

# Nebraska Technology & Freedom Policy Primer



Empowering Innovation, Preserving Freedom

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# Executive Summary

The "Nebraska Technology & Freedom Policy Primer" is a document designed to analyze and enhance the technology policy landscape in Nebraska. This AI-driven primer comprehensively examines the technological ecosystem, identifying challenges and proposing solutions. Its goal is to foster innovation, economic growth, and the development of a talented workforce. As the first of its kind in the nation, this primer sets the foundation for Nebraska's ongoing policy development and innovation, offering a promising future for the people in the state.

Excessive regulation can stifle growth and innovation, create unnecessary red tape, and lead to the government arbitrarily picking winners and losers. Instead, the marketplace should be the primary measure of societal utility, with existing laws often sufficient to protect consumers and private actors.

The Platte Institute is committed to advancing policies that eliminate Nebraska's growth and opportunity barriers. Its mission is to champion free-market alternatives, empowering Nebraskans to keep more of what they earn, start and grow businesses with minimal government intervention, and retain and attract a talented workforce. By promoting these alternatives, Platte gives Nebraskans a sense of control over their economic decisions, reducing the impact of government policies that can limit career choices, impose unfair taxes, and spend taxpayer money without transparency.

This primer on Technology Policy aims to delve into the current landscape of tech policies in Nebraska, shed light on the challenges related to regulations and compliance, showcase pioneering projects and solutions, and offer practical policy suggestions. Crucially, the primer strongly emphasizes the importance of involving diverse groups of Nebraskans in the policy-making process. This inclusive approach ensures that every voice is heard and valued, contributing to the state's progress as a trailblazer in technological innovation and economic advancement.

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## Platte Institute's Mission and Vision

The Platte Institute is dedicated to advancing policies that remove Nebraska's growth and opportunity barriers.<sup>1</sup> Our mission is to promote free-market alternatives that empower Nebraskans with the freedom to keep more of what they earn, start and grow businesses in Nebraska with minimal government intervention, and retain and attract a talented workforce.

A diverse group of Nebraskans are engaged in the policy-making process and make valuable contributions to our state. However, government policies often impose barriers that make it harder for Nebraskans to succeed. These obstacles may limit career choices, levy unfair taxes, or spend taxpayer money without transparency or public input.

The cost of these barriers is much greater than dollars and cents. When Nebraska unjustly limits opportunity, it can cost our state and communities their future vitality. For Nebraska to be a place where everyone can live their Good Life, a constant voice must unify Nebraskans around policies that enhance economic freedom and enable more people to build a future in our state.

### THE GOOD TECH MAKING THE GOOD LIFE

We envision a state where Nebraskans have the freedom and opportunity to achieve their Good Life, Nebraska's version of the American Dream. Recent technology Innovations can help us



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<sup>1</sup> <https://platteinstitute.org/about/>

## Purpose of the Technology Policy Primer

The "Nebraska Technology & Freedom Policy Primer" aims to explore Nebraska's current technology policy landscape, identifying key areas of focus and concern. It highlights the regulatory and compliance challenges that hinder technological innovation and economic growth within the state. By celebrating innovative projects and solutions developed through collaborations between state policymakers, private businesses, and individuals, the primer demonstrates that progress can be achieved without increasing government expenditures or oversight.

To the best of our knowledge, this is the only report of its kind. We hope it will be the first of many iterations in and by other states. The "Nebraska Technology & Freedom Policy Primer" aims to explore Nebraska's current technology policy landscape, identifying key areas of focus and concern and providing explanations and recommendations.

It highlights the regulatory and compliance challenges that hinder technological innovation and economic growth within the state. By celebrating innovative projects and solutions developed through collaborations between state policymakers, private businesses, and individuals, the primer demonstrates that progress can be achieved without increasing government expenditures or oversight. It provides well-researched and actionable policy recommendations that leverage technology to expand economic opportunities and streamline government operations. Additionally, it emphasizes the importance of engaging diverse groups of Nebraskans in the policy process, ensuring their valuable contributions to the state's development.

Through these objectives, the primer supports Nebraska in becoming a leader in technological innovation and economic development, creating an environment that encourages creativity, reduces unnecessary regulatory burdens, and benefits all Nebraskans.

## Free Market Framework for Technological Innovation



*“If such a pause [to AI Research] cannot be enacted quickly, governments should institute a moratorium.”<sup>2</sup>*

A year ago, a group of influential computer scientists issued an open letter warning of the potential dangers of unchecked AI research.

Artificial intelligence refers to the ability of machines to perform tasks that would typically require human intelligence, such as learning, problem-solving, and decision-making.<sup>3</sup> AI is achieved using algorithms and sophisticated computer programs that can analyze data, recognize patterns, and make predictions or recommendations based on that data. The most apt example of what AI can do is provide chatbots that answer questions as a natural person would.

Their concerns were not totally unfounded, as they foresaw a future where AI could pose significant societal risks. Their call for action led to the complete stop of AI research on frontier models that make AI more intelligent and faster for at least six months. They proffer, “If such a pause cannot be enacted quickly, governments should step in and institute a moratorium.”<sup>4</sup>

Another group of academics, recognizing the global scale of the AI threat, called for concerted international action. They argued that mitigating the risk of AI-induced extinction should be a global priority, on par with other existential threats such as pandemics and nuclear war.<sup>5</sup>

Their stance implied that global regulatory bodies must rein in the free market, which drove the creation of these AI systems.

The platform mentioned risks such as an AI system becoming self-serving and hostile and situations where an AI program might be used to commit human rights abuses. Leading the charge is one of the creators of AI, Geoffrey Hinton, who, along with other AI researchers, mentioned, “We urgently need national institutions and international governance to enforce standards

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<sup>2</sup> <https://futureoflife.org/open-letter/pause-giant-ai-experiments/>

<sup>3</sup> <https://hai.stanford.edu/sites/default/files/2020-09/AI-Definitions-HAI.pdf>

<sup>4</sup> Ibid

<sup>5</sup> <https://www.safe.ai/work/statement-on-ai-risk#open-letter>

preventing recklessness and misuse.”<sup>6</sup> Hilton is the Oppenheimer of AI, stopping the machine he created from ushering in a post-apocalyptic future.<sup>7</sup>

My chatbot slyly said, “These warnings underscore the importance of developing robust regulatory frameworks to ensure AI advancements are aligned with ethical standards and societal well-being,” when I plugged this paragraph in to reflect. Et tu, AI-tus?<sup>8</sup>

The consensus of doom and gloom from some so-called experts was so strong that governments took on the mantle of our savior. Some governments forbade citizens from accessing Open AI GPT for some time on ethical grounds. Our White House did its best to make us safer from ourselves without any regulation. In the Executive issued by the President, the following was noted: “The critical next steps in AI development should be built on the views of workers, labor unions, educators, and employers to support responsible uses of AI that improve workers’ lives, positively augment human work, and help all people safely enjoy the gains and opportunities from technological innovation.”<sup>9</sup> The Biden White House believed that a committee should govern AI under the guise of safety, not let loose on the free market. Still, absent a congressional directive, they were limited.

A year later, our world did not end in catastrophe. AI programs continue to improve, and the world is better for it. A creative explosion of tools and software has given the average person access that no one thought possible through market-based mechanisms grounded by free market principles such as competition and freedom of choice. GPT 4o, the latest in the series of GPT AI programs, is now available to the nonpaying public.<sup>10</sup>

This is not just the story of AI but of many other inventions and innovations that radically alter how we live positively and productively without government. The free market flourished when a laissez-faire structure was a bipartisan common ground.

The belief that economic freedom fosters innovation, efficiency, and prosperity is at the heart of free-market principles. In a free market, prices for goods and services are determined by open competition and the forces of supply and demand. This system encourages businesses to operate efficiently and to innovate to meet consumer needs better than their competitors. The

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<sup>6</sup> “Managing Extreme AI risks Amid Rapid Progress” <https://arxiv.org/pdf/2310.17688> (May 2024)

<sup>7</sup> “Godfather of AI” Geoffrey Hinton: The 60 Minutes Interview” [https://www.youtube.com/watch?v=qrvK\\_KuleJk](https://www.youtube.com/watch?v=qrvK_KuleJk)

<sup>8</sup> From William Shakespeare’s Julius Caesar

<sup>9</sup> “Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence” <https://www.whitehouse.gov/briefing-room/presidential-actions/2023/10/30/executive-order-on-the-safe-secure-and-trustworthy-development-and-use-of-artificial-intelligence/>

<sup>10</sup> <https://openai.com/index/hello-gpt-4o/>



principle of voluntary exchange is fundamental to the free market. It posits that transactions should be mutually beneficial, where buyers and sellers engage freely and benefit from the exchange. This voluntary interaction drives economic activity and growth. Entrepreneurs are incentivized to innovate and improve products and services, knowing they can reap the rewards of their investments and risk-taking.

