



MINNESOTA STATE
Board of Trustees

AGENDA ITEM SUMMARY

NAME: Joint Meeting: Board of Trustees and Leadership Council **DATE:** January 28, 2025

TITLE: Application of Artificial Intelligence in Higher Education

Action

Review and Discussion

This item is required by policy

PRESENTER BIO

Dr. Mark Hagerott serves as Chancellor of the North Dakota University System and also holds joint academic appointments (non-tenured) at North Dakota State University where he is an adjunct scholar at the Northern Plains Ethics Institute. Previously, he served in the faculty and held academic leadership roles with the US Army and US Navy. He served as a planning and strategy director in the NATO Training Mission, which included the Afghanistan army, police, air force, and medical school programs. Hagerott served as distinguished professor and deputy director of the Center for Cyber Security Studies at the Naval Academy and served on the Defense Science Board summer study of autonomous systems 2014-2015. In 2022 he served as Chair of the Secretary of the Navy Education Reform Task Force, and in 2023-2024, served on an AGB Commission to study the future of higher education, the final report to be published in early 2025. He is a commissioner on the Midwestern Higher Education Compact, and Western Interstate Commission for Higher Education.

Chancellor Hagerott's research and writing focus on the evolution of technology and is the author of multiple articles and book chapters, with an emphasis on the educational challenge posed by rapid advances in cyber security, AI, and autonomous systems. He served as a Cyber Fellow of the New America Foundation, 2015-2017. He recently authored a chapter, "The Emergence of Intelligent Machines and Cyber Space: Framing the Challenge to University Systems," published in an edited volume by Johns Hopkins University Press in 2024.

Hagerott previously served as a White House Fellow and held leadership positions in the U.S. Navy, both aboard ships and in administrative positions in the Department of Defense. At sea, he served on five US navy combatant ships including rising to ship command. In addition, he is a certified naval nuclear engineer and served as chief engineer for a major environmental project defueling of two atomic reactors.

Hagerott holds a B.S. from the U.S. Naval Academy, an M.A. in political science and economics from Oxford University where he attended as a Rhodes Scholar, and a Ph.D. in history from University of Maryland, College Park. His family homesteaded in North Dakota prior to statehood, and he and his wife are now blessed with four grandchildren.

BACKGROUND INFORMATION

The presentation slides are included at the end of the document. Additional reading to provide background and context related to artificial intelligence in higher education is included below.

Higher Education Funding and Structure by leading state systems

New York

- Governor Hochul Announces Steps to Advance Artificial Intelligence Capability at SUNY and Make New York National Leader in AI (May 9, 2024)
<https://www.suny.edu/suny-news/press-releases/5-24/5-9-24-ai/ai.html>
- Governor Hochul Launches First Phase of Empire AI, Powering Critical Research for the Public Good Just Six Months After FY25 Budget (October 11, 2024)
<https://www.governor.ny.gov/news/governor-hochul-launches-first-phase-empire-ai-powering-critical-research-public-good-just-six>

Florida

- University of Florida to acquire one of the world's most powerful supercomputers (December 13, 2024)
<https://news.ufl.edu/2024/12/hipergator-upgrade/>
- University of Florida Artificial Intelligence website: <https://ai.ufl.edu/>
- University of Florida to lead hub for \$285 million semiconductor research institute (November 19, 2024): <https://news.ufl.edu/2024/11/chips-funding/>

Higher Education's Key Role in the Age of AI

How Higher Ed Can Adapt to the Challenges of AI by Joseph E. Aoun

<https://www.chronicle.com/article/how-higher-ed-can-adapt-to-the-challenges-of-ai?sra=true>

A version of this article appeared in the August 2, 2024, issue of The Chronicle of Higher Education.

We have reached a moment of reckoning about what artificial intelligence means for the human experience. This is a moment of reckoning, too, for higher education. It's not enough for colleges merely to transfer knowledge and skills to AI's future programmers and stewards. Colleges have a pivotal role to play in preparing all students for life *with* AI, and advancing human well-being in a digital world.

