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Ethical and Governance Issues in AI Applications Across Scholarly Publishing

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Outline

- AI is transforming things, quickly
- What does adoption look like for researchers?
- What does adoption look like for editors and publishers?
  - *Editorial workflow tools, accessibility, collaboration and transparency*
  - *Assessment in an AI world*
- Governance, ethical, and integrity challenges
- Can the ecosystem tackle these challenges?
- Implications and support for librarians

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The transformative potential of AI in scholarly publishing

"Just as the Internet transformed industries, AI is poised to permeate every aspect of publishing. We are embracing AI in its ability to innovate, adapt, and lead the transformation."

Josh Jarrett,
Senior Vice President and General Manager,
AI Growth, Wiley

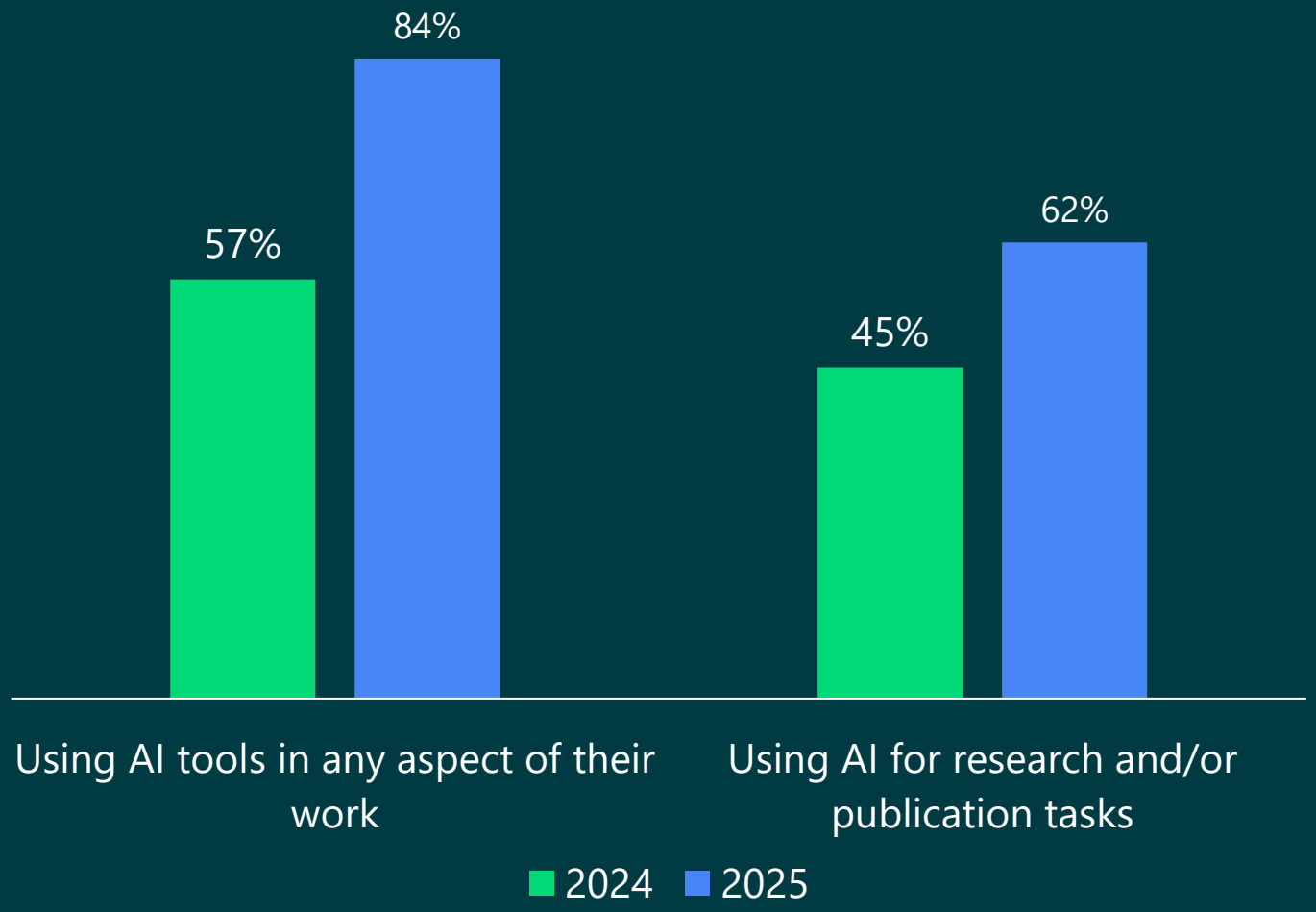
AI is already reshaping publishing

- Generative AI will totally redefine how we create, review, and disseminate research
- These technologies accelerate workflows, reduce friction, and scale discovery
- It's no longer an 'optional' shift — it is one that is already underway and embedding into every stage of scholarly communication, from ideation to citation
- Just like the shift from print to digital/online publishing, but much more impactful
- '*How do we keep pace with acceleration?*'

General usage and awareness has surged, along with research specific usage

ExplanAItions

80% of researchers have used a general-purpose AI tool, compared to just 25% have tried one or more specialized AI tools for research



Base: 2024 n=1,043-4,946; 2025 n=2,118-2,430

WILEY 'ExplanAItions' (2025): https://www.wiley.com/en-gb/about-us/ai-resources/ai-study/

Who's leading adoption?

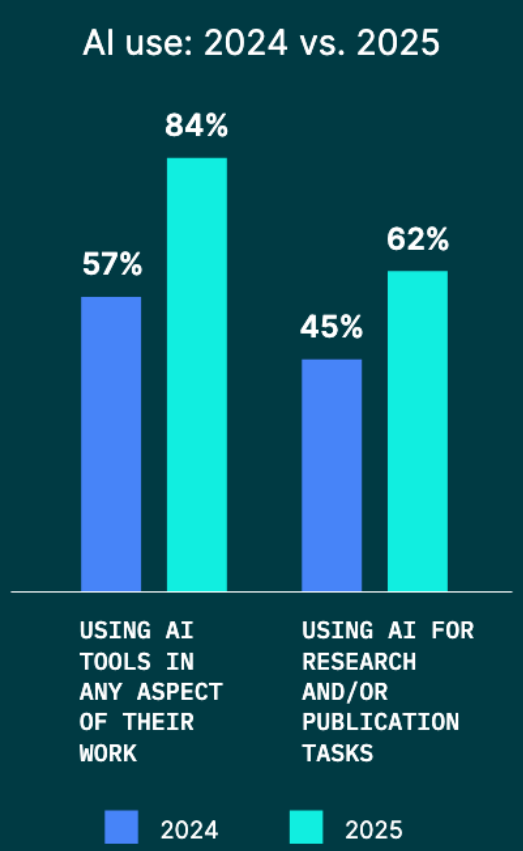
ExplanAItions

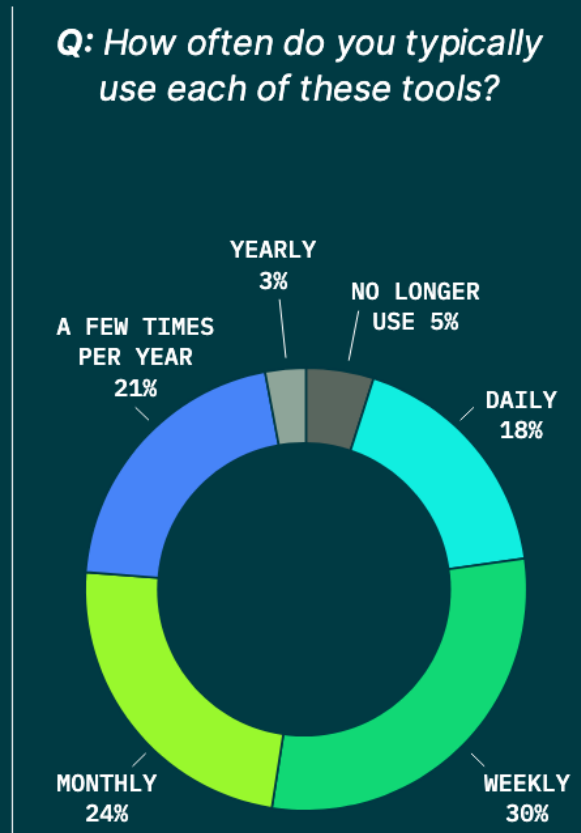
For research and/or publication tasks:

- Researchers in the APAC region (72%)
- Researchers in the field of Business, Economics, and Finance (70%)
- Early career researchers (70%)
- Researchers in Physical Sciences fields (66%)

AI is increasingly part of researchers' regular workflows and processes:

- 72% of researchers using the tools they've adopted at least monthly
- 48% using them at least weekly





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‘Cautious optimism’

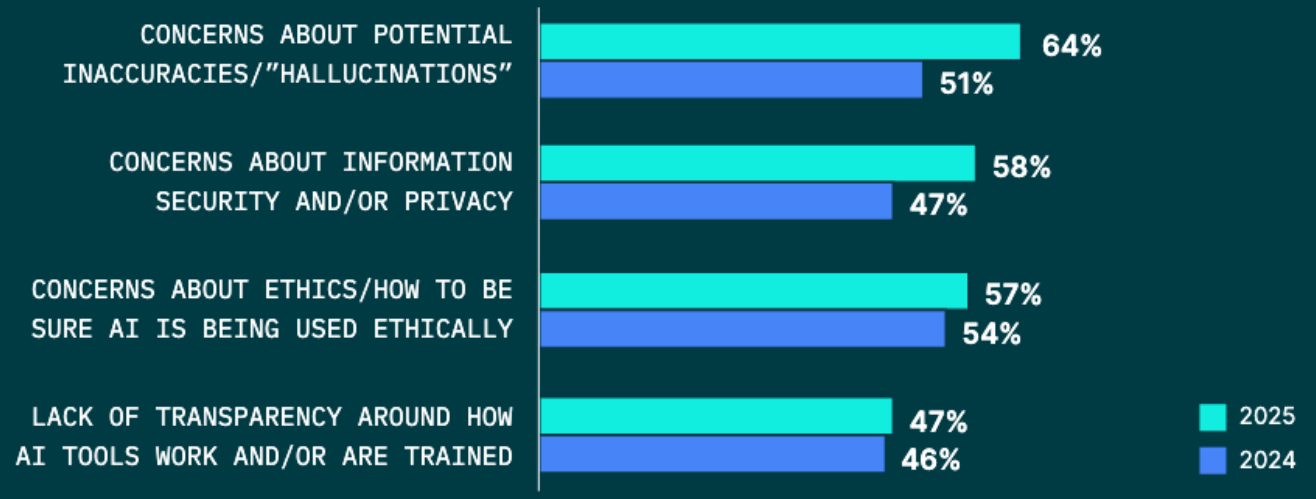
ExplanAItions

Some groups of researchers remain optimistic about AI’s current capabilities.

Those more likely to think AI is presently outperforming humans include:

- Early adopters of AI (think AI currently exceeds human ability in 59% of use cases)
- Researchers in Healthcare (57%) and Corporate (50%)
- Researchers in APAC regions (45%), particularly China (47%)
- Researchers whose field of study falls under Medicine (48%) or Computer Science (43%)

***Q:** What, if any, barriers or obstacles are preventing you from using AI in your work to the extent that you would like? Select all that apply.*



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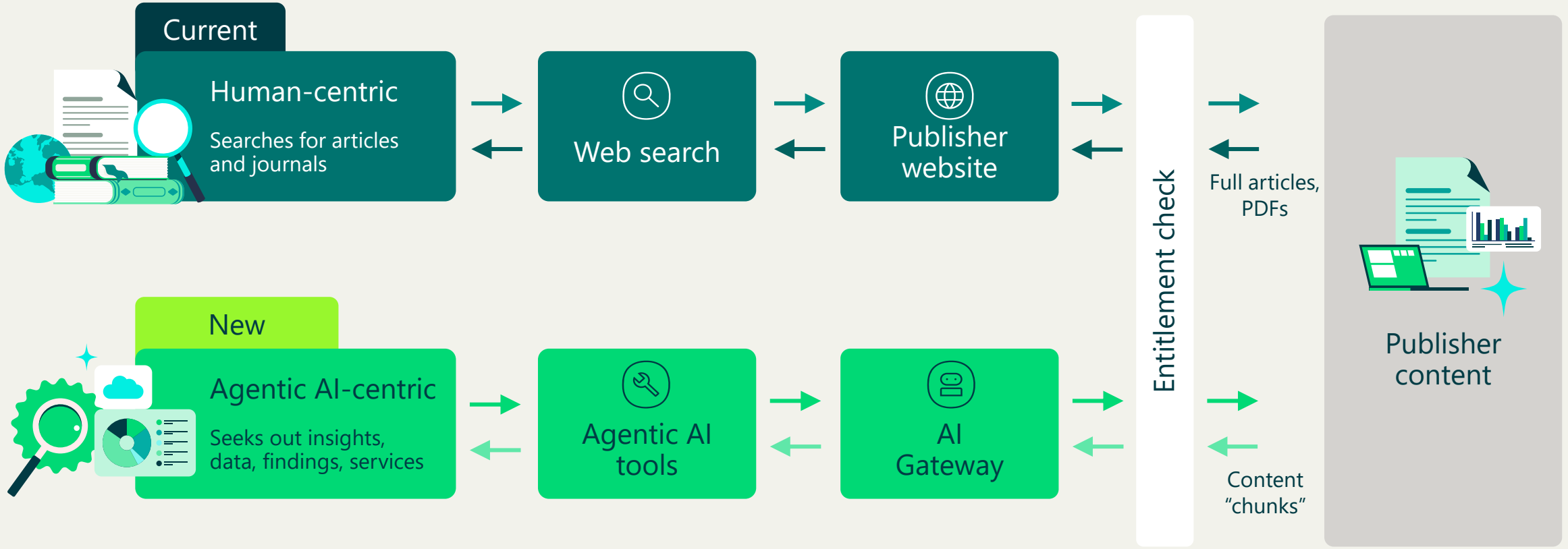
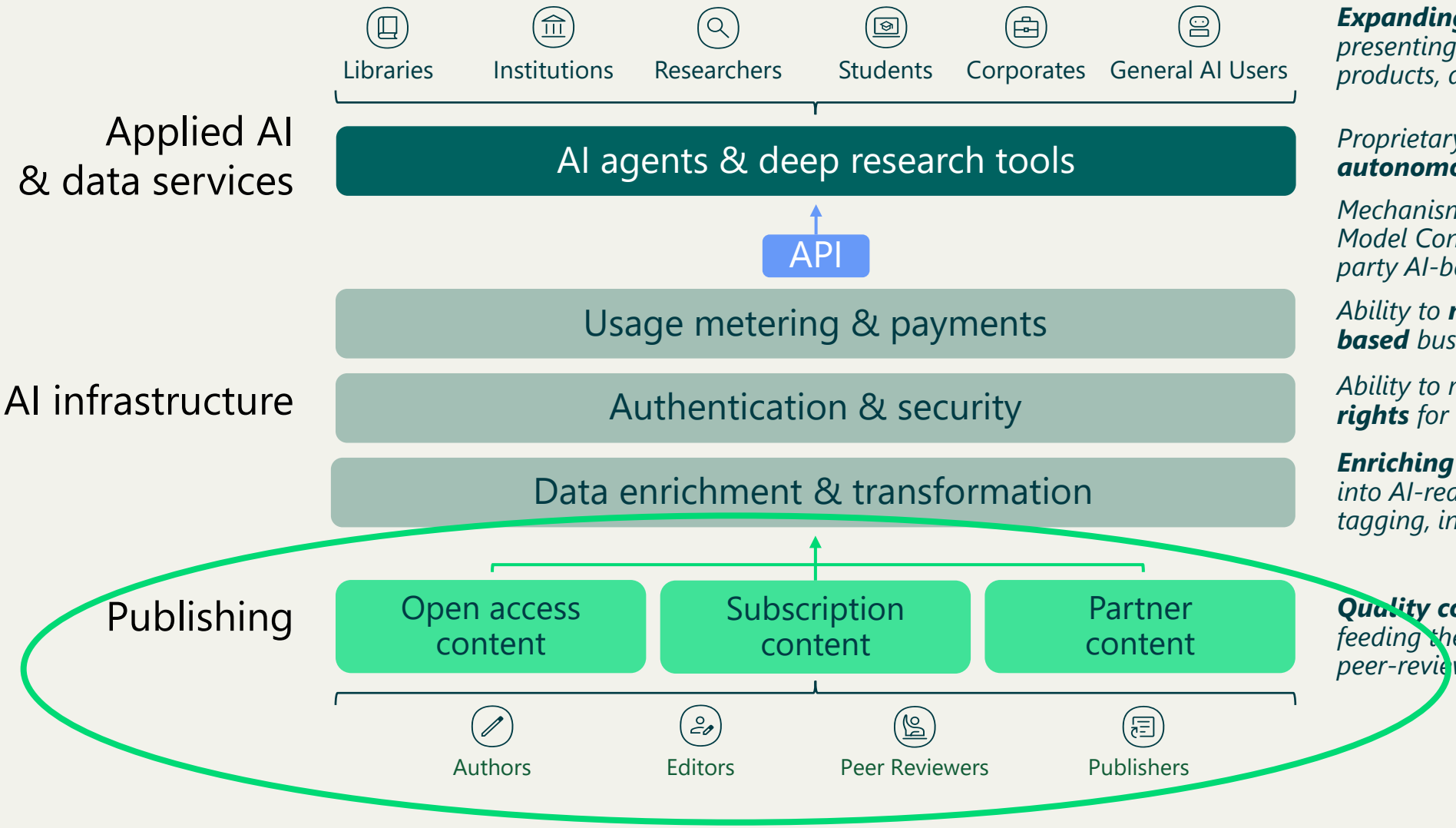
Paradigm shift