Competition in the free market acts as a regulatory mechanism without the force of such a mechanism. It compels businesses to enhance quality, reduce prices, and adopt new technologies, ultimately benefiting consumers. Barriers to entry are minimized, allowing new firms to challenge established ones and ensuring that monopolies do not form and stifle innovation and progress. In today's digital age, consumers are increasingly concerned about the security of their personal information and the ethical use of their data. Companies prioritizing these aspects can differentiate themselves in the market, gaining consumer trust and loyalty. Firms compete to be the safest and most privacy-centered, often the mirror image of regulatory bodies and politicians' goals who trumpet those concerns. The stock market values the most innovative companies. They are the ones that will grow while the irresponsible companies are creatively destroyed.<sup>11</sup>

A highly regulatory environment does not creatively destroy non-performing companies but destroys the economy. The more the government interferes, the less innovation there will be, along with a consolidation of power that limits our freedom. That is the case for several reasons.

## **Extended Regulatory Timeframes and Consumer's Power**

Moreover, if tech regulations or laws do get finalized, there is a risk that the market may have already moved on to newer, better versions of technology. This is particularly relevant in the fast-paced tech sector, where advancements occur rapidly. Regulations based on older versions of technology can become obsolete quickly, creating a regulatory framework that no longer aligns with the current state of innovation. This mismatch can stifle progress and limit the effectiveness of such regulations, leaving businesses and consumers constrained by outdated rules while the market has already advanced.

But more than this, other than the timeframe, the Power of Choice. Consumers in a free market can choose products and services that best meet their needs, driving companies to prioritize safety and privacy. This empowerment encourages businesses to exceed customer expectations.

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<sup>11</sup> <https://www.econlib.org/library/Enc/CreativeDestruction.html>

Regulatory approaches limit consumer choice by enforcing one-size-fits-all solutions, which may not address all consumers' specific concerns or preferences.

Companies that focus on safety and privacy often align their values with those of their customers, fostering stronger connections and greater loyalty. Regulatory standards are established by government bodies once they are finalized after an extended period.). They may not always reflect the values and priorities of consumers, leading to potential disconnects between what is regulated and what consumers want. Unlike regulation, market forces do not take years to manifest themselves.

### **Power of Existing Law**

Sometimes, lawmakers are overly energetic in creating new laws that control or create barriers to emerging technologies without recognizing that existing laws can often be applied to these new technologies. This enthusiasm to legislate can lead to unnecessary and duplicative regulations that stifle innovation and create business compliance burdens. The Resolution in Support of Free Market Solutions and Enforcement of Existing Regulations for Uses of Artificial Intelligence from ALEC emphasizes that existing law can be applied to AI.<sup>12</sup> The common (or case law written law) has slowly and steadily been refined legislative pronouncements for hundreds of years and can be predicted.

For instance, many regulatory frameworks for consumer protection, data privacy, and antitrust already have provisions that can address issues arising from new technologies (See Privacy Chapter). Lawmakers can provide effective oversight without hindering technological advancement by relying on and adapting these existing laws rather than creating entirely new regulatory regimes.

### **Power to Control Information and Freedom**

Some governments have temporarily banned the whole industry, leading to disastrous results—the kind that they were trying to avoid in the first place. Italy, for example, unilaterally decided to ban ChatGPT for one month due to its privacy issues for only one month.<sup>13</sup> This resulted in a nine percent decrease in the growth of Italian firms based on similar firms inside the European

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<sup>12</sup> <https://alec.org/model-policy/resolution-in-support-of-free-market-solutions-and-enforcement-of-existing-regulations-for-uses-of-artificial-intelligence/>

<sup>13</sup> <https://www.bbc.com/news/technology-65139406>

Union.<sup>14</sup> Italy limited the free market, guiding light of freedom of choice, and became locked in the dark of economic despair before it opened back up the illumination of consumer choice. Italy will likely face long-suffering problems for an extended time after the AI embargo ends because today's AI-focused Productivity will accelerate exponentially.

It is striking that the group of countries, aside from Italy, that have banned ChatGPT are often accused of significant human rights abuses.<sup>15</sup> Countries such as China, North Korea, Iran, Cuba, Syria, and Russia have implemented strict controls over information and communication technologies, which aligns with their broader practices of censorship and suppression of free speech. These countries are known for their tight control over the flow of information to maintain political power and suppress dissent.

China, for example, has a long history of internet censorship through its Great Firewall, restricting access to foreign websites and monitoring online activity to prevent the spread of information that might challenge the state.<sup>16</sup> Once considered a bastion of openness and free expression in China, the Great Firewall has created a nationalist presence that represses dissent.<sup>17</sup>

Even more extreme, North Korea maintains one of the most restrictive internet environments in the world, allowing only tiny elite access to the global internet<sup>18</sup>. At the same time, the general population is limited to a state-controlled intranet. In those countries, propaganda is effectively the only source of information available. That holds true, especially in Russia after they invaded Ukraine.<sup>19</sup>

Iran, Cuba, and Syria, also have stringent regulations on internet usage and frequently block websites and services that they perceive as threats to their regimes.<sup>20 21</sup> These actions are part of broader strategies to control public discourse, limit political opposition, and prevent the organization of protests. The internet is a powerful tool for democratic choice; AI may make it even more powerful and, therefore, even more dangerous for repressive regimes.

The force of the big G-man does not have to be dramatic to damage economic prosperity. In some regions, like the European Union (EU), regulatory bodies can sometimes act as gatekeepers of innovation, imposing stringent rules that slow the adoption of new technologies.

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<sup>14</sup> [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4452670](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4452670)

<sup>15</sup> <https://www.cnbc.com/2023/04/04/italy-has-banned-chatgpt-heres-what-other-countries-are-doing.html>

<sup>16</sup> <https://www.theguardian.com/news/2018/jun/29/the-great-firewall-of-china-xi-jinpings-internet-shutdown>

<sup>17</sup> <https://www.politico.com/news/magazine/2020/09/01/china-great-firewall-generation-405385>

<sup>18</sup> <https://www.csis.org/analysis/north-koreans-want-external-information-kim-jong-un-seeks-limit-access>

<sup>19</sup> <https://www.wired.com/story/russia-invaded-ukraine-choice-propaganda-death/>

<sup>20</sup> <https://cpj.org/2015/04/10-most-censored-countries/>

<sup>21</sup> <https://rsf.org/en/how-islamic-republic-has-enslaved-iran-s-internet>

The EU's General Data Protection Regulation (GDPR) is often cited as an example of well-intentioned regulation that may inadvertently stifle innovation by imposing heavy compliance burdens on companies, particularly smaller firms and startups.<sup>22</sup>

The European Union's proposed AI regulations include the concept of regulatory sandboxes.<sup>23</sup> However, these sandboxes are not aligned with the type of sandboxes the Platte Institute advocates.<sup>24</sup> In the EU context, the sandbox is intended as an enforcement mechanism to support the introduction of new regulatory measures and compliance requirements. This approach contrasts sharply with the Platte Institute's vision, where sandboxes remove red tape and facilitate innovation by providing a controlled environment for businesses to test new technologies without the burden of excessive regulation. Therefore, the EU's version of sandboxes represents an additional layer of bureaucracy, potentially stifling innovation rather than fostering it. Meta is choosing not to release new multi-model chat boxes because of the uncertain regulatory environment in the EU.<sup>25</sup>

While the GDPR aims to protect consumer privacy, its stringent requirements can lead to significant costs and complexity, making it harder for new entrants with new and innovative ideas to compete. In addition to limiting freedom of choice and spreading innovation, the high regulatory burden also has unintended consequences for firms that existed before regulation.

Compliance with regulations often diverts valuable resources from developing better products or services. When companies are required to meet extensive regulatory requirements, significant amounts of time, money, and workforce are redirected toward ensuring compliance rather than innovation. This can slow down product development, reduce the quality of services, and hinder a company's ability to respond swiftly to market demands. In contrast, a free-market environment, with minimal but effective regulation, allows businesses to focus their resources on innovation and improvement, driving economic growth and enhancing consumer satisfaction.

As companies compete for market share, countries also compete to attract tech companies. This global competition involves offering favorable regulations, tax incentives, and supportive infrastructure to entice tech firms to establish operations within their borders. Countries recognize

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<sup>22</sup> <https://www.americanactionforum.org/insight/the-price-of-privacy-the-impact-of-strict-data-regulations-on-innovation-and-more/>

<sup>23</sup> <https://artificialintelligenceact.eu/article/57/#:~:text=The%20EU%20is%20requiring%20member,being%20released%20to%20the%20market.>

<sup>24</sup> <https://platteinstitute.org/research-note-utahs-regulatory-sandbox/>

<sup>25</sup> <https://www.theverge.com/2024/7/18/24201041/meta-multimodal-llama-ai-model-launch-eu-regulations>

the economic and innovative benefits of hosting major tech companies and strive to create an environment that fosters technological growth and development.

New regulations can immediately halt this competitive advantage, potentially driving tech companies to seek more favorable conditions elsewhere. So, not only will the regulatory burden affect companies directly, but it will also indirectly harm consumers, limiting the innovation that could be driven by these companies that choose to leave.

