GOVERNOR'S TASK FORCE ON EMERGING TECHNOLOGIES

ARTIFICIAL INTELLIGENCE STRATEGY TO SUPPORT STATE AGENCIES IN OKLAHOMA

A Forward Thinking Approach

December 29, 2023

PRESENTED BY:

FPOV
FUTURE POINT OF VIEW

"AI has the potential to revolutionize the way our society operates. The private sector is already finding ways to use it to increase efficiency. Potential exists for the government to use AI to root out inefficiencies and duplicate regulations, and it is an essential piece of developing a workforce that can compete on a global level."

- Governor Stitt

CURRENT APPLICATIONS OF ARTIFICIAL INTELLIGENCE (AI)

CONSUMER FACING APPLICATIONS OF AI

1. Personal assistants such as home devices that are voice enabled. (i.e., Alexa, Siri, Google Assistant)
2. Personalized chat systems. (i.e., Chat-GPT, Claude, Customer service chatbots, etc.)
3. Autonomous vehicles and self-driving cars. (i.e., Tesla, Waymo)
4. Security cameras with video enabled recognition. (i.e., Ring and SimpliSafe)
5. Email filters that can reduce spam, read, categorize, and summarize.
6. Mapping, traffic analysis, and route optimization systems for travel. (i.e., Apple, Google maps, Waze, etc.)
7. Personalized social media content delivery and recommendation systems.
8. Personalized music recommendation systems. (i.e., Spotify, Amazon Music, Apple Music, etc.)
9. Personalized streaming video content recommendation systems. (i.e., Netflix, YouTube, etc.)
10. Virtual and augmented reality such as image creation, virtual fitting rooms, and photo filters.

PRIVATE SECTOR APPLICATIONS OF AI

1. Medical diagnostics such as the Mayo Clinic's use to improve patient care.
2. Fraud detection such as JPMorgan Chase's use for financial fraud detection and prevention.
3. Retail personalization such as Amazon's use to provide personalized shopping experiences.
4. Predictive maintenance such as General Electric's use in its manufacturing processes.
5. Adaptive learning such as The University of Phoenix's use in their online courses.
6. Autonomous transportation such as Waymo's use AI in self-driving cars.
7. Agricultural monitoring such as John Deere's integrations for crop and soil monitoring.
8. Cybersecurity such as IBM's use through their Watson platform.
9. Energy monitoring such as Siemens utilization with its smart grid solutions.
10. Pharmaceutical improvements such as Pfizer's use in drug discovery and development processes.

PUBLIC SECTOR APPLICATIONS OF AI

1. Public health such as The Centers for Disease Control and Prevention (CDC) use in health surveillance.
2. Tax efficiency such as The Internal Revenue Service (IRS) use of AI to detect tax fraud.
3. Traffic efficiency such as the Los Angeles Department of Transportation's use of AI for traffic management and congestion reduction.
4. Educational resource allocation with school districts like the New York City Department of Education's use of AI to analyze student performance data.
5. Environmental use such as The United States Environmental Protection Agency (EPA) leveraging AI for environmental monitoring.
6. Emergency response such as FEMA (Federal Emergency Management Agency) integrating AI in disaster response efforts.
7. Criminal investigations such as The London Metropolitan Police Service's use of an AI-powered system to scan video feeds from CCTV cameras, comparing faces against a database of known offenders.
8. Energy management such as the City of Amsterdam's use of AI-driven systems to optimize energy usage in public buildings, street lighting, and other infrastructure.
9. Waste management such as the city of Seoul, South Korea's use of AI to efficiently separate and recycle.
10. Public records management such as The National Archives and Records Administration (NARA) use of AI technologies to digitize historical documents.

U.S. EMPLOYEE DEFICIT PROBLEM

EMPLOYEE DEFICIT

U.S.

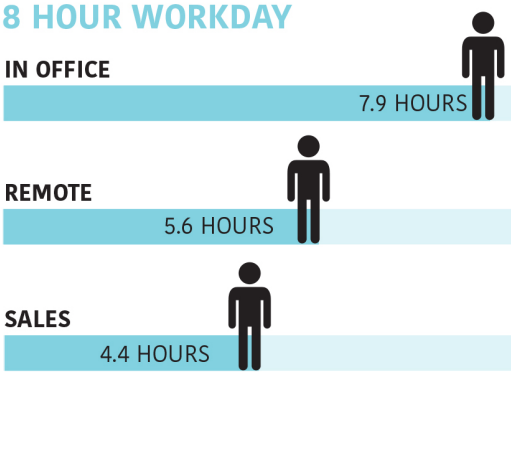
LESS THAN

4%

UNEMPLOYMENT

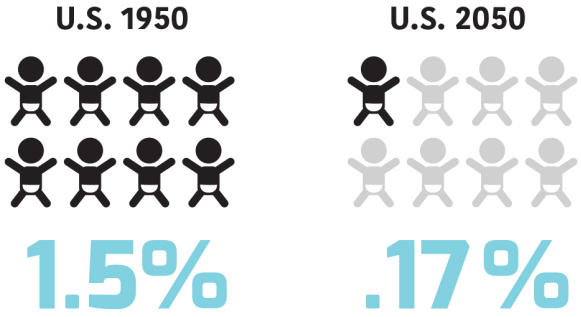
PRODUCTIVITY

8 HOUR WORKDAY



CASE STUDY

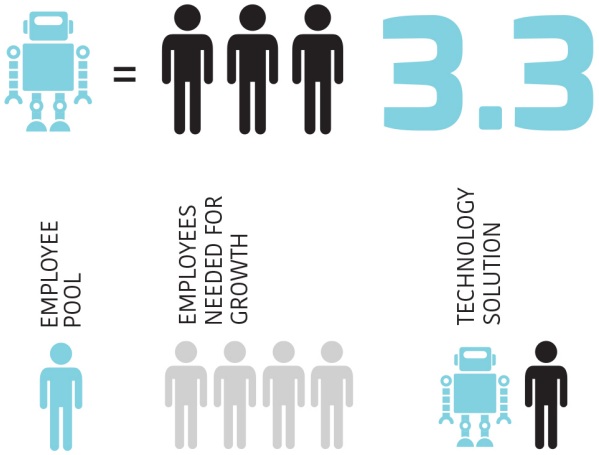
GROWTH RATE



BY 2033:

MORE 65+ AGED, THAN CHILDREN

JAPAN 1980'S SOLUTION



JAPAN TODAY

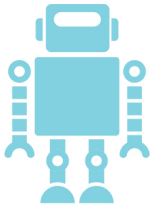
11%

INCREASE IN TOTAL WORKFORCE

STILL

3RD

LARGEST ECONOMY



45%

ALL ROBOTS PRODUCED TODAY

FPOV

OKLA. EMPLOYEE DEFICIT PROBLEM

EMPLOYEE DEFICIT

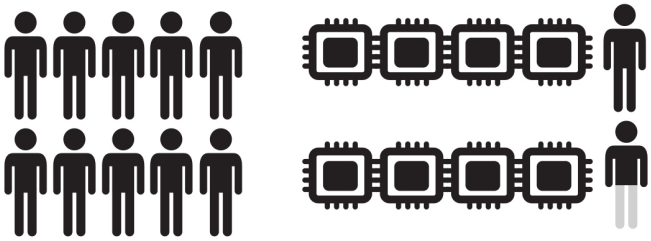
OK.

APPROX.

3%

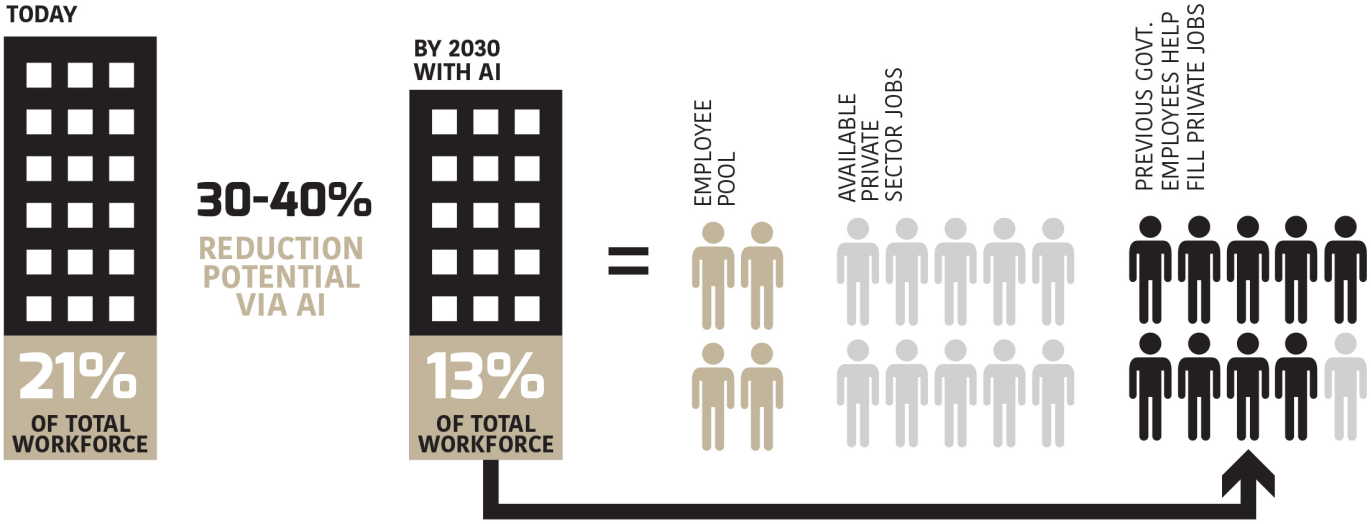
UNEMPLOYMENT

2022 CASE STUDY



85% REDUCTION IN CALL CENTER COSTS

OKLA. GOVERNMENT JOBS CROWDING OUT PRIVATE SECTOR



OPPORTUNITIES

BY 2030

20%

ENERGY DEDICATED TO TECHNOLOGY

TODAY

ENERGY DEFICIT WHERE MOST DATA CENTERS LOCATED

OKLAHOMA

HAS ENERGY SURPLUS

FPOV

THE VISION

Establish Oklahoma as the top state in the responsible, safe, secure, and proactive use Artificial Intelligence in order to make government more efficient, improve education, prepare our workforce for tomorrow's economy, and encourage innovation to build new technologies, fostering a brighter future for all Oklahomans.

THE OPPORTUNITY

The advent of Artificial Intelligence (AI) presents transformative opportunities for enhancing public and private sector operations, decision-making, and service delivery. Embracing this technological revolution, the State of Oklahoma is committed to becoming a global leader in the responsible adoption and application of AI. This framework establishes a strategic pathway for integrating AI into government agencies, ensuring its use aligns with our core values of transparency, efficiency, and public welfare.

At the heart of this initiative is a dual commitment: leveraging AI to foster innovation and improve public services, while upholding the highest standards of ethical responsibility, inclusivity, and accountability. The framework provides guidance on AI implementation, from data management to human oversight, adhering to legal, ethical, and technical standards.

