

How to prepare your newsroom for AI

7 things to consider before adopting AI in your news organisation

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Journalism AI is a project run by Polis – the journalism think-tank at the London School of Economics and Political Science – in collaboration with the Google News Initiative.

These training materials are designed as a complement to the *Journalism AI report* and to help media organisations interested in artificial intelligence to take the first steps towards the adoption of AI technologies.

They are based on a survey of the state of mind and state of play in 71 news Organisations from 32 different countries regarding artificial intelligence (AI) and associated technologies.



Introduction

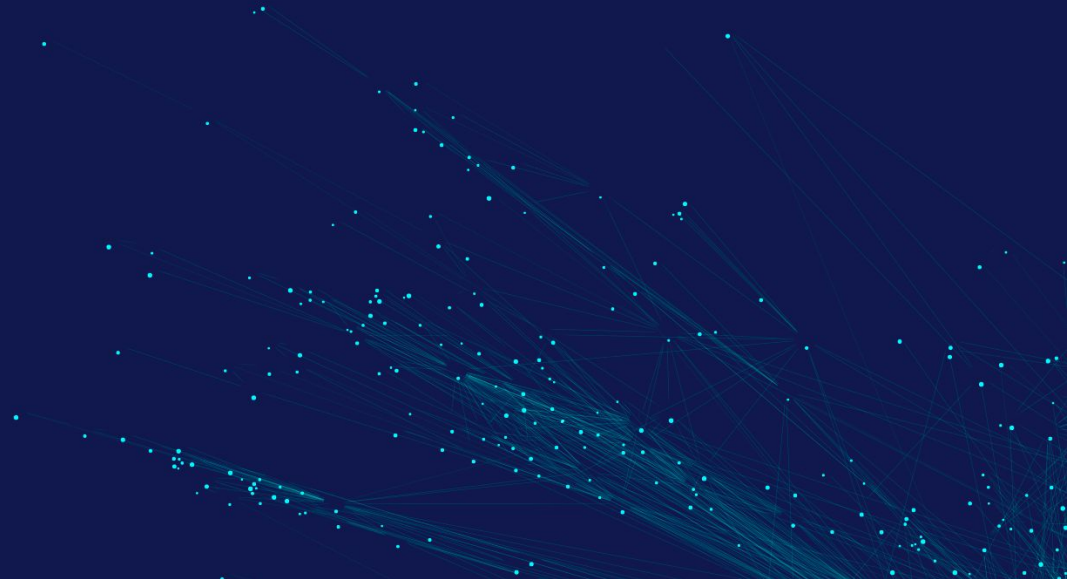


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Artificial intelligence (AI) is a significant part of journalism already but it is unevenly distributed. Its future impact is uncertain but AI has the potential for wide-ranging and profound influence on how journalism is made and consumed.

The power and potential described in the *Journalism AI* report make it clear that all newsrooms should pay attention to AI. But how can you prepare your newsroom for the AI-powered future?

Only half of the newsrooms surveyed by *Journalism AI* feel they are AI-ready and just over a third claim to have an active AI strategy.



Many newsrooms are worried about falling behind. This is a particular problem for small newsrooms, raising the prospect of growing inequality within the industry.

Do you recognise your newsroom in this description? Then these materials are designed for you. In seven steps, they will outline the key things you should consider as you start approaching AI technologies.

This is not a manual for implementation. These slides will help you reflect on how to design a strategy for AI adoption but they won't tell you how to do it. Further resources are included at the end if you want to dive deeper.

Let's go.

A decorative graphic in the bottom right corner consisting of a network of thin grey lines connecting small grey dots, resembling a neural network or data flow diagram. A solid red horizontal bar is located at the bottom left corner of the slide.

How to prepare your newsroom for AI in 7 steps

1. **Make sure you know what AI is and is not**
2. **Understand** how AI is used and what it can do for you
3. **Reflect** on what problems you are trying to solve
4. **Consider** the impact AI might have on newsroom roles
5. **Identify** potential obstacles and how to address them
6. **Evaluate** how AI might impact your editorial policies
7. **Assign** responsibilities and consider collaboration



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Step 1

Make sure you know what
AI is and is not



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So, you want to use AI... But what is 'AI' ?

Having an organisational definition of artificial intelligence is fundamental to help shape strategy and to promote understanding and communication about it in the newsroom. How do you define AI? This is the definition we have adopted:

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



Journalism AI asked newsrooms what is *their* definition of AI. One media organisation quickly realised they didn't have a shared definition. They spent thirty minutes answering that single question and told us about how beneficial this process was. This is what they came up with:

“ [Artificial intelligence is] a system that makes predictions combined with a system that is allowed to take actions on behalf of, or in assistance to, humans. ”

Quite different from the definition we proposed, isn't it? **Why is that?**

The way that newsrooms define AI usually reflects the role these technologies play in their organisations. **Definitions divide broadly into technological and human-related.**

