UCL Social Research Institute

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Responsible Use of AI in Evidence Synthesis (RAISE)

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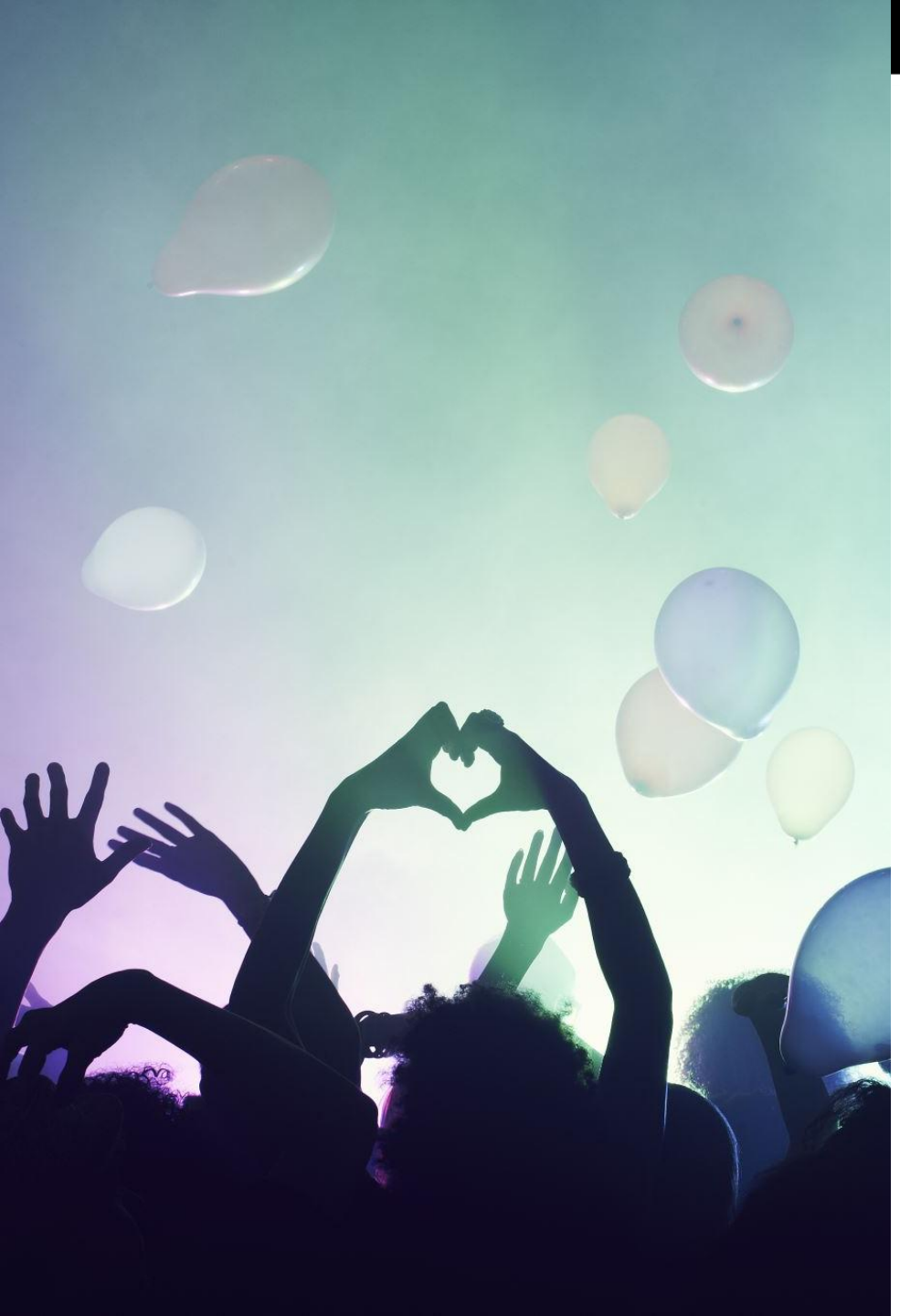
About me

- Worked in the EPPI-Centre, UCL for a long time
- Systematic reviews – mostly for Department of Health & Social Care / PHE
  - Addressing questions beyond effectiveness
  - Methodological development
- Evidence synthesis methods
- Long-standing area of work in making the review process more efficient using new technologies