States can also do this. If California passes extreme AI regulations that impose civil and even criminal penalties, startups will leave for other states.<sup>26</sup> This migration can be driven by the need for a more favorable regulatory environment where businesses can innovate and grow without the burden of excessive compliance costs and legal risks.

## **Rent Seeking Behavior and Economic Development**

Rent-seeking behavior in economics refers to activities individuals or firms undertake to gain economic advantages without creating new wealth or value.<sup>27</sup> Instead of contributing to productivity, rent-seeking involves increasing one's share of existing wealth through manipulating or exploiting the economic environment, often via government intervention.<sup>28</sup> Companies might lobby for regulations limiting competition or subsidies providing financial benefits. For example, a company might push for burdensome licensing requirements for new entrants, thus reducing competition.

There are numerous adverse effects of rent-seeking. Resources that could be used for productive purposes are instead used for lobbying and other rent-seeking activities. This misallocation can reduce overall economic welfare and efficiency. Rent-seeking often leads to economic inefficiencies by protecting incumbents from competition and innovation. This can also slow economic growth and reduce society's overall welfare.

As alluded to in an op-ed, Big Tech's call for AI regulation in the signed documents can also be seen as a form of rent-seeking behavior.<sup>29</sup> Companies seek to influence regulatory standards to create barriers to entry for new competitors. This can stifle innovation and protect

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<sup>26</sup> [https://leginfo.legislature.ca.gov/faces/billCompareClient.xhtml?bill\\_id=202320240SB1047&showamends=false](https://leginfo.legislature.ca.gov/faces/billCompareClient.xhtml?bill_id=202320240SB1047&showamends=false)

<sup>27</sup> <https://www.econlib.org/library/Enc/RentSeeking.html>

<sup>28</sup> <https://www.investopedia.com/terms/r/rentseeking.asp>

<sup>29</sup> <https://nebraskaexaminer.com/2023/07/13/the-future-of-ai-big-tech-acknowledges-the-need-for-regulation-but-for-whom/>

established firms' market positions. For example, stringent compliance requirements disproportionately burden smaller startups, hindering their ability to compete and innovate.

In that op-ed, I mentioned that “[t]his is a classic case of rent-seeking, where big tech companies try to create barriers to entry for competitors by promoting regulations that they can easily comply with due to their vast resources with a vested interest in maintaining their dominance. While most tech CEOs prioritize the responsible and positive use of their technology, it is important to acknowledge that this can still be viewed as rent-seeking behavior if lawmaking is involved.”

Rent-seeking behavior causes the government to regulate technology and pick winners and losers before the market can react. When governments impose regulations, they often create advantages for certain firms while disadvantaging others, regardless of their performance or innovation capabilities. This stifles competition and innovation, as companies may focus more on influencing regulators than improving their products and services.

Firms engaged in rent-seeking behavior often disguise their motivations under the guise of moral protection, claiming to safeguard the market from supposedly dangerous or inferior products or services. This tactic serves to protect their interests by stifling competition.

A prime example occurred when Uber emerged, disrupting traditional taxi companies by allowing private citizens to offer rides.<sup>30</sup> Taxi companies argued that Uber drivers posed safety risks and lacked proper regulation, framing their resistance as a moral obligation to protect consumers. However, this stance primarily aimed to preserve their market dominance and shield them from the competitive pressure introduced by the more flexible and innovative ride-sharing model Uber and other ridesharing apps offer. By cloaking their self-interest in the language of public safety and consumer protection, these firms attempt to garner regulatory support to maintain their monopolistic control over the market.

This can cause a deadweight loss. Deadweight loss refers to the loss of economic efficiency that occurs when the equilibrium outcome is not achievable or not achieved.<sup>31,32</sup> This typically happens in markets when supply and demand are out of balance due to external factors such as taxes, subsidies, price floors, or ceilings. In this case, the deadweight loss comes from the compliance price, which lowers the supply to the market.

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<sup>30</sup> <https://www.forbes.com/sites/adigaskell/2017/01/26/study-explores-the-impact-of-uber-on-the-taxi-industry/>

<sup>31</sup> <https://economictimes.indiatimes.com/definition/deadweight-loss>

<sup>32</sup> <https://corporatefinanceinstitute.com/resources/economics/deadweight-loss/>

Rent-seeking behavior can be particularly productive in the absence of solid legal enforcement. Firms may seek subsidies, essentially free money, given directly to companies within a specific field to reduce competition. This government intervention can artificially support certain businesses, allowing them to gain an advantage over competitors without improving their products or services. Subsidies can distort market dynamics by creating an uneven playing field, where success is determined more by political connections and lobbying efforts than efficiency and innovation. This hinders fair competition and can lead to inefficiencies and a misallocation of resources as firms focus on securing government funds rather than competing in the marketplace.

Again, the marketplace, driven by competition and consumer choice, is the best measure of society's utility. It naturally rewards the most efficient and innovative companies while ensuring consumers benefit from higher quality and lower prices, which rent-seeking actively prevents. By allowing the market to regulate itself, we ensure that technological advancements are guided by consumer needs and preferences rather than arbitrary regulatory decisions that may lag the pace of innovation.

## **The Power Choice of Rational Choice and The Externality of Paternalism**

The great economist Milton Friedman once wrote, “Freedom is a tenable objective only for responsible individuals.”<sup>33</sup> To remove choice is to deny individuals the opportunity to develop



ethical dialogue.

a moral framework of responsibility and to be autonomous. Forcing choices is the antithesis of freedom. In a world rife with misinformation and increasingly defined by extremism fueled by AI tools and sources of information, each person needs to develop an internal dialogue about what is true and what is deceptive. The market allows individuals to make these choices. Many regulations regimes command force to protect us from ourselves sidestepping the opportunity to develop internal

Scarcity in economics refers to the concept that there is only a limited number of resources in the world, and their supply dictates their price.<sup>34</sup> Sometimes those who advocate for government

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<sup>33</sup> [https://media4.manhattan-institute.org/sites/as/files/Friedman%20Capitalism%20and%20Freedom%20Ch.2%20\(3\).pdf](https://media4.manhattan-institute.org/sites/as/files/Friedman%20Capitalism%20and%20Freedom%20Ch.2%20(3).pdf)

<sup>34</sup> <https://www.investopedia.com/terms/s/scarcity.asp>

intervention believe that the state should manage scarcity. We see this during natural disasters, where law enforcement sometimes prevents individuals from selling generators at high prices, thinking that such actions are harmful. Free market advocates, however, reach a different conclusion, arguing that market forces should determine prices even in times of scarcity because of the power of rational choice.<sup>35</sup> This principle applies to technological resources like computer chips, where supply and demand influence prices and availability. Intermediaries make the market work.

Compliance with regulation does not inherently produce an ethical standard because companies are compelled to adhere to the law or face actions that would leave them with less autonomy than before. Ethical behavior arises from voluntary adherence to moral principles, not from compulsion. This compulsion is the essence of paternalism, not only to protect minor children but to protect adults.

In a free market, the availability of numerous alternatives empowers consumers to make choices that best fit their needs and values. This abundance of options stems from competition among businesses that strive to differentiate themselves through quality, price, innovation, and ethical practices. This leads to a fuller expression of a moral life based on individual preferences and values, even if we act selfishly. The concept of rational choice highlights the importance of individual decision-making based on self-interest. Self-interest governs our daily lives, driving our choices to maximize our well-being and prosperity. The government must respect these choices, recognizing that individuals are best positioned to understand their needs and make decisions accordingly. By respecting self-interest and the rational choices of individuals, the government can foster an environment where personal and economic freedom thrive, ultimately benefiting society.

When firms follow regulations out of fear of penalties rather than a genuine commitment to ethical practices, the resulting compliance is often superficial. It fails to foster a culture of true moral responsibility. This coercive compliance can undermine the spirit of innovation and the intrinsic motivation to maintain high ethical standards, better cultivated in a market-driven environment that encourages responsibility and ethical conduct as part of its natural operations.

The competition inherent in a free market not only increases choices but also raises the standards for ethical behavior among businesses. Companies that engage in unethical practices

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<sup>35</sup> <https://www.aei.org/carpe-diem/an-economic-analysis-of-price-controls-v-market-prices-post-natural-disasters-reveals-superiority-of-market-prices/>



risk losing market share to more responsible competitors. This dynamic encourages firms to innovate and improve their moral standards to attract conscientious consumers.

This also has rippling effects on the broader civil culture. Media literacy is in decline, and it is shocking.<sup>36</sup> This year, a post circulated widely claiming that the US had reinstated the draft, a rumor primarily driven by teenage “social media” influencers. This misinformation spread rapidly on social media, highlighting a disturbing lack of critical thinking among technology users.<sup>37</sup> The prevalence of such baseless claims underscores the urgent need for improved media literacy education. Our natural inclination might be to remove technology from the public sphere to mitigate such issues. Still, it only compounds the problem since we rob people of the ability to think for themselves through their choices, including what media to consume.