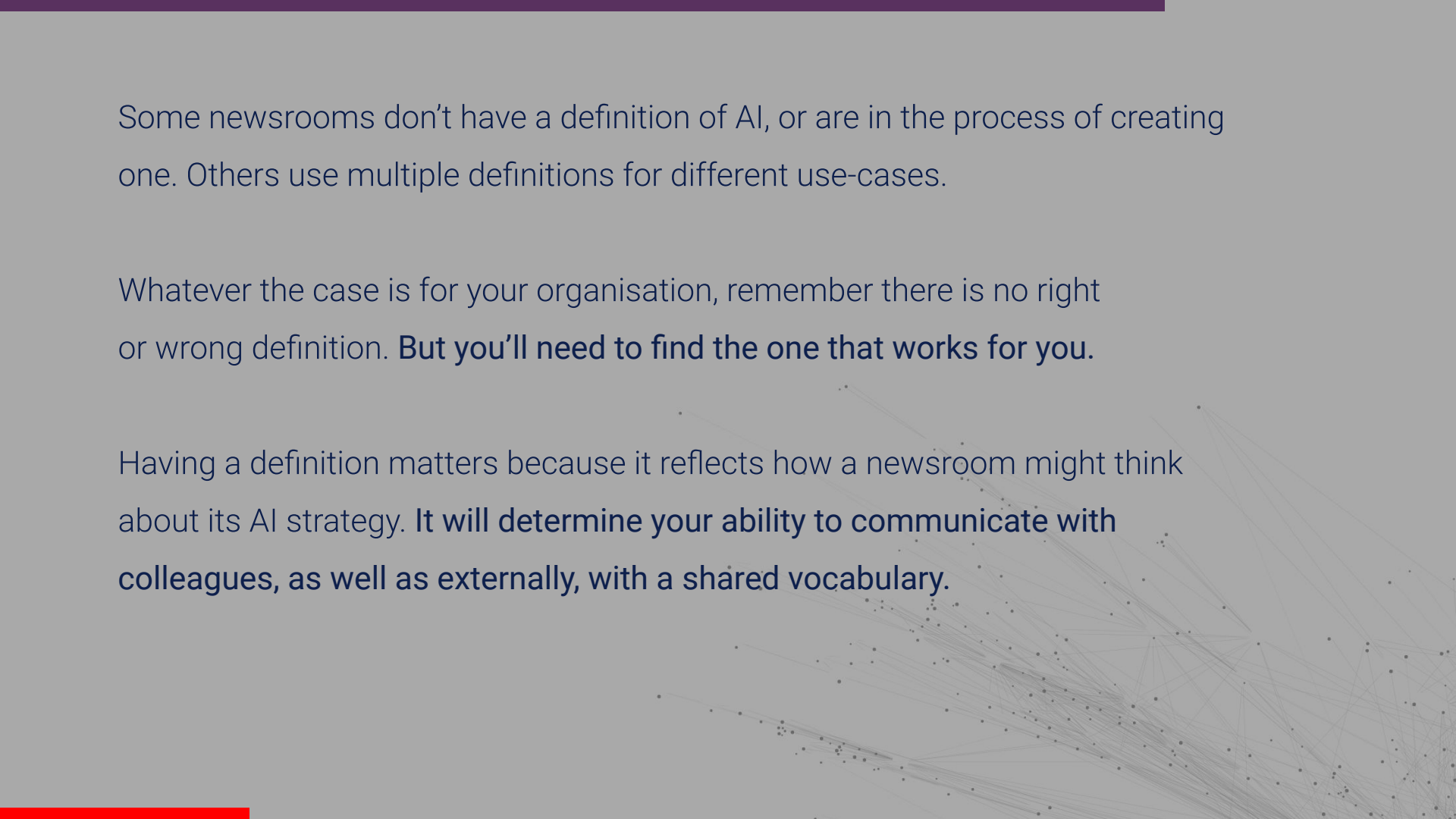
More **technological** definitions focus on the way that AI works. For example, by creating pattern recognition in managing large sets of data.

The **human-related** definitions focus instead on AI's ability to perform, replicate, or mimic tasks commonly associated with human beings' cognitive abilities.

Some newsrooms don't have a definition of AI, or are in the process of creating one. Others use multiple definitions for different use-cases.

Whatever the case is for your organisation, remember there is no right or wrong definition. **But you'll need to find the one that works for you.**

Having a definition matters because it reflects how a newsroom might think about its AI strategy. **It will determine your ability to communicate with colleagues, as well as externally, with a shared vocabulary.**



As the technology advances, AI will perform more systematic and autonomous functions in the newsroom. **Understanding what AI is will be important to realising its potential and the opportunities and risks involved.**

Once you have a definition, **you'll need to understand what AI can do for you.**

That's the focus of the next section.



Step 2

Understand how AI is used and what it can do for you



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The *Journalism AI* survey asked newsrooms what they are using AI for. The replies split broadly into three areas:

Just under half of respondents said they use AI for newsgathering, two-thirds said they used it for production and just over half said they employed AI for distribution.

There was a general aspiration to use any efficiencies to free up resources for enhanced newsroom functionality and for new or improved content and services.