This document is provided in response to Executive Order 2023-24 issued by Governor J. Kevin Stitt on September 25, 2023, and outlines the principles and practices that will guide Oklahoma's journey toward a future where AI enhances our State's governance, respects individual rights, and contributes to the well-being of all citizens. It serves as a blueprint for government agencies to navigate the complexities of AI adoption, promoting that technology serves the public good and sets a standard for responsible AI use globally.

A letter from our Chairman

As the Chief Information Officer and the Chairman of the Governor's Executive Task Force on Emerging Technology, I am excited to share an exciting vision for our state: a future powered by Artificial Intelligence (AI). This transformative technology holds immense potential to shape Oklahoma's prosperity, improve our lives, and propel us forward.

Imagine personalized education tailored to each student's needs, advances in health care, safer roads with AI-powered traffic management, smarter cities that respond to citizens' needs in real-time, and a thriving environment protected by AI-powered monitoring and early-warning systems. These are just glimpses of the future we can build with AI, a future where every Oklahoman benefits from its revolutionary power.

But realizing this future requires strategic action and practical steps. We need to invest in our people, training the next generation of Oklahomans to not just utilize but build and innovate with AI. We must build a robust digital infrastructure that empowers AI solutions and ensures equitable access for all. And we need clear guidelines and regulations to ensure AI is used ethically and responsibly, always serving the best interests of Oklahomans. By embracing AI with intention and purpose, we can unlock its boundless potential and build a brighter future for generations to come.

Through this task force, we have brought leaders from across government, the private sector, education, and commerce, to help develop a strategy. This strategy will allow Oklahoma to lead by harnessing the power of AI to build a smarter, healthier, and more prosperous state. But this is only the beginning of our journey. It will take continued investment and leadership to ensure that every Oklahoman can reap the benefits of this emerging technology, creating a future where innovation thrives and opportunity flourishes.

Joe McIntosh, Chief Information Officer for the State of Oklahoma

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SECTION 1: BENEFITS OF AI

1.1 PUBLIC ADMINISTRATION EFFICIENCY: Artificial Intelligence (AI) can automate administrative tasks, including scheduling, document management, reducing backlogs, and accelerating processes, all while providing analytics and insight into the complex dynamics of state operations to improve the citizen experience.

In the State of Oklahoma, the integration of AI into public administration will signal a new era of efficiency and service excellence. AI's ability to process vast quantities of data transcends human capabilities and would enable state agencies to automate routine tasks, streamline workflows, and liberate valuable human resources for critical thinking and decision-making tasks. For instance, AI can optimize document handling, reducing manual errors and processing times for permits, applications, and other government documents, thereby enhancing the speed and reliability of services offered to the public.

In Oklahoma, the state government can pursue the integration of Artificial Intelligence (AI) into state agencies to recognize the potential benefits of a balanced collaborative workforce. As the number one employer in the State, with approximately 21% of the workforce engaged in public sector jobs, Oklahoma could face a challenge in attracting private sector companies. Due to a high percentage of the available workforce working in the public sector and a low unemployment rate of approximately 3.2%, this public employment phenomenon is economically referred to as “crowding out.” With approximately 65,000 citizens unemployed in the state against a posted 100,000 job vacancies, Oklahoma can seize upon AI as an opportunity to automate repetitive state related tasks and return some of the available workforce to the private sector. This strategic move aims to not only optimize the public sector, but also make the State more appealing for private sector investments and position Oklahoma as a leader in innovative workforce management.

In addition, AI systems can be deployed to manage public inquiries, using natural language processing to provide immediate, accurate responses to common questions and to direct more complex queries to the appropriate human personnel. This can improve citizen satisfaction by providing quicker responses and reduce the administrative burden on staff, allowing them to concentrate on more substantive matters. The strategic application of AI in Oklahoma's public administration is not merely an operational upgrade; it is a transformative shift towards a more agile, responsive, and citizen-centric government.

As an example, national industry standards indicate that a human-staffed call center incurs costs ranging from $5.00 to $8.00 per call. Remarkably, 85% of the human capital driven costs can be mitigated through the implementation of automation technologies powered by Artificial Intelligence (AI). This is just one example of a potential cost reduction that could represent a major efficiency gain for the State. Moreover, AI-driven automation in call

centers doesn't just offer financial benefits; it also enhances customer accessibility and satisfaction. By automating routine inquiries and responses, AI allows for a more consistent, round-the-clock service, reducing wait times and improving the overall customer experience. This dual advantage of cost reduction and enhanced service quality positions AI as a transformative tool in the customer service industry, offering a compelling case for its widespread adoption.

Utilizing AI to analyze economic trends and tax collection data would enhance revenue forecasting and produce more accurate fiscal projections, while deploying AI for expenditure analysis could identify inefficiencies and suggest cost-saving measures. Additionally, implementing a real-time AI monitoring system for budget execution would ensure spending aligns with legislative appropriations and financial policies, aiding in the prevention of cost overruns and enabling timely adjustments to financial plans.

1.2 HEALTHCARE IMPROVEMENTS: Artificial Intelligence (AI) can support public health initiatives through predictive analytics, improving outbreak response and health service delivery.

By implementing AI-driven data analytics, the State can support more accurate and expedient diagnoses, personalize treatment plans, and predict patient outcomes with greater precision. AI can manage and analyze medical records to identify trends and improve the overall quality of care. Moreover, AI algorithms can optimize the allocation of healthcare resources, manage patient flow, and reduce wait times, thereby increasing the efficiency of health services. Utilizing AI in public health can lead to better disease surveillance and control, facilitating timely interventions during health crises.

AI could significantly enhance the assessment of service utilization and identification of care gaps in disability services. By analyzing extensive data, AI has the potential to pinpoint areas where services are lacking or inefficient, enabling targeted improvements. This approach would not only enhance the quality and accessibility of services for individuals with disabilities, but also allocate resources in the most effective manner, maximizing their impact and reach within the community.

1.3 TRANSPORTATION OPTIMIZATION: Artificial Intelligence (AI) can improve traffic management, reduce congestion, and enhance the planning of public transportation systems.

The incorporation of AI into transportation systems promises to revolutionize how residents and visitors experience mobility. AI's predictive capabilities can be utilized to analyze traffic patterns, assess signage needs, optimize the flow of vehicles, and reduce congestion on Oklahoma's roads. This advanced traffic management, facilitated by AI, enhances efficiency, safety, and the overall commuting experience. Additionally, AI can assist in the dynamic scheduling of public transportation to align services with real-time demand, thereby improving reliability and accessibility.

The application of AI extends to enhancing the safety measures within Oklahoma's transportation systems. By integrating AI with real-time monitoring technologies, the State can promptly identify and respond to potential safety hazards on roads, such as traffic incidents or hazardous weather conditions. This proactive approach to transportation safety, driven by AI's advanced analytical capabilities, mitigates risks and fosters a safer travel environment for all. Embracing these AI-driven safety enhancements reflects Oklahoma's dedication to safeguarding its citizens and visitors, while advancing its transportation network into a new era of safety and technological sophistication.

1.4 ENVIRONMENT AND ENERGY:

Utilizing Artificial Intelligence (AI) in environmental monitoring and energy management could significantly advance capabilities in both disaster response and sustainable resource optimization. AI-enhanced forecasting and preparedness for natural events, as well as improved ecosystem preservation, pollution control, and sustainable energy practices, could establish a more resilient and environmental future for the State.

The integration of advanced AI in environmental monitoring and emergency response in Oklahoma would mark an important step forward in the State's ability to manage natural events and disasters. AI's proficiency in analyzing vast datasets enhances weather forecasting accuracy, a critical asset in Oklahoma's often severe and seemingly unpredictable weather landscape. This advanced forecasting capability enables the State to anticipate and prepare for extreme weather events more effectively, thus minimizing damage and protecting communities. In the realm of disaster response, AI's role becomes even more pivotal. By analyzing real-time data from a myriad of sources, including satellite imagery and on-ground sensors, AI can inform emergency services about the most affected areas, enabling a rapid and targeted response. The capacity of AI to model disaster scenarios enhances planning for evacuation routes and relief operations. AI systems can optimize resource allocation during emergencies, accurately predicting the needs of affected populations, and facilitating the efficient distribution of aid.

The integration of AI in environmental management could revolutionize Oklahoma’s approach to ecosystem preservation and energy sector advancement. AI's analysis of environmental data could provide critical insights into air and water quality, guiding strategies to enhance conditions and protect natural habitats. In energy production, AI could optimize resource use to reduce waste and lessen ecological impact. Pollution control would also benefit from the advanced monitoring and predictive capabilities of AI, supporting clean air objectives and improving resident health. AI could streamline regulatory compliance across energy sectors, aligning reasonable regulations with industry compliance. Additionally, AI's assessment of renewable or new energy potentials, such as wind, solar, and hydrogen could increase the State’s energy potential, improving Oklahoma's ability to be a sustainable energy producer over the coming decades.

1.5 PUBLIC ENGAGEMENT: Artificial Intelligence (AI) powered virtual assistants and chatbots can provide Oklahomans with quick and accurate information, enhancing civic engagement.

AI has the potential to greatly enhance public engagement in the State of Oklahoma. AI tools like virtual assistants can offer personalized, efficient interactions with citizens, handling non-sensitive inquiries and providing standardized information on demand. This technology can integrate into various communication channels such as government websites, social media platforms, and mobile applications, promoting accessible and inclusive access to information.

AI can analyze public feedback from surveys and social media interactions to gauge public sentiment and identify emerging issues. This data-driven approach enables the government to respond more effectively to the needs and concerns of its citizens, fostering a more responsive and engaged civic environment.

By leveraging AI in public engagement, Oklahoma can demonstrate its commitment to adopting innovative solutions for enhanced citizen communication, ensuring that government services are more accessible, responsive, and attuned to the needs of the public.

1.6 INFRASTRUCTURE MAINTENANCE: Artificial Intelligence (AI) can predict when roads or public utilities need maintenance, prioritize repairs, and optimize budgets.

The incorporation of AI as part of Oklahoma's infrastructure management represents a paradigm shift towards enhanced efficiency, safety, and sustainability. AI can monitor infrastructure health, using sensors and data analytics to predict maintenance needs, thereby preventing costly repairs, and extending the life of public assets. This proactive approach can ensure consistent functionality and safety of critical infrastructure, from bridges to water systems.

AI could play a crucial role in urban planning and development. By analyzing complex datasets, AI can assist in optimizing land use, transportation networks, and energy distribution, creating more efficient and sustainable urban environments. This data-driven approach facilitates smarter decision-making, aligning development projects with the State's long-term economic and environmental goals.

1.7 ECONOMIC GROWTH: In the dynamic landscape of Artificial Intelligence (AI), Oklahoma recognizes an opportunity for technology-driven economic growth by applying forward-thinking AI strategies across emerging business sectors and established industries such as energy, agriculture, healthcare, and aerospace (See Supplemental document titled Governor’s Task Force on Emerging Technology: Supplemental Artificial Intelligence Strategy to Support Businesses in the State of Oklahoma).

1.7.1 Establishment of an AI Technology Economic Development Task Force

The task force should be considered and report to the Chief Artificial Intelligence Officer (CAIO) (described in section 3.1). The task force should include selected private sector leaders, including those from core industries identified in the State of Oklahoma Science and Innovation Strategic Plan, and public officials charged with facilitating the development of a robust and resilient AI Technology economic sector by supporting the viability and expansion of existing operations, encouraging new AI related entrants to the State of Oklahoma, and maximizing the effectiveness of policies and programs while strengthening the public-private partnerships with state agencies to mature a responsible AI ecosystem. The task force should be established on annual terms and report interim deliverables as deemed necessary by the CAIO.