Researchers **increasingly access** findings, data, and services via **AI agents** consuming content from **publisher platforms**



Wiley AI Gateway



Expanding enterprise and end user markets *presenting opportunities for innovative services, products, and business models*

Proprietary and 3rd party AI tools ***conducting autonomous research and discovery*** *actions*

Mechanism to facilitate ***data transfer*** *between Model Context Protocol (MCP) Gateway and third-party AI-based applications*

Ability to ***meter usage and enable consumption-based*** *business models*

Ability to manage ***permissions and tiered access rights*** *for existing subscribers and new customers*

Enriching and converting *unstructured content into AI-ready, structured data with rich meta-tagging, increasing* ***the value of our content*** *to AI*

Quality content is foundational *to our future, feeding the knowledge ecosystem with trusted, peer-reviewed articles, journals, books, data*

https://www.wiley.com/en-gb/solutions-partnerships/ai-solutions/

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Authorship, adoption, and confidence

Treating AI as a co-author

AI is helping to shape how research is generated, communicated and evaluated:

- AI is no longer just assisting with text generation, it's influencing how we ask questions, how we interpret data, and is **helping research to become an evolving narrative**, moving beyond isolated manuscripts
- Researchers can continuously revisit and refine their findings, turning research into an **ongoing conversation** rather than a one-off product
- Researchers are already integrating AI outputs such as datasets, hypotheses, and visualizations as **collective outputs of research**

AI is blurring authorship boundaries:

- Publishing will need to adapt to support more **dynamic models of continuous research publication and distribution**
- Researchers and publishers need to **decide where human creativity and AI-contributions intersect**

Researchers are approaching this transformation along a spectrum

Low AI experience

High AI experience

Skeptics

Some participants worry that AI use:

- Would be seen as intellectual weakness or laziness
- Could lead to dependency that undermines core research skills

Pragmatists

The majority of participants view AI as another tool in their toolkit

Great at speeding up basic tasks…

but need to aware of limitations and apply critical thinking to evaluate outputs

"It's just like a math tool really. You need to be aware of the limitations of that tool. You know, like any method you use in science."

Enthusiasts

Some researchers view AI as **transformative**:

- They aim to regularly integrate AI into their workflows
- They are developing more sophisticated strategies for AI use and use a variety of AI tools

This creates an ‘expertise paradox’

The ‘expertise paradox’	The adoption divide
Researchers with more AI experience are more comfortable using it *and* more aware of its dangers	**Researchers with differing exposures to AI** approach it from fundamentally different research contexts and responsibilities
- Those who need AI least - experts with deep domain knowledge - **are often best positioned to use it safely**	**Early career researchers** can see AI as a natural tool, feel confident evaluating outputs, want clear rules to follow
- Those who could benefit most - newer researchers, those with heavy workloads - **face the highest risk of missed errors or over-reliance**	**Established researchers** often worry about impacts on developing critical skills, fear they lack expertise to spot AI errors, and face dual burdens of teaching and reviewing AI-assisted work

AI can complicate perceptions of accountability

Many researchers feel that AI is further diminishing already-challenged trust in publishing.

- *Authors should trust editors won't wrongly reject AI-assisted work*
- *Editors should trust authors to generate their own ideas and honestly disclose AI use when appropriate*
- But researchers and editors also report that AI actually increases their verification burden, regardless of disclosure
- Both increasingly doubt this mutual trust

Transparency in AI use can build trust if disclosure is meaningful.

- It can reduce suspicion about the manuscript
- Improve equity and diversity of voice in publishing, allowing great research to cross language barriers

Those we interviewed said that authors, reviewers, and editors should verify all results regardless of origin

AI use does not change the responsibility of who needs to check the quality of a manuscript

So - accountability hasn't changed

Despite the complexity AI can introduce, one thing remains constant:

Researchers are responsible for their work

- AI is a tool. The researcher decides how to use it, must verify all outputs, and owns the integrity of the final manuscript
- Transparency and disclosure become key

"All writing of articles, generation of methods, or planning of solutions ***should still be centered around individuals*** *and* ***cannot rely on AI.***

AI is just a tool *for you."*

– Researcher (Wiley ExplanAItions, 2025)

In 2024, almost 70% of researchers cited **lack of AI guidance** as a barrier.

They expect publishers to provide **clear and comprehensive guidance** to fill this gap

Bridging the guidance gaps

Researchers understand the risks and are looking for guidance	What does this mean for publishers?
Bias AI reinforces existing perspectives, blind spots, and data inequities	✓ **Empower, don't restrict** Build competence across career stages rather than creating barriers
Plagiarism Risks of accidentally reproducing content AI presents without attribution	✓ **Flexible - appropriate - disclosure** Match requirements to actual use cases (editing ≠ drafting ≠ data analysis)
Privacy They're unsure about what happens to unpublished data uploaded into AI tools, and the legal and ethical uncertainties that follow	✓ **Address real fears** Give researchers frameworks for bias detection, privacy protection, and avoiding plagiarism
Guidance on *how* to use AI safely is more urgent than rules around *whether* to use it	✓ **Support the spectrum** Acknowledge that researchers have different needs, concerns, and relationships with AI

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Transforming editorial workflows

AI is reshaping editorial approaches

As authors experiment with AI as a creative and analytical partner, **editors are equally beginning to explore how it can support and transform their work**

Editorial teams are handling content that's faster, more iterative, and increasingly shaped by machine contributions - meaning long-standing processes need to evolve.

This brings huge opportunities for efficiency and insight, but it also forces us to **rethink responsibility, transparency, and what "quality" really means in an AI-driven ecosystem.**

Tackling the peer review crisis

Can AI reduce pressure without eroding quality?

Problem	Opportunity
212% increase in publications (2004-2024) Explosion in research outputs	✓ **New wave of published researchers can become reviewers** Tapping into early career researchers assisted by AI
Not enough reviewers Finding qualified peer reviewers in a timely manner a challenge	✓ **Technology can prompt and guide review process** Automating steps and tracking
Variable quality and timeliness Quality of reviews completed is variable and often slow	✓ **AI-empowered review, triage. Review as a commodity** Potential for AI to assist (safely) in peer review
Reviewer burnout Burnout is a real issue	✓ **Transfer systems can reduce review waste** Automated refer and transfer keep good research in the pipeline

Reducing review waste

Using new solutions to help reduce friction in the review process

Proactive novelty and quality assessment

First pass assessments of suitability and submission quality can help content find a home quicker, and get in front of the right experts at the right time

Empower transfer networks

AI powered-suggestions for journal transfer, and semantic analysis of submissions to journal scope can keep quality research in the pipeline

Better targeting of reviewers

Semantic matching of article content and publication history of potential reviewers, filtering and matching against availability, reviewing history, activity and expertise.