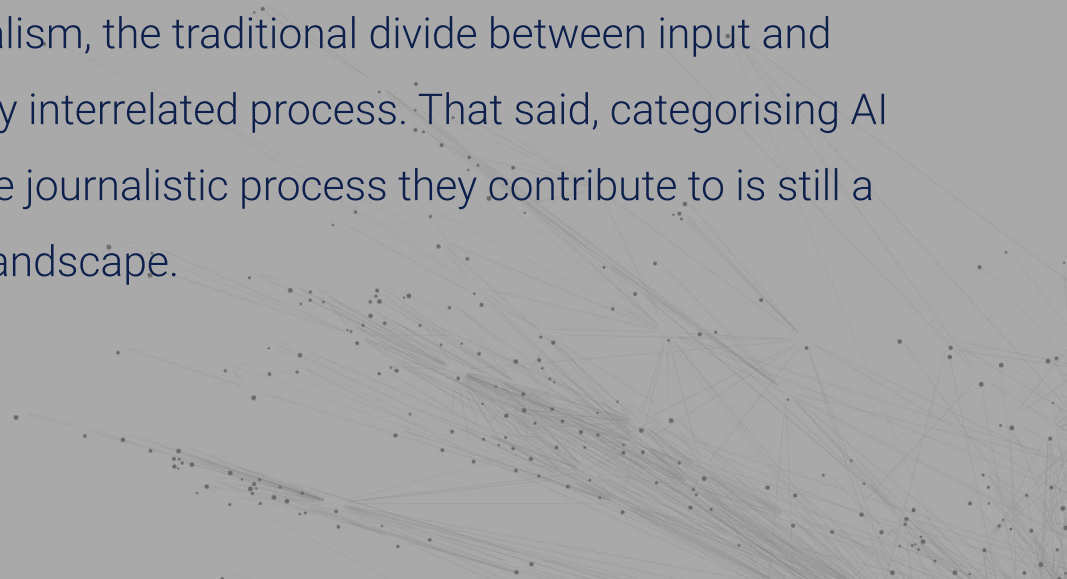


The Journalism AI report

This is not a strict classification, as **not all AI applications fall squarely into one category**. The use of AI to pre-moderate user comments, for example, could be seen as a way of gathering content, creating or editing that same content, or as a key way of improving audience engagement.

In the context of contemporary journalism, the traditional divide between input and output is better understood as a highly interrelated process. That said, categorising AI applications around what phase of the journalistic process they contribute to is still a useful way to navigate this complex landscape.

Let's dive a little deeper:



1. How AI can help the news gathering process:

- ❑ AI can help with the job of sifting through huge amounts of data
- ❑ AI can automate the laborious task of tagging articles with topics/keywords
- ❑ AI can help to scan social media through the automated filtering of UGC
- ❑ AI can spot interesting patterns in data and alert the journalist about them
- ❑ AI can help editors decide what content is more relevant for the audience

The potential of AI to augment journalists' ability in the news gathering phase is obvious. **Algorithms can analyse huge amounts of data at scale in a way that is simply unachievable for the human journalist.**

2. How AI can help the production of news:

- ❑ Speech-to-text technology can automate the process of transcribing interviews
- ❑ AI can help with fact-checking, automating the process of detecting claims
- ❑ AI is automating content creation, writing stories about sports, business, elections, the weather, and other areas that rely on structured information
- ❑ AI can automatically create charts and data visualizations to enrich your reporting
- ❑ AI can help organise information and suggest links between topics

AI can improve news production by automating laborious and repetitive tasks, **freeing up time for the journalists to focus on more creative work and on building a stronger connection with your audiences.**

3. How AI can improve news distribution:

- ❑ AI can inform your content strategy, by analysing how your stories perform online
- ❑ AI can help you decide what type of content is best for which platform
- ❑ AI can inform the way you structure your home-page
- ❑ AI powers the personalisation algorithms that allow you to recommend different content to individual users based on various factors

AI has great potential to improve news distribution by allowing you to tailor content to different segments of your audience. **This can improve engagement and user experience and support your business model** by helping design efficient paywalls and subscription systems.

Now you have a definition and a better sense of *what* AI can do for your news organisation.

The next question you should ask yourself is: **“Why AI?”**



Step 3

Reflect on what problems
you are trying to solve



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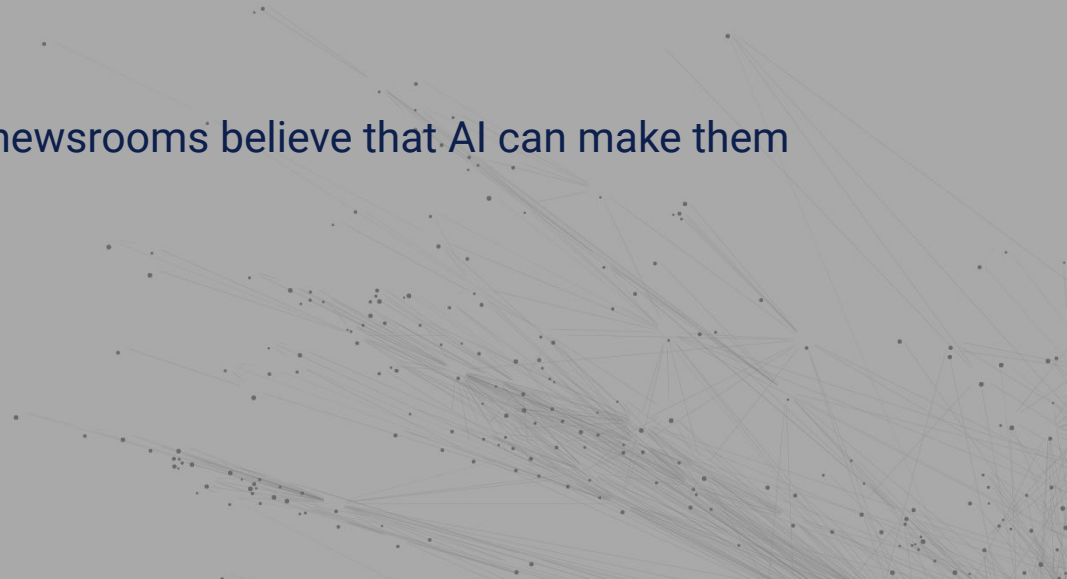
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Recent years have taught news organisations the risks that come with uncritically adopting the shiny trend of the moment, be it immersive technologies, Snapchat, or another pivot to video.

