# GenAI in public institutions of higher education

## Four steps to help turn disruption into advantage

Within state governments, public institutions of higher education, including state colleges and universities, have long been recognized as outliers. Their source of funding is perhaps the most obvious difference, with only 18 percent on average coming from government appropriations.[1] A more significant difference, however, may be their view on generative artificial intelligence (GenAI).

Unlike other state and local government entities, public institutions of higher learning see this new technology through two completely different lenses at once. Through one, GenAI appears as a powerful ally; through the other, it looks like an existential threat.

These institutions are typically well ahead of the curve when it comes to their understanding of GenAI technology. They often have entire departments dedicated to research and academic scholarship in AI. It's not surprising, therefore, that they recognize GenAI as a powerful tool that can greatly improve their ability to fulfill their mission.

Yet they also recognize that GenAI threatens to undermine that same mission. GenAI can make anyone sound like an expert in anything, whether they are or not, potentially enabling some students to trick or cheat their way to a college degree. One study has shown that in the past year, AI has been used in 11 percent of student papers.[2] Can an institution of higher education properly educate students if GenAI shortcuts the process in some way? Even if used legitimately, will it somehow shortchange students— by undermining the development of critical thinking and reasoning skills, for example? Will it introduce cheating or inadvertent errors in academic research, leading to irreparable reputational harm?

### Why modern government is important

Government agencies in the US must modernize in order to keep up with changing user needs, regulations, and health and public safety requirements. Leaders of modern governments rethink business processes and service delivery models to more effectively achieve their mission. This article is one of a series that features how modernizing affects the government workforce and the user experience, improves security and public trust, and accelerates the digital journey. KPMG team members offer insights intended to help guide governments in their modernization efforts to encompass all processes, technologies, policies, and the workforce so each works together to create connected, powered, and trusted organizations.

To be fair, all agencies are challenged by risks that AI in any form can introduce, including security, privacy, bias, intellectual property, ethical and cultural risks. But this particular risk is something unique to public education institutions, and something they alone, therefore, must address.



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1 Source: "An Overview of State Higher Education Funding Approaches," James Dean Ward, et al., Ithaka S+R, December 10. 2020
2 Source: "GenAI in higher education," Tyton Partners, April 2024

# A familiar road

It's fair to say that these are legitimate concerns. However, if the road looks somewhat familiar, it's because we've been down it many times before. The appearance of the internet and its search engines posed a similar threat in the 1990s: why learn anything if that knowledge was just a few clicks away? The electronic handheld calculator posed a similar threat. Likely many said the same when Guttenberg revealed his press.

Trying to ban the use of such new technologies is a nonstarter; once the genie is out of the bottle there's no putting it back. These "threats" were ultimately addressed by institutions adapting to their existence and leveraging their capabilities to improve the product they offered. That same adaptation—or perhaps the better word is "evolution"—is just beginning to happen today with GenAI in institutions of higher education.



# Understanding the upside and reducing the downside

There's no denying that GenAI has the potential to greatly enhance the value public institutions of higher learning offer and improve many aspects of how they operate.

- For **administrators**, GenAI can simplify and automate many of the more mundane, rote, or bureaucratic tasks involved in the administration of the institution, including those within student services, HR, IT services, accounting, and finance.

- For **students**, GenAI could provide course selection assistance. It could help shape personalized learning by tailoring educational content and experiences to individual students, enhancing engagement and understanding using adaptive learning materials and targeted feedback.

- For **faculty**, it can help clarify and enhance course materials, and help researchers better communicate key insights in publications or discover and summarize related work. It could assist with student evaluations, and help more easily identify struggling students sooner, automatically providing tutoring assistance or other forms of support.

- GenAI could help foster a more engaged **alumni** community by assisting with targeting and outreach, involvement and recognition. It could help with **donor** outreach, providing insights for donor identification and prioritization and helping to articulate to donors the value of their contributions.

A quick web search can reveal dozens of articles containing these and many more imaginative examples. Coming up with them isn't the challenge. The challenge is how to start laying the groundwork to help turn these potential benefits into actualized ones in a safe and responsible manner so that the competing threat to the institution's mission is diminished.

**We see four fundamental steps:**

## 1 Build a sound policy foundation

While our crystal ball may not be better than anyone else's when it comes to predicting the future of education in an AI-driven world, we do know that the path to that future begins with policy development.

In May 2023, a UNESCO survey revealed that only approximately 13 percent of universities globally have established institutional policies or formal guidance regarding the use of GenAI applications. "Of the educational institutions that reported having a policy, approximately one-half said the institution provides 'pointed guidance,' meaning the institution has clear rules and advice regarding the educational uses of generative AI applications. The other half reported that the institution gives 'discretion to users,' meaning the institution has largely left it up to individual departments, classes, and teachers to decide whether and how to use generative AI applications."[3]

To modernize operations and add value through the adoption of GenAI initiatives, a clear vision of desired outcomes and delineation of the roadmap to achieve them are critical. Where can and can't GenAI be used? What parameters define its ethical use? What models can be trusted? How are data sources evaluated? How are potential biases or unethical uses identified?