The 2016 Russian propaganda push serves as an example of this kind of digital paternalism that robs people of choice. Russian operatives used social media platforms to disseminate misinformation and manipulate public opinion during the US presidential election. This effort sought to exploit the gaps in media literacy and critical thinking among the American public, fostering division and mistrust. Following this, a Republican report on the Russian propaganda machine recommended that new federal laws be passed to protect us from such rancorous foreign speech that likely hampers everyone’s speech.<sup>38</sup>

Suppose we coddle our society from all that is naturally occurring and allow only the government to dictate what is worth our time. In that case, we naturally lose a critical component of our civic life: our ability to think and choose for ourselves. This is an integral part of any market-based civil society. Shielding the public from diverse viewpoints and experiences under the guise of protection diminishes our collective critical thinking skills and stifles intellectual growth. Through exposure to different ideas and the freedom to challenge them, individuals develop the ability to discern truth from falsehood, make informed decisions, and contribute meaningfully to civic life. This intellectual autonomy is essential for a vibrant, democratic society where individuals are empowered to participate actively and responsibly.

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<sup>36</sup> <https://thehill.com/changing-america/enrichment/education/598795-media-literacy-is-desperately-needed-in-classrooms/>

<sup>37</sup> <https://www.rollingstone.com/culture/culture-news/military-draft-gen-z-tiktok-misinformation-1235041294/>

<sup>38</sup> <https://www.npr.org/2019/10/08/768319934/senate-report-russians-used-used-social-media-mostly-to-target-race-in-2016>

*We do have a Power of choice.*

Free Choice allows us to pick the tools we want and determine how we use them with minimal government interference. This choice empowers us to leverage technology to improve the quality of life for all individuals rather than having these decisions dictated by a committee of academic experts and bureaucrats that protect us from those choices in Nebraska.

Keep this framework in mind as we discuss it in the ensuing chapters.

## Recent Technological Innovations

This section will highlight recent technological innovations worldwide as a primer on the technology landscape before leading into a more Nebraska-specific analysis. We cannot account for a complete list of technological trends that impact us. Still, these descriptions are a starting point for a broad-range discussion of the current landscape.

**Accessibility:** Technological advancements have significantly improved accessibility for individuals with disabilities, providing tools and solutions that enhance their ability to participate fully in society. These technologies range from assistive devices and software to inclusive design practices that ensure digital content and physical spaces are accessible to all. Key technologies in this area include screen readers like JAWS (Job Access With Speech) and NVDA (NonVisual Desktop Access), which read aloud text on a screen, enabling visually impaired users to navigate and interact with digital content. Hearing aids and cochlear implants have also seen significant advancements, integrating features like Bluetooth connectivity for seamless use with other devices. Additionally, speech recognition software such as Dragon NaturallySpeaking allows users with mobility impairments to control their computers and dictate text using their voice, enhancing their ability to work and communicate. Video content increasingly includes closed captions and subtitles, making it accessible to those with hearing impairments.

Smart home technology, including smart speakers, automated lighting, and adaptive home controls, enables users with mobility impairments to manage their environment more quickly. Smart speakers, such as Amazon Echo and Google Home, allow users to control various aspects of their home through voice commands, from playing music to setting reminders and controlling other smart devices. Automated lighting systems can be programmed to turn lights on and off or adjust their brightness at specific times or in response to voice commands, reducing the need for physical interaction with light switches. Adaptive home controls, including smart thermostats, door locks, and window blinds, can be operated remotely via smartphone apps or integrated home automation systems, giving users greater independence and convenience. These technologies enhance the daily living experience and provide critical support in emergencies, allowing users to quickly and easily contact emergency services or alert family members. By integrating these smart technologies, homes become more accessible and responsive to the needs of individuals with mobility impairments, significantly improving their quality of life.

One fantastic example is Neuralink.<sup>39</sup> Neuralink is an innovative accessibility technology involving a surgically implanted device into the brain. This groundbreaking technology aims to assist individuals with severe neurological conditions, such as spinal cord injuries and Amyotrophic Lateral Sclerosis (ALS). By creating a direct interface between the brain and computers, Neuralink hopes to restore motor function and improve communication abilities for those affected by these debilitating conditions. The ongoing development and research in this field promise to revolutionize how we understand and treat neurological disorders, offering new hope for improved quality of life for patients.

Educational tools also play a crucial role in accessibility. Programs like Nebraska's Assistive Technology Partnership Education (ATP/Ed) provide resources and tools to support students with disabilities, ensuring they have equal access to learning opportunities.<sup>40</sup> These resources include specialized software and hardware designed to assist with various disabilities, such as text-to-speech programs for students with visual impairments, speech-to-text software for those with mobility issues, and interactive learning apps tailored for students with cognitive disabilities. AI-driven tools help personalize learning experiences for students with disabilities by adapting content to their needs and learning paces.

**Advanced Driver Assistance Features:** Driver assistance technology, also known as advanced driver-assistance systems (ADAS), encompasses a range of features designed to enhance vehicle safety and improve the driving experience. These technologies use sensors, cameras, radar, and software to monitor the vehicle's surroundings and assist the driver in various ways, from warning of potential hazards to taking control of the car in certain situations.

One of the primary benefits of driver assistance technology is its ability to improve road safety. Features such as automatic emergency braking (AEB) can detect an imminent collision with another vehicle or pedestrian and automatically apply the brakes to prevent or mitigate the impact. Lane departure warning systems alert drivers when they unintentionally drift out of their lane while lane-keeping assistance can gently steer the vehicle back into the correct lane. The adaptive cruise control maintains a set speed and distance from the car ahead, adjusting speed to match traffic conditions.

Another significant aspect of driver assistance technology is its potential to reduce driver fatigue and stress. Long journeys and heavy traffic can be taxing but features like adaptive cruise

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<sup>39</sup> <https://neuralink.com/>

<sup>40</sup> <https://edn.ne.gov/cms/resources/nebraska-assistive-technology-partnership-atp>

control and traffic jam assist help by taking over some driving tasks. Traffic jam assist, for instance, can manage acceleration, braking, and steering in congested traffic, allowing the driver to relax and focus on the road.

**Artificial Intelligence** (AI): AI is the simulation of human intelligence in machines programmed to think, learn, and perform tasks that require human cognition. This technology encompasses various subfields, including machine learning, natural language processing, computer vision, and robotics. AI's ability to analyze data, recognize patterns, make decisions, and predict outcomes is transforming numerous aspects of our lives and industries.

One of the most notable advancements in AI is the rise of generative AI. Generative AI technologies, such as OpenAI's GPT models and image synthesis tools, can create new content, from text and images to music and design.<sup>41</sup> These systems generate high-quality, original outputs based on input data, enabling innovative applications like automated content creation, personalized marketing, and advanced design solutions.

Generative AI significantly impacts the workforce by automating tasks that humans once performed. For example, generative AI can draft written content, design marketing materials, and generate creative works such as art and music. This automation increases efficiency and reduces business costs but raises concerns about job displacement and the need for new skills in the workforce. As AI systems handle more routine and repetitive tasks, workers may need to focus on more complex, creative, and strategic roles.

In addition to generative AI, traditional AI applications continue to reshape industries. AI analyzes medical images and predicts patient risks in healthcare, leading to improved diagnostics and treatment plans. AI detects fraud, manages risks, and enhances customer service through automated finance systems. AI in education personalizes learning experiences and automates administrative tasks, while virtual assistants like Siri and Alexa simplify everyday tasks and provide information.

**Biometrics**: Biometrics involves using unique physical or behavioral characteristics, such as fingerprints, facial recognition, iris scans, and voice recognition, to verify a person's identity. This technology provides high security and convenience across various applications, from personal devices to secure facilities and financial transactions. Biometrics enhances security by making it difficult for unauthorized individuals to gain access, as these traits are unique and hard to replicate. In financial services, biometrics secure transactions and streamline customer

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<sup>41</sup> <https://openai.com/>

interactions, reducing fraud and improving user satisfaction. Healthcare benefits from accurate patient identification and data security, ensuring only authorized personnel access sensitive information. Travel and border control use biometrics to expedite identification and enhance security, while personal devices like smartphones and laptops use biometric authentication for quick and secure access. However, the widespread use of biometrics raises privacy concerns and ethical considerations.

**Cloud Computing:** Cloud computing refers to delivering computing services over the Internet, including storage, processing power, and software applications. Instead of relying on local servers or personal devices to handle data and applications, cloud computing leverages remote servers hosted on the Internet to provide these services on demand. This technology has revolutionized how individuals, businesses, and governments operate by offering scalable, flexible, and cost-effective solutions.

One of the primary benefits of cloud computing is its scalability. Businesses can easily adjust their computing resources based on current needs without investing in expensive hardware. For example, companies can increase their cloud resources during peak business periods to handle higher loads and then scale back during slower times, optimizing costs and performance. This elasticity ensures that businesses can respond quickly to changing demands and opportunities.

