

Using Generative-AI Tools in Research: Ethics Matters; How to Operationalise an Effective System

UKRIO Webinar Series: *'AI in research:
supporting research integrity through
governance and ethics'* (09/10/2024)

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About Me

My background

Law



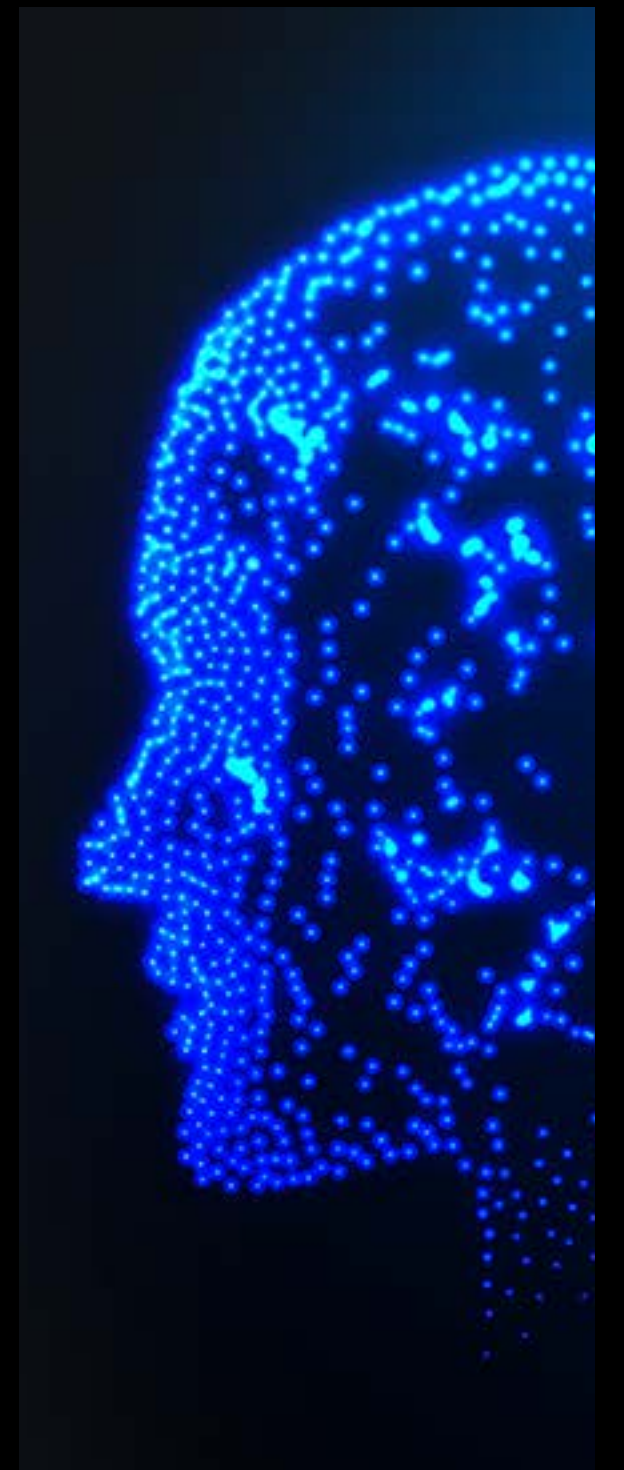
Research Data
Management

Research Ethics

Notes Before We Start

And a disclaimer...

- Views and opinions expressed will be that of my own and do not necessarily represent those of the UEA or other institutes I am affiliated with.
- When discussing the current UEA process a number of colleagues were involved with implementing this system: (from **Research and Innovation Services**; the **Information Compliance** team; **IT Services**; and **academic staff** from across the university).
- One colleague in particular needs recognition for all her work and support here – **Dr Helen Brownlee** (UEA's Research Integrity Manager).
- Note – there will be overlap between the three core questions!



(1) The potential ethical and legal considerations for using Gen-AI tools within a research project

The 'Black Box'

What's going on inside it?

- Can we check what is going on inside the tool?
- What is the algorithm? What is it doing?
- Are there any inherent biases within the tool?
- Inaccurate data out sometimes, as though correct (hallucinations).
- Do we know what data it was trained on?
- Data security. How is it protected?
- Where will the data be stored? (who has access to this?)