Acknowledgements and declaration of interests

- I am employed by University College London; receive funding from the funders below for this and related work; lead EPPI-Reviewer software development
- Cochrane roles: Review author; Co-convenor Joint Artificial Intelligence Methods Group[NEW!]; Co-Senior Scientific Editor Cochrane Handbook; was Co-lead on Project Transform: currently support Cochrane with information technologies
- Research projects on evidence synthesis and technology development for evidence synthesis
- Guidance for responsible use of AI in systematic reviews (RAISE)
- Parts of this work funded by: Wellcome Trust, National Institute for Health Research (NIHR)

Authors of RAISE

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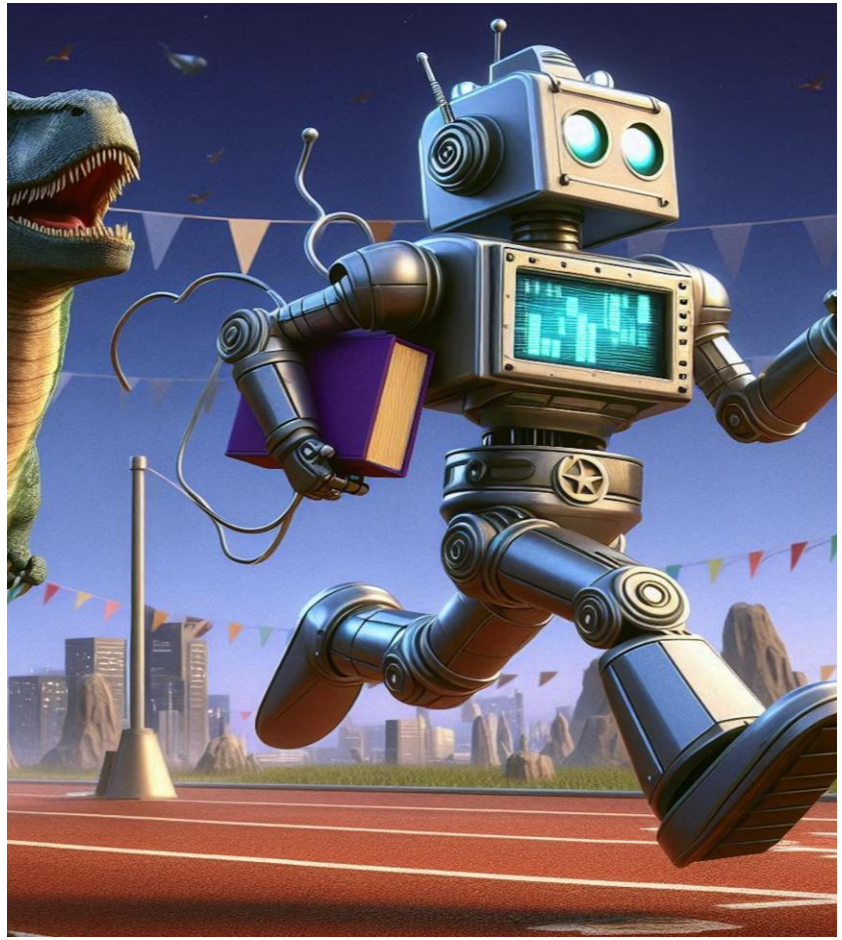
Outline

- Why RAISE is needed
- What RAISE is
- What's next?



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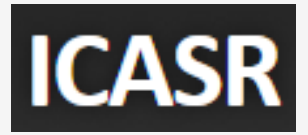
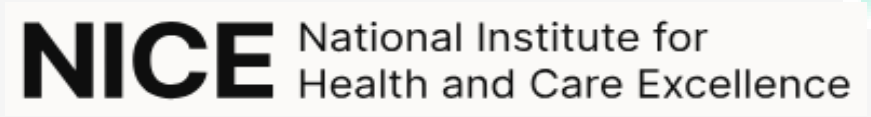
Where the work came from

- A number of us were asked repeatedly for guidance about which tool to use, and when
- But found we couldn't!
- The evidence base on which to base our advice was very limited
- AI tools were being developed that were not engineered to be fit-for-purpose

Vision: RAISE guidance for the responsible use of AI in evidence synthesis

- A draft of the guidance and recommendations is now online for consultation
- Our vision is for it to be a ‘living’ set of guidelines, that is updated through community input and helps to define roles & responsibilities within the ecosystem
- Should the ecosystem develop in this well-organized way, we hope to see the development of AI tools that adhere to the principles of research integrity, and so enable evidence accessibility in equitable and rigorous ways





Roles-based ecosystem

- We need to support the wider adoption of AI to overcome the increasing burden of doing timely and cost-effective evidence synthesis
- We need cross-field standards to support the development of appropriate and responsible AI
- We anticipate an ecosystem made up of individuals, collaborations, and organisations which each have a role to play in developing and using AI in a responsible way
- (one person / organisation may play multiple roles)

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tine to
nd grow

Evidence Synthesists

Remain ultimately responsible for the evidence synthesis

Report AI use in your evidence synthesis manuscript transparently

Ensure ethical, legal, and regulatory standards are adhered to when using AI

Be transparent about when the AI works best, its limitations, and any interests.