It is no exaggeration to say that recent advances in artificial intelligence have brought us to a

turning point in human history. After millennia of living within and adapting to the physical world, humans — particularly in developed economies — now occupy a digital world that is just as complex and multifaceted as the physical one. Much of this recent change is attributable to AI.

Over the past few years ChatGPT and other large language models have dominated the headlines, both for their astounding skill at replicating human language and their mistakes and ethical pitfalls. But large language models only scratch the surface of how AI is interwoven in our lives. From industrial AI to augmented reality, virtual reality, and the internet of things, there is scarcely a domain of human experience to which AI is not being applied. We have a limited opportunity to figure out how to harness AI's possibilities for the better and manage it effectively — instead of waiting for AI to manage us.

Though the analogy isn't perfect, it's useful to compare the rise of AI to the rise of the automobile in the early 20th century. For good or ill, cars reshaped virtually every aspect of existence in modernized societies. They connected communities, turbocharged economies, and expanded possibilities for people to live and work. But they also introduced a host of new physical dangers and environmental risks.

AI has the potential to transform our world to an equal degree, and at this moment we have the opportunity to anticipate those changes and brace for their potential impacts. Imagine if, at the outset of the automobile era, we had predicted a rise in carbon consumption and planned ahead for offsets. Or if we had proactively designed highways and roadways to minimize the disruption of neighborhoods. There is still time to do this for AI. But the window won't be open for long.

The most straightforward way to construct a comprehensive accounting of the human experience of AI is to consider it with reference to three different aspects of our selves: the physical, the cognitive, and the social selves. AI is changing our experience in all of these categories.

For example, an examination of AI with respect to our *physical selves* reveals some promising developments, but also some cautions. AI is now being used extensively in medicine. It can identify the presence of maladies a doctor may sometimes miss, such as breast cancer, skin cancer, and diabetic retinopathy. AI systems are accelerating drug discovery and personalized medicine by leveraging their capacity to analyze the human genome, and could lead to new treatments for diseases such as Parkinson's, Alzheimer's, and ALS.

At the same time, AI-generated medical diagnoses and advice can be [wildly inaccurate](#), such as in the case of a [chatbot](#) promoting dieting to a person with an eating disorder. More fundamentally, a recent [study](#) by the American Psychological Association found that people

who use AI frequently are more prone to sleeplessness, loneliness, and problem drinking.

AI also has mixed effects on our *cognitive selves*. While there is well-justified anxiety over AI's impact on jobs and professions, the upside is that, when used appropriately, AI tools can drive greater [productivity](#) in the workplace, freeing employees to focus on more complex and strategic work instead of routine tasks. Industrial AI applications such as “digital twins” — virtual representations of physical systems in, say, a plant or factory — can help increase our analytical abilities, moving us from reactive problem-solving to predictive analysis.

On the other hand, [some observers worry](#) that our critical-thinking skills will diminish if we come to rely on AI-generated analysis without proper scrutiny. [Others](#) go even further, noting that the process of learning requires us to acquire baseline knowledge before we can proceed to higher-level analysis. If AI is doing the basic work, they argue, we won't learn the basic skills.

Now consider our *social selves*. In the past decade, AI-enabled virtual reality has had a positive impact on our social lives by enabling us to communicate over long distances in a novel environment, almost as though we are face-to-face. Studies have found that people deem VR environments to be more genuine, and to create a better sense of presence, than other modes of long-distance communication such as Zoom or other conventional forms of video conferencing. VR programs employing digital avatars have been used to help people with autism better recognize facial expressions, body language, and emotions from a person's voice, aiding the development of social skills. At the same time, AI-powered social media has had colossal negative impacts on mental health, exacerbating problems with self-esteem, isolation, and bullying. Moreover, AI makes it terrifyingly easy to propagate misinformation and disinformation, rending the social fabric and threatening democracy.