Data Input and Output

Feed the machine

- What data will be inputted?
- Will the inputted data be used to train the tool?
- What will it be used for or how will it be used in the future?
- How long will the data be kept in the tool?
- Can you remove the data? (What if a participant requests the data to be removed?)
- Data linkage considerations.
- What is the quality of the data outputted (re accuracy, representative, what has it used).



Intellectual Property

Who owns the inputs, outputs and everything in between!

- Intellectual property rights cover various areas e.g. copyright, patents, design rights, and trademarks.
- Starting question: Who owns the material you input?
- Do you have permission to input the information from the right's holder?
 - But, the 'research exemption'! Yes, but that does not necessarily mean we can input into the tool.
 - What about participant produced materials, can these be inputted?
- Who owns the information in the tool itself?
- Who owns the information that is outputted? (You, original holder, participant, the tool?) Did the tool add to this?
- Consider the risks here (re ownership, reuse, loss of novelty etc).
- Ideas / patentable materials – avoid inputting this into the Gen-AI tool.



Inputting Personal Data

Given the above how could we make it more risky?

- This makes matters more tricky.
- Compliance with the Data Protection Principles:
 1. Lawfulness, fairness and transparency.
 2. Purpose limitation.
 3. Data minimisation.
 4. Accuracy.
 5. Storage limitation.
 6. Integrity and confidentiality (security).
 7. Accountability.
- Data protection by design and default.
- Who is the controller / processor here?
- A DPIA will be required by law if personal data will be inputted which is likely to result in a high risk to the rights and freedoms of individual data subjects.

Should I?

The Computer says 'NO'!

- A reflection on whether you can comply with data protection requirements.
- Honestly, in many cases this will likely be a no.
- But the participant consented!
- Can you anonymise the information first?
- Confidential data?
 - Business risks – university position.
 - Professional risks (re your research).



Can we use it?

Given all of the above considerations / questions / concerns

- Absolutely you can.
- But the question is should you?
 - The key starting question: “Is its use appropriate, useful, and needed for the project? Does it add something?”
- If you do wish to use it, reflect on the previously discussed potential ethical and legal issues.
- These are not insurmountable considerations.
- But they must be reflected on to ensure it is fair to participants and so that the research meets good ethical standards and practices (and legal requirements).

(2) What researchers need to consider when using Gen-AI tools in their research (to ensure good practice)

So what Should I as a Researcher do?

How to do it... part 1

- What information is available on the tool:
 - Privacy policy.
 - Terms and conditions.
- What do you know of the algorithm?
- Consider the potential risks.
- Consider the potential data linkages.



So what Should I as a Researcher do?

How to do it... part 2

- Opt-out of training the Gen-AI tool (where possible).
- Keep the data in the UK / EU (where possible).
- Avoid inputting personal data or confidential data. If you wish to do this ensure to speak to the the Information Compliance Team (**before** you start).
- If you are planning to input secondary data – that belongs to another – in the tool, ensure to check the permissions (remember just because data is available online, it does not mean we can do what we want with it or that there is no copyright).

Transparency and Consent

Being clear with participants and in publications

- Need to clearly inform participants of the Gen-AI's use in the project.
 - How, what it will involve, specifics of the tool. (Enough information required to give informed consent).
 - Let them know of the possible risks.
 - Consider future reuse in tool.
 - Can they still take part but opt-out of the Gen-AI usage part?
 - Then let them decide to use the tool.
- Can you adequately protect the rights of vulnerable groups and children?
- Can previously or future collected data be input into the Gen-AI tool (did the participant's give consent for this)?
- Attribute work – need to capture details of the Gen-AI tool used to be able to evidence the contribution of the tool in work.
- Accountable – the researcher has to take full responsibility for the use of the Gen-AI tool in their research.

Participant Information Sheet (PIS)

What should be included in the PIS to inform participants...

- Need to include the Gen-AI usage in the project on the PIS.
- Where, what, how will depend on its proposed usage.
- At the UEA (as this is a specialist area), we sought to create a template that can be adapted by researchers.