Commit to continued learning, development, and monitoring.

AI development teams

Methodologists

Adhere to open science practice when researching and evaluating AI systems

Commit to independent evaluations and validation of AI systems

Adhere to open science practices when designing, building, testing, and validating tools.

Be transparent about when the AI works best, its limitations, and any interests.

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AI development teams

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Consider sustainability and generlisability o the products they support

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AI development teams

Encourage the responsible use of AI

Consider sustainability and generlisability o the products they support

Funders of evidence synthesis

Ensure best practice standard for responsible AI use are clear and integrated into policies and guidelines

Promote, guide, and support responsible AI use in your evidence synthesis activities

Monitor the develpment and use of AI within your organisation

Organisations producing evidence synthesis

Ecosystem to h
roles contin
develop and

Trainers of evidence synthesis methods

Ensure best practice standards for responsible AI are embedded within training materials

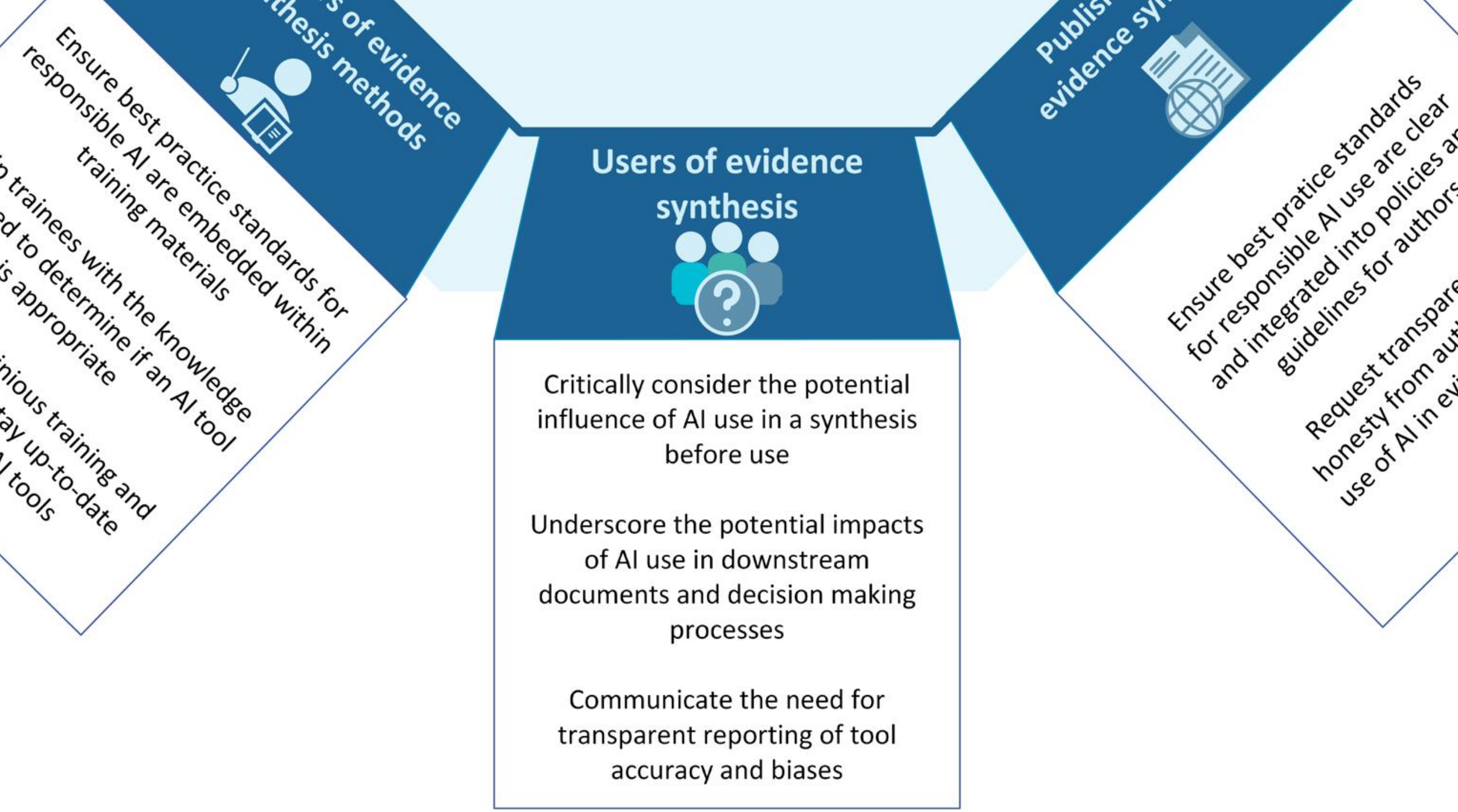
Equip trainees with the knowledge they need to determine if an AI tool is appropriate