These questions and many more like them remain unanswered at some institutions even as GenAI use soars within them, not due to apathy or indifference but appreciation for the complexity of the issue and the speed at which the technology has appeared. Private sector CEOs say ethical challenges are the top obstacle to successfully implementing GenAI, not budget or technology issues.[4]

Developing effective policies and mechanisms to address AI-related risk requires both expertise and reliable information to help understand the risks and the environment in which the policies will be applied. They're also required to understand whether the policies and mechanisms are actually effective after they've been implemented. This is a huge challenge for any organization, not just public educational institutions. In a recent KPMG survey of US-based enterprise executives, only 19 percent said they have the expertise to conduct such reviews internally, and 53 percent cited a lack of appropriately skilled resources as the leading factor limiting their ability to review AI-related risks.[5]



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3 Source: "UNESCO survey: Less than 10% of schools and universities have formal guidance on AI," UNESCO, June 2023
4 Source: KPMG 2023 US CEO Survey
5 Source: "Responsible AI and the challenge of AI risk," KPMG, March 2023

## **2** Adopt trusted AI principles

Beyond skilled resources, it's essential to have a tested framework for developing and implementing effective policies. Trusted AI is our approach to designing, building, deploying and using AI systems in a safe, trustworthy, and ethical manner. It's founded on 10 core principles:

- Fairness – AI models should be equitable and free from bias.

- Transparency – AI solutions should include responsible disclosure to provide stakeholders with a clear understanding of what is happening across the AI lifecycle.

- Explainability – AI solutions should be developed and delivered in a way that answers the questions of how and why a conclusion was drawn.

- Accountability – Human oversight and responsibility should be embedded across the AI lifecycle to manage risk and comply with applicable laws and regulations.

- Data integrity – Data used in AI solutions should be acquired in compliance with applicable laws and regulations and assessed for accuracy, completeness, appropriateness, and quality to drive trusted decisions.

- Reliability – AI systems should perform at a desired level of precision and consistency.

- Security – Safeguards should be in place to defend against unauthorized access, corruption, attacks, or misinformation.

- Privacy – Compliance requirements for privacy, regulations, and consumer data usage should be adhered to.

- Safety – AI should not negatively impact humans, property, or the environment.

- Sustainability – AI solutions should be designed to be energy efficient, reduce carbon emissions, and support a cleaner environment.

Many of these principles are focused on developing proprietary models and may seem like overkill when applied to a policy for how students may be allowed to use an existing large language model (LLM), for example. However, they still provide a yardstick against which to measure how any such existing model has been developed and deployed, and for the safeguards in place to address the associated risks.

## 3 Reexamine your target operating models

Policies to address AI risks don't operate in a vacuum. They are part of a much larger ecosystem, and like pushing on one side of a balloon, their effects are rarely isolated no matter how finely targeted.

We use **target operating models (TOMs)** to help define and refine such ecosystems. TOMs help clearly and concisely identify the qualities of an ideal future state. A TOM is a blueprint for how an organization will achieve its mission and objectives, including the technologies, processes, people, governance, and performance indicators required. These elements are tightly interconnected.

When a disruptive technology such as GenAI is introduced into the mix, the other elements of the TOM must be adjusted to help turn the disruption into advantage. For example, what risk and governance, mechanisms must be introduced to help ensure that GenAI isn't abused or that it doesn't introduce bias or reputational damage in some way? What key performance measures or other reporting must be added or changed to help policy makers understand the impact of the technology and if policies are working? What training must be provided to existing staff, and what new skills should be prioritized in new hires?

Even the technology component isn't as straightforward as "allowing" GenAI to be used. What platforms should be added or reexamined as part of the institution's broader strategy to modernize? How should budgets be updated to accommodate them?

## 4 Leverage the culture of transparency

In the private sector, specifics related to the use of AI or GenAI will likely be held close to the vest. While companies may announce to the world that they're using GenAI and tout the efficiencies they've achieved, the details will be seen as prized competitive advantages and highly proprietary information and experiences. They won't, for example, make the data the models use available to others. In an unusual twist, government agencies may be ahead of the curve on GenAI if only because solution providers have taken advantage of the publicly available data within government—use cases for the technology are often first designed for problems government agencies face.

But public institutions of higher education have taken this to an entirely new level because they have a culture of transparency—it's inherent in their mission. They publish and share information including cutting-edge insights because it's what they do—their raison d'être.