7. Research Involving Generative AI Tools - Template for the Participant IS/CF Opt In Document

If you require a version of the Participant Information Sheet (PIS) and Consent Form for your research involving a generative AI tool, below is the template for you to either download and complete, or to use to edit the PIS generated in Ethics Monitor.

The text highlighted in green shows what additional information should be added to a PIS when a study involves a generative AI tool.

[Generative AI Tool Template for the Participant IS/CF Opt In Document](#)

(3) What will the study involve for me?

[INSERT, to the extent that this is known at the outset of the study, the nature, location, and timing of the participant's involvement in study activities.]

[INSERT a detailed description of what the study activities will involve for the participant.]

[INSERT, if applicable to your study, details of any access to the participants personal information or records that is being requested, including details of which information will be accessed, how it will be accessed, and for what purpose it will be used.]

[INSERT the details of the use of the generative AI tool(s) in the study, for example to generate images that will be shown to the participants. Include if relevant, the data to which the tool(s) will have access, a description of what the generative AI tool(s) will do with their data, and the measures in place to ensure the privacy and security of their data.]

[INSERT, if applicable to your study, text to say that their data may be reused as a secondary dataset in a generative AI tool(s).]

(5) Do I have to be in the study? Can I withdraw from the study once I have started?

Being in this study is completely voluntary and you do not have to take part. Your decision whether to participate will not affect your current or future relationship with the researchers or anyone else at the University of East Anglia *[INSERT name of any other individuals or institutions]* now or in the future.

If you decide to take part in the study, you can withdraw your consent *[INSERT 'at any point.']* **[OR if anonymised and/or pseudonymised personal data will be collected: INSERT 'up to the point that your data is fully anonymised.']**. You can do this by *[INSERT how would a participant withdraw their consent to participate in the research if they change their mind]*.

[INSERT, if applicable to your study, text to say that if they withdraw from the study, their data cannot be removed from the generative AI tool(s).]

(6) What are the consequences if I withdraw from the study?

[INSERT if Interview:] You are free to stop the interview at any time. Unless you say that you want us to keep them, any recordings will be erased and the information you have provided will not be included in the study results. You may also refuse to answer any questions that you do not wish to answer during the interview. If you decide at a later time to withdraw from the study your information will be removed from our records and will not be included in any results, up to the point we have analysed and published the results **If UG or PGT:** and this would include the submission of the dissertation for assessment purposes.

[INSERT, if applicable to your study, text to reiterate that they are free to withdraw from the study at any time, but their data cannot be removed from the generative AI tool(s).]

(7) Are there any risks or costs associated with being in the study?

[INSERT the risks or costs associated with being in the study.]

Include the risks associated with using the generative AI tool(s) in the study, for example their data will stay in the tool(s).

(9) What will happen to information provided by me and data collected during the study?

[INSERT what will happen to the participant's personal data and the information the participant provides during the study.]

Your personal data and information will only be used as outlined in this Participant Information Sheet, unless you consent otherwise. Data management will follow the Data Protection Act 2018 (DPA 2018) and UK General Data Protection Regulation (UK GDPR), and the University of East Anglia's [Research Data Management Policy](#).

*[INSERT **ONE** of the following paragraphs:]*

*[OPTION 3: where PARTICIPANTS **WILL BE IDENTIFIED** in publications e.g. oral history:]*

UG/PGT:

The information you provide will be stored securely. Study findings will be used for the purposes of my dissertation and may also be used for other scholarly and educational purposes such as research publications and in teaching, and you will be identified if you decide to participate in this study. Where the study findings are solely used for the dissertation, the data will be destroyed following the examination of the dissertation. Where the study findings will also be used for other purposes such as publications, the data will be kept for at least 10 years beyond the last date the data were used. The study findings may be deposited in a repository to allow it to facilitate its reuse. You will be identifiable in the deposited data.

For PGR/Staff:

The information you provide will be stored securely. Study findings may be published and may also be used for other scholarly and educational purposes such as in teaching, and you will be identified if you decide to participate in this study. The data will be kept for at least 10 years beyond the last date the data were used. The study findings may be deposited in a repository to allow it to facilitate its reuse. You will be identifiable in the deposited data.

[INSERT an explanation of any relevant points to be included in your information.]