Undertake continious training and development to stay up-to-date with emerging AI tools

Users of evidence synthesis

Critically consider the potential influence of AI use in a synthesis before use

Underscore the potential impacts of AI use in downstream documents and decision making processes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tools
Users of evidence synthesis
Critically consider the potential influence of AI use in a synthesis before use
Underscore the potential impacts of AI use in downstream documents and decision making processes
Communicate the need for transparent reporting of tool accuracy and biases
Ensure best pratice standards for responsible AI use are clear and integrated into policies guidelines for authors
Request transpare honesty from aut use of AI in evi

Publishers of evidence synthesis

Ensure best pratice standards for responsible AI use are clear and integrated into policies and guidelines for authors

Request transparency and honesty from authors on their use of AI in evidence synthesis

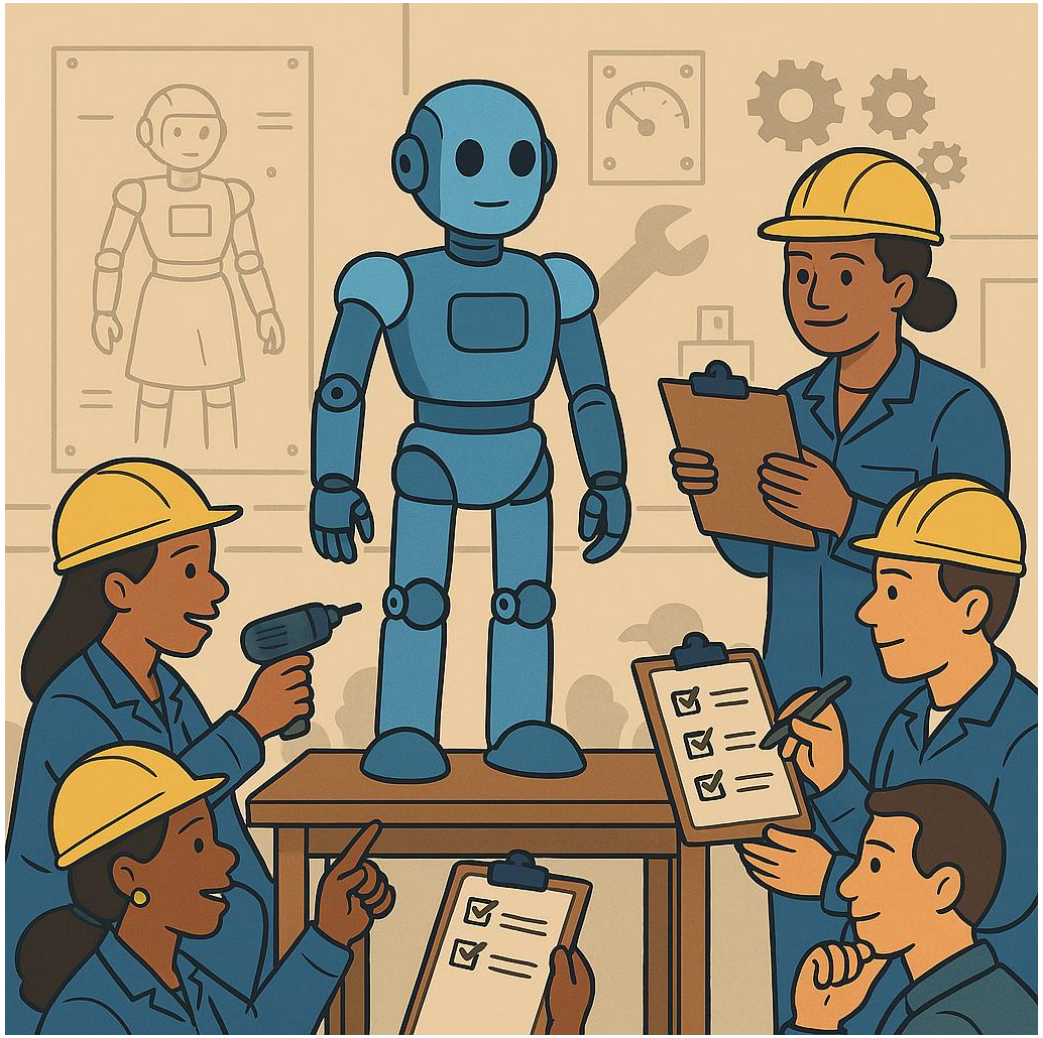
Users of evidence synthesis

Critically consider the potential influence of AI use in a synthesis before use