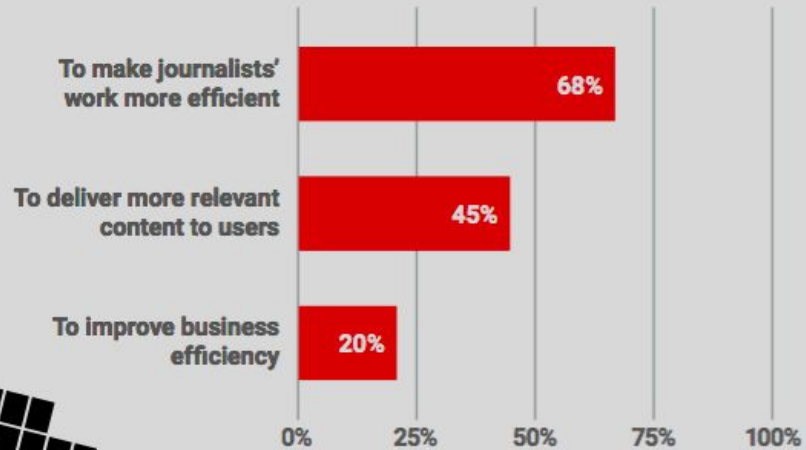
This applies to AI adoption too and that's why **it's critical to think from the start of your motivations.**

The *Journalism AI* report shows that **newsrooms believe that AI can make them more competitive and efficient.**



From the *Journalism AI* report:

WHY HAVE YOU STARTED ADOPTING AI TECHNOLOGIES?



NB: Proportion of respondents who mentioned each motivation in their answers.

The chart shows that, beyond financial reasons, the two key motives for using AI relate to **making journalists' work more efficient and delivering more relevant content to users.**


What is *your* motivation? What problems do you want to solve? And why do you want to use AI to solve those problems?

Hopefully, your answer will read somehow like this:



From the *Journalism AI* report:

“ The aim: augment the user-citizen, journalist, and the newsroom. And to create feedback loops that help us understand our users, content and our journalistic actions and the world around us in relation to each other. We aim to provide a more direct, meaningful, and engaging experiences in our main services. We aim to empower journalists in their news reporting and storytelling. And we want to create new methods and tools to better understand ourselves and the world around us. ”



The key concept to keep in mind in reflecting on your motivations for adopting AI is **augmentation**. If deployed responsibly (more on this soon), AI presents great benefit to two categories of people:

- ❑ AI can free up **journalists** to work on creating better journalism at a time when the news industry is fighting for economic sustainability and for public trust and relevance.
- ❑ AI can help **the public** cope with a world of news overload and misinformation and to connect them in a convenient way to credible content that is relevant, useful and stimulating for their lives.

So far, we have talked about AI's potential to **augment and support** journalists.

But what of the impact that AI might have on **roles and structures** in the newsroom of the future?



Step 4

Consider the impact AI might
have on newsroom roles



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One of the key areas for any strategic discussion of AI is what will happen to jobs.

Will the robots take over from humans? Will the computer wizkids displace the seasoned hacks? Will traditional skills be substituted by algorithms?

The *Journalism AI* report shows that AI creates labour as well as reducing it. **But certainly, what people do will change.**

Once you have identified what problems you are trying to solve with AI, you should reflect on **how the adoption of AI will affect your newsroom.**

The *Journalism AI* report shows that, as a result of the AI adoption, **newsroom roles are changing through the augmentation of current roles rather than the replacement of jobs:**

“ I think the impact will be subtle. I am highly critical of the idea of a ‘robot journalist’. It’s a nice sci-fi imagination, but not actually practical or realistic. I think most AI applications will become invisible fast and support workflows and reporting, but not replace it. Instead we’re going to see the automation and augmentation of tasks, such as translation, transcription, image search, augmented writing, automated summaries, maybe some form of personalisation inside a journalistic framework. ”

In general, the adoption of AI by news organisations seem to be less about the creation of new roles and more about the evolution, training, and education of existing resources into more AI- and tech-savvy ones.

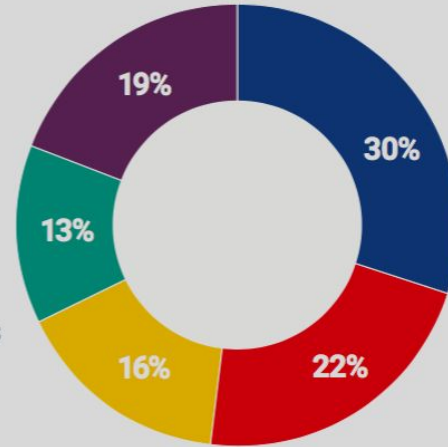
So far, **few AI-specific roles have been created**, with a variety of existing departments leading the efforts to adopt and implement AI technologies in the newsroom.



From the *Journalism AI* report:

WHAT DEPARTMENT OF YOUR NEWSROOM LEAD ON AI STRATEGY?

- A dedicated cross-functional team was designed to focus specifically on AI strategy**
- Strategy led by Innovation/Digital teams**
- Strategy led by Data teams**
- Strategy led by Tech/IT departments**
- Strategy led by other departments, incl. Product, Business, Editorial**



NB: Only the responses of newsrooms that said to have an AI strategy were considered.

