wlm7td4grsffdal2qfh&utm.source=drip&utm.medium=email&utm_campaign=Your=Syllabus=This+Week

^{10.} https://digital-strategy.ec.europa.eu/en/library/ethics-guidelines-trustworthy-ai...

^{11.} https://mediaperspectives.nl/intentieverklaring/

Changing roles and skill development

Introduction of AI might create a need for new skills or job roles – for instance, journalism organisations working with generative AI see the need for skills related to effective prompt creation, critical revision of generated content and technical expertise to incorporate and maintain systems that include AI and automation.¹² Therefore, as media organisations explore where to integrate AI into workflows, a key success factor is to implement appropriate human resource development processes.

- Make a list of new roles or skill sets that are needed. For example, data engineers, production engineers, usability experts, documentalists, procurement specialists, and ethics and legal experts knowledgeable about AI. Consider which skills are essential to have internally and external experts may be relied upon.
- Article 4 of the EU AI Act mandates that providers and deployers of AI systems ensure their staff possess sufficient AI literacy, taking into account their technical knowledge, experience, education, training, and the context in which AI systems are used. This includes understanding the sources and handling of data to avoid the misuse or misinterpretation of AI outputs.
- Invest in skill development across the organisation and provide access to continuous training to ensure the workforce remains interested and can keep up with AI developments. This could include: training legal departments about the impact of the Al act, upskilling employees to critically assess the AI tools they use and the data they interact with, promoting a better understanding of the environmental impact of AI and strategies to monitor it, raising awareness for all employees on how to communicate clearly about how AI works, avoiding tropes that misrepresent Al.14 Offering continuous training also enhances the attractiveness of your employment package.
- Address anxiety or concern around how AI implementation may erode labour rights. Ensure these concerns are addressed in the AI strategy by involving employees from different parts of the organisation and across various seniority levels when defining key values and principles behind AI implementation. A key aspect to consider is which tasks the organisation wants to outsource to AI tools and which tasks are off-limits.

^{12.} Generative AI in Journalism: The Evolution of Newswork and Ethics in a Generative Information Ecosystem.

^{13.} https://www.europarl.europa.eu/doceo/document/TA-9-2024-0138_EN.pdf

^{14.} Artifical Intelligence - A Messaging Guide.

Ecological sustainability

The AI Act currently only mentions voluntary codes of conduct regarding the impact of AI systems on environmental sustainability. However, it is still important to consider the ecological footprint of working with AI, as high energy consumption, water use and mineral extraction are integral to building and operating the infrastructures to support the technology.

When discussing AI adoption, consider the larger context of the climate crisis and how using AI can, for example, increase pressure on the energy grid, especially when it is already strained by hotter temperatures. This consideration can help organisations make informed decisions about which AI systems to purchase or develop, which data centres

- to use, and whether to use AI in certain situations.
- Implement strategies and tools to monitor and measure the environmental impact of AI (see the Resources section for some suggestions). When co-developing tools with other partners, discuss what tools could be used for this and use insights from these measurements to guide decisions about the design and usage of AI solutions. When choosing between service providers, consider including environmental impact measurement as one of the selection criteria.

Use of data for training (internally or by third parties)

In the realm of AI integration, the use of data is a critical area that often involves navigating grey zones regarding data licences, data provenance, and governance. Given the societal impact of their work, media organisations must be meticulous in understanding and managing these aspects effectively to ensure compliance with regulations and ethical usage.

- Effective data management starts with understanding data provenance and tracking the origins, movement, and transformations of data within the organisation. This transparency is vital for maintaining data integrity and meeting regulatory requirements.
- Ensuring the legal and ethical considerations around data usage is particularly important when dealing with AI tools that require extensive data customisation and training, which often involves sharing data with

- external parties. Media organisations must navigate the complexities of data sharing, especially concerning sensitive or proprietary content and associated metadata. Establishing clear policies and guidelines can help in maintaining ethical standards and complying with regulations such as the GDPR. Checklists, such as those published by the European Commission,¹⁵ can support this process.
- Protecting data from breaches and unauthorised access is critical. Media organisations should implement robust cybersecurity measures and ensure that data privacy protocols are followed. This includes encryption, access controls, and regular security audits.

^{15.} https://www.edps.europa.eu/sites/default/files/publication/flowcharts and checklists on data protection brochure en 1.pdf.

Transparency and accountability towards users and the public.

To foster trust and accountability, media organisations should strive for transparency in their AI integrations. This involves openly communicating the extent of AI usage and ensuring that AI systems are deployed ethically and responsibly.