Flexibility is another significant advantage of cloud computing. Cloud services can be accessed from anywhere with an internet connection, enabling employees to work remotely and collaborate in real-time. Cost-effectiveness is a crucial benefit of cloud computing. Organizations can reduce the expenses of maintaining and upgrading physical hardware and software using cloud services. Instead of paying upfront for expensive infrastructure, businesses can adopt a pay-as-you-go model, paying only for the resources they use. This approach lowers the barrier to entry for startups and small businesses, allowing them to access advanced technology without significant initial investments. The most popular cloud computing software is Microsoft Azure, used by many organizations in Nebraska and beyond. It can be broken down into three Distinct Programs.

**Infrastructure as a Service (IaaS):** Azure's IaaS offers the basics, such as virtual machines, networking, and storage, without the need to buy and maintain physical hardware.

**Platform as a Service (PaaS):** Azure's PaaS makes it easier for developers to create and manage applications. It provides all the necessary tools and services for app hosting, database management, and development so developers can focus on building their apps without worrying about the technical details of the infrastructure.

**Software as a Service (SaaS):** With Azure’s SaaS, software applications are hosted and delivered over the Internet. This means businesses don’t have to install and run software on individual computers. Examples include Office 365 (which contains popular programs like Word and Excel), which offers potent tools accessible from any device with an internet connection.

**Maker Spaces:** Maker spaces are collaborative workspaces with tools, technology, and resources that allow individuals to create, innovate, and learn through hands-on experiences. These spaces foster creativity and experimentation across various disciplines, including engineering, arts, crafts, and technology. They typically provide access to a wide range of equipment, such as 3D printers, laser cutters, woodworking tools, sewing machines, and electronics kits, enabling users to prototype and build their projects from start to finish.

Maker spaces like Do Space in Omaha significantly promote innovation and entrepreneurship in Nebraska.<sup>42</sup> They serve as community hubs where people of all ages and skill levels can share ideas, learn new skills, and collaborate on projects. These spaces often host workshops, classes, and events covering various topics, from basic tool usage to advanced coding, robotics, and digital fabrication techniques.

For students and educators, maker spaces provide an invaluable resource for hands-on learning and STEM (Science, Technology, Engineering, and Mathematics) education. Students develop critical thinking, problem-solving, and technical skills essential for the modern workforce by engaging in maker activities. Maker spaces also support educators by offering professional development opportunities and curriculum resources that integrate making into the classroom.

For entrepreneurs and small business owners, maker spaces provide a cost-effective way to access high-end equipment and expertise that might otherwise be out of reach. These spaces can serve as startup incubators, providing a supportive environment where entrepreneurs can prototype products, refine their ideas, and network with like-minded individuals.

Additionally, the collaborative nature of maker spaces encourages knowledge sharing and mentorship, fostering a vibrant community of innovators.

Nebraska Innovation Studio (NIS) is a state-of-the-art maker space on the Nebraska Innovation Campus in Lincoln,



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<sup>42</sup> <https://dospace.org/>

Nebraska.<sup>43</sup> It provides a dynamic environment for creative minds to design, prototype, and develop their ideas into tangible products. NIS is distinctive in its comprehensive array of tools, equipment, and collaborative spaces that cater to a diverse community of innovators, including students, entrepreneurs, hobbyists, and professionals. NIS is made for commercial manufacturing, while Do Space is made for individual consumers.

**Internet of Things:** The Internet of Things (IoT) refers to the network of interconnected devices that communicate and exchange data over the Internet. These devices range from everyday household items, such as smart thermostats and refrigerators, to industrial machinery and city infrastructure. IoT technology enables these devices to collect, share, and analyze data, enhancing efficiency, automation, and decision-making across various sectors.

One of the most significant advantages of IoT is its ability to create more innovative and responsive environments. In homes, IoT devices like smart thermostats, lights, and security systems allow residents to control and monitor their living spaces remotely, leading to increased convenience, energy savings, and enhanced security (like the tools mentioned in the accessibility section). For example, a smart thermostat can learn a user's schedule and preferences, adjusting the temperature automatically to optimize comfort and efficiency.

IoT plays a crucial role in improving operational efficiency and productivity in industries. Manufacturing plants use IoT sensors to monitor equipment performance and predict maintenance needs, reducing downtime and extending the life of machinery. Supply chains benefit from IoT by providing real-time tracking of goods, improving inventory management, and ensuring timely deliveries.

**IoT and Health:** IoT is also transforming the healthcare sector. Wearable health monitors, remote patient monitoring systems, and smart medical devices allow continuous tracking of patients' vital signs and health metrics. This data can be analyzed in real-time, enabling healthcare providers to make timely interventions and improve patient outcomes. IoT technology also supports telehealth services, making healthcare more accessible, particularly in remote and underserved areas.

One IoT that has been saving lives is the Apple Watch. The Apple Watch is a wearable device that allows users to track their health. The Apple Watch has become a significant tool in healthcare, saving lives through its advanced health monitoring features. Equipped with heart rate monitoring, ECG (electrocardiogram) functionality, and fall detection capabilities, the Apple

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<sup>43</sup> <https://innovationstudio.unl.edu/>



Watch can detect irregular heart rhythms, such as atrial fibrillation, and alert users to seek medical attention. For instance, the watch's ECG app can record the heart's electrical activity and identify signs of atrial fibrillation, which could lead to stroke if left untreated. Additionally, its fall detection feature can automatically call emergency services if the user does not respond to an alert, ensuring timely medical intervention. Numerous stories have emerged of individuals discovering severe health conditions or receiving critical assistance due to the Apple Watch, highlighting its role as a life-saving device.<sup>44</sup>

Apple prioritizes privacy, especially with its Apple Watch, ensuring that users' health data is secure and private. The company implements robust encryption and security measures to protect sensitive information such as heart rate, ECG data, and fitness metrics. Apple states that health data is encrypted both on the device and in iCloud and can only be accessed by the user or through explicit user consent. They also emphasize that they do not sell user health data to third parties, reinforcing their commitment to privacy.

However, data experts express concerns about potential privacy risks associated with Apple's vast reach and influence. Given the sheer volume of data collected by Apple devices and services, some experts worry that any security vulnerabilities or policy changes could expose user data to misuse or breaches. The scale of Apple's operations means that even minor lapses in data protection could have significant implications for many users. Additionally, while convenient, integrating health data across various Apple services and third-party apps introduces more points of potential vulnerability.

**Blockchain Technology and Crypto Currency:** Blockchain and cryptocurrency are transformative technologies that have the potential to reshape various aspects of the economy and society. Blockchain is a decentralized digital ledger technology that securely records transactions across multiple computers, ensuring the information is transparent, immutable, and tamper-proof. Cryptocurrency, conversely, is a digital or virtual currency that uses cryptography for security and operates on blockchain technology.

**Virtual Reality:** Virtual Reality (VR) is a cutting-edge technology that creates immersive digital environments, allowing users to interact with and experience simulated worlds as if they were real. Using VR headsets and sensory equipment, users are transported into three-dimensional, computer-generated spaces replicating real-world scenarios or creating entirely new fantastical

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<sup>44</sup> <https://www.cbsnews.com/philadelphia/news/apple-watch-saves-mans-life-frank-haggerty-lawrenceville-new-jersey/>

environments. This technology has rapidly evolved, with applications spanning various sectors, including gaming, education, healthcare, and professional training. VR headsets like the Oculus Rift, HTC Vive, and PlayStation VR provide high-resolution displays, motion sensors, and built-in audio systems to engage users' senses fully, enhancing the feeling of presence in the virtual environment.

**Work From Home:** The work-from-home (WFH) model has gained significant traction globally, particularly since the COVID-19 pandemic necessitated remote business operations. This model relies on a suite of tools and platforms that enable employees to perform their duties remotely, ensuring business continuity and productivity outside traditional office environments. Key technologies supporting WFH include communication tools such as video conferencing platforms like Zoom, Microsoft Teams, and Google Meet, which facilitate virtual meetings, webinars, and face-to-face interactions. Messaging apps like Slack and Microsoft Teams are essential for real-time communication and quick information sharing among team members.

Recently, the Nebraska Association of Public Employees (NAPE) challenged the Governor's executive order to bring public employees back to the office, arguing that this order violated their existing bargaining agreement. In response, the Nebraska Commission of Industrial Relations issued a scathing ruling, charging the union with using administrative processes to obstruct workers' return to the office.<sup>45</sup> This ruling highlighted the ongoing tensions between state governments and public employee unions regarding workplace policies and the interpretation of labor agreements. Such tensions are felt across various sectors as employees and employers nationwide navigate the complexities of returning to traditional work environments while balancing health concerns and contractual obligations.

Collaboration platforms are another critical component, with project management software such as Asana, Trello, and Monday.com helping teams track projects, assign tasks, and monitor progress. Document collaboration tools like Google Workspace and Microsoft Office 365 allow multiple users to work on the same document simultaneously, making collaboration seamless and efficient. To ensure data privacy and protection against cyber threats, cybersecurity measures like Virtual Private Networks (VPNs) and Multi-Factor Authentication (MFA) must be implemented.