Helping editors make faster decisions

Guiding editors to the best reviewer matches with search filters and re-ranking as well as metadata that supports faster decision-making

Accelerating the publishing process

AI is helping to make publication faster, fairer, and more focused *without replacing human judgement*

Methodology and statistical evaluation

Flagging potential weakness in design or analysis early, given editors and reviewers a head start or surfacing things that are less clear to the eye

Literature mapping

Automated synthesis show where a manuscript ‘fits’, what it builds on, what it’s missing, and where it challenges and transforms prior work

Clarity and reproducibility

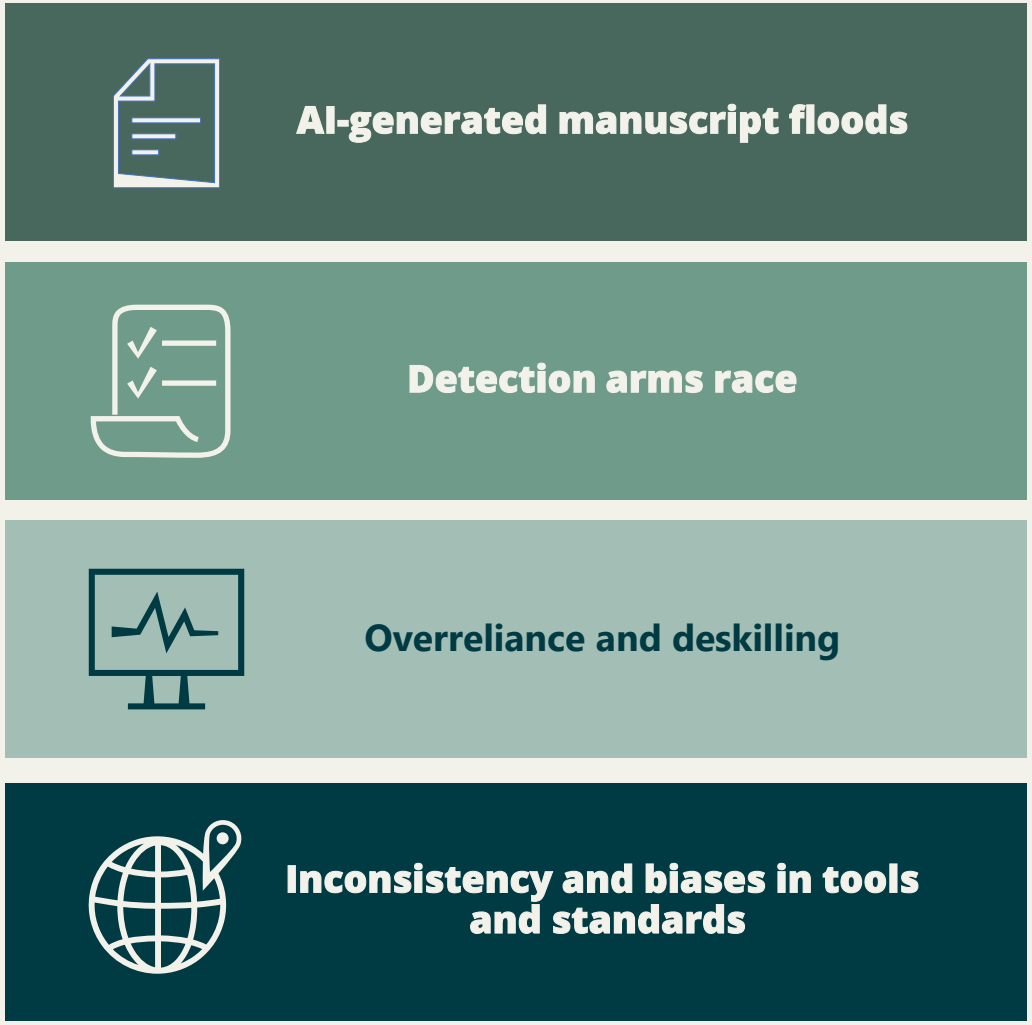
Scanning for vague methodologies, adherence to reporting guidelines, identify biases, and surface these for reviewers and editors to work with

Structured critique and review drafting

Quickly outline key strengths and weaknesses. Reviewers still refine and judge, but AI can help them get there faster

AI review as a double-edged sword

AI could make peer review more challenging… and more confusing



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Ethical and governance challenges: accelerating accountability

Ethical and transparency challenges

Avoiding ethical pitfalls

'As researchers and publishers embrace this new frontier, the need to identify, understand, and mitigate potential risks becomes increasingly important. As both challenges and opportunities emerge, a balanced approach is needed' (Upholding Research Integrity in the Age of AI, Wiley, 2024 white paper)

Industry-wide standards need to evolve

'Current publisher policies fall well short of providing a robust framework for assessing the risk of different AI tools and researchers are left guessing how they should use AI in their research and subsequent writing.' (Staiman, Scholarly Kitchen 2024)

Promoting methodological integrity

While AI offers powerful insights, it should 'complement - not substitute - sophisticated and nuanced decision making' . Researchers need to balance AI with traditional scientific rigor and expertise.

Mitigating AI bias

Bias in AI models can undermine research validity. Researchers must ensure AI tools are designed with inclusivity in mind, upholding fairness and accuracy in academic findings.

Upholding Research Integrity in the Age of AI (Wiley, 2024)
https://scholarlykitchen.sspnet.org/2024/07/22/woefully-insufficient-publisher-policies-on-author-ai-use-put-research-integrity-at-risk/

Bias, hallucinations, and echo chambers

Reliability
Researchers express deep concern about AI's tendency to generate plausible-sounding but incorrect information

Systemic bias
Researchers are very worried about systematic biases built into AI systems, including from AI training data, and about confirmation bias and sample bias based on volume, rather than accuracy, of source material

Experience bias
Researchers say that AI systems remember and build on previous interactions, creating echo chambers where AI reinforces existing perspectives, or challenges without real-life experience

Privacy and confidentiality concerns

Researchers are making privacy decisions without full visibility of AI data flows

Research data exposure
Fears that competitors - or other AI platforms - could access their unpublished data

Patient and participant protection
Medical researchers remain cautious about AI tools processing sensitive or identifiable information

Institutional and legal liability
Legal obligations can be unclear. Many researchers don't know where responsibility lies when AI tools mishandle data

The "black box" problem
AI opacity makes it difficult to know where data goes or how it's used, undermining trust

Awareness
Some researchers simply aren't aware of privacy risks and the potential for error

> "***Patient privacy is still a very important aspect that requires great attention. Although AI does have a privacy protection protocol, we are still very cautious in this regard****...The potential leakage of patients' names is also a significant issue"*
>
> *– Researcher (Wiley ExplanAItions, 2025)*

Practical and purposeful disclosure should:

Promote author innovation

AI methodology is a rapidly growing area of experimentation and innovation. Researchers want to *see* how their peers use gen AI in open, transparent ways so they too can learn and innovate

Build trust

Transparency matters to everyone in the research ecosystem. Simple and consistent disclosure helps normalize AI use whilst building accountability

