Cynthia Hudson Vitale and Annie Johnson

Anticipating Tomorrow

How the University of Delaware Is Preparing for an AI-Driven World

In February 2025, the University of Delaware (UD) Library, Museums, and Press launched a focused exploration of how artificial intelligence (AI) could shape the future of their work across libraries, museums, and publishing. With AI technologies evolving rapidly and reshaping how knowledge is produced, accessed, and preserved, UD convened its senior leadership team for a half-day strategic planning retreat grounded in foresight, collaboration, and scenario-based thinking.

Guided by the Association of Research Libraries (ARL) and the Coalition for Networked Information (CNI) AI-Influenced Futures Scenarios, participants explored the challenges and opportunities that AI could present over the next decade and worked together to surface robust strategies to help the Libraries, Museums, and Press navigate this complex and shifting landscape.

This article shares the goals, structure, strategic insights, and outcomes from that retreat and outlines how scenario planning can be a useful tool for an organization grappling with uncertainty in the age of AI.

Why Scenario Planning for AI?

Emerging applications of AI are reshaping research practices, altering patterns of information use, and creating new expectations for learning, collaboration, and professional expertise. As the university's center for information access and public knowledge stewardship, the UD Library, Museums, and Press recognize that these transformations are defining the library's role.

The retreat adopted a scenario planning methodology because of its value in uncertain environments. Rather than focusing on likely or desirable outcomes, scenario planning embraces multiple plausible futures. This approach encourages organizations to test assumptions, identify early signals, and develop strategies that are resilient no matter which way the future unfolds.

By using the ARL/CNI 2035 Scenarios[1] developed by ARL and CNI, the UD Library, Museums, and Press senior leadership team grounded its conversations in four divergent yet plausible futures. These scenarios were designed to help research libraries explore the strategic implications of AI in the research and learning ecosystem by considering multiple trajectories, rather than relying on a single forecast.

Cynthia Hudson Vitale is associate dean at Johns Hopkins University, email: cvitale1@jh.edu. Annie Johnson is associate university librarian at the University of Delaware Library, Museums, and Press, email: akjohnso@udel.edu.

The scenarios articulate four distinct futures shaped by AI:

- Autonomous AI: A world in which AI becomes an independent partner and collaborator in research and learning, reshaping workforce structures and scholarly communication.
- Consumer-Oriented AI: Where AI adoption is uneven, with most advances confined to consumer applications and markets.
- Democratized and Socially Integrated AI: A future where advances in AI and human–computer interfaces drive equitable access, inclusivity, and open knowledge.
- Laissez-Faire AI: A scenario shaped by fragmented policies, missed opportunities, and weak governance. In this world, AI adoption is hasty and uneven, exacerbating bias, privacy breaches, and misinformation.

The session began with an introduction to scenario planning, highlighting how the ARL/CNI 2035 Scenarios provide a structured approach to anticipating change and making proactive decisions. Participants then divided into groups, each working through one of the four scenarios to consider how different AI-influenced futures might affect the UD Library, Museums, and Press and the university more broadly. Groups surfaced insights about collections, services, partnerships, and workforce implications, which were then discussed and further explored.

Building from this analysis, participants engaged in a series of facilitated activities designed to move from reflection to action. In one exercise, each group identified potential opportunities and risks emerging from their scenario. These ideas were then refined into a set of possible actions and strategies during a prioritization exercise, with an emphasis on identifying "robust" strategies, or those that would hold value across multiple futures, rather than being tied to a single outcome.

Through reporting out, gallery walks, and collective discussion, overlapping themes emerged to develop a set of ten strategic priorities.

Strategic Themes and Priorities

Across all four AI futures, the retreat surfaced ten robust strategic implications that hold relevance across multiple scenarios.

Responsible AI Leadership

In all four scenarios, the UD Library, Museums, and Press become central to responsible AI oversight, whether through championing open-source principles (Democratized), managing responsible partnerships (Consumer-Oriented), navigating minimal regulatory frameworks (Laissez-Faire), or supervising automated decisions (Autonomous). This shift highlights the increasing expectation that libraries address algorithmic bias, address user privacy, and democratize access.

Shifts in Assessment and Metrics

As AI transforms teaching, research, and resource usage, traditional metrics (e.g., circulation, gate counts) decrease in relevance. UD Library, Museums, and Press will need to collect new indicators, like workshop participation for AI literacy, frequency of algorithmic queries, or levels of data or AI training data reuse, while also exploring qualitative feedback

on key areas such as trust. This evolving data environment challenges existing frameworks of performance measurement and calls for flexible, ongoing adaptation.

Physical–Digital Balance and User Engagement
Under certain scenarios (e.g., Autonomous AI or Laissez-Faire), the space considerations for the physical library may shift with some users needing tech-free zones; in others (e.g., Democratized or Consumer-Oriented), it can serve as a collaborative hub or community maker space. Regardless of scenario, shifting user behaviors and the spread of virtual services prompt reimagined physical layouts that may emphasize communal learning, specialized labs, or mental-wellness niches, reinforcing libraries as more than just content repositories.

Shifts in Staff Roles and Expertise
Across the scenarios, technical proficiency and data-informed skill sets gain prominence, especially when repetitive tasks are automated or consumer-oriented platforms raise expectations. Additionally, library roles for specialized areas like prompt engineering, metadata for AI outputs, algorithmic validation, or user-guidance services will likely expand.

Evolving Service Models
In every AI-influenced future, service models shift as AI changes how information is discovered, interpreted, and applied. The Library, Museums, and Press should consider adapting by reexamining how patron services are designed and delivered. Some ideas include potentially expanding research consultations to include AI-related topics and technology and developing guidance for responsible tool use.