Nebraska ranks 37th in the country for the rate of persons who worked from home in 2021, with only 12.3% of its workforce engaging in remote work.<sup>46</sup> This lower rate is primarily due to

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<sup>45</sup> <https://ncir.nebraska.gov/sites/default/files/doc/1561%20Findings%20of%20Fact%20and%20Order.pdf>

<sup>46</sup> <https://www.unomaha.edu/college-of-public-affairs-and-community-service/center-for-public-affairs-research/documents/remote-work.pdf>

an economy comprising many low-wage positions that do not offer the flexibility or feasibility of remote work options. As a result, many Nebraskans cannot take advantage of the benefits associated with WFH technology, highlighting the need for economic diversification and more significant investment in digital infrastructure to expand remote work opportunities across the state.

# Nebraskan Education Technology Policy

The link between education and economics is intrinsically linked. A better-educated population is a more productive population. We are entering a time when technology will transform the entire educational process, for better or worse. Nebraska cannot afford to lag behind the technology curve. The State must use the free-market framework emphasizing market competition and consumer choice when implementing these new technologies. Cultural norms such as the value of four-year degrees must be considered in the context of the rapidly changing workforce and the need for adaptable workers. Upscaling and Online Micro-credentialing might be possible solutions that address some of Nebraska’s workforce problems.

## The Nebraska Numbers

Nebraska boasts one of the lowest unemployment rates in the United States, at 2.5 percent, tied for the fifth lowest in the country.<sup>47</sup> The Federal Reserve Bank of Kansas City reported that four job opportunities were available for every unemployed individual in Nebraska in the previous year.<sup>48</sup> We don’t have enough people to fill all the open positions. For every 100 open positions, there are only 30 heads to fill them. The US Chamber of Commerce has defined the state’s labor force as the most severe.<sup>49</sup>

## Young People Exodus

The other head of this twin dragon is the educational resources available to Nebraskans. Even if the state has enough people to fill all the openings, not all of them can meet the requirements of that position. This is called a skill gap, and education plays a crucial role in closing it. “A skills gap is present in an occupation if a high share of employers find that it is difficult to hire workers and there is a persistent gap between the demand for workers and the number of hireable workers entering the occupation.”<sup>50</sup> Compounding the matter is the state’s “brain drain.” Young workers under 25 are leaving Nebraska for what they perceive as a better quality of life

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<sup>47</sup> <https://dol.nebraska.gov/PressRelease/Details/313>

<sup>48</sup> <https://www.kansascityfed.org/omaha/nebraska-economist/labor-scarcity-remains-key-for-nebraskas-economy-in-2023/>

<sup>49</sup> <https://www.uschamber.com/workforce/the-states-suffering-most-from-the-labor-shortage?state=ne>

<sup>50</sup> 2022 Omaha Area Skills Gap Report P. 22

[https://networks.nebraska.gov/admin/gsipub/htmlarea/uploads/Omaha\\_Skills\\_Gap\\_2022.pdf](https://networks.nebraska.gov/admin/gsipub/htmlarea/uploads/Omaha_Skills_Gap_2022.pdf)

elsewhere.<sup>51</sup> In 2022, 4,610 young people left the state for others, such as my home state of Idaho and Washington. That population is the most likely to have the education requirements to fill those jobs, leaving those who cannot fill the jobs here.

That effect is twofold for our educational system. Around the state, school districts need help finding qualified teachers for their students who would allow them to meet the baseline requirements for the position. Those teachers must also provide students with a quality education that will close the skill gap.

However, there are free market solutions to both of those problems. First, the state can grow its own teachers. Additionally, those already in the workforce can use AI technology to minimize the staffing shortage while helping kids with the skills gap and with incarcerated individuals.

## **Grow Your Own Teacher Pipeline**

Nebraska has started the Grow Your Own Teacher Apprenticeship Program to address the teacher shortage.<sup>52</sup> LB705 was passed in the legislature in 2023 to fund the program with one million dollars for on-the-job training and online night classes with iPads for people already in the education workforce. The program works with paraprofessionals with classroom experience and partners with existing pipeline programs, such as the University of Nebraska at Kearney. This is modeled with the help of the National Grow Your Our nonprofit organization.<sup>53</sup>

This approach allows these educators to utilize consumer technology already in place. By integrating practical, real-world solutions and leveraging current technological resources, the program aims to enhance educational opportunities and improve job readiness for Nebraskans who want to educate kids, particularly in rural and underserved areas.

## **Upskilling Using Digital Learning**

The Grow Your Own Teachers program is an excellent example of upskilling. *Upskilling* refers to teaching employees new skills or enhancing their existing ones to better prepare them for

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<sup>51</sup> <https://www.unomaha.edu/college-of-public-affairs-and-community-service/center-for-public-affairs-research/documents/brain-drain-2022-release.pdf>

<sup>52</sup> <https://www.ketv.com/article/nebraska-launches-dollar1-million-program-to-recruit-and-retain-more-teachers-in-the-state/60323094>

<sup>53</sup> <https://ncgyo.org/>

their current roles or new organizational positions.<sup>54</sup> This concept is crucial in a rapidly evolving job market where technological advancements and changing industry needs require workers to update their competencies to remain competitive continuously. Upskilling can involve formal training programs, workshops, certifications, and, as in the Teacher Pipeline, on-the-job learning opportunities that equip individuals with the necessary skills to meet emerging job requirements. However, the primary learning environment is on the computer.

The World Economic Forum reports that this will be the decade for upskilling because of low cost and low barriers to entry that use digital classrooms.<sup>55</sup>

Upskilling and the technology it requires have evolved to meet employers' needs, while our other, more traditional education institutions have failed. Historically, a standard four-year degree was the benchmark for entering the teaching profession. Education was viewed as a gateway to a well-paid salary and the cornerstone of civic life, emphasizing the importance of well-rounded academic and professional training for educators. This model fostered a robust educational foundation and civic engagement, ensuring teachers were well-prepared to guide future generations.

However, this traditional model has been increasingly challenged and been found wanting. Many college campuses, especially in rural areas, are closing due to declining enrollments and financial pressures. Prior generations would attend teachers' college, earn a bachelor's degree, and begin teaching. Grace University in Omaha was a teaching college that was shuttered recently in 2018.<sup>56</sup> Some of these colleges, like Iowa Wesleyan University, were in rural areas, leaving those who aspired to be teachers with few other options.<sup>57</sup> The federal government has provided a solution that is in its limited repertoire: give the colleges more money.<sup>58</sup> This often does nothing more than prolong the inevitable demise of struggling academic institutions.

Meanwhile, new technologies are significantly altering how people learn, necessitating a shift in how educational qualifications and training are approached. This leads to a new upscaling pipeline like the Grow Your Own Teacher Program. Unlike the traditional four-year teacher

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<sup>54</sup> <https://www.uschamber.com/co/run/human-resources/upskilling-vs-reskilling>

<sup>55</sup> <https://www.weforum.org/agenda/2024/01/the-2020s-will-be-a-decade-of-upskilling-employers-should-take-notice/>

<sup>56</sup> <https://www.3newsnow.com/news/local-news/grace-university-to-cease-operations-at-the-end-of-2017-2018-school-year>

<sup>57</sup> <https://www.iowapublicradio.org/ipr-news/2024-04-04/iowa-wesleyan-campus-divided-and-sold-one-year-after-announcing-its-closing>

<sup>58</sup> <https://www.washingtonpost.com/education/2023/04/27/government-is-rescuing-rural-colleges-that-would-otherwise-close/>

program, it allows people already in the workforce to get an education without leaving the workforce. By integrating online learning platforms and flexible certification programs, these initiatives provide quicker, more accessible routes into the teaching profession.

The backbone of upskilling is the use of technology. Online learning platforms and artificial intelligence provide a seamless learning experience, making education more accessible and efficient. The proliferation of affordable tablets and devices has further enabled more people to access educational content, breaking down barriers and opening opportunities for continuous learning and professional development. As the pandemic pronounced temporary victory over the in-person educational system, online learning became a default for many. Now that distance education has a certain comfort level, upskilling is more comfortable.

A hidden benefit of upskilling with technology is that participants not only find technology to make educational content more accessible but also gain valuable knowledge of how to use it effectively. This dual advantage makes them more attractive to employers, as they acquire specialized skills from their courses and the technological proficiency needed in today's job market. This enhanced tech-savviness can significantly boost their employability and career prospects.

A student could enhance their tech-savvy as a traditional student in a university but with a financial ghost that may haunt them for many years. A major problem with the traditional four-year degree is that it often leads to significant student debt, which has reached astronomical levels in recent years, decreasing economic mobility.<sup>59</sup> This financial burden saddles new teachers with sizeable monthly debt payments, making it challenging to manage their finances and reducing the overall appeal of pursuing a teaching career through conventional educational routes. Not so with upskilling.