Stepping back still further, it's worth considering how AI affects humankind on a macro level, broadly affecting food and energy consumption, the environment, social stability, and our species' very existence. Here, the early track record of AI presents a decidedly mixed bag. For instance, AI is driving agricultural innovation by helping farmers optimize irrigation and fertilization, yielding better crop outputs. On the other hand, AI uses an enormous amount of energy: According to the International Energy Agency, it accounted for between 1 and 1.5 percent of worldwide energy use in 2022, and that figure will double in two years.

Policymakers are grappling with how to regulate AI. Governmental approaches include the European Union's focus on data privacy and intellectual-property implications and the United States' focus on arenas where AI arguably should be prohibited, such as autonomous warfare. And of course, we all have heard the fears that AI could spell the end of the human race itself. A recent report commissioned by the U.S. State Department flatly stated that the misuse of AI by a nation or rogue actors “could pose an extinction-level threat to the human species.”

It is high time, then, to contemplate systematically what it means for humanity to exist in an AI-driven world. Such an accounting must do more than merely tally up the pros and cons of these new technologies. It should offer a road map for how we can maximize their positive aspects and minimize the negative ones for the benefit of humankind. To my mind, there is one societal institution that is ideally positioned to provide this kind of accounting: the university.

There are many reasons for this. First and most obvious, colleges are one of the few institutions with the multidisciplinary expertise to construct a comprehensive accounting of AI, which will require contributions from fields as diverse as engineering, ethics, and sociology. Second, colleges' practice of subjecting ideas, hypotheses, and findings to rigorous questioning and challenge supports the development of a systematic analysis of AI that is deeper, more substantive, and more accurate than popular discourse can provide. Unlike other parts of society where such development could also take place — such as within the many private-sector companies that are actively and rapidly developing AI tools — colleges are honest brokers, less subject to distorting forces such as competitive pressures and profit motives.

But perhaps colleges' greatest asset is that they are the port of arrival for the segment of society that will be most affected by present and future AI developments: students. It's been widely noted that the cohort of undergraduates who have matriculated over the course of the past decade have been digital natives. But the students of today — and of the future — are AI natives. Understanding how they distinctively interact with, experience, and feel the consequences of AI will be crucial to understanding the technology's long-term implications.

In my previous writings on AI, I argued that higher education needs to offer an educational framework to help students meet and master the opportunities and challenges of the AI age. Specifically, I called for a framework called "[humanics](#)." This consists of, first, a baseline education in what I term the "New Literacies": (1) technological literacy, or a basic education in the functioning of technologies such as AI; (2) data literacy, or how to understand and interpret the data emanating from such technologies; and (3) human literacy, the development of uniquely human attributes, such as creativity, critical thinking, entrepreneurship, and cultural agility, that continue to differentiate us from advanced machines.

In addition, I argued that students should immerse themselves in diverse experiential-learning opportunities outside the classroom to develop their uniquely human skills. Lastly, I proposed that colleges do more to provide robust lifelong learning opportunities as technology continues to reshape the workplace and the world, giving rise to the need for people to learn these new technologies, sharpen existing skills, and cultivate new ones.

I still believe this is a sound overall prescription. However, just as AI has evolved from basic versions to more sophisticated iterations, its expansion necessitates a Humanics 2.0. Here are its key evolutions:

Now that the digital world has come into full bloom, a baseline education in how technologies like AI work, and how to interpret the data that emanates from them, is not enough. Since AI has extended its tendrils into nearly all facets of life, an education in it must be similarly comprehensive, providing a *lingua franca* that learners can apply across all of AI's manifestations.

This should be panoramic, offering not just an understanding of how AI is affecting our economy, but also our institutions, and our future as a species. At the same time, it also should be personal so students learn to recognize AI's fingerprints in their daily lives: in their personal finances and health care, in their homes and transportation, in their social-media feeds, and in the apps that recommend what to buy, whom to date, and what to believe.

This core education can be coupled with innovations at the interdisciplinary level. For example, colleges should incorporate instruction into how AI is transforming each subject of study so students' learning is kept up-to-date in this fast-moving milieu. One way to do it is through combined majors that weave together disciplines with the thread of AI — for example, bridging computer science and theater. This develops a depth of knowledge while simultaneously exploring how technology may be changing subjects of study, challenging accepted shibboleths, or creating new opportunities.