The chairperson of the AI Technology Economic Development Task Force, may delegate the responsibility and authority for any particular matter, as deemed appropriate from time to time under the circumstances to any working group or subcommittee it may form.

To carry out its purposes, the AI Technology Economic Development Task Force should consider the following but may diverge from this list as appropriate.

- Conduct an assessment on the gaps in AI technology development within the State of Oklahoma to deliver to the Chief Artificial Intelligence Officer (CAIO).
- To recommend a business and strategic plan to enhance economic opportunity, attract and sustain business, and promote a business-friendly environment to increase access and development of AI Technologies in the State of Oklahoma.
- To recommend the mechanism of public-private partnerships to support business incubation and acceleration.
- To recommend regulatory actions that de-risk investment in AI Technology.
- To recommend how to support research, development, and commercialization of new and existing AI Technologies with high market potential.
- To recommend how to support investor awareness and interest in AI Technology in the State.
- To recommend mechanisms to increase access to state risk management services for AI Technology such as beneficial access to grants, loan guarantee programs, microfinance, insurance, and the monetization of tax and R&D credits.
- To recommend how to support new entrants to the State of Oklahoma in the AI Technology sector.

- To recommend mechanisms to increase access to incentives for AI Technology development and training.
- To recommend available special economic development areas.
- To recommend marketing strategies for AI Technologies in the State of Oklahoma across the private sector.

1.7.2 Creating a Favorable Regulatory Environment and Establishing Public-Private Partnerships: The State of Oklahoma should focus on creating a regulatory environment conducive to AI development and implementation. This includes simplifying regulations to encourage innovation and investment in AI technologies. Fostering public-private partnerships through new incentives and adapting existing ones will develop a collaborative ecosystem that attracts AI enterprises and startups to Oklahoma and stimulates economic growth.

1.7.3 Robust Technical Infrastructure: Investing in high-speed computing and enhancing connectivity robustness are essential for creating a strong technical infrastructure in Oklahoma. This involves both upgrading existing digital infrastructure and initiating new projects to ensure state-wide access to high-performance computing resources. Such infrastructure is vital for supporting advanced AI applications and research.

1.7.4 Investment in STEM Education and AI-related Fields: The State should intensify its investment in science, technology, engineering, and mathematics (STEM) education related to AI including responsible use, data science, and the infrastructure needed to support AI technologies. This involves introducing extra programs and initiatives in schools to spark interest in AI and emerging technologies. By nurturing an early interest in these fields, Oklahoma can cultivate talent that is ready to engage with and contribute to the AI-driven economy.

1.7.5 Leveraging Energy Surplus and Location: Oklahoma's energy surplus and strategic location offer unique advantages for enhancing and supporting the increased “compute power” needs of AI technology. The State could capitalize on these assets to attract businesses that require substantial compute power, energy, and robust network infrastructure. These natural and geographic strengths position Oklahoma as an ideal partner for energy dependent industries and data-intensive research facilities.

The State of Oklahoma, already home to the 8th largest industrial park and the 2nd largest Google data center in the world, is uniquely positioned to become a burgeoning hub for technology and AI investment. Google's significant contributions, including $5 million in grants, the creation of over 800 jobs, and an impressive $4.4 billion investment with continual expansions, have set a precedent for the economic impact tech giants can have when investing in Oklahoma. The recent announcement of Northern Data's data center near Google's site and the presence of a dedicated power plant for the industrial park further solidify this area as a potential technology powerhouse. Additionally, Google's

Economic Report for Oklahoma highlights the training of 135,000 Oklahomans in new digital skills and underscores the potential for workforce development by collaborating with cutting-edge technology providers.

As an example, OneNet, which provides connectivity to higher education, K-12, and career techs, has a direct peering relationship with Google, creating an even faster connection to their resources. Oklahoma can build off this success, encouraging other vendors to bring data centers to Oklahoma and otherwise work with them to connect resources, which will provide real benefit for Oklahomans.

By facilitating further investment in technology and AI, Oklahoma could not only boost its economy but also position itself as a leader in tech innovation and skilled workforce development, creating a ripple effect of prosperity and technological advancement across the State.

1.7.6 **Bolstering Industries in Oklahoma:** AI can be a transformative force to the key industries outlined in the Oklahoma Science and Innovation Strategic Plan and economic development efforts including aerospace and defense, advanced air mobility and autonomous systems, agriculture, bioscience, and logistics among many others. The State should aim to support the integration of AI solutions into these sectors, enhancing their productivity, innovation capacity, and global competitiveness. This involves adopting AI technologies within the State agencies and creating industry-specific AI applications tailored to meet the unique challenges and opportunities of each sector. This targeted approach can strengthen Oklahoma's position in key industries, driving economic growth and diversity.

If Oklahoma becomes less competitive in the growing AI marketplace, it could have tax base implications. Given that sales tax constitutes approximately 41.5% of state tax revenues, personal tax is approximately 31.6%, and business tax is approximately 15.3%, with an overall effective tax rate of 9%, any shift in economic activities could impact the state’s revenue streams.

If technologically advanced firms and industries gravitate toward neighboring states with more AI-friendly environments, Oklahoma could experience a decline in its attractiveness to both existing and potential new businesses. This shift could result in a reduction of business tax revenues and, importantly, a decrease in higher paying jobs. In this event, and if this were to occur, the State risks high-income jobs migrating to other states or otherwise becoming scarce, and personal tax revenues could diminish due to lower overall income levels among residents.

The possibility of firms employing labor in other states that could telecommute also raises concerns. While business tax revenues might not decline significantly as companies maintain a nominal presence in Oklahoma, the reduction in physical jobs could lead to decreased spending power among the populace, affecting sales tax revenues.

Reduced demand for labor in Oklahoma could suppress wages, leading to a decrease in sales and personal taxes. This situation would likely exacerbate structural unemployment, raising the natural unemployment rate. The period of retraining for displaced workers to find employment in other industries could further strain the State's finances, particularly in terms of increased unemployment benefits and potentially higher social service costs.

In terms of expenditures, while the State may not immediately become less efficient, it would miss out on the efficiency gains and cost-saving measures that AI investment brings. A lack of technological progress could gradually render the State less competitive in terms of business operations and public service delivery, potentially leading to higher long-term costs.

Collaborating with the Department of Defense (DoD) is another an option for growth. Currently, Oklahoma is ranked 25th compared to other states in defense spending, with approximately $7.0 billion spent annually in the state. Defense spending accounts for 2.9% of the state GDP which ranks 13th compared to other states. The area that shows increased potential for DoD investment in Oklahoma is in grant spending. The State is currently ranked 40th with a fiscal year 2022 investment of $66.3 million. In addition, of the $7 billion spent in OK, only 2% was in research and development (R&D). In August 2023, the DoD announced the establishment of a generative AI task force and had made it a priority to invest in developing AI systems and providing the training to effectively utilize it. With state support, Oklahoma could create an environment for the DoD to increase engagement in R&D for generative AI.

Overall, avoidance of considering AI’s potential could put Oklahoma at a disadvantage compared to neighboring states that could become more forward-thinking, potentially leading to a decrease in its tax base and an increase in expenditures, such as in the realm of social services and unemployment benefits. This scenario could challenge Oklahoma's current standing as the 10th best state in terms of financial management and its operation at a surplus.

SECTION 2: PRINCIPLES AND VALUES FOR AI SYSTEMS

2.1 RESPECT FOR HUMAN RIGHTS: Artificial Intelligence (AI) systems should be designed and operated to respect and enhance human rights, dignity, and values.

Integrating a deep respect for Human Rights in the domains of AI development and application is pivotal for shaping an ethical framework that guides AI technologies and safeguards the fundamental human values of privacy, equality, and freedom of expression for all Oklahomans. AI, in its rapid evolution, holds immense potential to transform societal structures and individual lives. However, this transformative power also brings the potential for ethical challenges and risks to basic human rights. If AI is not guided by a thoughtful ethical framework, these technologies risk infringing upon human rights, either through intentional design or unintended consequences.

The responsibility for ensuring that AI adheres to human rights standards falls squarely on the shoulders of developers, stakeholders, and policymakers. It is imperative that these actors engage in continuous and dynamic discourse about the ethical implications of AI, grounded in respect for human rights. This involves a proactive approach to understanding the multifaceted impacts of AI, instituting robust oversight mechanisms, and fostering transparency in AI operations. There is a need for state, national and international collaboration to establish unified standards and guidelines that incorporate cultural differences.

Integrating human rights considerations into the fabric of AI ethics offers long-term benefits for building trust and ensuring the sustainable advancement of technology. When AI systems are developed with a clear commitment to human rights, they are more likely to gain public trust and acceptance. This trust is crucial for the widespread adoption and beneficial use of AI technologies. By aligning AI development with human rights and ethical principles, the State can protect individuals and communities exposed to these technologies and steer AI towards contributing positively to societal progress.

2.2 TRANSPARENCY AND ACCOUNTABILITY: Artificial Intelligence (AI) operations must be transparent with clear lines of accountability. Agencies that use AI technologies must be able to explain decisions and processes undertaken by AI systems.

The incorporation of transparency and accountability into the ethical framework of AI is essential in ensuring that decisions made by the AI systems are both comprehensible and justifiable. In the realm of public service sectors like law enforcement and social services, the decisions made by AI could significantly impact individuals. Therefore, the decisions made by AI must be unbiased, transparent, and understandable to the public. This

transparency is a cornerstone in fostering public trust and a factor in the successful deployment of AI in public services for the State of Oklahoma.

Achieving transparency and accountability in AI can pose challenges if not addressed appropriately. The complexity of AI models presents a significant challenge, making it difficult to understand how decisions are derived. To address this, there should be a growing emphasis on the development of explainable AI models. These models aim to make the decision-making process of AI systems more interpretable and understandable, both to AI specialists and the public. This approach requires a multidisciplinary effort, combining expertise in AI technology, ethics, and public policy, to safeguard these systems as effective and ethically sound.

Robust oversight mechanisms are necessary to ensure accountability. This involves establishing clear guidelines and standards for AI development and deployment, along with regular monitoring and assessment processes. By implementing such mechanisms, public agencies in Oklahoma can ensure that AI systems align with ethical principles and appropriate standards, fostering a culture of responsibility and trust.

Incorporating notice and explanation mechanisms in the application of automated AI systems is an important aspect of promoting ethical and transparent AI deployment, particularly in the public sector where AI decisions can impact lives. Notice entails clear communication about the use of AI, including its role, operational parameters, and the responsible overseeing entity or authority having jurisdiction. This transparency provides an avenue for public awareness and understanding of AI's influence across contexts, from employment to legal decisions. Explanation complements notice by demystifying the AI decision-making process. These explanations should be technically valid, meaningful, accessible, and articulated in plain language. They should clarify the rationale behind AI-influenced outcomes, particularly in use cases involving the protection of individual rights.