Who will be in charge of designing an AI strategy for your organisation? Will it be a single department or an *ad hoc* team created for this specific purpose?

Think carefully about where you will start the implementation process and make sure your newsroom understand the process itself.

Preparing your newsroom for the changes that come with AI will be critical to achieve the goals you have identified in the previous section:



Step 5

Identify potential obstacles and how to address them



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Now you are equipped with a definition of AI, motivations for adopting it, knowledge of what AI can do for you, and how this will affect your newsroom.

And still, it doesn't mean that things will be easy.

The *Journalism AI* report clearly highlights that adopting AI at scale is not an easy process. **This is an emerging technology that can be complex and expensive to apply.**

Newsrooms have already encountered a number of significant challenges to AI adoption. The next slide shows the most prominent ones. After that, we let the respondents to the *Journalism AI* survey elaborate on each challenge.

From the *Journalism AI* report:

THE MAIN CHALLENGES TO AI ADOPTION ENCOUNTERED BY OUR RESPONDENTS

- 1 Lack of financial resources and/or willingness to invest.
- 2 Lack of AI-related skills along with the difficulty to attract and hire talent.
- 3 Skepticism towards new technologies, and fear of job losses.
- 4 Structural issues, including technical gaps between departments.
- 5 Lack of knowledge & understanding about the potential of AI.
- 6 Lack of strategy, especially at the management level.
- 7 Lack of time and difficulty to prioritise AI projects.

Other challenges: data quality, ethical concerns, complexity, inadequate tech infrastructure, language-related barriers, low accuracy of existing AI tech.



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1. Lack of financial resources:

“ AI is expensive to build and manage. It takes a lot of work to ensure data is clean and machine learning is effective. It may be the domain of big companies, which can develop and sell AI services to smaller companies. ”

2. Lack of AI skills and difficulty to hire new talent:

“ Hiring talented data engineers and data scientists is challenging in a competitive marketplace where we're competing head to head with banks, hedge funds, and start-ups that can offer more in compensation or stock options. ”

3. Skepticism towards new tech and fear of losing jobs:

“ Among the biggest problems of AI are the imaginations and visions communicated around this term. Most have their roots in science-fiction. We’ve been trying hard to make this field seem as boring as possible to the rest of the company. This helps manage expectations, because people are afraid of literal job-terminators. ”

4. Structural issues and gaps between departments:

“ There is a cultural gap between journalists and computer scientists. Topics such as algorithmic personalization are [...] sensible directions for computer scientists, but raise concerns with journalists around editorial responsibilities. We need to keep everyone on board before developing solutions. ”

5. Lack of knowledge and understanding about AI:

“ There is no common understanding of the term ‘AI’ and when implementing algorithms can actually be helpful. This does not only lead to false expectations but also turns the search for proper use cases into a challenging task. ”

6. Lack of strategy at the management level:

“ Managers often don’t know enough about technology and have too little understanding of the technical advantages and possibilities [offered by AI]. Combine that with a lack of imagination due to poor tech skills. ”

7. Difficulty to priorities AI projects:


“ Among the many challenges we’ve encountered [an important one is] prioritization. How to know what to automate? Which AI project comes first? As with all coverage, you have to weigh up the needs of the audience, the impact of the reporting, the gains for the newsroom, and so on. ”

Don't let this list discourage you. A number of case-studies in the *Journalism AI* report clearly suggest that **these challenges are not insurmountable**.

Some of the challenges are already familiar for an industry that has become used to grappling with change driven by technological advancements. Most probably you have already found innovative ways to tackle them.

Resources have been and are being created to help improve **AI literacy**. Forward-thinking organisations are experimenting innovative solutions to explain to their newsroom **the value AI can bring**. Collaborations are emerging to **share the financial burden** of developing AI tech in-house. These challenges are **already** being addressed.

The responses to the *Journalism AI* survey make it clear that **what the industry needs is a better way to share lessons-learned and solutions**, and avoid reinventing the wheel all the time. We hope to contribute to fill that gap in 2020.



Step 6

Evaluate how AI might impact your editorial policies



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AI changes the way that journalism is created and consumed **but how does it change the journalism itself?**

60% of respondents to the *Journalism AI* survey told us they are concerned about the impact that AI might have on the journalism they produce. Your AI strategy won't be ready, and might even be harmful, if you don't dedicate careful consideration to the impact AI might have on your editorial policies.

How does AI change the standards or nature of the content you produce, and the social value of its relationship with your audiences? Journalism has a chequered ethical history and levels of public trust are not particularly high at a time of unprecedented political and economic pressures.

At the same time there has been a public debate about AI in general: Do the algorithms discriminate against certain groups of people? Will this technology lead to mass unemployment? How does society hold this technology accountable?

The *Journalism AI* report highlights six areas where newsrooms think AI might make a difference to their organisations' editorial policy and practice:

ETHICS AND EDITORIAL: SIX AREAS WHERE THE IMPACT OF AI MUST BE CONSIDERED

- Economics: savings or investment?
- Algorithmic bias
- Misinformation and 'filter bubbles'
- Enhancement of editorial decisions and transparency
- Balancing artificial and human intelligence
- The role of the technology companies



1. Economics: Savings or Investments?

The most obvious issue is whether AI efficiency savings are ploughed back into editorial or used to cushion news organisations against wider financial constraints. The temptation will be to take short-term financial decisions, with the risk of undermining your value to the public, while instead **savings should be invested in the development of the technology or to enable better journalism.**

From the *Journalism AI* report:

“ The big question is: will savings be reinvested or used to counter generally declining incomes? [...] There is potential for higher rates of ‘low value’ journalism to be churned out quickly. The role of reputable news organisations to analyse and verify stories may become a scarce resource. ”

2. Algorithmic Bias

All AI systems will be biased in the sense that they will reflect the intentions and assumptions of the people who create and use them. **What matters is how aware you are of the bias and how you manage and minimise it.** The ability to monitor and correct algorithmic bias requires technological expertise and the resources to apply it within the constraints of a newsroom.