- Implement a voluntary self-labelling system for AI tools, as suggested in the AI white paper by the European Commission. This would allow economic operators to voluntarily adhere to certain requirements, earning a quality label that signals trustworthiness and compliance with standardised EU benchmarks, thereby enhancing transparency and accountability.
- Media organisations should invest in building internal capacity for data governance and AI literacy. This could include training staff across departments to understand and manage AI-related data issues effectively. Developing comprehensive internal guidelines and step-by-step instructions for navigating ethical dilemmas related to AI can support this effort.
- For users of AI systems and their outputs, such as journalists and the general public, the ability to check the provenance of content is important. Several key players in the media ecosystem (news generators, gatherers and equipment manufacturers) are working together within the Coalition for Content Provenance and Authenticity (C2PA) to develop verifiable, tamperevident signatures that indicate that neither the image nor its associated metadata has undergone undisclosed alterations. However, it is important to note that the practical application of content credentialing across the entire lifecycle is not yet fully feasible, as these standards and supporting tools are still in development. Media organisations are advised to monitor and engage with these emerging solutions as they evolve, as they hold the potential to empower end users to verify the authenticity and origin of digital content in the future.

Ethical and legal considerations

In many organisations, the decisions related to the ethics of AI are not standardised – it is not always clear how the decisions are made and who is responsible for them. Ethical considerations related to AI may arise across the organisation, such as selecting technology providers, ensuring alignment with the AI Act, and determining when a human-in-the-loop is needed. Therefore, it is insufficient for a single person or small team to be responsible for all ethical considerations –all departments should

strengthen their capacity in this area.

- The organisation can support this by publishing internal guidelines for staff, with step-by-step instructions to guide them through various scenarios related to AI.
- Develop communication tools that support resolving ethical dilemmas across all departments.
- Consider appointing an AI ethics officer who can oversee the ethical

^{16.} White Paper on Artificial Intelligence: a European approach to excellence and trust - European Commission (europa.eu).

and transparent implications of AI deployments across the organisation. This role (potentially an expansion of the GDPR officer's role, depending on their expertise) can help ensure that ethical considerations are integrated into all stages of AI development and deployment, fostering a culture of ethical awareness and responsibility.

 The organisation might also explore participating in collaborative initiatives to develop and utilise open-source technologies, as these efforts can drive innovation and offer potential cost savings.

Navigating risks

Risks are unavoidable when implementing AI, but they can often feel abstract and hard to grasp. A successful AI strategy should consider practical procedures that can help navigate these risks.

- For each AI application, define and map potential risks and their impact. Pay particular attention to scenarios involving unintended use and misuse. A mapping exercise like the 'Foresight in AI chart' (Figure 2) is a good starting point.
- In the risk analysis, consider risks related to different impact areas: potential for

- misuse to cause societal harm, employee rights and wellbeing, environmental effects, and ethical implications.
- Some risks are going to be common across multiple AI applications. Consider creating a 'Frequently Asked Questions' document to address them. Collecting case studies on how previous projects or other organisations have dealt with specific risks might also be useful.

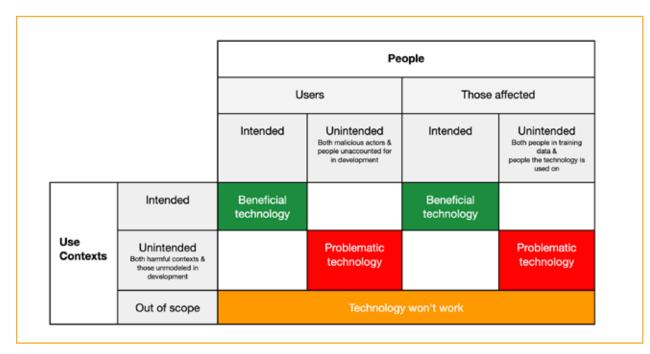


Figure 2: Foresight in AI chart provides guidance on how to categorise and identify potential impacts. Credit: Margret Mitchell / m-mitchell.com / CC-BY

Concluding remarks

This white paper underscores the complex yet promising journey of AI integration within the media sector. As media organisations continue to navigate the challenges and opportunities presented by AI, it is crucial to develop strategies that align with their unique values while fostering collaboration and innovation across the industry.

By embracing responsible experimentation, strengthening internal capacities, and forging long-term partnerships, the media sector can harness the power of AI to enhance its operations while upholding ethical standards and public trust.