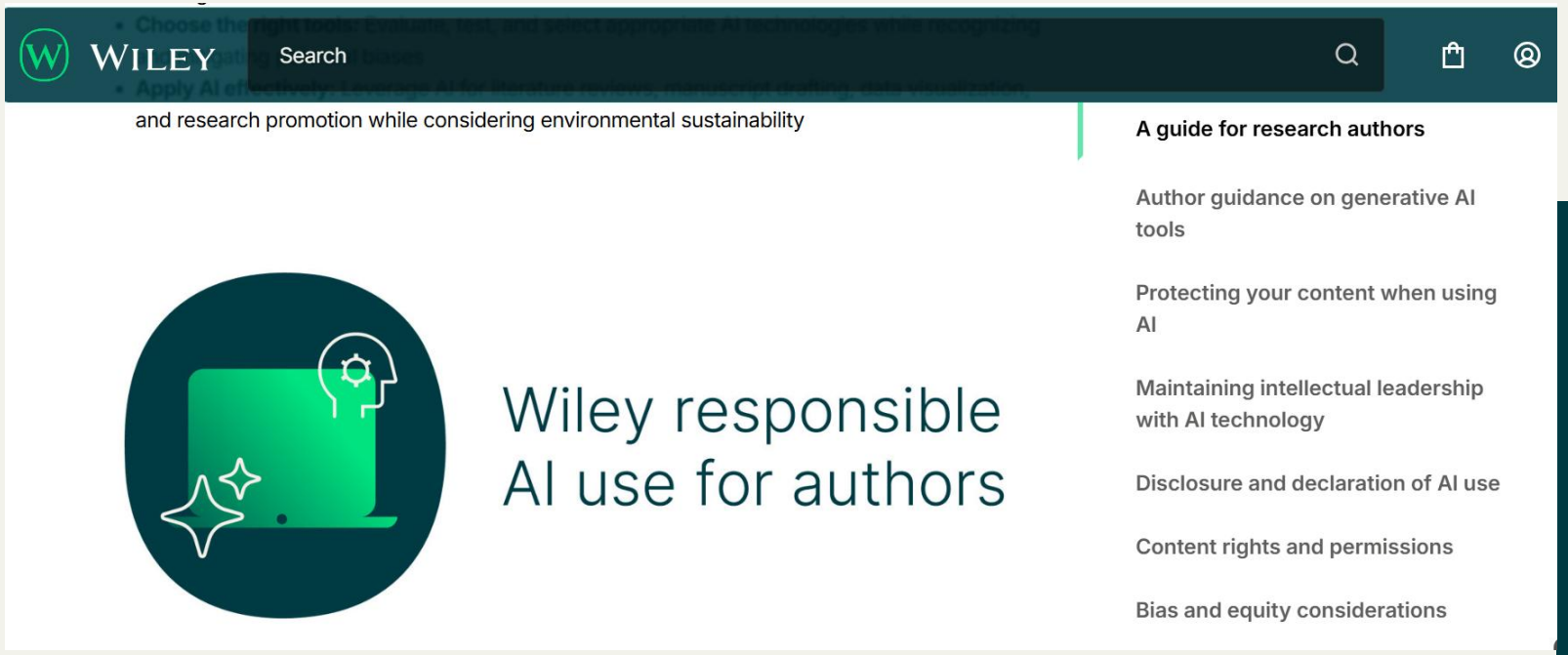
Be purposeful and practical

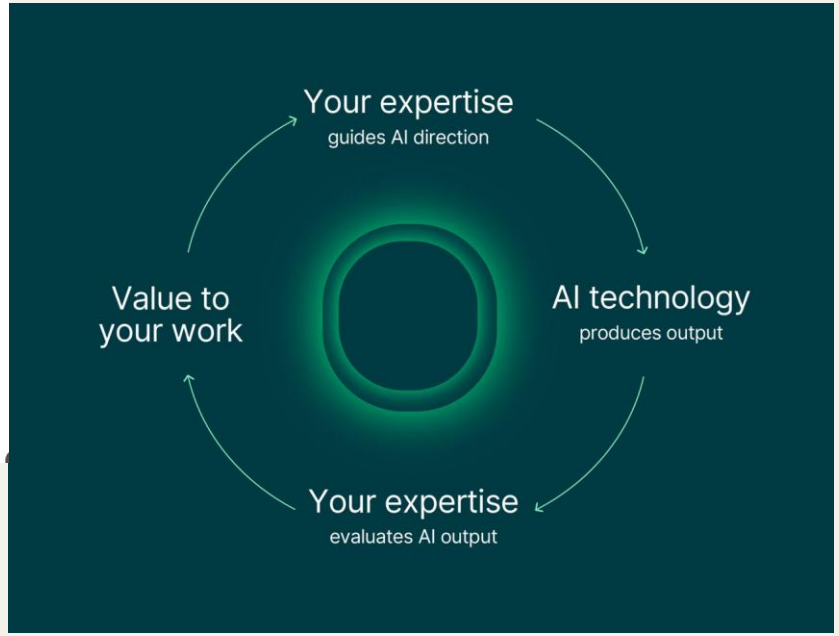
Overly detailed statements can become performative noise. Policies should balance researcher needs with journal standards, supporting integrity and collaboration without adding friction

Be thoughtful and flexible

Rigid disclosure will age rapidly as AI tools evolve. Flexibility is an enabler for equity, and frameworks should be adaptable across disciplines whilst recognizing different use cases.

Responsible AI use at Wiley





https://www.wiley.com/en-us/publish/article/ai-guidelines/

https://www.wiley.com/en-us/publish/book/resources/ai-guidelines/

Shared responsibility in AI approach between researchers *and* publishers

Researchers

Commit to full disclosure

Transparently disclose AI tools and share datasets used at every stage of research, from data analysis to drafting. Documenting AI usage builds trust and sets a standard for reproducibility.

Leverage AI to tell evolving stories

AI can empower researchers to **treat research as a dynamic, evolving narrative.** With AI integrated throughout the research process projects are continuously refined creating a transparent, reproducible story that grows over time.

Balance AI with personal expertise

Use AI to complement - not replace – human insight and expertise. Researchers should ensure AI aids productivity but does not overshadow their scientific rigor and critical insights.

Engage with emerging standards

Stay informed about evolving GAI use and AI declaration standards, contributing to a culture of integrity and transparency. **Be proactive in adopting best practices** set by publishers and industry bodies.

Building supportive AI frameworks — together

Publishers, industry bodies, and researchers need to **collaborate** to provide **clear, accessible policies, guidelines and disclosure standards** on ethical AI use in research publishing, to foster consistency and confidence

Treat articles as part of a wider narrative

Publishers must adapt to support more **dynamic, evolving narratives of research publication**, and explore tools that allow the **seamless, parallel generation of artefacts** - prompts, datasets, preprints, and 'outputs' for all users

AI as a research partner

Publishing is challenging. Publishers should **embrace AI tools to collate artefacts and streamline labor-intensive tasks**, such as reference management, summarization, and hypothesis testing — while clearly defining AI's role throughout

Support inclusive AI research practices

Encouraging diversity in research practices means ensuring AI tools reflect varied perspectives, promoting equity and transparency across the academic community.

Publishers

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AI as a research misconduct accelerator

There is a *"continuation of unethical activity"* in the publishing world that represents a *"major and ongoing challenge for the entire scholarly publishing industry and all who rely on the integrity of the scholarly record"*.

Liz Ferguson,
Senior Vice President
Research Publishing, Wiley

Understanding ‘misconduct’

Research misconduct

‘Unethical practices that fall into this category include ghost-writing, guest authorship, and authorship for sale; while not new, they are becoming more prevalent..’ (Ferguson, 2022)

AI-Generated content

‘AI tools can be exploited to generate fabricated data, manipulate images, and even devise entire studies with seemingly legitimate results.’ (Naddaf, 2023)

Peer review manipulation

‘In instances of manipulation, dishonest researchers may engage in various deceptive practices, such as submitting fake contact information for suggested reviewers, providing false email addresses, or even reviewing their own submissions under different identities.’ (Lechner and Evans, 2020; COPE Council, 2021)

Paper mills

‘An individual, group of individuals, or organisation that aim to manipulate the publication process to achieve the publication of articles for the purposes of financial gain.’ (COPE Council, 2023)

Ferguson, L. (2022). ’Advancing Research Integrity Collaboratively and with Vigour’
Naddaf, M. (2023). ChatGPT generates fake data set to support scientific hypothesis. Nature.
Lechner, I. and Evans. N. (2020). ‘Fake Peer-Reviewing’ The Embassy of Good Science
COPE Council (2021). How to Recognise Potential Manipulation of the Peer Review Process. COPE: Committee on Publication Ethics
COPE Council (2023). Committee on Publication Ethics. Systematic manipulation of the publication process

Why does this *actually* matter?