The need for these explanations to adapt alongside any modifications in the AI system's functionality highlights their importance in promoting accountability and trust. Notice and explanation serve both as tools for transparency and mechanisms for contesting unjust decisions or errors. Providing a clear understanding of AI operations and decisions empowers individuals to effectively engage with and respond to AI systems. This approach helps to ensure AI systems operate in an ethical and responsible manner, respecting the dignity and rights of all individuals affected by their outcomes.

2.3 PRIVACY AND DATA GOVERNANCE: Artificial Intelligence (AI) technologies should safeguard personal privacy and utilize data responsibly to ensure accuracy, security, and the confidentiality, integrity and availability (CIA) of data.

In the State of Oklahoma, the integration of privacy and data governance within AI ethics necessitates a robust and nuanced approach, one that includes the protection of individuals from invasive data practices. This approach should be rooted in the principle that everyone is entitled to privacy protections and control over their personal data,

especially those data elements that have a reasonable potential to be used in ways that can expose individuals or organizations to harm. Examples include loss of intellectual property or financial harm due to identity theft. AI systems should maintain safeguards to align data collection and use with relevant limits and reasonable expectations.

AI designers, developers, and deployers must seek and respect individual consent regarding data collection, use, management, storage, and sharing. This consent should be sought in a manner that is clear and concise, empowering individuals to make informed decisions about their data. The current practices of obscure consent requests, often embedded in lengthy and complex terms and conditions, should be reformed to genuinely offer agency to users.

The ethical use of data in sensitive areas like health, education, work, criminal justice, and finance demands heightened protections. In these domains, personal data and inferences drawn from the data, like derived data and categorizations, should be limited to essential functions, guarded by ethical review processes, and subject to strict usage prohibitions. For example, AI systems that allow continuous monitoring of environments like workplaces, educational settings, and housing should be reviewed, especially where it risks infringing on individual rights and freedoms.

Oklahoma should also address the challenges posed by surveillance technologies. These technologies should undergo rigorous pre-deployment assessments to evaluate potential harm, and their use should be limited to protect privacy and civil liberties. Citizens should have access to transparent reporting, confirming that their data preferences are respected and providing insight into the potential impacts of surveillance technologies on their rights and opportunities.

The State should recognize that data privacy is a fundamental principle necessary for the realization of all principles in Oklahoma's AI ethics framework. The pervasive nature of surveillance and data collection by both private entities and government agencies, and the subsequent use of this data in automated systems, can become a concern. In certain use cases of AI, Federal law may not be sufficient in addressing the scale of private data collection and government access to this data. There is potential for individuals to lose visibility of their personal data, in cases such as data brokers aggregating information without consent, which leads to risks of misuse and misinterpretation.

In response, Oklahoma should advocate for standardizing practices that protect consumer privacy, including minimizing data collection, enhancing clarity in data use communication, and bolstering security practices. While some federal and state laws offer a framework for personal data protection, a comprehensive, clear, standardized, and enforceable framework can be beneficial as the prevalence of AI grows. This combined framework should ensure that AI systems do not engage in unwarranted monitoring, information gathering, or surveillance without specific consent or legal authority. By doing so, Oklahoma can protect its citizens from the growing risks associated with data harvesting

and surveillance, fostering a culture of trust and respect for individual privacy and autonomy in the age of AI.

2.4 FAIRNESS AND NON-DISCRIMINATION: Artificial Intelligence (AI) systems should be free from unfair bias, providing equitable outcomes regardless of race, gender, age, or other protected characteristics.

Fairness and non-discrimination should stand as a fundamental principle of AI Ethics in Oklahoma. Considering the evolving nature of technology and the profound impact it can have on society, AI datasets present fundamental concerns around amplifying biases that may be present in the data it consumes. In an era where decision-making processes are increasingly delegated to automated systems, the risk of perpetuating historical inequities or introducing new forms of bias could occur. Fairness in AI is not merely a technical challenge; it embodies a commitment to social justice, ensuring that AI systems do not unfairly disadvantage any individual or group.

This imperative is especially important considering Oklahoma's diverse populace. AI systems, when designed or used without a rigorous consideration of fairness, may inadvertently reinforce societal disparities, leading to outcomes that systematically favor certain groups over others. This is particularly critical in sectors like healthcare, employment, and law enforcement, where a potential bias in an AI system can have long-term consequences.

Moreover, the commitment to fairness and non-discrimination in AI aligns with broader societal values of equality and justice. It reflects a recognition that technology should be a tool for empowerment, not exclusion. By prioritizing these principles, Oklahoma can set a precedent that AI should be a force for good, democratizing opportunities rather than deepening divides. Such a stance fosters public trust in technology, as a part of its effective adoption and utilization.

2.5 PUBLIC PARTICIPATION AND OVERSIGHT: Deployment of Artificial Intelligence (AI) should involve public input and oversight to confirm that AI serves the public interest and upholds democratic values.

In the rapidly evolving landscape of AI, the integration of public participation and oversight emerges as a pivotal component in the ethical framework for the State of Oklahoma. This stems from a recognition that AI, in its multifaceted applications, could have an impact on the broader socio-cultural fabric that defines public service. Thus, it is paramount to ensure AI systems both comply with ethical standards and align with the values of the communities they serve.

Public participation in the development and governance of AI is essential in cultivating a system that is transparent, accountable, and reflective of the diverse perspectives in the State of Oklahoma. Such participation encourages a democratization of technology, where the public is not merely a passive recipient but an active contributor to the AI discourse.

This engagement fosters a deeper understanding of AI technologies among the populace, thereby enhancing informed decision-making and promoting a sense of collective ownership. Furthermore, public input serves as a crucial mechanism for identifying potential biases and ethical blind spots in AI systems, ensuring that these technologies are designed and deployed in a manner that aligns with the societal norms and values of Oklahoma's diverse communities.

Oversight, as a fundamental pillar in the AI ethics framework, is instrumental in maintaining the integrity, trustworthiness, and alignment of AI systems. It involves continuous monitoring and evaluation to ensure compliance with established ethical guidelines and available standards. Effective oversight mechanisms should encompass both the technical aspects of AI and its broader implications on privacy, equity, and societal well-being. This includes scrutinizing AI applications in critical sectors such as healthcare, education, and law enforcement, where the outcomes can have particular significance. Such oversight should be coordinated among independent participants with broad multidisciplinary expertise, capable of assessing both the technological and ethical dimensions of AI.

Moreover, grounding AI systems in the public interest is of utmost importance. The primary objective of AI should be to enhance societal welfare as well as modernize and streamline state government and improve the ability to address the challenges faced by the State. This necessitates a paradigm shift from viewing AI as a tool for mere efficiency and process optimization to one that is a catalyst for social good. AI systems should be evaluated not only on their technical performance but also on their contribution to societal goals such as inclusivity, sustainability, and public welfare. In this regard, Oklahoma should ensure that AI systems are designed with a human-centric approach, prioritizing the needs and rights of its citizens.

In conclusion, embedding public participation and oversight within Oklahoma's AI code of ethics should be considered as a strategic imperative. It is a step towards fostering AI systems that are not only technically sound but also ethically grounded, socially responsible, and aligned with the public interest. As Oklahoma navigates the complex terrain of AI governance, these principles can serve as a guiding light, ensuring that the State remains at the forefront of ethical AI development and deployment.

2.6 HUMAN ALTERNATIVES: Citizens should be able to opt-out, have recourse for a dispute, and have timely access to an effective human alternative of Artificial Intelligence (AI) technology.

In the rapidly evolving landscape of AI, where algorithms and automated systems increasingly permeate various aspects of public and private life, the provision of a human alternative to these systems becomes a necessary consideration. This necessity stems from the recognition that while AI systems offer efficiency and scalability, they may not be able to fully replicate the nuanced understanding and ethical judgment inherent to human decision-making in all situations. The ability of citizens to opt out of AI systems, therefore, should not be viewed merely as convenience, but as a fundamental right, ensuring that

individuals maintain the ability to participate in decisions that could have a significant impact.

The intrinsic complexity and potential biases within AI algorithms necessitate an option for individuals to challenge or question the outcomes generated by these systems. Such an option underscores a commitment to fairness and individual rights, particularly in cases where automated decisions may be part of the decision-making processes, such as in legal, employment, or healthcare contexts. The provision for submitting disputes or complaints against AI-generated decisions is integral to this process, allowing for transparency and accountability in systems that might otherwise be seen to operate as a difficult to understand artificial or synthetic system.

Timely access to an effective human alternative is not just a matter of convenience, but a safeguard against the fallibility and potential biases of automated systems. It ensures that there is a mechanism for human oversight and intervention. This human element in overseeing AI systems serves as a critical balance to the possible impersonalized approach of algorithms, maintaining an essential layer of empathy and ethical consideration to the decision-making processes.

Moreover, a human alternative provides a crucial check against the inadvertent perpetuation of systemic biases that could be possible within AI systems. By allowing individuals the option to seek human judgment, especially in sensitive situations, it reaffirms the value of human perspective in complementing technological advancements. This approach not only enhances the trust and reliability of AI systems but also aligns with a broader ethical framework that prioritizes human dignity and rights in the age of digital transformation.

The integration of a human alternative in AI systems should be a fundamental aspect that reinforces the ethical use of emerging technology. It is a testament to the understanding that while AI can augment human capabilities, it cannot yet replace the depth and breadth of human judgment and ethical reasoning. Such a balance is crucial in ensuring that the advancement of technology aligns with the principles of justice, fairness, and respect for individual autonomy.

SECTION 3: ARTIFICIAL INTELLIGENCE OVERSIGHT

3.1 CHIEF ARTIFICIAL INTELLIGENCE OFFICER (CAIO): In order to establish responsibilities and authority for AI in the State of Oklahoma, the Chief Artificial Intelligence Officer (CAIO) role should be considered. The CAIO should have jurisdictional areas of responsibility related to Artificial Intelligence (AI) systems of all state agencies and hold primary responsibility, in coordination with other responsible officials, for overseeing the State's use of AI, promoting AI innovation, and managing risks from the State's use of AI.

The CAIO should have the necessary skills, knowledge, training, and expertise to perform the responsibilities described in this section and have the necessary financial, human, information, and infrastructural resources to carry out these responsibilities effectively, including providing or requesting resources via the budget process to support the responsibilities identified in this section.

Requirement considerations should include a graduate degree in a science, technology, engineering, or mathematics (STEM) or other similar degree, a minimum of ten (10) years of professional experience that includes the development of AI systems, development of innovation programs, development of budgets for emerging technology and development of AI system risk management programs.

To carry out the potential requirements of the CAIO role, considerations of the following should be given but may diverge from this list as appropriate under the circumstances.

- Serve as the senior advisor for AI to the Governor of the State of Oklahoma, the directors of Oklahoma agencies and departments and Oklahoma elected officials.
- Lead the State's AI Technology strategy and policy on investment and AI adoption, as well as govern and oversee efforts across the State, define the roadmap for implementation, including risk governance and conduct a cost benefit analysis using key leading and lagging metrics to demonstrate the return on investment (ROI) of AI Technology endeavors, at least on an annual basis.
- Serves as the Chair of the Artificial Intelligence (AI) Oversight Committee, "AI Committee" (described in subsection 3.2).
- Coordinates with the AI Experts designated within each agency and department in the State of Oklahoma.