From the *Journalism AI* report:

“ I am concerned about journalists’ complacency and over-reliance on algorithms and how they may end up doing a disservice to our audience. There are currently many cases of bias in journalism that comes with use of AI. Poorly trained algorithms may do more harm to journalism. ”

3. Misinformation

One key concern is around the credibility of journalism. **AI technologies can be used to promote and spread misinformation and most newsrooms are not ready to counter this issue.**

Furthermore, the same AI tools used by journalists risk contributing to the spread of misinformation if they are not carefully designed and monitored by the newsroom.

From the *Journalism AI* report:

“ Machine learning is a perfect tool for generating deepfakes and fake content in general, and it will be a major problem for all news outlets and credible media. Also, verification will become much more difficult. We need to [develop better tools] to spot these fakes. ”

4. Editorial Decisions and Transparency

Could AI help uncover stories or facts that would otherwise have been missed? **Questioning AI bias** had led some newsrooms to reconsider their own assumptions and to think again about **what readers want**. This trend towards greater awareness suggests that **transparency** could be a way of avoiding the damage of algorithmic bias and contribute to regain public trust.

From the *Journalism AI* report:

“ AI makes you question everything. AI models are only as good as the humans who structure and train them. [...] I think AI has a role to play in helping expose the biases that already exist within the industry. It is an opportunity to reflect on how we make decisions. ”

5. Balancing Artificial and Human Intelligence

Another key concern is **the risk of losing the 'human' element of journalism**. This is not only driven by the cultural hostility towards technology and the fear of losing jobs that we already touched upon. Does journalism become less 'human' when content is co-created or repackaged by AI? Does the automation of basic tasks lead to a decline in journalism fundamentals?

From the *Journalism AI* report:

“ If media outlets are too much driven by wrong technical metrics, they can encourage journalists to try to compete with robots or game the AI recommendation systems. Instead, patience, perseverance and curiosity are valuable human qualities and should be encouraged inside the newsroom. ”

6. The Role of the Tech Companies

The *Journalism AI* report shows that the relationship between news organisations and the tech companies is **ambivalent** in the AI field. Tech companies provide most of the AI tools that newsrooms end up using, leaving the journalists with no control on the technology. If those tools are to align with journalistic priorities and the public interest, **then the relationship between the tech companies and the news organisations becomes critical.**

From the *Journalism AI* report:

“ I would like to see tech companies that have successfully utilized AI to spread awareness of the many uses and act as ambassadors. Tech companies are crucial for the successful transition into an AI-powered future. They bear a great responsibility in terms of creating a healthy ecosystem. ”

The debate about ethics and editorial policy needs to be embedded in product development, not just addressing the outcomes. **Journalists need to understand AI enough not to leave that discussion to developers and technologists.**

The six areas of concerns we just studied are maybe the most pressing ones. But adopting AI will pose an even wider range of challenges to your newsroom. **Make sure your AI strategy takes stock of all these concerns in a proactive way.**

Put in place systems that will allow you to check the impact that AI technologies will have from an ethical and editorial perspective. If you design this process responsibly, you will be almost ready to introduce AI in your media organisation. **One last step...**

Step 7

Assign responsibilities and consider collaboration



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Once your strategy is ready and well-defined, it's time to put it to work.

You can't just share a document called 'AI Strategy' with the newsroom expecting them to understand it. But you can't expect everyone in the newsroom to be AI-ready either.

You'll need a plan for a step-by-step introduction of AI in the newsroom and someone in charge of that plan.

A network diagram consisting of numerous small grey dots connected by thin, light grey lines, forming a complex web of connections. The dots are scattered across the lower right portion of the slide, with a higher density of connections in the bottom right corner.

A majority of respondents to the *Journalism AI* survey suggested creating teams to develop an integrated AI and data strategy. These teams should have two key features:


- ❑ Be **multi-disciplinary** and involve not only journalists and developers, but also social scientists and designers.
- ❑ Have the freedom to **experiment**. Not to build new products from the start, but first to identify promising applications and possible risks.

How might this look like in practice?



From the *Journalism AI* report:

“ I would set up a small team focused on a broader aspect, such as automation and augmentation. The team should not be anchored inside the newsroom, but instead act as a bridge between different parts of the company. [It would be] an internal lab with a core team of AI experts that colleagues from every department could join for one or two months to analyze their processes, to do research on our readers’ understanding of AI-driven content, and test new tools. ”



Let's be honest. Most likely you won't have the resources to hire an entire new team to focus on introducing AI to the newsroom. But that doesn't mean you should give up.

Pick staff from different departments, bring them together, and **empower them with the responsibility to make your AI strategy operational and easy to understand.**

And make sure the collaborative approach doesn't stop within the team. For an industry that has traditionally competed rather than cooperated, the enthusiasm for **collaboration around AI** – highlighted by the *Journalism AI* report – represents a significant shift in thinking and even in the way that news will be produced.