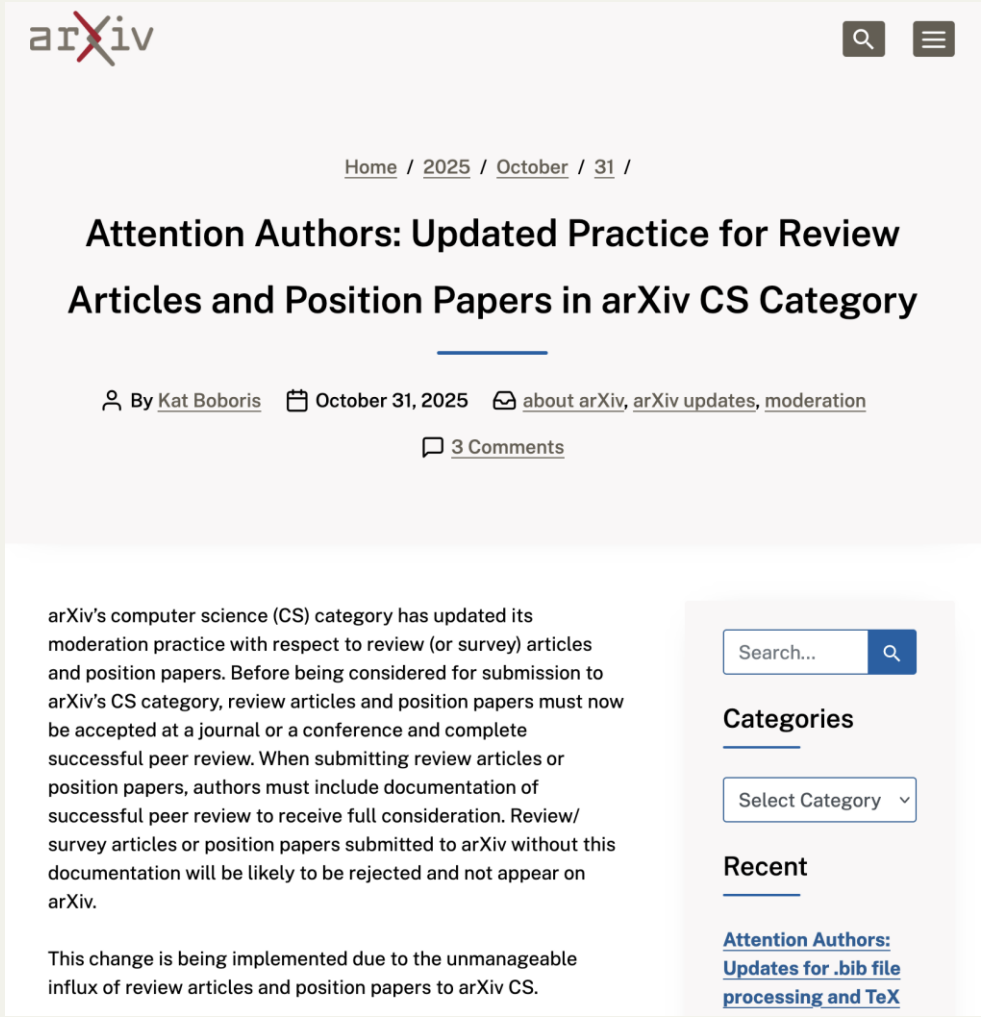
AI amplifies these challenges

‘Slop’ acceleration:

- The combination of publish-or-perish culture and generative AI risks flooding journals with low-quality, error-filled and sometimes plagiarised work. AI can lower the effort barrier, flooding research pipelines with unreliable content.

We’re already seeing this play out

- ArXiv’s computer science category recently tightened its moderation policy after seeing an ‘unmanageable influx’ or AI-generate review and position papers, requiring peer review before posting.



https://blog.arxiv.org/2025/10/31/attention-authors-updated-practice-for-review-articles-and-position-papers-in-arxiv-cs-category/?ref=404media.co

AI amplifies these challenges

Fabrication and falsification:

- AI can generate believable but false data, graph, citations, or paraphrase and combine works - making it harder to know what's genuine

Training data issues:

- AI systems are trained on copyrighted or proprietary works (often without permission), raising concerns about intellectual property theft and uncredited reuse.

Invisible or accidental plagiarism:

- AI can reproduce or remix content without attribution. This risk is heightened for early career researchers who may not spot recycled content, content undergoing translation, or for researchers from academic cultures with different citation norms

Gaming peer review:

- AI can be used to write fake reviews, impersonate individuals, or mass submit fabricated feedback, undermining the trust and transparency of peer review processes

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Rebuilding trust through proactive integrity and governance

Moving from reactive to proactive

Reactive

Solutions that **empower** publishers, funders, and institutions to **elevate their standards of research integrity, transparency, and accountability**

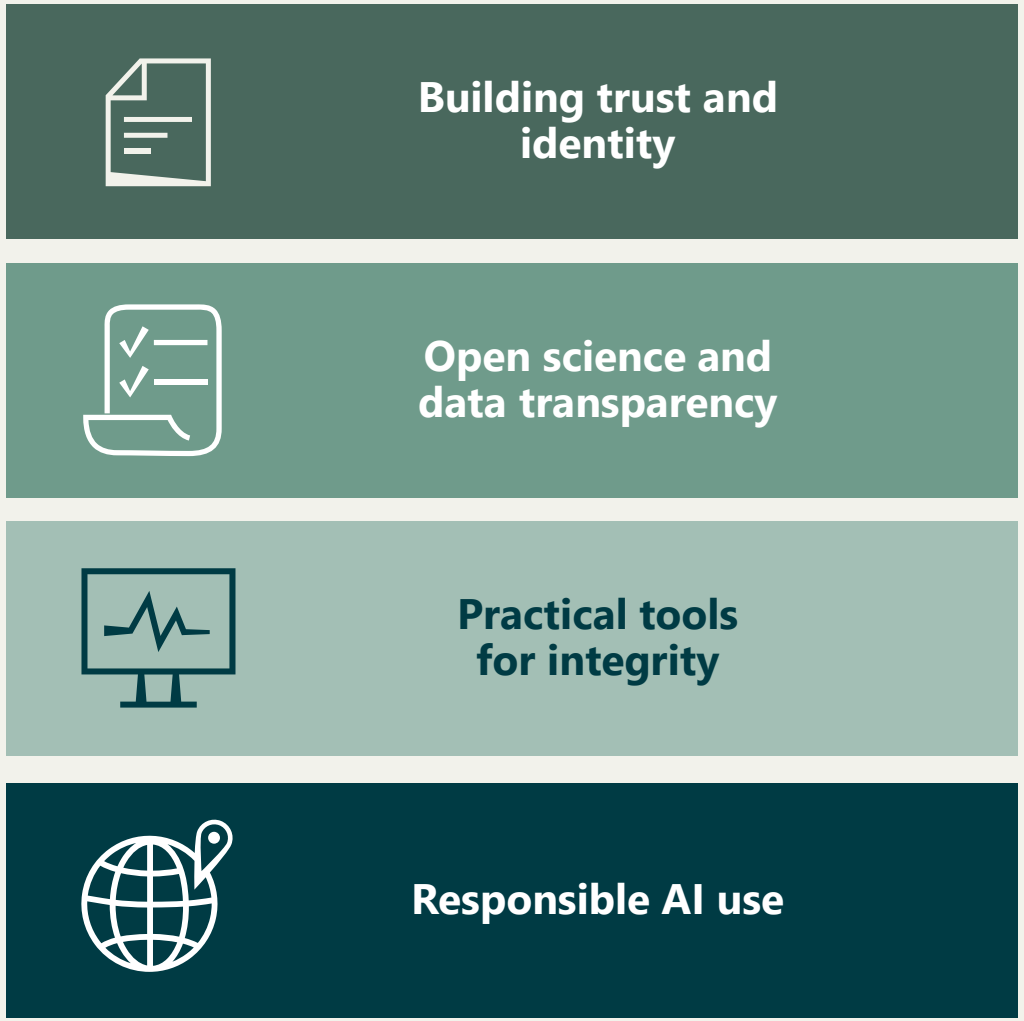
Solutions that foster a culture of **continuous innovation and optimisation,** using data to help rapidly respond to evolving needs and threats in the research landscape

Move away from research as individual objects - looking also at surrounding artefacts as **part of an interconnected research ecosystem** from which to draw insights