Resources

Data governance

How is the Media Sector Responding to Content Crawling for Model Training

https://tinyurl.com/mediadatascraping

Broadcaster archives as datasets https://fiatifta.org/broadcast-archives-as-datasets/

Commons-based Data Set Governance for Al https://openfuture.eu/publication/commons-based-dataset-governance-for-ai/

Trend monitoring

Al4Media Observatory https://www.ai4media.eu/observatory/

FIAT/IFTA AI Survey https://fiatifta.org/ai-survey-results/

Measuring environmental impact

The Environmental Impacts of AI - Primer https://huggingface.co/blog/sasha/ai-environment-primer

The Uneven Distribution of Al's Environmental Impacts https://hbr.org/2024/07/the-uneven-distribution-of-ais-environmental-impacts

Measuring the environmental impacts of artificial intelligence compute and applications https://www.oecd.org/en/publications/2022/11/measuring-the-environmental-impacts-of-artificial-intelligencecompute-and-applications_3dddded5.html

Code Carbon https://codecarbon.io/

Machine Learning CO2 Impact https://mlco2.github.io/impact/#home

The Sustainability Index for Artificial Intelligence https://algorithmwatch.org/en/sustain/

Evaluation and benchmarking

• • • • • • • •

• • • • •••

Blueprints for Evaluating AI in Journalism

• • • • • • • https://generative-ai-newsroom.com/blueprints-for-evaluating-ai-in-journalism-e702c9e8c4f3

Case studies

How can we integrate AI successfully in news production? VRT shares their experiences and good practices https://www.ai4media.eu/how-can-we-integrate-ai-successfully-in-news-production-vrt-shares-their-experiencesand-good-practices/

Risk assessment

Guidance note - Potential misuse of research from the European Commission

https://ec.europa.eu/info/funding-tenders/opportunities/ docs/2021-2027/horizon/guidance/guidance-note-potential-misuse-of-research-results_he_en.pdf

The Pillars of a Rights-Based Approach to AI Development https://www.techpolicy.press/the-pillars-of-a-rightsbased-approach-to-ai-development/

Demystifying AI

Artificial Intelligence: A Messaging Guide - very practical guide for anyone communicating about AI

https://docs.google.com/document/d/1f7s6vR3IkR7LJ1qYM8seJjf8vIJ2nUTSdkeON5F_oQg/edit

Better Images of AI: A Guide for Users and Creators https://blog.betterimagesofai.org/better-images-of-ai-guide/

Organisational strategy and policies

Public Service Media and Generative AI https://www.publicmediaalliance.org/resources/public-servicemedia-and-generative-ai/

Developing a Checklist for the Procurement of External AI Systems by Media Organizations

https://generative-ai-newsroom.com/developing-a-checklist-for-the-procurement-of-external-ai-systems-by-media-organizations-8470b3b3a407

Consulted experts

Virginia Bazán-Gil

Head of Archives at Radiotelevisión Española (RTVE, Spain)

Thomas Biasci

Innovation Project Manager at Radio France (France)

Vincent Dabouineau

Data Programmes Lead of DAIA at France TV (France)

Brecht Declerca

Head of Archives at Radiotelevisione Svizzera (RSI) (Switzerland)

Veronique Demilly

Senior Project Manager at France TV (France)

Quinta Diik

Project and Access Manager at Sound (The Netherlands)

Maud Ehrmann

Research Scientist at École polytechnique fédérale de Lausanne (EPFL, Switzerland)

Lalya Gaye

coordinator of AI & Data Initiative at European Broadcasting Union (EBU)

Bas van Gunst

European Project Lead at Sound (The Netherlands)

Victor Hendrikse

Junior Project Manager at Sound (The Netherlands)

Eirini Kaldeli

Senior Researcher at National Technical University of Athens (NTUA, Greece)

Arthur Lezer

Research Engineer at Institut national de l'audiovisuel (INA, France)

Marco Rendina

Senior Consultant at Cinecittà (Italy)

Alexandre Rouxel

Senior Project Manager at European Broadcasting Union (EBU)

Lauri Saarikoski

Development Manager at Yleisradio Oy (YLE, Finland)

Deirdre Temple

Head of Solutions, Technology at Raidió Teilifís Éireann (RTE, Ireland)

Mark Westerhoff

CTO and Manager Operations at Algemeen Nederlands Persbureau (ANP, The Netherlands)



Follow us







@ai4mediaproject

































































This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 951911