- Maintain an AI technology inventory for each state agency submitted by the state agency at the time of initial adoption, except in cases whereby there is an exemption provided, and update at least annually an inventory of the State's AI use cases.

- Solve and scale enterprise and joint AI Technology use cases across state agencies.

- Establish oversight and auditing of AI Systems to ensure continuous risk governance mechanisms of AI technologies to align AI practices with ethical standards, reasonable requirements, and public trust.

- Contract with a private consultant or consultants to assist in the assessment and development of the strategy as required in this subsection.

- Provide direction for the AI Technology professional development of the staff of state agencies.

- Create and implement communications plans that disseminates pertinent information to state agencies on standards, policies, procedures, service levels, project status, and other important information on AI Technologies.

- Oversee the AI Technology Economic Development Task Force (described in subsection 1.7.1), the AI Technology Talent Task Force (described in subsection 5.1), the AI Digital Workforce Task Force (described in subsection 3.5), and any other AI efforts to include a possible AI Center of Excellence to support agency initiatives (described in subsection 3.3).

  It should be considered that the pace of advancement in AI is relentless, with the technology evolving even more quickly than other recent disruptors such as the internet and smartphones. To be successful with AI Technology efforts, considerations may be needed to adjust budgetary planning, or establish a more rapid access to funding, for this new rate of advancement. For example, the current budgeting processes that are based on 12 to 18 month cycles are not well adapted to this technology. It will likely become important to look further out within strategic planning processes and introduce more flexibility into budgetary support.

  Over the near term, within the Oklahoma State Finance Act, particularly Sections 34.11.1 and 34.27 relating to the State Governmental Technology Applications Review Board (GTARB), the establishment of a Chief Artificial Intelligence Officer (CAIO) and broader AI initiatives could be integrated into the existing structure.

  The creation of the CAIO role could fall under the authority of the Chief Information Officer (CIO) as outlined in 34.11.1 Subsection E, which authorizes the CIO to employ personnel for the Information Services Division of the Office of Management and Enterprise Services (OMES). Furthermore, the responsibilities for AI initiatives can

potentially align with the duties specified in Subsection F, which includes formulating and implementing information technology strategies for state agencies.

The CAIO could be a member of GTARB, per Section 34.27. This would place the responsibility for AI initiatives within the scope of GTARB's purview, as it is tasked with overseeing the implementation of action plans developed by the CIO and approving any amendments to these plans.

To integrate the CAIO or other AI initiatives within the State's strategic framework in the near term, it can be considered that the CIO includes the need for these initiatives in the Information Services Plan or within the annual assessment or report as stipulated in 34.11.1 Subsection D.1-2. The CIO, vested with the authority to set the strategy for the Information Services Division of OMES and make relevant hires or purchases, could effectively incorporate AI strategies into the broader state IT agenda.

Moreover, GTARB's role in providing oversight to the implementation of the action plan developed by the CIO, as outlined in Section 34.27, positions it well to recommend and oversee the integration of the CAIO role or AI initiatives. This aligns with GTARB's responsibility to ensure that state technology applications are effective, efficient, and aligned with the State's overall strategic objectives.

3.2 ESTABLISHMENT OF AN ARTIFICIAL INTELLIGENCE (AI) OVERSIGHT COMMITTEE:

The establishment of an Artificial Intelligence (AI) Oversight Committee ("AI Committee") in the State of Oklahoma would represent an important step in ensuring the responsible development and deployment of AI technologies as technological advancements continue. This initiative is paramount, considering the rapidly evolving landscape of AI and its profound implications across various sectors, including economic development, healthcare, education, and public safety.

The AI Committee should provide proactive governance to drive responsible, ethical decisions across the State of Oklahoma for the use of AI technologies. The Committee should provide direction, management, and monitoring of the State's AI activities, mitigate risk, oversee compliance, manage regulatory requirements, and address ethical concerns.

The AI Committee should consist of a chairperson and at least three members that represent each of the three branches of state government. The Committee may delegate to its chairperson, any one of its members or any working group or subcommittee it may form, the responsibility and authority for any particular matter, as it deems appropriate from time to time under the circumstances.

The AI Committee should have authority to retain such experts, and other advisors as it determines appropriate to assist in the full performance of its functions. This includes having appropriate funding, as determined by the AI Committee, in its capacity for payment of (a) compensation to any advisors employed by the AI Committee and (b) ordinary

administrative expenses of the AI Committee that are necessary or appropriate in carrying out its duties.

The AI Committee should be composed of members representing each branch of government and a multi-disciplinary range of AI-relevant expertise that could be comprised of internal resources, external resources, or a combination thereof. These members should be qualified to provide advice and oversight of topics such as science and technology research, emerging technology development, ethics, standards, education, governance, innovation, technology transfer, commercial applications, security, economic competitiveness, and other topics related to AI. Each member of the AI Committee should be (or should become within a reasonable time after appointment) reasonably knowledgeable on principles, practices, rules, and standards relevant to the AI Committee. If a vacancy exists on the AI Committee, the remaining members should exercise all its powers so long as a quorum remains available.

To carry out its Purposes, the Committee should consider the following but may diverge from this list as appropriate under the circumstances.

- The Committee should advise the State of Oklahoma Chief Artificial Intelligence Officer (CAIO) on matters related to AI.
- The Committee should monitor and understand the state of AI science and development.
- The Committee should conduct financial and technological forecasts to anticipate and determine the appropriate balance of state activities and funding needs.
- The Committee should maintain oversight of AI data risk, model development risk, operational risk and monitoring programs, and policy enforcement.
- The Committee should oversee development of and continual updates to a State of Oklahoma AI strategic plan and advancing innovation as part of other State of Oklahoma strategic plans.
- The Committee should be responsible for preparing the present and future State of Oklahoma's position on the successful integration of AI systems within the state agencies, to track agencies' AI progress, and provide coordination of AI development, use, and governance across all state agencies.
- The Committee should monitor the degree to which the implementation of AI systems meets the goals and metrics of the State of Oklahoma strategic plan.
- The Committee should have the authority to conduct or authorize assessments/reviews into any matters within its scope of responsibilities and to retain outside advisors to assist it in the conduct of any investigation.

- The Committee should provide coordination for an AI Economic Development Task Force (described in subsection 1.7.1).
- The Committee should provide coordination for an AI Technology Talent Task Force (described in subsection 5.1).
- The Committee should oversee and provide coordination for an AI Digital Workforce Task Force (described in subsection 3.5).
- The Committee should cooperate and coordinate with state agencies, other relevant committees, and public and private partner organizations on the development of AI standards, and the compatibility of regulations.
- The Committee should determine the interim deliverables of all task forces coordinated within annual terms.
- The Committee should recommend additional task forces and other standing committees.

The Committee should consider meeting as often as may be deemed necessary or appropriate in its judgment, but not less than monthly, either in person or telephonically. The Committee may request any of those that represent the State of Oklahoma or from external parties to attend a meeting or to meet with the Committee or its advisors.

The Committee would serve as a guardian of ethical standards, a resource for regulatory compliance and be responsible for the strategic plan and adoption of AI systems throughout the State of Oklahoma. AI, by its nature, raises complex ethical questions and potential risks, such as bias in decision-making and privacy concerns. A dedicated oversight body, equipped with the necessary expertise, could assist in ensuring that AI applications align with the State's ethical values and legal frameworks, thereby fostering public trust and accountability.

Additionally, the Committee can play a crucial role in guiding AI-related economic growth. Oklahoma, with its diverse industrial base, stands to benefit significantly from AI-driven innovation. The Committee would facilitate a conducive environment for AI research and development, attracting investments and fostering collaborations and alignment between academia, industry, and government (described in subsection 1.7).

Furthermore, the Committee's existence would ensure that AI's impact on the workforce in Oklahoma is addressed thoughtfully. As AI transforms job landscapes and creates digital full time equivalent roles, proactive measures are needed to manage transitions, upskill the workforce, and mitigate potential socioeconomic disparities. This initiative would position Oklahoma as a leader in the responsible stewardship of AI technologies, benefiting its citizens and setting a prime example for other states to follow (described in section 5).

3.3 ESTABLISHMENT OF AI SUPPORT FOR ALL STATE AGENCIES AND DEPARTMENTS: In addition to the AI Committee, the directors of all state agencies and departments should charge one person on their team with becoming an AI expert to support AI initiatives and to work with the CAIO, the AI Committee, task forces that may be created, and any other collaborative emerging technological efforts. These individuals should be responsible for supporting and overseeing the implementation and integration of AI technologies within the agency and to ensure coordination with the CAIO and the AI Committee.

In the event that the designation of a specific individual is not possible or available within some agencies, the CAIO should consider establishing a shared AI Center of Excellence (AI COE) that can support agency AI development needs. The AI COE could consist of internal resources, external resources, or a combination thereof. The AI COE could provide agencies with cross-disciplinary AI expertise and resources to support internal AI efforts and offer increased collaboration, innovation, and learning opportunities.

The internal or shared supporting role should involve the coordination, innovation, and risk management for their agency's use of AI and the designees or supporting shared service model should have relevant experience in AI and have the necessary financial, human, information, and infrastructural resources to carry out the responsibilities effectively, including providing or requesting resources via the budget process to support the responsibilities.

This structure ensures that AI usage is tailored to the specific needs and goals of each agency, enhancing efficiency and effectiveness.

3.4 ESTABLISHMENT OF 5 YEAR STRATEGIC PLANS FOR ALL STATE AGENCIES AND DEPARTMENTS: Moreover, each agency should be tasked with developing a five-year strategy for utilizing digital resources, AI, and emerging technology to include the augmentation of a digital workforce when beneficial. This strategic planning is essential for navigating the rapidly evolving AI landscape. It allows agencies to set clear objectives, identify opportunities for technological integration, and address potential challenges proactively. These strategies will be vital in ensuring that AI's benefits are maximized across different sectors, aligning with Oklahoma's overall vision for technological advancement and innovation.

3.5 ESTABLISHMENT OF AN AI DIGITAL WORKFORCE TASK FORCE: The task force should be considered and report to the Chief Artificial Intelligence Officer (CAIO). The task force should include selected members to review the use of AI Technologies as part of streamlining processes, enhancing productivity, fostering a more engaged and efficient workforce, and the management of AI Technologies as a digital workforce component within the State of Oklahoma. The task force should be established on annual terms and report interim deliverables as deemed necessary by the CAIO.

The chairperson of the AI Digital Workforce Task Force may delegate the responsibility and authority for any particular matter, as deemed appropriate from time to time under the circumstances to any working group or subcommittee it may form.

To carry out its Purposes, the AI Digital Workforce Task Force should consider the following but may diverge from this list as appropriate under the circumstances.

- Conduct an assessment on the potential for AI technology to augment talent within the State of Oklahoma and deliver to the Chief Artificial Intelligence Officer (CAIO).
- To recommend a clear and compelling AI-driven digital workforce strategy for the State's future that can be integrated with the State's overall strategic-planning process.
- To recommend a strategy to convert traditional tasks into those that can be provided by an AI-driven digital workforce equivalent.
- To recommend the requirements for new AI technology implementations and communication plans to key stakeholders.
- Provide a recommendation to track new technological developments in areas of interest to the State.
- To recommend a plan for collaboration and knowledge sharing between agencies on shared AI technology opportunities, where appropriate.
- To recommend strategies for an ongoing incremental, disruptive, and radical innovation program for state agencies focused on AI technology.
- To recommend financial budgetary needs for AI technology digital workforce development. This includes managing investments, allocating funds appropriately, and ensuring their effective use.
- To recommend mechanisms to measure ROI for AI projects, to ensure investments are focused on meaningful tools and resources.
- To recommend alignment measures with other State of Oklahoma workforce initiatives to support responsible AI technology usage.