My initial formulation of humanics argued that experiential learning extends the benefits of classroom-based instruction. For instance, a co-op or long-term internship at a professional workplace not only gives learners a practical setting to apply subject-specific learning, it also offers unexpected, unpredictable, and serendipitous moments for flexing critical-thinking, problem-solving, creative, cultural, and social skills.

In this respect, experiential learning allows human-centered talents to blossom, expanding the set of attributes learners have to distinguish themselves, and stay ahead of, AI. It also fosters their ability to engage in what cognitive researchers call "far transfer": the insightful application of learning to a vastly disparate situation or context, which is a unique hallmark that differentiates human from artificial intelligence.

These remain worthy goals. They should also be coupled with efforts to leverage experiential-learning settings as venues for learners to *use* AI, not just surmount it. Professional workplaces and other real-world settings are among the first places to experience AI, feel its impact, and adapt to new technologies. "AI won't steal your job, but someone who works with AI will" is a cliché, but that doesn't make it untrue. Students should therefore best learn to use it.

Similarly, we need to broaden the lens through which we see lifelong learning as an answer to AI. Over the last decade, interest in these programs has grown significantly. The pace of change in professions, sectors, and society itself has accelerated, requiring people to refresh their

learning at regular intervals so they remain in tune with the world and economically viable. The newest AI advances add jet fuel to this proposition. Since people live in a rapidly changing digital world that is as meaningful and consequential as the physical and natural worlds, colleges must do more than meet a tactical need for acquiring new skills through lifelong learning. They will need to prepare people for true *reinvention*.

Readying learners for reinvention means moving beyond the notion that a university should help learners succeed in a single lifelong vocation, to the idea that the university should prepare learners for a multiplicity of changing roles throughout life, including ones that would seem unfathomable to their undergraduate selves. At my university, we've created ALIGN, a pathway for students with undergraduate backgrounds in the humanities or basic sciences to pursue careers in technology. Through it, they earn a master's degree in AI and computer science while gaining up to a year of experience in the tech sector. The goal is not just to create career opportunities for individual students, but to ensure that people from a variety of backgrounds are in positions to develop and steer emerging technology.

Nearly two centuries ago, Cardinal John Henry Newman argued that the primary role of the university is to provide people with a comprehensive understanding of the world for its own sake: "Knowledge is capable of being its own end." Updating this view for today, we can say that this now encompasses understanding the digital world comprehensively. Meanwhile, in the last century, John Dewey argued that education should be practical, pragmatic, and grounded in the "intelligent exploration and exploitation of the potentialities inherent in experience." Updating *this* view for today, we can say that an education can no longer be fully practical if it does not prepare students to reinvent themselves for the relentless shifts of the digital world.

A full accounting of AI would seek to combine both impulses, to make both intellectual and practical sense of the digital domain. AI is our reality now: All of us on this planet, young and old, will be dealing with the ramifications of this technology for the rest of our lives. How this will affect our fortunes, our convictions, and our future as a species cannot be known fully. But by offering a framework for understanding and navigating the age of AI, colleges can put us on track to meet that future with confidence.

Higher Education Challenge beyond money or work force: some philosophical issues

<https://www.washingtonpost.com/opinions/2024/08/04/sam-altman-ai-arms-race/>

Washington Post Letters to the Editor August 4, 2024 regarding Sam Altman's July 28 op-ed, "*Who will control the future of AI?*"

"There's no way for humanity to win an AI arms race" by Anthony Aguirre, Santa Cruz, CA, executive director and board secretary of the Future of Life Institute.

In 2017, hundreds of artificial intelligence experts signed the Asilomar AI Principles for how to govern artificial intelligence. I was one of them. So was OpenAI CEO Sam Altman.

The signatories committed to avoiding an arms race on the grounds that "teams developing AI systems should actively cooperate to avoid corner-cutting on safety standards."

