*Draft for comment:* Developing a library strategic response to Artificial Intelligence: Working paper

The purpose of this short working paper is to set out considerations relevant for libraries developing a strategic response to Artificial Intelligence.

It is organised around developing a set of questions that prompt reflection and action.

# Defining AI

Artificial Intelligence has been defined as “a suite of technologies and tools that aim to reproduce or surpass abilities in computational systems that would require ‘intelligence’ if humans were to perform them. This could include the ability to learn and adapt; to sense, understand and interact; to reason and plan; to act autonomously; or even create. It enables us to use and make sense of data.” (UKRI, 2021: 4)

* AI has evolved over time. We are already familiar with auto-suggestion, recommendation, spam filtering, plagiarism detection and translation, which all, arguably, represent forms of AI.
* The release of Chat GPT has led to a surge of interest in AI and also a re-evaluation of how it is defined and the professional implications.
  + While making content creation easier, its tendency to hallucinate plausible untruths and failure to cite its sources creates an urgent need for algorithmic literacy
* Although AI promises to enhance access to knowledge, there are serious ethical concerns in the areas of bias; privacy protection; explainability, transparency and accountability; and social impact.
* Ethical issues of generative AI illustrate many of the issues posed by all AI, because it:
  + makes biased statements, eg biased assumptions about gender
  + “hallucinates” information which is inaccurate, threatening trust in information
  + fails to cite its sources or even invent sources
  + threatens to accelerate the uncontrolled creation of content
  + violates copyright by using text and data on the Internet without permission
  + is unexplainable because it is not open about what data it is based on or how it works
  + was developed by exploiting very low paid Kenyan workers to detoxify content
  + threatens jobs, eg journalists and those working in marketing
  + is available to people with money to subscribe, disadvantages those without
  + may not be environmentally sustainable
  + reveals the disruptive power in the hands of big Tech companies
* There is a danger of being sucked into current controversies, and not recognising the wider picture of the evolution of big data and AI and the context of the wider digital transformation.

# Impact of AI on libraries

AI could have “wide and deep” impacts on library work.

AI will change everyday knowledge work, eg through translation, summarisation and text generation.

Table 1 AI impacts on library operations

|  |  |
| --- | --- |
| AI application… | impacts… |
| Library or institutional chatbot | User services |
| AI in backend systems, eg RPA | Library systems |
| AI to describe collections at scale | Collections team, Special collections |
| AI to enhance metadata | Metadata team |
| Need for algorithmic and data literacy of users | Training team |
| Supporting data scientist communities | Liaison team |
| Analysing and predicting user behaviour | Planning team |
| Smart spaces | Facilities team |

*Which developments are most critical in reshaping the library role? Which are most likely to happen and in what time scale?*

*How can AI technologies enhance our library services? What challenges can AI help address? What are the potential risks and ethical considerations, and how can we mitigate them?*

*How can we continuously monitor and stay up-to-date with emerging AI trends and advancements?*

# Strategic context

AI is a strategic priority as identified by, among many others, the UK government, the NHS, UKRI and JISC. Libraries need to be aligned strategically with these wider policies. But to date AI appears to be rarely mentioned in university and academic library strategies as such.

*What is the strategic stance of your institution and wider sector towards AI?*

*What hooks are there in existing strategies where AI may be relevant?*

Specifically in the academic library context there some common themes in institutional and library strategy that offer hooks for aligning AI related activity

Table 2 Hooks in existing strategy

|  |  |
| --- | --- |
| ***Potential hooks in institutional strategy*** | ***Potential hooks in library strategy*** |
| *Research excellence and impact* | *User engagement and experience* |
| *Teaching excellence* | *Collections* |
| *Equality, diversity and inclusion* | *Physical space* |
| *Sustainability* | *Collaboration* |
| *Mental health and wellbeing of students and staff* | *Information and digital literacies* |
| *Civic role* |  |

*Do you want to align to the institution or proactively shape the institutional response?*

### SWOT

The SWOT below evaluates the strategic position of libraries in general in relation to AI