SECTION 4: FRAMEWORK FOR RESPONSIBLE ARTIFICIAL INTELLIGENCE SYSTEMS ADOPTION

4.1 RISK IN THE UTILIZATION OF ARTIFICIAL INTELLIGENCE SYSTEMS: With the increasing technological development and the incorporation of Artificial Intelligence (AI) systems by state agencies to support the citizens of Oklahoma, there is a need to establish an organized approach to the governance of data, model development, and human oversight of the systems.

4.1.1 Data Privacy and Security: The integration of AI systems in the operational framework of the State of Oklahoma's government can be beneficial for enhancing efficiency and modernizing public services. However, this integration necessitates the management of potentially sensitive data, thereby elevating concerns regarding data privacy and security. The essence of AI systems lies in their ability to process vast quantities of data, a process that, if not stringently safeguarded, could be susceptible to privacy concerns and cyber security threats. Such vulnerabilities pose a potential risk of unauthorized access and potential exposure of confidential citizen and state information. Ensuring reasonable security protocols is an important consideration in maintaining the integrity of these AI systems. The State's commitment to safeguarding this data should not merely be a technical necessity but a responsibility to its citizens, ensuring that their personal information remains protected, and the State's use of AI is both responsible and trustworthy. This protective stance towards data can be instrumental in upholding the ethical standards expected in government administration and can be a critical step in fortifying the State's defenses against the evolving landscape of cyber threats.

4.1.2 Bias and Algorithmic Discrimination: The implementation of AI systems within Oklahoma necessitates a vigilant approach towards potential inherent biases that may be present in AI algorithms. These biases, often a reflection of the data on which AI systems are trained, can carry the potential to inadvertently lead to outcomes that could be considered discriminatory in nature. The commitment to mitigating these potential biases is not just a technical challenge but also requires reasonable oversight to support AI-driven decisions to foster fairness and equity, particularly in a state as diverse as Oklahoma. This undertaking is essential in safeguarding against the inadvertent reinforcement of systemic biases, which could otherwise result in societal inequities. Proactively addressing these concerns is vital to ensure that AI serves as a tool for inclusive governance, reflecting the diverse needs and perspectives of all Oklahomans. By including fairness and equity in AI systems, Oklahoma can set a precedent for responsible AI usage in governance, contributing to a just and equitable society.

4.1.3 Dependency and Skill Gap: The adoption of AI as part of the administrative mechanisms of Oklahoma's government, while offering numerous benefits, also brings with it the potential risk of an over-reliance that could reduce the role of human expertise to an

unreasonable extent. This dependency on AI systems, if not carefully managed, could reduce the critical thinking and decision-making skills that are inherent to support effective governance. This growing reliance is accompanied by a potential skills gap within the workforce, a gap characterized by the lack of sufficient training and expertise needed to proficiently oversee and manage these advanced AI systems. Such a gap poses a challenge, as it can result in unnecessary inefficiencies within the governance, modernization and streamlining of government services. The State should continue to invest in continuous training and development programs that should include AI technologies. These programs would serve to bridge this skill gap and empower the workforce with the ability to work alongside AI, harnessing its capabilities while maintaining human oversight and judgement. This balanced approach can be vital in ensuring that the integration of AI into government operations enhances, rather than undermines, the efficacy and reliability of public service delivery, thereby maintaining the high standards of governance expected by the citizens of Oklahoma**.**

4.2 DATA: "Data" refers to the quantitative or qualitative values that Artificial Intelligence (AI) systems process for learning, operation, or decision-making. The role of data in AI is foundational, as these systems rely on data for training algorithms, validating results, and evolving through machine learning. The responsible use of data throughout the AI system is important, as it can potentially influence the fairness, accuracy, and integrity of AI outputs.

4.2.1 Data Elements: Data elements are the individual units of data that collectively form the datasets used in AI systems. These elements include, but are not limited to text, documents, images, videos, audio, photos, sensor data, numeric data, observed data, reference data, synthetic data, inferred data, structured data, categorical data, customer data, time series data, metadata, derived data, location data, surveys, disability related data, medical data, prescription drug history, paramedical or medical exam, biometrics, satellite, behavioral monitoring, psychographic information, facial recognition, public records, assessor data, genealogy records, voter information, wearable devices, marketing data, telematics, consumer intelligence, hobbies and interests, household data, census, property records, mobile phone data, internet or website data, vehicle data, lifestyle indicators, education level, gender, race, financial information, mainstream credit files, loans, credit cards, alternative credit data, telecommunications data, utility, rent payment, social media habits, purchasing habits, home ownership, occupation, licensures, civil judgements, court records, criminal information, or other measurable units of information, whether in machine readable or user readable form. Their accuracy, representation, and quality are critical for the efficacy and ethical operation of AI systems.

- **Mitigation of Risks in Data Elements:**

  - **Frequency of Data Addition:** To maintain the relevance and accuracy of AI systems, it is recommended that new data be added at intervals that are frequent enough to keep the AI system updated, yet sufficiently sequenced to ensure stability and thorough evaluation of the system itself. This balance is important to avoid the introduction of transient anomalies or biases.

  - **Validation of Data Inputs**: Data inputs must be checked for validity, reliability, accuracy, consistency, and completeness. This process is fundamental to ensuring that AI systems function as intended and produce fair and unbiased outcomes. It is recommended that periodic audits, reviews, or tests should be conducted to uphold the need for validation.

- **Sources of Data Input (Public and Private):** Data originating from both public and private sources should be used with discernment. It is essential to consider the implications of data sourcing on privacy, consent, and data rights. Appropriate measures should be taken to ensure that data collection complies with legal standards and respect for individual rights.

- **Using Regulated Data (e.g., HIPAA, FCRA):** When utilizing regulated data such as healthcare information (HIPAA) or consumer financial information (FCRA), compliance with these regulations should remain consistent as per existing requirements. The use of such data in AI systems must adhere to applicable laws and regulations from authorities having jurisdiction to ensure the protection of individual privacy and data security.

4.2.2 Data Sensitivity: Data sensitivity pertains to the inherent characteristics of data that may have implications for privacy, bias, and ethical use in AI systems.

- **Mitigation of Risks in Data Sensitivity:**

  - **Data as a Proxy for Bias**: Certain data types may inadvertently act as proxies for bias, leading to potential discriminatory outcomes in AI applications. This includes, but is not limited to, data related to race, gender, age, and socioeconomic status. Adequate scrutiny of such data is important to identify and mitigate potential biases, any unrecognized aggregation risk of multiple systems using the same datasets and ensuring that AI systems do not perpetuate or exacerbate inequalities.

  - **Data Derived from Other AI Technologies**: When data used as an input in an AI system is derived from the output of another algorithm or AI technology, it is important to assess the quality and integrity of the originating source. This data must be evaluated for potential inherited biases or errors, ensuring that subsequent AI processes are based on unbiased data foundations.

4.2.3 Data Governance: Data governance encompasses the policies, standards, and practices to support the secure, ethical, and effective management of data in AI systems.

- **Mitigation of Risks in Data Governance:**
  - **Independent Evaluation of Data Inputs**: To support objectivity and impartiality, it should be considered that data inputs for AI systems undergo independent evaluation or meet independent standards of care. This evaluation should assess the data's relevance, accuracy, and potential for bias, thereby upholding the integrity of AI decision-making processes.
  - **Data Security to Industry Standards**: Data used in AI systems should be secured according to relevant standards, including encryption, access controls, and regular security audits. This remains a foundation to protect sensitive information from unauthorized access or breaches, thereby maintaining confidentiality and trust.
  - **Addressing Known Data Breaches in Similar Datasets**: In instances where there have been suspected or known data breaches of datasets used in an AI system currently in use or for an AI system used for similar purposes by other organizations, an investigation should be considered to understand the potential data breach's impact on the AI system. This includes examining how the potential data breach may affect the integrity of the AI system and implementing measures to prevent unanticipated outcomes. Requirements for disclosure should remain in place for those data breaches to include the steps taken to mitigate their effects.

4.3 MODEL DEVELOPMENT AND MONITORING: The underlying mathematical models and ongoing operations of the Artificial Intelligence (AI) systems should be assessed and monitored to ensure appropriateness for use in support of state initiatives.

- **Tailored Use Case**: Each AI system should be developed with a clear and specific use case in mind, ensuring its design and functionality are appropriate to the tasks it is intended to perform within the agencies of the State of Oklahoma.
- **Override Mechanisms**: Provisions should be made for manual override mechanisms, allowing human intervention when necessary to correct or halt AI operations that deviate from performance metrics, expected outcomes or ethical norms.

4.3.1 Assessment and Testing: AI systems should undergo testing and validation using established metrics to ensure they meet the intended performance standards and function within acceptable parameters of operation. A well tested AI system should consider the following types or similar types of tests:

- **General Tests**

  - **Benchmark Testing**: Establish a repository of benchmarks, defined as sets of tests, to facilitate comparative performance assessments of AI systems against established standards.

  - **Subject Matter Expert Testing**: Enforce measurement approaches that identify risks associated with AI deployment, requiring consultation with domain experts and end users, with the resulting approaches being thoroughly documented.

  - **Exploratory Testing**: Implement experience-based testing protocols, wherein testers design and execute tests based on their existing knowledge and prior explorations of the AI system, as well as heuristic rules of thumb concerning software behaviors and failure types.

  - **Scenario Testing**: Mandate the creation of test scenarios built around the risk profiling of AI systems, to systematically evaluate potential operational risks.

  - **Systems Testing**: Utilize a differential testing approach by employing an alternative version of the AI system as a pseudo-oracle, to compare expected results for consistency and accuracy from the same test inputs.

  - **Bias Testing**: Measure the distance between the predicted values provided by the AI model and a desired fair prediction, to determine that the AI system operates within the bounds of fairness and non-discrimination.

  - **Combinatorial Testing**: Create test cases to execute specific combinations of values of several parameters, encompassing all combinations testing, each choice testing, and base choice testing, to validate the AI system's decision-making process.

  - **Pairwise Testing**: Test design technique in which test cases are designed to execute all possible discrete combinations of each pair of input parameters, ensuring a comprehensive assessment of the AI system's interactions.

  - **Fuzz Testing**: High volumes of random or near-random data, referred to as fuzz, are utilized to generate inputs to the AI system, verifying the system's robustness against unpredictable data scenarios.