Collaboration between news organisations could focus on R&D, data sharing, training initiatives, or even investigative stories. **Collaboration** can be economically efficient and facilitate the circulation of knowledge and ideas.

AI presents opportunities for collaboration not only with other media organisations but also with research institutions. Current case-studies focus around three main areas:

- ❑ Collaboration on specific reporting projects to become familiar with the potential offered by AI
- ❑ Facilitate the recruitment of new staff that could bring AI skills that the newsroom lacks
- ❑ Support for R&D, for example in designing new AI-powered tools

Conclusion

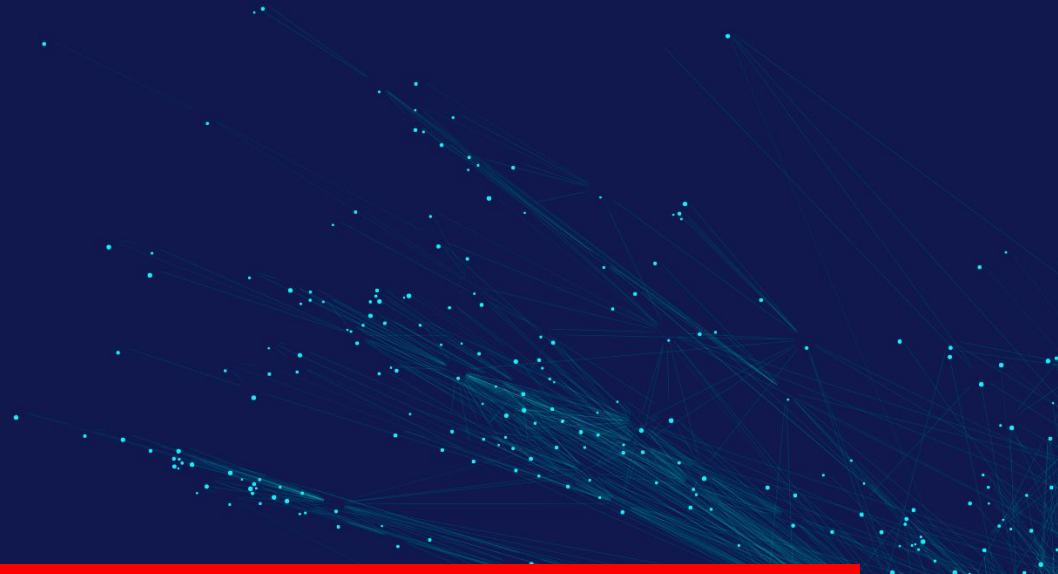


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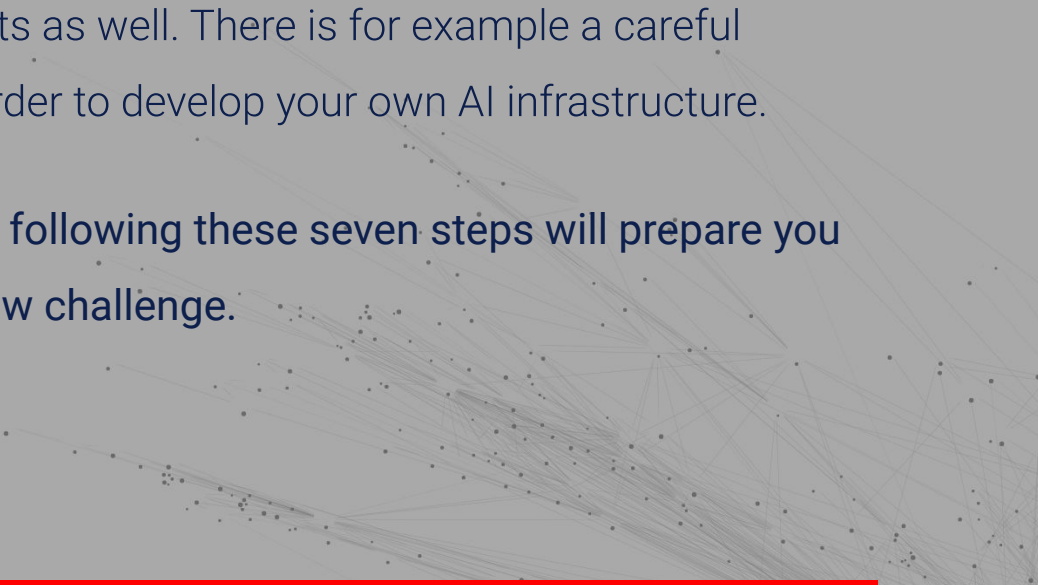
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This is just an introduction. We hope these materials will help you to not succumb to the hype surrounding AI and to make informed judgements about the value of this technology and the way it can be deployed strategically.

To design a complete strategy for AI adoption, you'll need to go beyond these first seven steps and consider other aspects as well. There is for example a careful technological analysis to be done in order to develop your own AI infrastructure.

It's not going to be easy. But hopefully, **following these seven steps will prepare you and your newsroom to take on this new challenge.**



What journalism is and how it is consumed is changing. AI offers a range of tools to find new ways of being the creator and curator of credible information.

After going through these slides, you probably realised that to benefit from the potential offered by AI technologies, news organisations will have to change. **Again.** They need to change their workflows, systems, and recruitment.