Deliver clear, interpretable, and transparent narratives for users of all experiences to make **accurate, confident, and swift assessments**

Proactive

Proactive solutions



Trust is multi-dimensional

Trust in the individual identity of a user

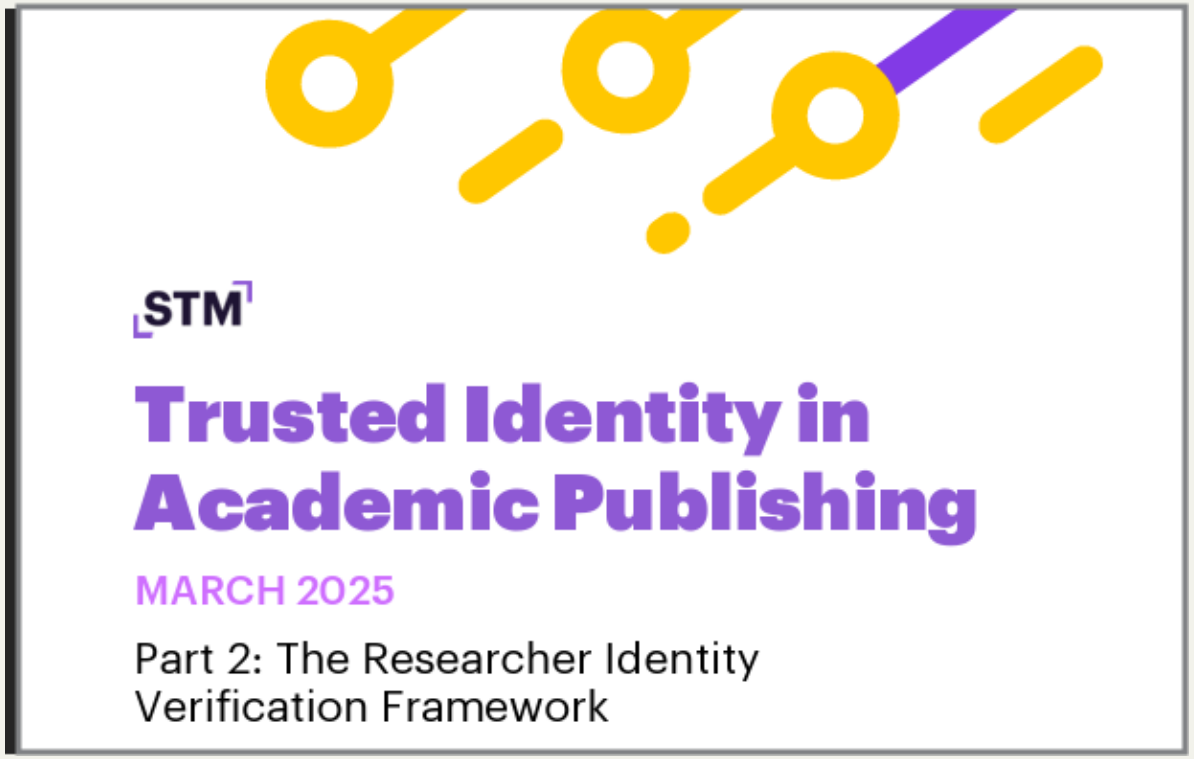
How confident are we that the user's identity is being controlled by a real-world bona fide, and not — for example — a bad actor impersonating someone else?

Trust in the things they claim about themselves

How much evidence we have that a given user is a good actor; a genuine researcher acting honestly?

Identity establishes accountability

Verified identity without a strong record is better than an impressive record that can't be verified…



STM: Trusted Identity in Academic Publishing (Oct 2024/March 2025)

Persistent, trusted, *open* identifiers

Building trust and identity

Strengthen identity credibility

Linking *open* persistent IDs (PIDS) like ORCID or ROR provides a consistent, visible record of contributions, strengthening reputation in the academic community.

Enable fast verification

Trust markers within PIDs allow quick identity verification, giving collaborators and institutions confidence in researcher's records, recognise contributions, and establish accountability.

Proactively address integrity

Open PIDs support a proactive approach to identity verification *without barriers*, reducing risks and maintaining a reliable scholarly record.

Reward trusted behaviour

PIDs within foster transparent feedback loops around research activity, helping researchers gain recognition and support across the research ecosystem.

ORCID

RoRI

ROR

TIER 2

DRYAD

STM

iRISE improving Reproducibility In SciencE

CoARA

Open science strengthens trust

Open science and data transparency

Adopt good practices early on

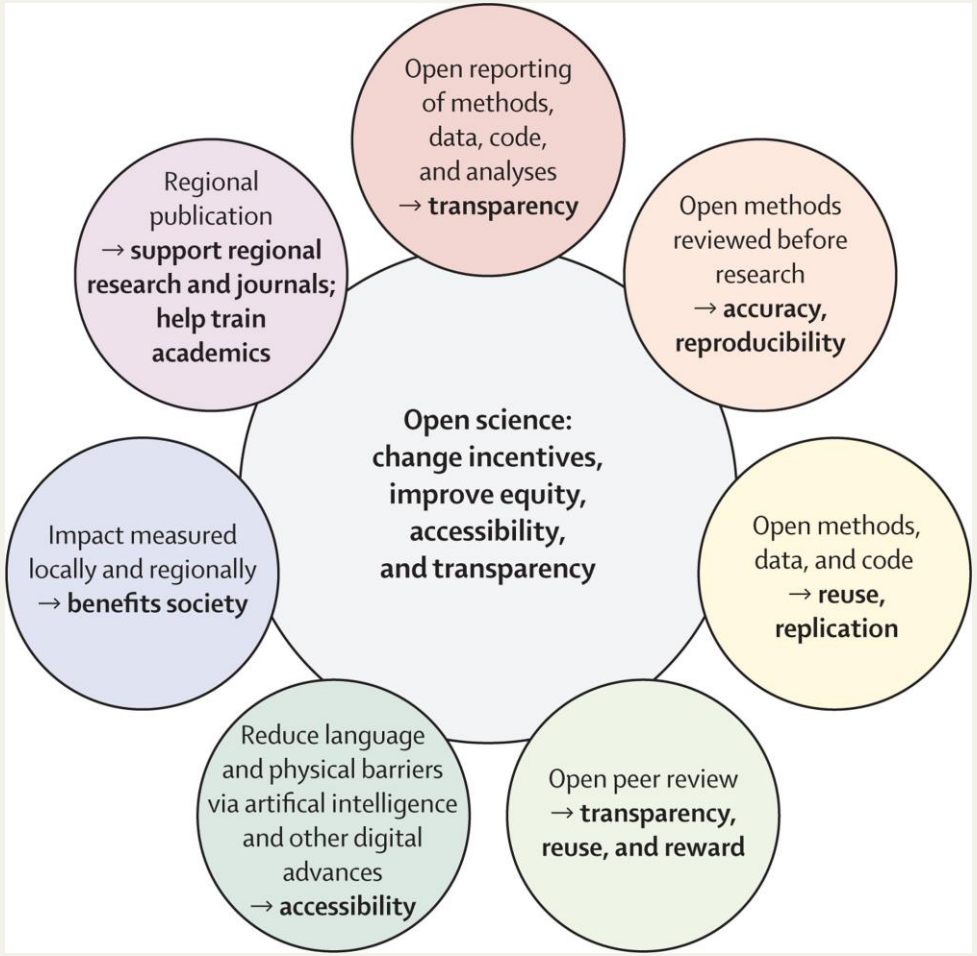
- Share data, methods, and results openly
- Post preprints to share findings early
- Pre-register your studies and follow transparent reporting standards
- Use open-source software for analysis and sharing

Building visibility and collaboration

- Publish in open journals to increase reach
- Participate in open peer review to foster collaboration
- Support your local research communities for networking and feedback

Evolving, open standards

- Store data in publicly accessible, open repositories (e.g. Dryad)
- Use persistent open identifiers (e.g., ORCID, ROR) for tracking
- Cite open resources and datasets in your publications



Multifaceted screening approaches

Practical tools for integrity

Signals in isolation are noisy, ambiguous, and difficult to interpret

Integrity systems must combine what we know about **contributors**, **content**, and **context** so that problems are caught early and explanations are clear

Contributors	Content	Context
Know your researcher Trust their identity and activity over time	**Know your content** Assess quality to spot problematic patterns at scale	**Know the context** Apply peer review and surrounding knowledge
	Know its provenance Trace origins and originality	**Know how to act** Reduce noise to turn insights into swift, evidence-based actions

From provenance to quality

Practical tools for integrity

The roles of researchers in these systems haven't changed — we've always cared about these things

AI tools force us to continuously reevaluate not only what is written, but who is writing, how it is expressed, and whether it is trustworthy

Provenance **matters...**

Knowing where a paper has come from builds trust in authorship and transparency...