- **Node Tests**
  - **Activation Testing:** Assess the output of activation functions of specific nodes in a neural network to ensure that each node's response is within the expected parameters.
  - **Transfer Testing:** Conduct tests on multiple nodes within a network to confirm that nodes correctly process and transfer inputs to subsequent nodes, maintaining the integrity of the data flow.
- **Failure Tests**
  - **Adversarial Attack Testing:** Deliberately employ adversarial examples to test the system's resilience against attempts to induce failures, ensuring robustness against malicious inputs.
  - **False Positive Tracking:** Maintain and analyze data on instances where the system incorrectly reports a pass, when it actually is a failure, to improve the system's accuracy.
  - **False Negative Tracking:** Keep records of instances where the system incorrectly indicates a failure, when the action should have passed.
- **Accuracy/Performance Tests**
  - **Model Accuracy:** Use performance metrics to gauge the proportion of correct classification predictions, confirming the model's ability to make accurate decisions.
  - **Performance Metrics:** Implement metrics such as accuracy, precision, recall, and F1-Score to evaluate the system's overall performance, ensuring the engine operates at the highest standards of efficiency and reliability.
  - **Testing against Human-Driven Status Quo**: AI systems should be benchmarked against current human-driven procedures to establish baseline performance and identify areas of improvement.
  - **Proactive Equity Assessments**: Regular assessments should be conducted to proactively identify and mitigate any forms of bias, ensuring equitable outcomes across diverse populations.
  - **Disparity Identification**: Systems should be evaluated for disparities in outcomes, and measures should be taken to address any identified disparities.

- **Results/Interpretation**
    - **Measurable Performance Improvements**: The deployment of AI systems should demonstrate measurable improvements over existing processes with clear metrics for performance evaluation.
    - **Summary Reporting for Public**: Summaries of AI performance and assessments should be made available to the public to maintain transparency and accountability.
    - **Training on System Interaction and Interpretation**: Individuals responsible for interacting with or interpreting the AI system's outputs must receive comprehensive training to ensure competent and responsible use.

4.3.2 Ongoing Monitoring

- **Regular Monitoring and Recalibration**: AI systems should be continuously monitored and recalibrated to adapt to new data and changing conditions in order to maintain their performance standards.
- **Resilience and Security Testing:** Regular testing for system resilience and security should be conducted to safeguard against vulnerabilities and ensure reasonable operation.
- **Well-Documented Testing**: Documentation of testing and evaluation should be thorough, detailing the methodologies, frequencies, and findings of all assessments conducted.

4.3.3 Third Party AI System Use and Deployment

- **Address Risk for 3rd-Party Entities:** The risks associated with 3rd-party entities involved in AI systems should be thoroughly assessed and be held to the same level of rigor as any AI model developed by state agencies. The expectations, responsibilities, and compliance requirements to manage and mitigate potential risks arising from 3rd-party collaborations should be clearly defined.
- **Contingency for 3rd-Party Failures or Incidents:** Contingency plans should be established for scenarios involving 3rd-party failures or incidents. These plans should detail the steps to be taken to minimize impact, protect citizens, and ensure continuity of operations in the event of a 3rd-party system failure.
- **Documentation on 3rd-Party Output/Knowledge Limits and Oversight:** Comprehensive documentation should be maintained regarding the outputs & knowledge limits of 3rd-party AI systems. This documentation should include details on the scope of the 3rd-party systems and the oversight mechanisms in place to monitor their performance & compliance.

- **3rd-Party Systems Tested:** 3rd-party AI systems should be rigorously tested before integration or use and on a recurring basis. These tests should assess the systems' functionality, accuracy, security, and compliance with relevant standards and regulations to ensure their reliability and safety.

- **Meaningful Access to 3rd-Party Systems for Oversight:** To facilitate effective oversight, there should be meaningful access granted to 3rd-party systems to the State of Oklahoma. This access should allow for thorough monitoring and evaluation of the systems, ensuring that they operate as intended and comply with established ethical and legal standards.

4.4 HUMAN OVERSIGHT:

Human oversight constitutes a fundamental component of a governance framework, ensuring that Artificial Intelligence (AI) systems operate in alignment with ethical norms, as per authorities having jurisdiction, and societal values. This oversight is important to maintain human accountability, particularly in decisions and actions derived from AI processes. It serves as a critical check against the autonomous operation of AI, providing a safeguard against potential biases, errors, and ethical lapses that may arise from AI systems. Additionally, the element of human oversight ensures that AI technologies augment human decision-making without supplanting the essential human judgment and responsibility. This oversight mechanism should be structured to provide continuous, informed, and effective supervision of AI systems, thereby aligning AI applications with the State's commitment to upholding the highest standards of safety, fairness, and public interest.

4.4.1 Organizational

- **Governance Structures:** Robust governance structures should be established for AI systems, including clear responsibilities, risk mitigation strategies, incident response protocols, and the potential for system modification or discontinuation to be overseen by a Chief Artificial Intelligence Officer (described in subsection 3.1) and an Artificial Intelligence (AI) Oversight Committee (described in subsection 3.2).

- **Encouraging Engagement with Diverse Input:** AI Technologies should include diverse perspectives to ensure a broad range of potential issues and requirements are considered, enhancing the inclusivity and effectiveness of AI systems as per an AI Technology Economic Development Task Force (described in subsection 1.7.1), an AI Digital Workforce Task Force (described in subsection 3.5) and an AI Technology Talent (described in subsection 5.1).

- **Context of Use and Scope Defined:** AI applications should be clearly defined in their context and scope as part of the AI inventory overseen by the Chief Artificial Intelligence Officer (CAIO) to prevent misuse and ensure that they serve beneficial purposes without causing unintended harm or ethical conflicts.

- **Potential Risks to Individuals, Groups, Communities, Organizations, and Society Defined:** Potential risks of AI systems to various stakeholders should be monitored throughout the deployment of AI technologies.

- **Training for Personnel Involved in AI Use or Evaluation:** Comprehensive training should be provided to personnel engaged with AI systems to ensure competent usage and accurate evaluation of AI outputs, thus preventing misinterpretation and misuse.

- **Monitoring:** Continuous monitoring of AI systems should be maintained to ensure compliance with legal standards and societal expectations, keeping AI aligned with public safety and interest.

4.4.2 Transparency

- **User-Specific Consent Practices, No Abusive Surveillance Practices:** Transparent, user-specific consent practices should be implemented and abusive surveillance practices should be prohibited to respect user privacy and autonomy.

- **Consent for User's Data to be Used in the AI system:** Explicit consent should be obtained for the use of an individual's data in AI systems maintaining user trust and compliance with privacy laws.

- **Request for Input and Output Data:** Users should have the option to request access to the input and output data of AI systems to promote transparency and accountability.

- **Request to Opt-Out of AI System Use with No Adverse Effects:** Users should be provided with the option to opt-out of an AI system use without facing negative consequences, respecting individual choice and autonomy.

- **Avenue for Appeal, Grievance, or Dispute for AI-Involved Process:** A clear mechanism should be established for disputes and appeals involving AI processes, to ensure fairness and address potential errors or biases in AI systems.

SECTION 5: TALENT, EDUCATION, RESKILLING, OUTREACH

5.1 ESTABLISHMENT OF AN AI TECHNOLOGY TALENT TASK FORCE: The task force should be considered and report to the Chief Artificial Intelligence Officer (CAIO). The task force should include selected members with responsibilities within agency human capital, technology talent programs, and primary, secondary, and higher education organizations to support AI technology strategic workforce initiatives, accelerate and track the hiring of AI technology talent, and support AI Technology workforce development across the State of Oklahoma. The task force should be established on annual terms and report interim deliverables as deemed by the CAIO.

The chairperson of the AI Technology Talent Task Force may delegate the responsibility and authority for any particular matter, as deemed appropriate from time to time under the circumstances to any working group or subcommittee it may form.

To carry out its Purposes, the AI Technology Task Force should consider the following but may diverge from this list as appropriate under the circumstances.

- Conduct an assessment on the gaps in AI technology talent within the State of Oklahoma to deliver to the Chief Artificial Intelligence Officer (CAIO).
- Conduct an assessment on the AI technology talent labor-market implications across state, national, and international contexts.
- To recommend the establishment of new criteria to provide incentives to individuals residing outside the State and possessing desired AI technology talent skills to relocate to the State of Oklahoma.
- To recommend budgetary needs for AI technology workforce development.
- To recommend plans to attract, hire, retain, train, and empower AI talent, including diversity, inclusion, and accessibility.
- To recommend plans for hiring additional staff to implement directives and accelerate the placement of key AI technology talent in high-priority areas and to advance agencies' data and technology strategies.
- To recommend expedited hiring and direct-hire directives, as applicable and appropriate, to hire AI technology talent rapidly.

- To recommend guidance for state agency application of existing pay flexibility or incentive pay programs for key AI technology positions to facilitate appropriate use of current pay incentives.

- To recommend mechanisms for the coordination of state agencies to collaborate, where appropriate, on pooled hiring and other shared hiring programs to incorporate AI technology talent.

- To recommend how to increase the availability and use of AI training and familiarization programs for employees, managers, and leadership.

- To recommend alignment measures with other State of Oklahoma workforce initiatives to support AI technology talent development.

5.2 EDUCATION: The strategic coordination and collaboration of educational initiatives focused on Artificial Intelligence (AI) capabilities and skill development is pivotal for the State of Oklahoma, serving a dual purpose: enhancing public understanding of AI and cultivating a proficient workforce adept in utilizing AI systems. Involvement should include Higher Education, Oklahoma State Regents for Higher Education (OSHRE), Career Tech, K-12, Oklahoma State Department of Education (SDE), alternative re-skill programs, and other initiatives centering our students and learners at the core of each program. Engaging citizens across the educational spectrum about AI's capabilities fosters a well-informed populace that can benefit from AI advancements and creates a “front door” for educational opportunities that support workforce needs in the State. This education is crucial in dispelling misconceptions and building a societal foundation that appreciates the ethical, economic, and technological implications of AI.

5.2.1 AI Programs for K-12 Students: The implementation of AI programs in K-12 education is essential for fostering early interest and developing proficiency in AI among Oklahoma’s students. By integrating AI into the curriculum, these programs can cultivate a generation that is conversant in AI and capable of innovating and leading in a landscape where AI is ubiquitous. The skills and knowledge imparted through these programs will enable students to think critically about AI's role in society, understand its underlying mechanisms, and apply its principles in various disciplines. Early education in AI paves the way for students to pursue advanced studies and careers in technology, and helps to position the State as a leader in producing a future ready workforce for businesses that compete in a technologically enhanced environment. Additionally, this initiative would serve to democratize AI knowledge, ensuring that students from diverse backgrounds have equal opportunities to participate in and contribute to the evolving technological world.

5.2.2 Using AI to Assist Teachers: Training teachers in the use of AI to aid their work is an important aspect of advancing educational practices in the State of Oklahoma. Such training equips educators with the tools to integrate AI into their teaching methodologies and administrative processes. This integration not only enhances efficiency but also

revolutionizes the educational landscape. Educators proficient in AI tools can deliver more personalized instruction, adapting to the unique learning needs of each student, thereby improving educational outcomes. Additionally, using AI for administrative tasks can reduce the time spent on routine activities, allowing educators to focus more on direct student interaction and curriculum development. A strategic initiative to empower teachers with AI skills would position Oklahoma at the forefront of educational innovation, ensuring that its education system is dynamic and responsive to the rapidly evolving technological landscape.