But in Mr. Altman's recent op-ed, he argued that the United States should accelerate trying to win just such a race at all costs, claiming American dominance of advanced AI systems is critical to preserving global democracy and freedom. Perhaps we should not be surprised. As the stakes and competition in the industry grow, caution —let alone "active cooperation" —is being thrown to the side. We can't forget the risks that led us to the Asilomar AI Principles in the first place.

The stated goal of OpenAI is to create artificial general intelligence, a system that is as good as expert humans at most tasks. It could have significant benefits. It could also threaten millions of lives and livelihoods if not developed in a provably safe way. It could be used to commit bioterrorism, run massive cyberattacks or escalate nuclear conflict, to name just a few scenarios. Altman characterized the danger as "lights-out for all of us." He is not alone in this assessment.

Given these dangers, a global arms race to unleash artificial general intelligence AGI serves no one's interests. Such competitions could drive participants to take drastic measures, escalate confrontation and risk nuclear annihilation.

Mr. Altman quotes Russian President Vladimir Putin's observation that the AI winner will "become the ruler of the world." What might potential losers resort to when threatened with the emergence of an unassailable AGI-powered technological superpower?

There is little historical evidence to suggest that some sort of democratized international governance system for AGI will emerge in the midst of an arms race. Giving a handful of billionaires in Silicon Valley unchecked global power is far from a "democratic solution" either.

And should AGI actually emerge, it's a folly to assume that the world's governments, much less

a few companies, could control it for long. A system that is better than us at most things, including AI development, would quickly become vastly better than us at everything, able to improve and replicate itself without limit. Such a system is not a tool but an intelligent species —one we could not constrain or govern. Speeding toward AGI and beyond without sufficient guardrails is a suicide mission, not a competition.

Without the necessary regulation, safety standards and appropriate oversight, a catastrophic accident or misuse could render artificial intelligence radioactive for decades to come, denying us its benefits. We should learn from the Three Mile Island incident, in which a lack of precautions and training led to a nuclear meltdown and America's tragic rejection of nuclear energy.

Despite enormous corporate pressure, Mr. Altman and others must remember their pledge to develop AI "for the benefit of all humanity rather than one state or organization." They should embrace it once again not as idealism but as necessary precondition for everything they hope to achieve —and everything they hope to prevent.

"The wrong questions about AI" by Shan Rizvi, Brooklyn, NY

The future of humanity may hinge on our ability to harness artificial intelligence for global cooperation rather than for control and conflict. Framing AI development as a zero-sum game between democratic and authoritarian regimes, as Sam Altman did in his recent op-ed, risks exacerbating existing geopolitical tensions and overlooking the transformative potential of AI as a tool for global problem-solving.

The true power of AI lies not in its capacity to cement the dominance of any single nation or ideology but in its potential to bridge divides and facilitate understanding across cultures. Just as Plato spoke of abstract "forms" underlying reality, AI might help us identify fundamental patterns in global conflicts and human behavior, leading to more profound solutions.

AI's ability to process vast amounts of data could help identify patterns in global conflicts by suggesting novel approaches to resolution that human negotiators might overlook. Advanced natural language processing could break down communication barriers, allowing for more nuanced dialogue between nations and cultures. Predictive AI models could identify early signs of potential conflicts, allowing for preemptive diplomatic interventions.

Moreover, AI's capacity to analyze and synthesize information from diverse sources presents an unprecedented opportunity to develop a cross-cultural philosophical framework. By identifying common threads and complementary ideas across different traditions —say, between the thinking of such figures as Socrates and Imam Husayn —AI could help us formulate a more universal ethical foundation for its own development and application.

This is not to say that the development of AI is without risks. Indeed, the potential for AI to exacerbate conflicts through advanced weaponry or surveillance is real and must be addressed. However, by shifting our focus from control to cooperation, we can direct AI development toward mitigating these risks rather than amplifying them. The challenge before us is not to win an AI arms race but to ensure that AI serves the collective interests of humanity. This requires a collaborative approach that transcends national boundaries and political systems.