But disclosure must equitably evolve to reflect new tools and practices

...but *quality* is essential

Style

Clarity, coherence, and connected reasoning show whether authors truly understand their work

Substance

Sound methods, rigorous data, and originality prove whether research is accurate, valuable, and ethical

Provenance builds trust
Style shows understanding
Substance proves the science

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Implications and support for librarians

Implications and support for librarians

Discovery and search assistance evolution

- How AI-powered search differs from traditional databases in coverage, ranking algorithms, and retrieval methods
- When to use semantic search vs. structured queries

Critical evaluation and AI literacy instruction

Librarians must develop expertise in teaching patrons how to assess:

- AI-generated literature reviews
- Identify hallucinated citations
- Understand the limitations of LLM-based research tools

Workflow integration and tool selection

- Support is needed for evaluating and implementing AI tools within existing research workflows (RefWorks, Zotero, institutional repositories)

Implications and support for librarians (cont'd)

Equity and access considerations

- Equitable access to premium AI research tools while managing budget constraints
- Guidance on balancing open-access AI tools with subscription-based platforms

Reference and instruction service transformation

- AI changes the nature of reference questions from "how do I find X" to "how do I verify what AI found" and "which AI tool should I use for Y task."
- Updated service/staffing approaches for this consultative, evaluative role

Data privacy and ethical use policies

- Policies around patron data protection when using AI tools
- Understanding terms of service and institutional compliance requirements.

Global librarian implications

Cross-language research discovery gap

- AI tools primarily trained on English-language corpora may underrepresent or mistranslate global research output
- Consortia need AI platforms that bridge the gaps between languages, ensuring global research appears in AI-powered discovery

Consortium-level procurement and evaluation standards

- Collective frameworks for assessing AI research tools' coverage of regional journals (such as those indexed in Taiwan Citation Index) that comply with academic integrity standards
- Bulk licensing negotiations require understanding which AI tools provide genuine value vs. redundant capabilities

Supporting researchers' international visibility

- Global faculties face pressure to publish internationally while maintaining local relevance
- AI tools that help researchers identify appropriate journals, understand global research trends in their fields, and position their work within international conversations

Global librarian implications

Vendor dependency and data sovereignty concerns

- Consortia must navigate where patron research data is stored, if AI training includes globally accessible institutional content, and institutional autonomy and data control
- Evaluating open-source alternatives and understanding data flow in AI systems

Capacity building across diverse institutional tiers

- Consortium members range from top research universities (NTU, NTHU) to smaller regional institutions with varying technical infrastructure and staff expertise
- Support models must enable equitable AI literacy and tool access across this spectrum without creating a two-tier system

Integration with local research assessment frameworks

- AI tools must align with local requirements, institutional evaluation systems, and emphasis on both international publications and local societal impact

Choosing a path forward

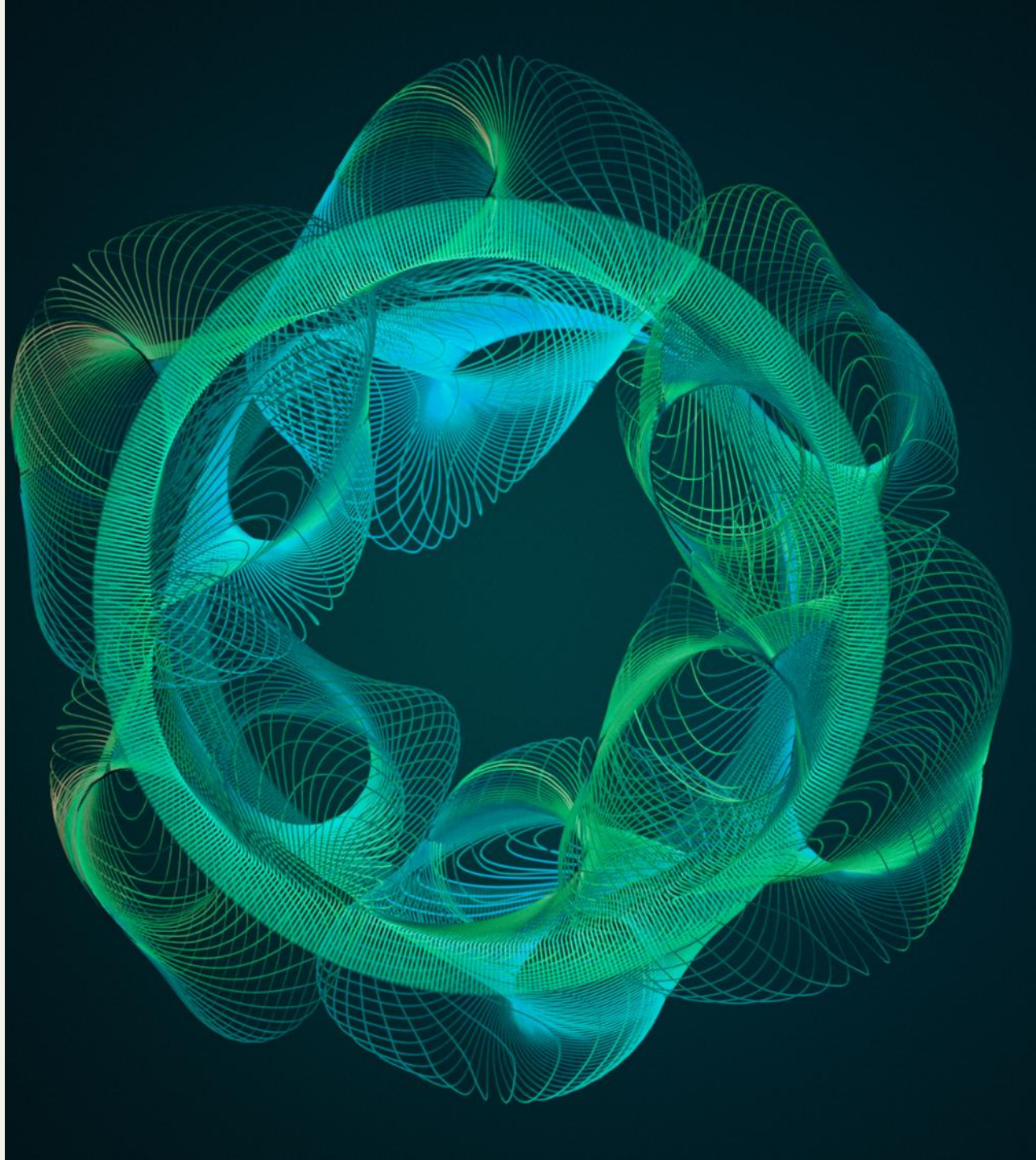
AI in research isn't about whether to use it, but how to use it **responsibly**.

The ecosystem needs to create environments where researchers can feel more confident to use AI effectively and ethically in their work. This requires:

- Guidelines which balance transparency with practicality
- A focus on building AI competence across all career stages
- Clear frameworks for bias detection and privacy protection
- Wide support for innovation, policies, and research integrity

The roles of the authors, reviewers, and editors haven't changed - but AI has changed the WAY we can perform our work.

We need to responsibly provide **education**, **policies**, and **infrastructure** that encourage safe and effective use while maintaining the key expertise and experiences of the individuals involved.



研討會後問卷調查
Post-webinar survey

掃描QR code完成調查， 告訴我們您對本次講座的看法。

感謝您參加我們的網路研討會。您的意見回饋有助於我們改進未來的課程。請花點時間分享您的體驗。

Thank you for attending our webinar. Your feedback helps us improve future sessions. Please take a moment to share your experience.

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