Underscore the potential impacts of AI use in downstream documents and decision making processes

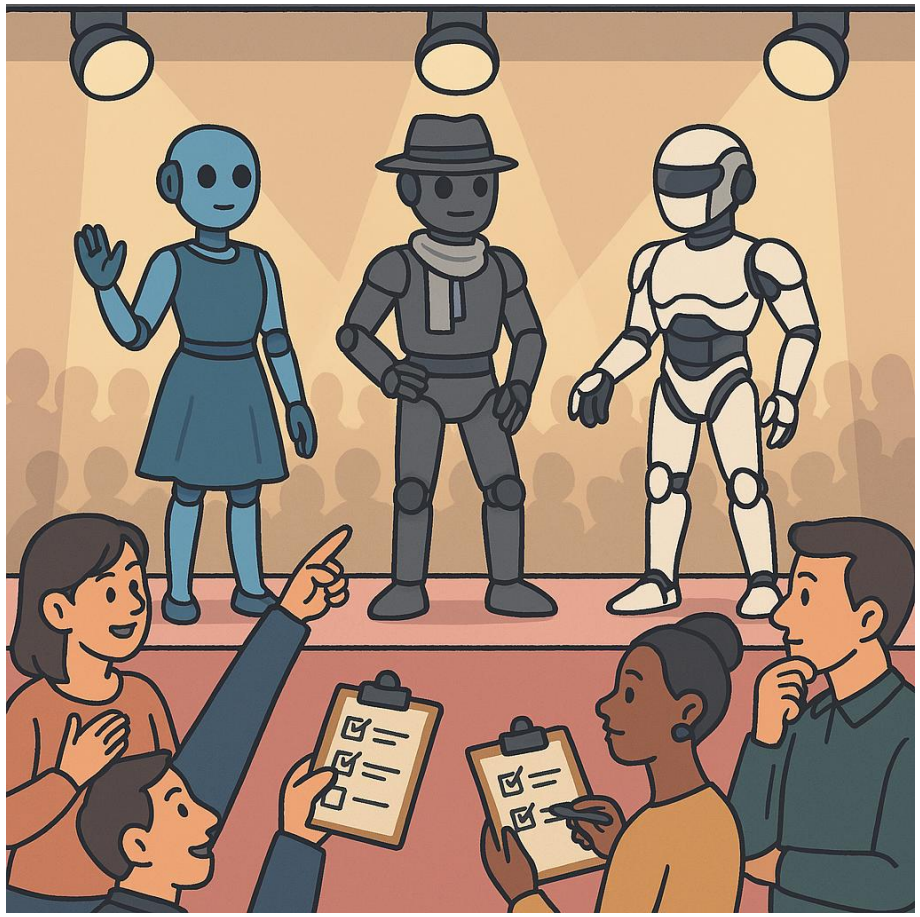
RAISE II: building and evaluating

- Building an AI tool
  - The build phase
  - The validation phase
- Conducting an evaluation
  - Considerations for each phase of the review
- Performance and accuracy metrics
- How to report the building and/ or evaluation of an AI tool



RAISE III: selecting & using AI evidence synthesis tools

- The current state of the art
- Selecting and using AI tools
  - Is there a tool to suit my current needs?
  - Does your team have the resources to use it?
  - Is it validated and appropriate?
  - Guidance for
    - Using an AI tool
    - After using the tool
- Ethical, legal and regulatory considerations when using an AI tool
- AI tool assessment considerations
  - How to make a decision about a tool post-assessment



How you can get involved

- The link : https://osf.io/fwaud/
- Timetable for development
  - The latest version is now online
  - Will move to journal publication soon
- Three documents:
  - Roles-based recommendations for practice
  - Guidance on building and evaluating AI tools
  - Guidance on selecting and using AI tools
- Do take a look and let us know what you think!