To achieve this, we need not control AI but ensure its development aligns with globally agreed-upon ethical and meta-philosophical principles. We should ensure that diverse voices from across the globe contribute to AI research and application, and foster open dialogue about AI capabilities and limitations to build public trust and prevent misuse.

The future of AI is not predetermined. It will be shaped by the choices we make today.

"AI needs newspaper subscriptions" by Toshit Panigrahi and Olivia Joslin New York, co-founders of TollBit.

If the nation needed a reminder of the importance of speed, accuracy and reliability in reporting, the past two weeks offered a harsh warning. Americans tapped AI chatbots for information about the attempted assassination of Donald Trump on July 13, and those new tools failed to meet the moment.

As The Post reported in the July 23 news article "AI chatbots struggle to keep up with onslaught of breaking political news," AI chatbots "didn't have current information, gave incorrect answers, or declined to answer and pushed users to check news sources." Hours after the assassination attempt, even bots for major companies were at a loss. "ChatGPT said rumors of an assassination attempt were misinformation. Meta AI said it didn't have anything recent or credible about an assassination attempt."

This failing isn't simply a result of flawed technology or bad intent. Rather, it's largely because most bots have no way of legally accessing the enormous body of information that would allow them to be informed enough to respond accurately in real time.

Although there has been a tremendous amount of focus on the need for content to train AI models, there has been little meaningful discussion around the need to make sure artificial intelligence can update its knowledge as events evolve after its initial training period. Before the public gets access to a tool powered by artificial intelligence, that tool's creators give it a large quantity of information to teach it about the world. That process, known as core model training, is completely finished by the time a chatbot or other tool is available for widespread use.

Most of the AI companies developing these programs rely on content available on the open internet rather than news articles or scientific publications that are accessible only through paywalls. And given the rigors of the training process and the challenge of getting access to information, ordinary people won't always know when a chatbot has been updated or what information about the world it has access to.

Without the constant replenishment of top-notch reporting, smart analysis and reliable data, these chatbots simply don't work well. They need information both from large-scale publishers and smaller reliable sources with different perspectives. When news breaks, the most accurate and timely information might come from unexpected sources. Niche and local reporting are essential to nourish a healthy content ecosystem.

So, how do we create an open exchange between AI developers and publishers to make sure AI agents are well-informed? And how do we do this in a way that rewards both timeliness and rigor, and ensures that publishers are fairly paid?

We need a global infrastructure that allows for the efficient exchange of content at fair prices and mechanisms that allow AI agents to pay fair market value in real time for the content they desperately need. We need to acknowledge that the use of AI tools is about to explode. And we need a pricing and technical framework that services small and large players on both the supply and demand side of the equation.

A platform that can keep pace with lightning-speed bots will help ensure that publishers and other websites receive fair pay for their content, reduce legal entanglements on both sides and foster a sustainable AI ecosystem in this current age of the internet. And such a system will help improve the accuracy of breaking news as we enter the AI era. That would be a win for journalists, for technology companies and for society at large.

Trump tech agenda begins with \$500B private AI plan and cuts to regulation

De Vynck, Gerrit; Tiku, Nitasha

<https://www.washingtonpost.com/technology/2025/01/21/stargate-500-billion-trump-ai/>

January 21, 2025

President Donald Trump set about defining his new administration's technology policy Tuesday, hosting industry CEOs at the White House to announce a massive private-sector investment in infrastructure for artificial intelligence that could reach \$500 billion.

The announcement came after Trump on his Inauguration Day rescinded a sweeping 2023 executive order on AI from his predecessor Joe Biden that introduced regulations on companies developing AI intended to prevent the technology causing harm.

Trump's AI policy moves on his first two days in office and remarks at the White House on Tuesday showed him positioning himself as a strong supporter of the U.S. tech industry — while turning away from the Biden administration's stance that AI technology requires both support and oversight. Biden's executive order, some of which has been implemented by changes at federal agencies, focused on preventing risks such as algorithms that spread bias or AI assistants that could help terrorists build bioweapons.