Include the involvement of the generative AI tool(s) in the study and if applicable to your study, state their data cannot be removed from the generative AI tool(s), and may also be used to train the tool(s) and may be reused by the tool(s).

PIS – Consent Form Section

part in any of the activities that I wish.

- *[INSERT if applicable when using a Generative AI Tool(s):]* I understand how my data will be used and managed by the generative AI tool(s). I also understand if and how my data will be retained by the generative AI tool(s) and used in future work by others.
- I understand that the results of this study will be used in the way described in the information sheet.
- I understand that personal information about me that is collected over the course of this project will be stored securely and will only be used for purposes that I have agreed to. I understand that information about me will only be told to others with my permission, except as required by law.

My data being inputted into a generative AI tool(s)

YES NO

The use of a generative AI tool(s) in the study

YES NO

*(only needed when there is a **direct** use of the tool(s) by the participants, and not when the tool(s) is being used in the study before the involvement of the participants, for example when using the tool(s) to generate images to show to the participants.)*

(3) How a university or institute can operationalise an effective procedure and process to support the ethical and legal use of these tools in research

Interested Parties

Working together...

- Need to bring the interested parties together:
 - Research Support;
 - Information Compliance;
 - IT Services;
 - Data Management Services;
 - Ethics Committee; and,
 - Researchers.

Policy

UEA Gen-AI Policy

- https://www.uea.ac.uk/documents/20142/1553813/uea_generative_ai_policy_for_research_and_innovation_-_20_03_24.pdf/8ddb7e71-9cd4-b689-5e0f-3fa36a155b76?t=1711376037035

Generative AI Policy for Research and Innovation

Authors: Research and Innovation Services (RIN) and Postgraduate Research Service (PGR) with contributions from the University Research Ethics Committee AI Working Group; the UEA AI Working Group; the Information Compliance Team, and the Head of Insurance.

Date: 20th March 2024

Version History: 1.1. - details of UEA's approval process for a generative AI tool are linked to in section 6.

Approved by: University Research Ethics Committee on 17th January 2024; Innovation Executive on 24th January 2024; Research Executive on 25th January 2024; Doctoral College Executive on 14th February 2024. Endorsed at Senate on 28th February 2024.

Effective Working Date: 1st March 2024 for all new Generative AI activities and for updates to software for ongoing activities. Those persons who have been working with Generative AI prior to the Effective Working Date should aim to ensure their work complies with this Policy at their earliest convenience.

Review Dates:

This Policy will be reviewed regularly during the first 12 months to ensure it remains current in light of the rapid developments in Generative AI technology. A full review is scheduled for completion by March 2025, and will be repeated annually thereafter.

Enquiries on the Policy: Tracy Moulton, Contracts Manager (RIN) and Dr Helen Brownlee, Research Integrity Manager (RIN): t.moulton@uea.ac.uk; h.brownlee@uea.ac.uk

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UEA Gen-AI Research Guidance Note

UEA ETHICS REVIEW OF RESEARCH INVOLVING GENERATIVE AI TOOLS

Date: 20th March 2024

This Ethics Guidance Note is part of a series of documents issued by the University Research Ethics Committee to support the University's Research Ethics Policy. For the full set of Guidance Notes, please visit the Research and Innovation Services' Research Integrity my.UEA page for [Research Ethics: Policy and Guidance](#)

This Ethics Guidance Note should be read in conjunction with the University's [Generative AI Policy for Research and Innovation](#).

INTRODUCTION

Artificial Intelligence (AI) is a novel technology and is constantly developing, but generally it:

- involves machines using algorithms to find patterns in large amounts of data.
- is the ability to perform repetitive tasks with data without the need for constant human intervention or guidance.

The field of AI has witnessed remarkable advancements, particularly in the realm of generative AI. Generative AI describes any type of artificial intelligence system that identifies patterns and structures in data / information / material and generates content, including: audio, code, images, text, simulations, and videos in response to instructions ('prompts') that resembles human-created content. Generative AI tools can be trained on large language models (LLMs). These models are the algorithmic basis for generative AI tools such as ChatGPT and Gemini. Alongside the many benefits of generative AI tools in research, there are also risks associated with this technology.