Resource Allocation and Collection Priorities
Across the scenarios, resource allocation may shift as investments move toward different technological and service models. Budgets may need to prioritize open-source infrastructure and community-driven tools (Democratized), commercial AI licensing and platform partnerships (Consumer-Oriented), or blended approaches (Laissez-Faire and Autonomous). Over time, reliance on new infrastructures and licensing agreements may redirect spending away from other initiatives, affecting resource access and the balance between physical and digital holdings.

Data-Centric Preservation and IP Complexities
As digital and AI-generated content become more integral to research and scholarship, the Library, Museums, and Press face growing responsibilities for managing data, outputs, and shifting norms of authorship. Future collections may encompass algorithmically produced texts, images, and training datasets that complicate established practices for attribution and long-term preservation. With physical formats and manual workflows in decline, cloud infrastructure, repository management, and documentation of AI provenance take on greater importance for the library.

Partnerships and Collaborative Networks
The UD Library, Museums, and Press experiences greater interdependence in all futures, through consortia for open AI (Democratized), vendor alliances (Consumer-Oriented), or

shared governance models (Laissez-Faire, Autonomous). This interdependence underscores the library's bridging function, as it simultaneously engages with campus stakeholders, external collaborators, and users who demand consistent and frictionless AI services.

User Support and Education

In each scenario, complex AI applications create demand for user guidance, whether that involves critical literacy (Democratized), technical troubleshooting (Consumer-Oriented), just-in-time assistance (Laissez-Faire), or ethical oversight (Autonomous). The UD Library, Museums, and Press thereby extend instructional roles across campus, helping patrons interpret AI-generated data, navigate licensing intricacies, and critique automated findings.

Equity and Inclusivity Challenges

All scenarios highlight the possibility of digital divides, biased algorithms, or uneven resource access. Some scenarios (e.g., Democratized) welcome broader user creation but still require vigilant oversight of data provenance, while others (e.g., Consumer-Oriented) risk excluding those without budgets for premium AI tools. These conditions underscore ongoing concerns about how libraries maintain open and fair access in environments shaped by automation or patchwork standards.

Reflections and Next Steps

The UD AI strategic implications retreat brought together the leadership team from the Libraries, Museums, and Press to explore how AI may shape the organization's work in the years ahead. The retreat surfaced shared insights, deepened understanding of the evolving AI landscape, and identified concrete actions to support ongoing planning and decision-making. The three primary actions identified as a result of the retreat included actively engaging library staff in training around AI to ensure readiness for new services and workflows, collaborating closely with other groups on campus on AI initiatives instead of going it alone, and continuing to provide a welcoming space for students, faculty, and staff to come together in person.

Some of this work has already been underway. Since 2024, for example, the team has been piloting an AI-powered reference chatbot, called UDStax. UDStax was developed to answer simple questions about library resources and services. Training and enhancing the model behind UDStax has provided an excellent learning opportunity for library staff.[2] A more formal organizational-wide AI professional development plan is currently being developed, with input from staff, by the organizational development team. One of the goals of this plan is that it will build space for those who are critical of AI to participate.

In terms of collaborating with other groups on campus, librarians were key leaders on a university-wide AI Teaching and Learning Working Group. Librarians led efforts to identify and validate an AI literacy definition and framework for integrating AI-related skills into the curriculum and helped to create a guiding framework for educators using generative AI in the classroom.[3] Librarians served as co-principal investigators with campus partners in the multi-institutional Ithaka S&R Making AI Generative for Higher Education project, researching local trends in how faculty use AI in their teaching and research, as well as faculty support needs.[4] Most recently, librarians have embarked on a new project with university information technology to develop an AI literacy module for employees across the university.

This will be based in part on a toolkit that librarians originally created for UD students.[5] A member of the senior leadership team has also been asked to serve as an internal advisory board member for the campus-wide First State AI Institute.

Finally, UD will continue to invest in its physical space, Morris Library. The organization has embarked on a major renovation of its special collections and is also in the process of launching a new area for technology-focused research support services. Over the course of the retreat, it became clear to participants that even in a future where AI plays a dominant role, the human-centered experience that libraries offer remains essential.

Notes

1. Association of Research Libraries and Coalition for Networked Information, *The ARL/CNI 2035 Scenarios: AI-Influenced Futures in the Research Environment* (Association of Research Libraries, 2024). https://www.arl.org/arl-cni-2035-scenarios.

2. Beth Twomey, Annie Johnson, and Colleen Estes, "It Takes a Village: A Distributed Training Model for AI-Based Chatbots," *Information Technology and Libraries* 43, no. 3 (2024).

3. University of Delaware AI for Teaching and Learning Working Group, "Considerations for Integrating AI Within Teaching and Learning," University of Delaware, 2024. https://www.udel.edu/content/dam/udelImages/artificial-intelligence/Considerations_for_Integrating_AI_Within_Teaching_and_Learning_FINAL.pdf.

4. Meg Grotti, Kevin R. Guidry, Erin Sicuranza, and Joshua Wilson, "Preliminary Summary and Recommendations from the Making AI Generative for Higher Education Project," 2024. https://drive.google.com/file/d/1WrmApV8qJWDcguDNtuDrgwGhi7Z6DZyg/view.

5. Maria Barefoot and Amanda McCollom, "AI Literacy: Algorithms, Authenticity, and Ethical Considerations in AI Tools," University of Delaware, 2024. https://guides.lib.udel.edu/AI.