

Embracing the Crossroads: How New Research Administrators Can Lead the Way in AI Adoption

By Kathleen Halley-Octa and Kari Woodrum

In the ever-evolving landscape of research administration, artificial intelligence (AI) presents both challenges and opportunities. As new research administrators, your fresh perspective, digital fluency, and adaptability uniquely position you to help shape how we integrate these technologies into our daily work.

Understanding the AI Landscape

AI is no longer confined to science fiction or specialized computer labs. Today, AI tools appear in our inboxes, spreadsheets, budgeting tools, and compliance platforms. At its core, AI refers to systems trained to perform tasks that traditionally require human input, such as interpreting language, detecting anomalies, or generating reports. Machine learning and natural language processing allow these systems to learn from patterns and interact more naturally with users. The emergence of generative AI, such as ChatGPT or DALL-E, adds the ability to produce original text, images, and even financial forecasts. For instance, some research administrators are using these tools to help draft budget justifications, generate proposal summaries, or brainstorm outreach language for broader impacts.

But not all AI outputs are created equal. It is important to utilize critical analysis to recognize results that miss nuances or context that human interaction provides.

The Critical Role of Human Oversight

AI can process massive amounts of data and identify patterns, but it can't always understand context or anticipate ethical implications. For instance, an AI tool might flag a travel expense as unallowable when in reality, it's a grant-approved expenditure tied closely to the scope of work approved by the sponsor. Without human review, these tools can cause confusion or frustration and lead to incorrect reporting.

This is why critical thinking remains central to the research administrator's role. Your ability to ask questions, interpret results, and apply institutional knowledge makes AI effective, not vice versa.

Practical Applications for AI in Research Administration

AI is already being used across several areas of financial research administration to streamline tasks and support decision-making. While these tools are not magic solutions, they offer real efficiencies when paired with critical

human oversight. Below are some specific, real-world applications where AI is already making a difference:

1. **Expense Auditing and Anomaly Detection:** Tools like AppZen use AI to audit expense reports automatically. These systems scan receipts, flag potential policy violations, and detect patterns that may signal errors or fraud.
2. **Monitoring Spending Trends and Forecasting:** Platforms such as Anodot apply machine learning to financial data to identify outliers or unexpected shifts in spending behavior. While these tools don't replace budgeting expertise, they can highlight areas that merit further reviews—such as a sudden increase in subaward payments or travel costs.
3. **Budgeting and Financial Planning:** Enterprise systems like Workday Adaptive Planning incorporate AI capabilities for financial forecasting and scenario modeling. This helps post-award teams assess how changes in funding levels or spending rates could impact the overall budget without manually recalculating spreadsheets.
4. **Travel and Expense Automation:** Products such as SAP Concur use AI to streamline travel and expense management. The system can read and categorize receipts using optical character recognition (OCR), match them to trips, and flag duplicate or out-of-policy charges.
5. **Spend Analysis and Procurement Optimization:** Coupa is another real-world tool that leverages AI to analyze institutional purchasing data. It can identify vendors with high error rates, suggest more cost-effective options, and monitor invoice processing trends for signs of inefficiency or risk.

While these tools can automate repetitive processes and surface insights faster than a manual review, they aren't perfect. Anomalies flagged by AI still require human interpretation to determine if action is needed. As a research administrator, your role is to bring context to the machine's output, especially when understanding grant-specific stipulations or institutional policies. These tools don't remove responsibility; they redistribute it. You're still the expert—AI helps you move faster and focus your expertise where it matters most.



AI's Limitations: Know What to Watch For

It's equally important to understand what AI can't do—at least not reliably. Current AI systems are prone to a few well-known issues:

- **Hallucinations** – AI sometimes invents facts that sound plausible but aren't true, such as citing a grant policy that doesn't exist.
- **Randomness** – The same prompt can yield different outputs depending on how the system interprets it, meaning you ask an AI tool to draft a cost-share justification and receive different versions each time that may contain conflicting information.
- **Bias** – AI learns from the data it's trained on. If that data is biased, so are the results. For example, an AI tool may suggest preferred vendors for lab supplies but consistently deprioritizes minority-owned businesses, reflecting biased training data from past procurement trends.
- **Struggles with Negatives** – AI often misinterprets statements with “not” or “except.” Meaning, if you prompt AI to list expenses not allowed under participant support costs, it may return a list of allowed expenses instead, leading to confusion and possible noncompliance if not caught.
- **Lack of Context** – It can't always tell when something that looks incorrect is valid in a particular situation. For instance, AI flags a late subcontract payment as an error, unaware that it was intentionally delayed due to a pending IRB approval, something a human would recognize as a valid exception.