Researchers must take full responsibility for the use of generative AI tools in their research and any data / information / material they have entered into those tools, and "must take all reasonable precautions to prevent or diminish loss, destruction or damage or any occurrence or cease any activity which may give rise to liability" in order to ensure their activities are covered by the University's Insurers.

The University is committed to providing support and protecting researchers in their use of generative AI tools. As stated by the [Information Commissioner's Office \(ICO\)](#), "Applications of artificial intelligence (AI) increasingly permeate many aspects of our lives. We understand the distinct benefits that AI can bring, but also the risks it can pose to the rights and freedoms of individuals".

In line with UEA's high ethical and research integrity standards, and the UK GDPR, when working with generative AI, **UEA researchers** have a responsibility to ensure that any potential harms must be mitigated against as far as practicable, for example:

- contravening consent and permissions;
- invasion of privacy;

- invasion of privacy;
- contravening consent and permissions;

with the University's Research Ethics Policy. For the full set of Guidance Notes, please visit the Research and Innovation Services' Research Integrity my.UEA page for [Research Ethics: Policy and Guidance](#)

The UEA Process

Let's look at how we have enshrined this into the Ethics Process at the UEA

The UEA Position

- **Embrace**

- Nothing to be gained from not using Gen-AI. Instead, UEA is embracing.

- **Best Practice**

- Cannot realistically remove every risk, but researchers need to assess the risks and implement measures to sufficiently mitigate against them.
- The Policy outlines technical and organisational measures to seek to do this.

- **Support**

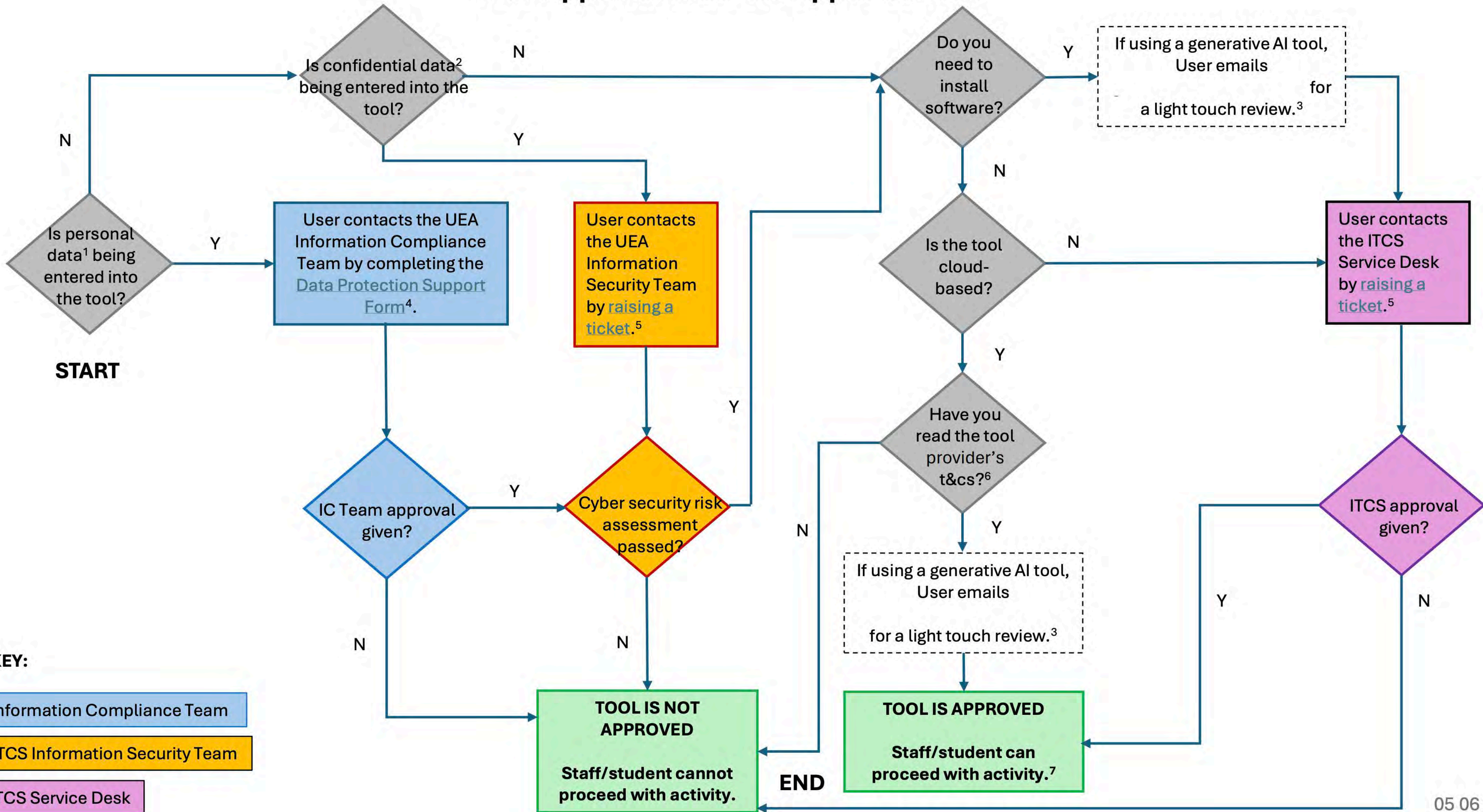
- The Policy is not to restrict research or academic collaboration, but to assist researchers in exercising caution when planning to involve a gen-AI tool, and to signpost researchers to further advice and information.