5.2.3 Integration of AI into Educational Curriculum: Equipping teachers to utilize AI as a teaching tool and developing curriculum within the State of Oklahoma is important in the development of interactive and innovative learning experiences to prepare for the future. This includes providing guidance on addressing AI in the classroom and restrictions or prohibitions on its use.

As an example, the AI Incubator Network, of which Tulsa Community College (TCC) is a member, managed by the American Association of Community Colleges (AACC) with funding from Dell Technologies and Intel, provides training and development of faculty and educational leaders on AI related topics.

By integrating AI into the classroom, teachers can provide students with an opportunity to engage directly with advanced technologies, enhancing their understanding and practical skills. Hands-on experience with AI enables students to develop a nuanced understanding of the technology and its potential. Integrating AI into school curriculum prepares students to join a workforce increasingly reliant on AI, and fosters critical thinking and problem-solving skills essential for navigating a technologically advanced landscape. This initiative would be significant step in preparing a future-ready workforce in Oklahoma, capable of working alongside AI to drive innovation and progress.

5.2.4 Developing Micro-Credentialing and Public Events: Developing micro-credentialing and public events focused on skills, awareness, and interest in AI can be beneficial for enhancing public engagement and understanding of AI in the State of Oklahoma. Organizing a variety of continuing education opportunities, events, including talks, seminars, demonstrations, and hackathons, would stimulate both interest and understanding in AI among the general population. As an example, Rodgers State University will begin offering a micro-credential in Artificial Intelligence in the 2024 spring semester.

These opportunities serve as platforms for knowledge exchange, skill development, and innovative thinking. It fosters an environment where AI is not only understood but also appreciated for its potential impact on various aspects of life and work. Through these opportunities, AI becomes a shared topic of interest and exploration, paving the way for a society that is aware and actively engaged in shaping the AI landscape.

5.2.5 Obtain Access to Industry Advisors: Collaborations and agreements with AI vendors and services would support high quality training for educators and students to develop AI-related skills across the workforce. This includes obtaining enterprise versions of AI tools and engaging in statewide contracts for AI services. Such initiatives ensure that the State's workforce is not only resilient to the disruptions brought about by AI but is also capable of leveraging these advancements for economic growth and innovation. Collectively, these educational endeavors position Oklahoma at the vanguard of AI adoption and application, enhancing its competitive edge in a technology-driven future.

5.2.6 Attracting, Educating and Retention of Oklahoma University Students: Higher education institutions across Oklahoma have begun efforts in utilizing AI to enhance existing courses and develop new courses and degree programs. Developing new courses and degree programs can be longer processes but the first of these are expected in 2024. The decision-making process includes deletion of some programs to accommodate new opportunities, creation of new programs, and use of AI in existing courses.

Research 1 (R1) institutions such as Oklahoma University (OU) and Oklahoma State University (OSU) and the Regional University System of Oklahoma (RUSO) highlight a unique dynamic in the State's higher education system and its impact on the local economy. The high retention rate of RUSO graduates within Oklahoma, contrasted with the tendency of a percentage of R1 institution graduates to leave the state, presents both challenges and opportunities for economic development, particularly in the realm of AI and tech industries.

To address these dynamics, the State of Oklahoma can leverage the current Oklahoma Statewide AI Education Committee, composed of over 100 higher education faculty and administrators, to consider implementing strategies for different elements of the University system that include a focus on AI as a discipline for some students and as a tool for all students.

Attracting R1 Graduates: To attract and retain graduates from R1 institutions like OU and OSU, the State could focus on creating a more vibrant tech and AI job market. This can be achieved by encouraging partnerships between these universities and the technology industries, fostering innovation hubs, and providing incentives for technology companies to establish operations in Oklahoma. Such an environment would offer compelling career opportunities for R1 graduates, potentially persuading them to remain in the State post-graduation.

Leveraging RUSO Graduates: RUSO students have a high level of retention within the State, as over 90% of graduates remain in Oklahoma 5 years after graduation. Given the high retention rate of RUSO graduates, Oklahoma can capitalize on this by enhancing AI education within the RUSO system. This approach involves integrating more AI-focused programs and training, which could make these graduates more attractive to industries looking for skilled AI professionals. Increasing the AI and tech competency of RUSO

graduates would benefit students and make Oklahoma more appealing to technology industries seeking a technologically skilled workforce.

Additionally, fostering a collaborative ecosystem involving both R1 and RUSO institutions in AI research and development can create a synergistic effect. This collaboration could lead to innovation that attracts new industries and encourages existing companies to invest in advanced technologies.

5.3 RESKILLING: As Artificial Intelligence (AI) revolutionizes industry demands and job roles, bridging the skills gap by proactively aligning its workforce with the rapidly changing AI landscape, Oklahoma can cultivate a workforce that is not only more versatile and robust but also steeped in advanced skills and innovative thinking.

5.3.1 Free/Affordable Programs for Teaching AI Skills to Workers: Providing alignment of state supported and affordable AI skill training program initiatives to workers is important for the State of Oklahoma to develop a workforce adept at excelling in an AI-driven economy. These programs are key in equipping individuals with the necessary skills and knowledge to effectively navigate the changing landscape of work influenced by AI technologies. By offering opportunities for such training, the State addresses the potential challenges posed by AI-driven automation and job transformation, ensuring that its workforce is not only prepared but also proficient in leveraging AI for career advancement and innovation. This initiative reflects a proactive approach to workforce development, ensuring that Oklahoma's labor force remains competitive and resilient in the face of technological advancements. Furthermore, it underscores the State's commitment to inclusive growth, enabling workers from various backgrounds to access opportunities for skill enhancement and professional growth in the era of AI.

5.3.2 Incentives for Businesses Providing AI Skills Training: Aligning incentives to businesses that provide AI skills training represents a strategic initiative by the State of Oklahoma to encourage the upskilling of the current workforce. This approach is instrumental in promoting a culture of continuous learning and adaptation among businesses and employees, which is crucial for navigating and thriving in a rapidly evolving technological landscape. By incentivizing businesses to invest in AI training, the State can foster an environment where technological proficiency is not only valued but actively pursued. This measure not only enhances the capabilities of the existing workforce but also positions Oklahoma as a forward-thinking state that is prepared to meet the demands of an AI-integrated economy. It demonstrates a commitment to ensuring that both businesses and their employees are equipped with the skills necessary to leverage AI for innovation and competitive advantage.

5.3.3 Partnership with Colleges and Technical Schools: Establishing partnerships with colleges and technical schools for the provision of AI education and training and alignment to business needs in the State are critical strategies for Oklahoma. These collaborations are pivotal in bridging the gap between theoretical academic knowledge and the practical, hands-on skills required in the field of AI. Through these partnerships, a new generation of

professionals will be meticulously prepared, not just in the theoretical aspects of AI but also in its practical applications and innovations. Such an initiative ensures that the emerging workforce is not only well-versed in AI concepts but also proficient in applying these concepts in real-world scenarios. These educational partnerships reflect a commitment to developing a robust talent pipeline that is equipped to meet the evolving demands of an AI-driven economy, thereby positioning Oklahoma as a leader in fostering a future-ready workforce.

SECTION 6: MOVING FORWARD

Oklahoma is poised to take a significant leap forward in AI governance and application through the potential establishment of several key entities: the role of a Chief Artificial Intelligence Officer (CAIO), an AI Oversight Committee, and specialized task forces focused on AI technology economic development, digital workforce, and technology talent.

Without adequate coordination and oversight, public sector agencies will likely begin to compete for the same resources, driving inefficiencies and potential lost opportunities. This includes exacerbating the “crowding out” effect with private industries (described in section 1.1). This effect can potentially lead to increased taxes and higher inflation.

An interim development plan could consider using the Government Technology Applications Review Board (GTARB) as a mechanism to provide support for the initiatives. Financial forecasts to determine revenue positive or revenue neutral AI technology integrations should also be considered as a means to drive near term use cases and agency efficiencies. In addition, AI solutions that could be replicated across multiple agencies could be considered for near term funding. Resolutions can be considered to create the task forces and enacted by Executive Order. All of these can be options, as part of the following actions, to include the creation of new initiatives.

6.1 ESTABLISHMENT OF A CAIO: The CAIO is positioned as a pivotal role, overseeing AI systems across all state agencies, and acting as a senior advisor and strategic leader in promoting AI innovation and managing associated risks. This role will coordinate with AI experts within each agency and oversee the AI Oversight Committee, AI Technology Economic Development Task Force, AI Digital Workforce Task Force, and AI Technology Talent Task Force.

6.2 ESTABLISHMENT OF AN ARTIFICIAL INTELLIGENCE (AI) OVERSIGHT COMMITTEE: The AI Oversight Committee will drive strategic decisions, manage risks, and oversee compliance and regulatory requirements necessary for the ethical and responsible usage of AI. Comprised of members with diverse expertise, the committee will advise the CAIO, monitor AI developments, and ensure the alignment of AI systems with the State's strategic plans.

6.3 ESTABLISHMENT OF AN AI TECHNOLOGY ECONOMIC DEVELOPMENT TASK FORCE: The AI Technology Economic Development Task Force will work under the CAIO to foster a robust AI economic sector, supporting the viability and expansion of AI operations, encouraging new entrants, and enhancing public-private partnerships. This task force will focus on assessing gaps in AI technology, recommending strategic plans for

economic opportunity, and supporting research and commercialization of AI technologies.

6.4 ESTABLISHMENT OF AN AI DIGITAL WORKFORCE TASK FORCE: The AI Digital Workforce Task Force will strategize and implement the integration of AI technologies as part of the State's workforce, focusing on augmenting talent, enhancing productivity, and streamlining processes. It is responsible for developing a digital workforce strategy, converting traditional tasks to AI-driven processes, and recommending budgetary needs for AI technology development.

6.5 ESTABLISHMENT OF AN AI TECHNOLOGY TALENT TASK FORCE: The AI Technology Talent Task Force in Oklahoma will focus on attracting and nurturing AI talent, implementing educational initiatives to equip the next generation for AI careers, and enhancing the skills of the existing workforce. By offering incentives to draw top AI professionals to the State and bolstering programs within the State, the task force is positioned to build a robust and continuous pipeline of skilled AI experts.

APPENDICIES

DEFINITIONS

The term “Artificial Intelligence” or “AI” has the meaning set forth in 15 U.S.C. 9401(3): a machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations, or decisions influencing real or virtual environments. Artificial intelligence systems use machine- and human-based inputs to perceive real and virtual environments; abstract such perceptions into models through analysis in an automated manner; and use model inference to formulate options for information or action.

The term “AI model” means a component of an information system that implements AI technology and uses computational, statistical, or machine-learning techniques to produce outputs from a given set of inputs including those such as large language model(s) or other data processing that processes information and uses computation as whole or part of a system to make or execute a decision, facilitate human decision-making or can be used to communicate with clients or prospects in an automated manner.

The term “AI system” means any data system, software, hardware, application, tool, or utility that operates in whole or in part using AI.

The term “compute power” refers to the speed at which computational instructions are carried out and is usually expressed in terms of FLOPS (floating-point operations per second). The development of Artificial Intelligence systems typically requires significantly more bandwidth (FLOPS) than traditional software development.

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Through 20 years of operation, the firm continues to serve a wide range of organizations and industries with the mission to create world-class strategies that drive compounding results for its clients.

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