Table 3 SWOT of libraries and AI

|  |  |
| --- | --- |
| **Strengths**   * Knowledge of user need * Data is key to AI * Previous experience with TDM, digital humanities, copyright * Professional knowledge sharing * Professional ethics, values and skills * Track record of successful collaboration and connecting different groups within the institution * Trust in library information * “Neutrality” of the library | **Opportunities**   * Improved access to knowledge/ collections: through content classification, summarisation, translation * Improved knowledge creation through generative AI * Collaboration * Better-informed decision making * Higher-value work enabled * Influencing better products from vendors |
| **Weaknesses**   * Limited technical development capacity of libraries * Cost of commercial products * Lack of off the shelf products for library context * Data quality issues, lack of data, limits on use of data * Other pressing priorities * Uncertainty, anxiety and lack of confidence in the sector about AI * Library and professional brand not associated with AI * Potential for AI conflict with professional values (e.g. confidentiality, privacy, equal access) | **Threats**   * Speed of change * Ethical issues: bias, issues of privacy and confidentiality, * Hype around AI * New ways of accessing information change expectations about search etc * Deprofessionalisation * Possible negative consequences for Equality, Diversity and Inclusion * Loss of relevance |

*What is the SWOT for your library?*

# Strategic responses to AI: Pros and cons

The strategic responses to AI could include:

1. Recruiting new staff with specialist AI skills
2. Upskilling existing staff
3. Engaging with users to see how they are using AI
4. Studying sector best practice
5. Running proof of concept projects
6. Talking to the system suppliers and buying systems
7. Aligning to what is happening in the institution
   1. Collaborating with other units
8. Aligning to what is happening in the sector
   1. Collaborating with other libraries
9. Taking a wait and see stance

## 1. Recruiting new staff with AI skills

*What type of skills do we need to acquire through recruitment?*

*Where would such staff sit within the organisation?*

|  |  |
| --- | --- |
| Data scientists may be attracted to the ethos of your organisation | Data scientists can command high salaries |

## 2. Upskilling existing staff

*What is the relevant knowledge needed?*

*What resources are there to support this learning?*

*How can we create space for staff to explore AI and learn relevant skills?*

*How do we ensure that staff continuously upskill in this area to keep up-to-date given the speed of change?*

Some options:

* Personal exploration of AI based productivity tools
* Exploration of open source AI tools
* Reading and discussion groups
* Training courses
* Data related skills

## 3. Engaging with users to see how they are using AI

AI is rapidly evolving in our time. Notably Chat GPT is changing how users discover information and write, and so their learning. It is critical to engage with our users to understand how it is impacting their information behaviours.

*How are our different groups of users using AI?*

*How do we support all users to navigate the AI landscape and maximise the positive benefits of AI while using it ethically?*

## 4. Studying best in sector practice

*What are comparator institutions doing? What works and what does not?*

*What can we learn from how other related sectors are using AI for (e.g. museums, galleries, archives etc.)?*

*What can we learn from how more distant sectors are using AI for (e.g. health, retail, transportation etc.)?*

## 5. Running proof of concept projects

*What immediate projects are there that could explore the benefit at point of need?*

## 6. Talking to system suppliers and buying systems

*Can our system suppliers offer us suitable tools?*

## 7. Aligning to what is happening in the organisation: Collaborating within the organisation

Potential collaborators are:

* IT
* Academic departments, especially computer science
* Faculty deciding policy eg around AIED or AI in research

|  |  |
| --- | --- |
| Share resources | Differing needs  Institutional politics  Library may not seem relevant |

*How are other departments in the institution using and responding to AI?*

*Who can we collaborate with internally to increase our capacity and influence ?*

## 8. Collaborating with partners outside the organisation

Turn to existing communities and sector wide organisations for direction.

Existing communities that are working in the AI and library space:

[AI4LAM](https://github.com/AI4LAM)

[IFLA Special Interest Group on AI](https://www.ifla.org/units/ai/)

[CENL AI in Libraries Network Group](https://www.cenl.org/networkgroups/ai-in-libraries-network-group/)

[AEOLIAN network](https://www.aeolian-network.net/)

Organisations beyond the library world

[Alan Turning institute](https://www.turing.ac.uk/)

[Ada Lovelace institute](https://www.adalovelaceinstitute.org/)

[Open Data Institute](https://www.theodi.org/)

*Who can we collaborate with externally to increase our capacity and influence?*

## 9. Wait and see stance

|  |  |
| --- | --- |
| Saves resources | Risk of being seen as irrelevant  Loss of control |

*Where does the library want to sit in the diffusion of AI innovation: from innovator, early adopter, early majority, to late majority or late adopter?*

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