A Centrally Approved Tool?

Not yet, but something we may have eventually

- Currently, the UEA does not have a centrally approved Gen-AI tool.
- Nor is the UEA expecting to have one in the short to mid-term.
 - Even if we did, the technology is moving fast and therefore this makes it challenging.
 - And, would the tool do what everyone wants it too?
 - But, personal data?
- So, the key question to start with is: “How will the Gen-AI tool be used in the research project?”
- Then, “How can you do this ethically, legally and transparently?”

UEA* Approval of an Unsupported Tool



- *KEY:**
- Information Compliance Team
 - ITCS Information Security Team
 - ITCS Service Desk

Research categories

Will the project include primary data collection involving human participants? *

e.g. surveys, interviews, experiments that are directly carried out by the researchers.

Yes No

Will the project use secondary data involving human participants? *

Secondary data is data that has already been collected by someone other than the primary user of the data.

e.g. a researcher who is analysing data that has been collected by another researcher or organisation. It includes certain types of organisational data - this could refer to specific individuals who are identifiable within a company, or it could refer to elements such as number of employees, financial records, policies, annual reports, etc, that are for example commercially sensitive

Yes No



Will the project involve the use of live animals? *

Yes No



Will the project have the potential to affect the environment? *

Yes No



Will the project have the potential to affect culturally valuable, significant or sensitive objects or practices? *

Yes No



Will the project involve security sensitive research? *

Yes No



Will the project involve a generative Artificial Intelligence (AI) tool? *

This includes the use of a pre-existing generative AI tool or the building of a generative AI tool from scratch. IT DOES NOT APPLY TO STUDIES THAT ARE ONLY SEEKING VIEWS ON AI.

The involvement of a generative AI tool in the project, applies to any part of the process from design to method to analysis to dissemination.

DO NOT SAY 'YES' IF USING MS TEAMS.

Yes No



Save and continue

Save for later

Embedding within the Application Process

Ethics Monitor

- Ticking yes on this option then leads to other options being opened up later in the ethics application process.

Generative Artificial Intelligence

Describe the generative AI aspect of this study. *

e.g. to analyse data, to interview a participant, to tag an image, as part of participatory research or co-creative research, to use it as a prompt or part of the research design, or to build or understand an AI tool.

Pre-existing Generative AI Tool Details

Are you using a generative AI tool that already exists? *

Yes No



Add another

New Build or Developing a Generative AI Tool Details

Are you building a new generative AI tool from scratch or developing a pre-existing generative AI tool? *

Yes No



Privacy Considerations

Will your involvement of the generative AI tool include inputting personal, confidential, third party, or UEA business critical data/information/material? *

You are strongly advised not to input any personal, confidential, third party, or UEA business critical data/information/material into a generative AI tool.