Finally, continuously upskilled teachers might have a chance to become better educators than those who rely on a traditional teacher four-year degree program. They might remain students through ongoing learning, constantly updating their knowledge and teaching methods with upscaling route. This continuous professional development allows them to adapt to new educational trends and technologies, ultimately enhancing their effectiveness and ability to connect with their students.

**Free to Choose:** Importantly, this is not an enforced mandate for those that want to climb the educational ladder. Schools do not force paraprofessionals to become certified teachers to

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<sup>59</sup> [https://www.newyorkfed.org/medialibrary/media/aboutthefed/pdf/Chakrabarti\\_Oct\\_2018.pdf](https://www.newyorkfed.org/medialibrary/media/aboutthefed/pdf/Chakrabarti_Oct_2018.pdf)

increase the teacher labor force. Instead, the program offers a voluntary pathway for those interested in advancing their careers. This flexibility allows paraprofessionals already in the classroom to utilize consumer technology and existing partnerships to upskill at their own pace, thus contributing to the educational workforce without imposing additional requirements and having a limited budget of one million dollars. That is one more barrier to the good life gone for people that make that choice.

## **AI and Education**

The Rand Corporation found in their nationwide survey of American teachers that systematic poor working conditions lead to teacher burnout.<sup>60</sup> Artificial Intelligence innovation must mitigate the State's overworked teachers.

AI tools like Khanmigo help teachers stay organized and create lesson plans more efficiently.<sup>61</sup> They can streamline administrative tasks, allowing teachers to focus more on teaching and less on paperwork. Khanmigo assists in developing personalized lesson plans by analyzing student data and providing tailored content that meets the needs of each learner. It can suggest interactive activities and resources, ensuring engaging and effective lessons by automating routine tasks and offering valuable insights. For school districts looking to reduce the workload of employed teachers while struggling to find qualified staff, AI tools like Khanmigo can be a part of the short and long-term solution, but only if they find it helpful.

From a free market perspective, allowing teachers to choose AI tools like Khanmigo exemplifies the benefits of competition and innovation in the education sector. By enabling teachers to select the AI technologies that best suit their needs, it encourages the development of cutting-edge solutions that streamline administrative tasks and enhance lesson planning so teachers can do what they do best: teach. Such a solution not only helps combat teacher burnout but can also help students not drop out. AI chatbots can be tailored to the individual needs of each student.

This market-driven approach empowers educators to leverage the most effective tools available, leading to improved efficiency and better educational outcomes. This competition fosters continuous improvement in educational technology, driving the market to provide superior products and services that benefit teachers and students.

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<sup>60</sup> [https://www.rand.org/pubs/research\\_reports/RRA1108-9.html](https://www.rand.org/pubs/research_reports/RRA1108-9.html)

<sup>61</sup> <https://www.khanmigo.ai/>



## Nebraska University System Partnership with Google

Upscaling technology is available for paraprofessionals who aspire to become teachers and anyone who wants to better themselves, and it offers opportunities for personal and professional development across various fields, empowering individuals to gain new skills, advance in their careers, and achieve their goals on time. One such program is the Nebraska Grow with Google initiative.

In 2023, Google partnered with the University of Nebraska system to provide a limited group of Nebraskans with low-cost certifications through the Grow with Google program.<sup>62</sup> This initiative targets workforce development by offering accessible and affordable training in high-demand fields such as IT support, data analytics, project management, and UX design. The certification courses, which only cost \$20, will be integrated into the existing online NU Advance portal, which supports non-credit learning.

By leveraging Google's expertise and the University of Nebraska's educational infrastructure, this partnership seeks to equip participants with valuable skills and certifications that can significantly improve their employment prospects and contribute to the state's economic growth.

This program is another form of upskilling. By integrating these certification courses into the existing online NU Advance portal, the program seeks to offer accessible, affordable, and flexible training opportunities. These certifications enable participants to acquire new skills or enhance their current abilities while in the workforce, improving their future job prospects and ability to meet the demands of the modern workforce.

Along with upskilling, the Google program also focuses on micro-credentialing. Micro-credentialing involves earning more minor, focused certifications or badges in specific skills or knowledge areas.<sup>63</sup> These micro-credentials are designed to be more targeted than traditional degrees, allowing individuals to develop competencies in particular subjects or technologies. They provide a way for professionals to quickly gain and demonstrate proficiency in specific areas through short educational programs.

When workers achieve a micro-credential, they can showcase it on work-related social media sites to demonstrate their specialized skills to recruiters. This highlights their commitment

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<sup>62</sup> <https://nebraska.edu/news-and-events/news/2024/04/new-university-partnership-with-google-will-support-career-workforce-growth-in-nebraska>

<sup>63</sup> <https://www.nea.org/professional-excellence/professional-learning/micro-credentials>

to continuous learning and makes them more attractive candidates for potential job opportunities, as recruiters can easily see their expertise in specific areas. This visibility can significantly enhance their professional profile and increase their chances of career advancement.

It bears repeating that upskilling and micro-credentialing have shallow barriers to entry, unlike the traditional educational route, which typically requires a high school diploma if not some community college education – and a substantial amount of student debt.<sup>64</sup> Most micro-credentialing programs are conducted online, making transportation a non-issue for completion.

This accessibility allows individuals from various backgrounds to enhance their skills and knowledge without the constraints of physical attendance or extensive prior qualifications, thereby democratizing education and opening new opportunities for personal and professional growth. Minimal barriers allow more freedom to choose.

Micro-credentialing and upscaling will not significantly aid the unskilled labor force, which is separate but related to the unemployment problem. Service workers and others in similar positions often need a clear path to advancement. Complete retraining programs are necessary to equip these individuals with the technology-related skills required for higher-paying and more stable employment opportunities. Without comprehensive retraining, these workers may remain trapped in low-skill, low-wage jobs, unable to benefit from the economic mobility that more skilled professions offer.

Worse yet, Harry J. Holzer at the Brookings Institution argues that artificial intelligence will usher in a new automation revolution that might replace jobs in the manufacturing and service sectors. He echoes that “[d]isadvantaged workers will need more support to complete such education, including occupational guidance and childcare.”<sup>65</sup> He further writes that the new job positions will be adjacent to the machines and require frequent relearning. We must have a path forward that uses technology to ensure that the most vulnerable workforce does not get left behind in the AI era.

**Dyslexia Research Grant Program:** The Dyslexia Research Grant Program, provided for in LB1284 and folded into AM3061 during the 2024 Legislative session, uses grant money specifically for researching artificial intelligence-based writing assistance for individuals with dyslexia.<sup>66</sup> It uses aggregate writing analytics to identify writing errors and patterns. This

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<sup>64</sup> <https://www.wsj.com/articles/college-doesnt-need-to-take-four-years-higher-education-credentials-university-degree-training-credits-students-11675370630>

<sup>65</sup> <https://www.brookings.edu/articles/understanding-the-impact-of-automation-on-workers-jobs-and-wages/>

<sup>66</sup> <https://nebraskapublicmedia.org/en/news/news-articles/university-of-nebraska-lincoln-graduates-devote-work-to-dyslexia-software/#:~:text=In%20the%202024%20legislative%20session,soon%20as%20the%20program%20starts.>

research can help teachers develop comprehensive literacy plans for students with dyslexia, further demonstrating the benefits of accessible educational resources.

Dyslexi.co is a platform that provides AI-driven tools to support students with dyslexia by offering personalized writing assistance and real-time feedback.<sup>67</sup> Dyslexi.co helps students improve their writing skills and gain confidence in their abilities, demonstrating the broader benefits of accessible educational resources and innovative technology in education. Those errors include incomplete thought, incorrect letter capitalization, and phonological, orthographic, and morphologic syntactic.

Although the author of this primer has dyslexia and could have significantly benefited from Dyslexi.co as a student, there are a few concerns about the funding mechanism for this grant research. This bill garners enthusiasm for one particular tool, which is a good tool, no doubt, at the potential expense of others. The government should be cautious about picking winners and losers based on current technology. This approach can stifle innovation and limit the development of other potentially valuable tools and technologies that could also benefit individuals with dyslexia.

## **AI Technology, Education, and Justice-Involved Citizens**

It's easy to forget about those in prison, but their reality is stark. In a societal hierarchy, they would be near the bottom, receiving the least resources as deemed just. Even after release, their past can follow them like a scarlet letter. Public access to their criminal history ensures that their mistakes are never forgotten, limiting their opportunities and reinforcing their marginalization in the job market.<sup>68</sup> This persistent stigma makes reintegration into society an ongoing struggle, as they often get only the last crumbs of opportunity.