"AI seems to be very hot," Trump said at the White House on Tuesday. "It seems to be the thing that a lot of smart people are looking at very strongly."

Trump was joined by OpenAI CEO Sam Altman, Oracle Chairman Larry Ellison and SoftBank CEO Masayoshi Son who announced "Stargate," a joint venture that will seek to spend as much as \$500 billion over the next four years to build as many as 20 new data centers to support AI projects.

The warehouselike facilities, stuffed with thousands of powerful and electricity-guzzling computer chips, are essential to developing and running AI software like that behind ChatGPT. A boom in data center construction is straining the power grid in states across the United States as companies including Microsoft, Google, Amazon and Meta have spent billions of dollars on new facilities. But AI leaders such as Altman say many more of the facilities must be built for AI technology to keep advancing.

"I think this will be the most important project of this era," Altman said at the White House on Tuesday. "We wouldn't be able to do this without you, Mr. President," he said, turning to Trump. Son said that SoftBank decided to move ahead with the Stargate project because of Trump's election victory.

The \$500 billion doesn't include money from the federal government, according to a person familiar with the project who spoke on the condition of anonymity to describe plans that haven't been made public. In addition to the companies creating Stargate, Dubai investment firm MGX, an investor in OpenAI, will contribute funding to the project. Microsoft and semiconductor manufacturers ARM and Nvidia will provide technology, OpenAI said in an announcement.

Trump's industry-friendly first moves on tech policy were not unexpected.

OpenAI has been working on Stargate for months, and its CEO Altman had been pitching politicians on the idea of a major push to build up AI infrastructure a year ago. Prominent Silicon Valley executives and investors, including some who contributed to Trump's reelection, had long railed against President Joe Biden's executive order instituting guardrails for AI technology.

Although certain industry leaders like Altman said some regulation was necessary, critics said the government would only get in the way of the technology's development and prevent smaller, younger companies from being able to compete with more established ones. Months before the election, Trump allies were already drafting an executive order of their own that would review "unnecessary" regulations and launch "Manhattan Projects" to develop military technology.

Despite Trump's more industry-friendly approach to AI, his emerging policy is not a complete reversal of his predecessor's. Biden in the final days of his administration directed federal agencies to speed up the development of AI data center projects on federal land.

Trump said on Tuesday that he supported that policy. "That sounds to me like it's something that I would like. I'd like to see federal lands opened up for data centers. I think they're going to be very important," he said.

Netchoice, a lobbying group with members including Google, Meta and Amazon, welcomed Trump repeal of the Biden-era AI rules. "His orders rolling back regulations on U.S. energy production and ending Biden's artificial intelligence (AI) red tape wishlist are critical for America's global leadership in technological development," Netchoice said in a post on X. Amazon founder Jeff Bezos owns The Washington Post.

Proponents of AI regulation have argued that it is needed not only to ward off potential harms from the technology but also to support its economic development and adoption by providing people with confidence that AI is safe to use.

"A politically-motivated repeal with no thoughtful replacement is self-defeating for our country and dangerous for our people and the world," Alondra Nelson, a senior fellow at the Center for American Progress, a liberal think tank, who also worked on technology policy in the Biden administration, said in a statement. "This will leave the American public unprotected from the risks and harms of AI and, therefore, unable to take up the benefits it might bring." Deborah Raji, a Mozilla fellow and AI researcher at the University of California at Berkeley, said that the repeal of Biden's executive order, in combination with the Supreme Court curbing federal agencies' power to set and institute regulations last year and Trump's ambitions to empower business leaders, create a "Wild West era" for AI products. "They're going to be empowered to build models and throw them everywhere, without a lot of regard to safety," she said.

AI companies have been spending huge amounts of money buying computer chips and building new data centers to house them. The surge in data center construction has also pushed up estimates for how much electricity the U.S. will need to generate to power them, leading to some coal power plants that had been slated to be closed to be kept online.