This is where your analytical skills come in. Every AI-generated output should be reviewed critically—ideally with a process that includes validation, ethical review, and a clear understanding of institutional guidelines. Think of AI as a first draft, not a final answer—your expertise ensures accuracy, context, and alignment with sponsor and institutional expectations.

How You Can Help Your Team Use AI Wisely

As someone early in your research administration career, you may already feel more comfortable with new technologies than some of your colleagues. That's a strength you can bring to your organization. Here are a few ways to be a change leader:

- **Model Curiosity, Not Certainty:** Show that you're experimenting thoughtfully with AI tools. Share both successes and things that didn't work.
- **Host Informal Demos:** Offer your team short, informal “AI 101” sessions. Demonstrate how you used a tool to generate a report, visualize data, or double-check a budget narrative.
- **Promote Ethical Use:** Talk openly about AI limitations and privacy concerns. Remind colleagues to avoid feeding tools sensitive or proprietary data and never rely on AI alone for compliance tasks.
- **Be Aware of Institutional Restrictions:** Many universities have implemented policies that restrict or prohibit the use of generative AI tools with certain types of data—especially sensitive, confidential, or proprietary grant information. These limitations are often driven by concerns around data security, privacy, and vendor compliance. Before using AI tools in your workflow, check your institution's guidelines and approved tools list to ensure you're in compliance.
- **Encourage Prompt Engineering:** Share tips for writing better prompts: be specific, provide context, and ask follow-up questions. Show how small changes in phrasing can improve AI results.
- **Start with Small Wins:** Look for low-stakes ways to test AI in your day-to-day work—such as summarizing meeting notes or refining a budget narrative. Small successes can build your confidence and spark ideas to share with others.

One helpful way to think about AI is to treat it like an intern: eager, fast, and surprisingly capable—but still in need of guidance and oversight. The more clearly you explain what you need and provide feedback, the better the results. Framing it this way can help you use AI more effectively and build confidence as you explore its potential.

Ethical Questions Every Research Administrator Should Ask

Ethics have always been foundational to research administration—from ensuring compliance to safeguarding integrity in proposal review and financial stewardship. As we integrate AI into our workflows, these responsibilities don't go away—in fact, they become even more critical. AI introduces new questions about data use, accountability, and transparency that require the same level of thoughtfulness and scrutiny we already apply to sponsor regulations and institutional policies.

As we bring AI further into our daily work, we also have to ask the tough questions:

- Is the data we're using fair and complete?
- Who is accountable when an AI system makes a mistake?
- Are we transparent with researchers, sponsors, and leadership about how we're using AI?
- How do we ensure confidentiality, especially when tools process sensitive grant data?

These questions won't always have simple answers, but asking them keeps ethics at the forefront. In a field where trust, compliance, and integrity are essential, introducing AI means those principles matter even more. By staying curious and cautious, you can help ensure that AI enhances—not compromises—the ethical standards research administration is built on.

The Road Ahead

The future of research administration is likely to include deeper AI integration—predictive financial modeling, automated reporting, and even AI-assisted peer review. As a new research administrator, you are in a unique position. You can help your organization explore AI in thoughtful, practical ways while fostering a culture of critical engagement. Whether you're reconciling budgets, reviewing subawards, or drafting compliance language, AI can be a powerful co-pilot—if you remain in the driver's seat. So, explore. Question. Share what you learn.

The tools will continue to evolve—and so will your skills. Staying informed, asking good questions, and engaging in open dialogue with colleagues will help you use AI wisely and confidently. You don't have to have all the answers to lead the way—just a willingness to explore, learn, and share. The crossroads of AI and critical thinking is where the future of research administration begins—and you're already standing at the intersection. ■



Kathleen Halley-Octa is a Manager with Attain Partners' Research practice. She has 15 years of experience in research administration, with expertise in pre-award operations, training development, and change management. Kathleen focuses on eRA system implementations, organizational assessments, and business process improvement. She can be reached at kmhalleyocta@attainpartners.com.



Kari Woodrum is a Grants and Contracts Assistant with the Prairie Research Institute at the University of Illinois, Urbana-Champaign. In this role, she supports researchers throughout the full life cycle of grants and contracts, including budget development, proposal preparation and submission, financial monitoring, and compliance with sponsor and institutional requirements. She can be reached at kwoodrum@illinois.edu.