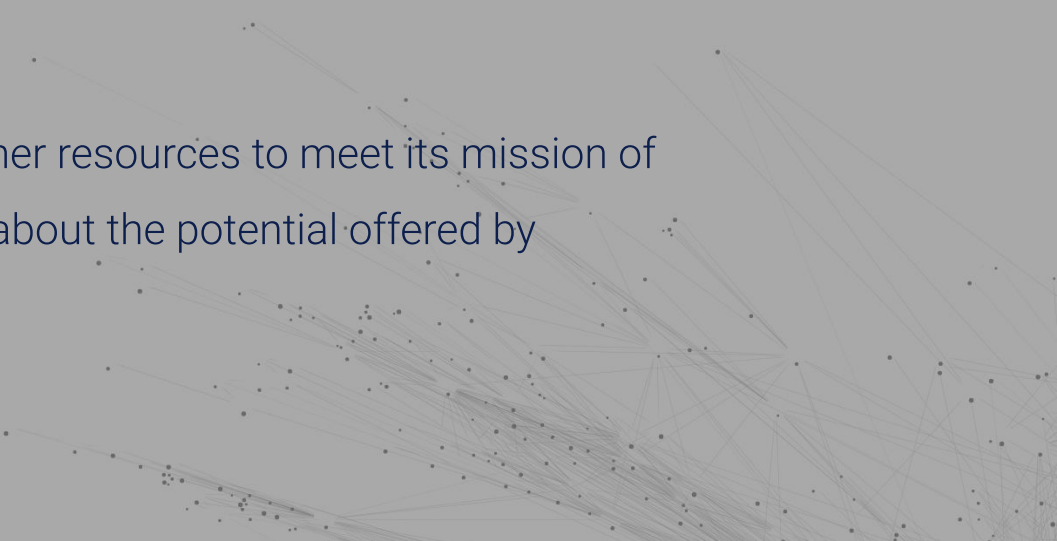
But as important as the management designing an AI strategy for the newsroom is to **improve literacy and understanding about AI across the newsroom.**



When the *Journalism AI* survey asked newsrooms what would help them meet the challenges of an AI future, the most frequent response centred around the urgent need for **training** and **education**.

These training materials hope to contribute to meet that need but they are only a first step.

In 2020, *Journalism AI* will design further resources to meet its mission of educating and informing newsrooms about the potential offered by AI-powered technologies. **Stay tuned.**



Readings and Resources

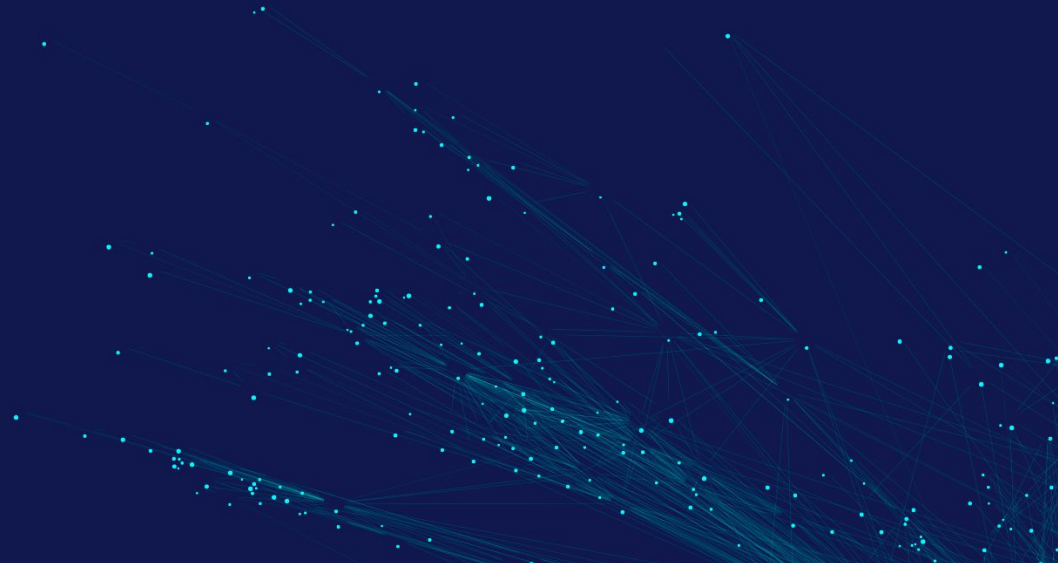


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AI in Journalism Starter Pack

- ❑ [Automating the News: how Algorithms are Rewriting the Media](#)
Diakopoulos, N. (June 2019), Harvard University Press
- ❑ [Newsmakers: Artificial Intelligence and the Future of Journalism](#)
Marconi, F. (forthcoming, February 2020), Columbia University Press
- ❑ [Elements of AI](#)
An excellent free online course to learn the basics about AI
- ❑ [Quartz AI Studio](#)
A platform to help journalists use machine learning to report their stories
- ❑ [Artificial Intelligence: Practice and Implications for Journalism](#)
A 2017 report exploring how AI is impacting newsrooms
- ❑ [How to make your newsroom AI-ready](#)
Van de Weghe, T. (March 2019) on Medium



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New powers, new responsibilities

**A global survey of journalism
and artificial intelligence**

Charlie Beckett

Download the
Journalism AI
report at:

blogs.lse.ac.uk/polis

The *Journalism AI* team welcomes your feedback on how to improve and expand these training materials to make them even more useful for news organisations of all sizes across the world.

To share your feedback, if you have any questions about the project, or if you want to be involved in future *Journalism AI* initiatives, do not hesitate to get in touch:

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