Organizational inertia, however, doesn't disappear in a culture of transparency. Developments and learning can and do occur at institutions (and even within departments at the same institution) without being shared with others, simply because they don't think to share them or are too busy with their "regular" work to do so. To help them overcome this challenge, we have been facilitating collaboration efforts among and within institutions of higher education, and once the engagements begin, there's usually an impressive flow of information.
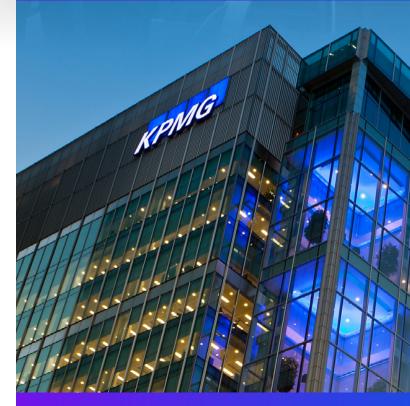
# How KPMG can help

KPMG has worked with federal, state, and local governments for more than a century, so we know how public sector agencies, education institutions, and healthcare organizations work.

**We're experienced, nimble, and flexible.** We understand the unique issues, pressures, and challenges government organizations face on the journey to AI adoption. We'll meet you where you are on that journey and help advance your progress with no agenda other than to see you succeed. We'll help you leverage the investments you've already made to help maximize their value—not try to sell you something new.

**We offer clarity and insight.** As a trusted advisor, we can help you make sense of everything going on in the highly dynamic world of AI that can impact your mission, from regulatory mandates to emerging technologies. We can help align your efforts with leading practices from both the private and public sectors, and help keep you moving forward quickly with confidence and conviction.

**We see the big picture.** We can help you anticipate and adapt to the wide-ranging impacts AI can have on your organization, including budgets and financial controls, business processes and operating models, and employee growth and retention. We can help you understand your data—where it comes from, what controls are required, how to help maximize value locked in it, and how to share that value across organizations. We can help you harness the power of AI ethically and responsibly with trusted AI principles and governance models for managing risk.
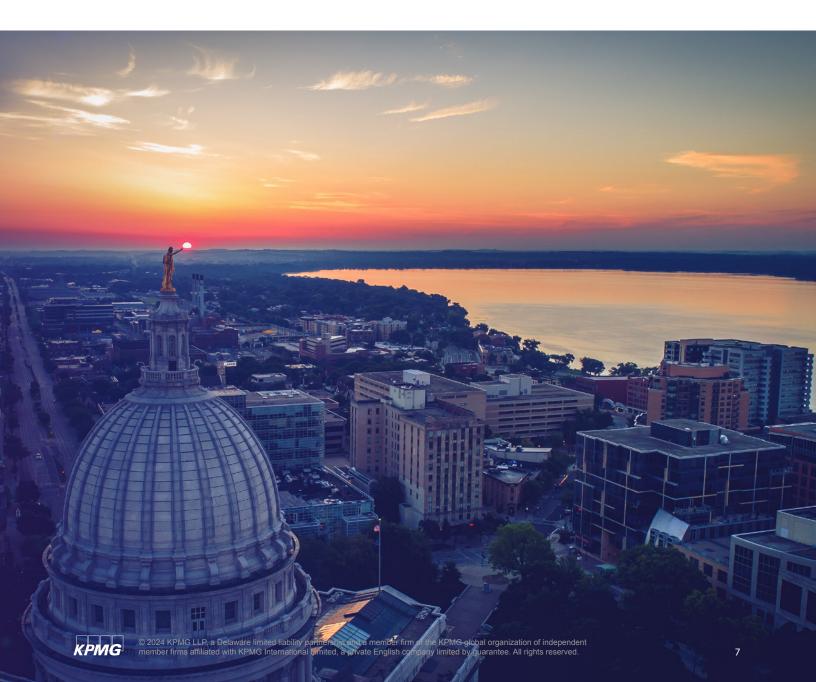
**We're not just thought leaders.** We're helping government organizations design and implement real use cases today. Our wide-ranging capabilities, from strategy to technology implementation, help us understand the challenges you face holistically. Our extensive network and strategic alignment with leading AI solution providers can give us ahead-of-the-curve insights and help enable us to be surgical in our approach.

# About KPMG

KPMG has worked with federal, state, and local governments for more than a century, so we know how agencies work. Our team understands the unique issues, pressures, and challenges you encounter in the journey to modernize. We draw on our government operations knowledge to offer methodologies tailored to help you overcome these challenges and work with you from beginning to end to deliver the results that matter.

The KPMG team starts with the business issue before we determine the solution because we understand the ultimate mission. When the way people work changes, our team brings the leading training practices to make sure your employees have the right knowledge and skills. We also help your people get value out of technology while also assisting with cloud, advanced analytics, intelligent automation, and cybersecurity. Our passion is to create value, inspire trust, and help government clients deliver better experiences to workers, citizens, and communities.

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