Yes No



How will you mitigate against any potential adverse linkages between your usage of the generative AI tool and other usages of the tool? *

Have you explained to participants in the Participant Information Sheet, the use and context of the generative AI tool? *

Yes No Not applicable



Intellectual Property (IP) Risks

Are you planning to enter any data/information/material into the generative AI tool? *

Yes No

Biases and Discrimination

Explain how confident you are that the generative AI tool can meet the level of accuracy required for your project. *

How will you mitigate against the generative AI tool creating biases or discriminatory outcomes at the point of application? *

e.g. if your are inputting data into the generative AI tool, how will you check the quality of the data for any biases? How will you check if the AI model has any possible learned or programmed biases?

Other Ethical Considerations

How will you mitigate against any unexpected behaviours or unforeseen consequences of the decisions of the generative AI tool? *

Provide details about any broader ethical and societal impacts of using a generative AI tool for your project. *

The unpredictability of generative AI software can result in outcomes that negatively impact individuals or society as a whole.

UEA Approval of the Generative AI Tool(s)

Provide the following evidence of UEA approval of the generative AI tool(s) you are planning to use.

YOU WILL NEED TO OBTAIN THIS APPROVAL FIRST, FOLLOWING THE UEA APPROVAL STEPS OUTLINED [HERE](#), BEFORE SUBMITTING YOUR ETHICS APPLICATION, OTHERWISE YOUR ETHICS APPLICATION WILL BE RETURNED TO YOU.

1. Data Protection Approval of the Use of the Generative AI Tool(s) *

Follow the UEA Approval Steps (the link is provided in the Guidance for this question) and provide details of the Data Protection Support Form outcome undertaken by the UEA Information Compliance Team, if relevant.

A DPIA is required by law if you will input personal data where the processing of the personal data is likely to result in a high risk to the rights and freedoms of individual data subjects.

Even if you are not inputting personal data, the University recommends that you submit a Data Protection Support Request when you are using a generative AI tool.

PLEASE READ THE GUIDANCE FOR THIS QUESTION.



Upload documents related to data protection.

e.g. the outcome of the UEA Data Protection Support Form.

choose file..."/>

2. ITCS or GenAI Light Touch Review Group Approval of the Use of the Generative AI Tool(s) *

Follow the UEA Approval Steps (the link is provided in the Guidance for this question) and provide details of either the ITCS approval or the GenAI Light Touch Review Group (LTRG) approval that was given for the planned usage of the generative AI tool(s) in your project.

You must include any restrictions that have been stipulated for the use of the generative AI tool(s) in your project and any requirements as part of giving their approval.

PLEASE READ THE GUIDANCE FOR THIS QUESTION.



Upload documents related to the ITCS approval or the GenAI Light Touch Review Group approval. *

choose file..."/>

The UEA Process

I want to know more!

- Lays out the steps of our journey.
- A blueprint?
- Accessible at: <https://www.timeshighereducation.com/campus/developing-genai-policy-research-and-innovation>.
- *Published yesterday!*

The screenshot shows a webpage from Times Higher Education. At the top, there is a navigation bar with links for Home, News, Rankings, Jobs, Students, Events, Resources, and Solutions. Below this is a secondary navigation bar with 'Campus' selected, and links for 'Resources for academics and university staff', 'Home', 'Key topics in HE', 'Spotlight guides', 'Collective insight', 'Podcasts', 'University partners', 'Green skills', 'About', and 'Newsletter sign up'. The main content area features the article title 'Developing a GenAI policy for research and innovation' in a large, bold font. Below the title is a sub-headline: 'Establishing a framework to guide AI use in research is vital for ensuring institutions are and remain fully compliant'. There are several tags below the sub-headline: 'Artificial intelligence', 'Research excellence', 'University leadership', 'Feature article', and 'Europe'. The author information shows a profile picture of Helen Brownlee and Tracy Moulton, with their names and 'University of East Anglia' listed. The date '8 Oct 2024' and social media icons are also present. A large image of a man working in a laboratory with a robot arm is featured. To the right of the image, it says 'Created in partnership with' followed by the UEA logo and a 'See all resources' button. At the bottom, there is a 'YOU MAY ALSO LIKE' section with a preview of another article titled 'Professors who 'practise what they preach' help...'. The page footer is partially visible at the bottom.

Questions / Comments /
Observations?

Thank you for listening!

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