This is especially true with access to technology. Hall County denied the use of tablets in the county jail in part because of this knee-jerk reaction comparing prisoners to children who go take a time out.<sup>69</sup> “If you got kids and send them to their room, and by the way, we're giving you a tablet, they're going to think it's a joke,” Commissioner Gary Quandt said. Hall County soon reversed course and allowed public tablets that could not be taken into individual jail cells.<sup>70</sup> Douglas County perceived what Hall County did not initially: that these tablets make jails safer

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<sup>67</sup> <https://dyslexi.co/>

<sup>68</sup> <https://platteinstitute.org/how-about-a-second-chance/>

<sup>69</sup> <https://nebraska.tv/news/local/tablets-in-jail-hall-county-debates-pros-and-cons-of-technology-for-inmates>

<sup>70</sup> <https://www.ksnbllocal4.com/2023/12/22/county-jail-will-receive-tablets-inmates/>

and make incarcerated individuals more likely to stay out of trouble by offering a way to connect with the outside world through personal connections and increase education.<sup>71</sup>

Jail cell tablets supplied by private companies are locked down, meaning no inmate can access the internet. The company that manages the tablets controls the limited apps. These tablets are usually cheap Android devices.

Getting more tablets in correctional facilities means more incarcerated individuals' access to education helps prevent the cycle of criminality, but a more technological focus is warranted.

According to the Nebraska Department of Corrections, a strengths-based approach to support those returning needs to consider educational aspirations and educational satisfaction.<sup>72</sup> This boils down to providing the right opportunities as early as possible that support prisoner education.

Educating this demographic for educational aspiration and satisfaction is particularly challenging due to their diverse backgrounds, intellectual abilities, and ages even with tablets. Because of this broad range, prison education programs are often less effective than traditional schooling. According to an overview of RAND of higher education programs in prisons, citing a government study, one-third of incarcerated inmates perform at low literacy and math fluency levels.<sup>73</sup> (Page 3) With traditional schooling, pupils are usually in the same age group and have similar educational backgrounds. In higher education, there is a clear path to getting a degree where students start with the base education, building up to more advanced subject areas. That educational framework is an impossible feat for those who are locked up.

The AI Prison Education Solution needs to come forth. Without being pollyannaish and at the risk of appearing over-redundant, humanity has entered the AI Era. The current zeitgeist is partly a mix of fear, tribulation, and excitement about this in our work and home. In our reaction to this, we often turn to education as the solution to the future, and this publication gives possible concrete solutions, especially for those who are in danger of falling behind, such as low-wage workers who need transferable skills and students in overcrowded school needing tailored individual education plans. For the first time in history, we have a solution that can meet the needs of any learner, anywhere, anytime, with minimal expense. Why should we not take advantage of this to help ensure that all learners succeed, even those behind bars?

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<sup>71</sup> <https://www.youtube.com/watch?v=Y-GZYhLjxNk>

<sup>72</sup> [https://www.corrections.nebraska.gov/sites/default/files/wysiwyg/advancing\\_strengths-based\\_rehabilitation\\_in\\_corrections.pdf](https://www.corrections.nebraska.gov/sites/default/files/wysiwyg/advancing_strengths-based_rehabilitation_in_corrections.pdf)

<sup>73</sup> <https://www.rand.org/pubs/perspectives/PE342.html>

AI can be introduced to prisons relatively quickly now that tablets are already used. AI programs like OpenAI's GPT offer a "ready-made" solution for the prison system. Strict safeguards are in place to prevent AI from engaging in criminal activity. Since it is all text-based, prisoners cannot use it to view illicit or lewd content. AI can supplement already existing educational efforts by acting as a tutor, helping inmates learn and improve their skills. It does not require high processing power, so it can run on inexpensive Android tablets that prisoners already can access. This enhances their learning experience without additional costs.

Engagement is the most significant benefit of bringing AI software and support to incarcerated individuals. Reading on a tablet is foundational to learning, but books cannot talk back or answer a reader's questions. Educational professionals only have a limited amount of time in the prison system, if they are available at all. There are many unfilled openings for these professionals, just like in many other occupations. AI can fill this gap by providing continuous, interactive educational support, enhancing the learning experience, and fostering personal development among inmates.

## Nebraska Agriculture Technology Public Policy

Employment, agriculture, and technology are closely intertwined here in the Midwest. We are in a state where the Nebraska Football team is named after farming corn. The Nebraska Farm Bureau wants to have the state be a leader in agricultural technology.<sup>74</sup>

**Farm Bill and Cybersecurity:** The Farm Bill, unlikely to pass this year, contained several vital amendments to protect Nebraska farmers against cyber-attacks.<sup>75</sup> Nebraska's second district Congressman Bacon introduced these amendments, recognizing the growing threat of cyber intrusions on agricultural operations. These provisions were designed to enhance the cybersecurity infrastructure of farms, ensuring that sensitive data and automated farming equipment are shielded from potential cyber threats. The proposed law would set up a program at the University of Nebraska to assist farmers with effectively implementing cybersecurity measures.

## New Era of (Possible) Cooperation Via Technology

**Chevron Doctrine Demise:** This year, the Supreme Court overturned the Chevron doctrine in *Loper Bright Enterprises v. Raimondo* (2024).<sup>76</sup> The wicked witch of Red Tape is dead; Dorothy is now free to farm. A Platte Institute blog discusses on how we got here and why *Loper* matters for the agricultural segment and the larger business community.<sup>77</sup>

A great example of cooperation between farmers and federal agencies is the initiative to help farmers get the medical and scientific tech equipment needed to stop the spread of the avian flu without red tape to protect their livestock and maintain public health standards.<sup>78</sup> Such cooperative efforts are crucial in addressing significant agricultural challenges and demonstrate how effective partnerships between farmers and federal agencies can improve the farming sector's safety and productivity. This level of cooperation would be difficult to achieve in a top-down, regulation-heavy relationship, where rigid oversight can stifle innovation and responsiveness.

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<sup>74</sup> <https://www.nefb.org/09/01/2023/nebraska-growing-food-and-technology/>

<sup>75</sup> <https://www.brownfieldagnews.com/news/likelihood-of-getting-a-farm-bill-passed-this-year-continues-to-dwindle/>

<sup>76</sup> [https://www.supremecourt.gov/opinions/23pdf/22-451\\_7m58.pdf](https://www.supremecourt.gov/opinions/23pdf/22-451_7m58.pdf)

<sup>77</sup> <https://platteinstitute.org/chevron-deference-overturned-a-victory-for-separation-of-powers/>

<sup>78</sup> <https://nebraskaexaminer.com/briefs/feds-incentivize-better-biosecurity-at-dairy-farms-for-bird-flu/>

New technology has led to a rise in tools to combat avian flu. The USDA will pay for the technology equipment farmers need without demanding that they will do so. Farmers have a choice, and the spirit of free market principles will make the farm-to-table journey much safer.

## State of Nebraska and The Combine

We now turn to the state, which supports farmers more than the federal government. The Department of Economic Development was instrumental in funding the tech lab incubator in Nebraska called The Combine, providing crucial resources and support to foster agricultural innovation.<sup>79</sup> This state-level support helps farmers access cutting-edge technology and research, enabling them to improve their practices and increase productivity. By focusing on local needs and leveraging state resources, Nebraska demonstrates a solid commitment to advancing its agricultural sector and supporting its farmers.

- The tech lab incubator in Nebraska helped TreadSure, a company that developed an innovative app for monitoring tire tread wear.<sup>80</sup> This app provides real-time data and analytics, assisting farmers to ensure their equipment is operating safely and efficiently. By leveraging the incubator's resources and support, TreadSure brought this valuable tool to market, benefiting the agricultural community and enhancing farm operations using data.
- Another graduate company from the incubator is Grain Weevil, which manufactures robots designed to replace dangerous trips into grain bins.<sup>81</sup> These robots can save lives by performing tasks that would otherwise require farmers to enter potentially hazardous environments. Grain Weevil's innovative technology enhances safety and increases efficiency in grain management. Grain Weevil received a grant from the Department of Economic Development to create a prototype of their design, highlighting the vital support provided by the state.
- Another company, Sentinel Fertigation, uses data science and imagery to tell farmers when to apply nitrogen fertilizer to increase crop yields.<sup>82</sup> By analyzing real-time data and providing precise recommendations, Sentinel Fertigation helps farmers optimize their fertilization practices, leading to more efficient resource use

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<sup>79</sup> <https://www.nebraskacombine.com/>

<sup>80</sup> <https://treadsure.app>

<sup>81</sup> <https://www.grainweevil.com/>

<sup>82</sup> <https://www.sentinelfertigation.com/>

and improved crop productivity. This advanced approach enhances yields and supports sustainable farming practices by reducing excess fertilizer application.

This program is unique because it partners agrotech startups with farmers who deploy and test those products, gaining firsthand knowledge. This collaboration allows farmers to provide valuable feedback and insights, which helps refine and improve the technologies. By working directly with the end-users, these startups can ensure their products meet the practical needs of the agricultural community. This hands-on approach accelerates innovation and ensures that new technologies are effective and user-friendly, benefiting the entire agricultural sector.

A dogmatic approach to free market ideology might see supporting such incubators as tax revenues paying for winners and losers, thereby introducing externalities in the market that cause a deadweight loss of productivity. However, the government funding is only partial. The Combine collaborates with stakeholders to build a diverse community where individuals work hard to achieve their entrepreneurial aspirations and lead fulfilling lives. This collaboration fosters innovation and provides startup opportunities to thrive, ultimately contributing to the agricultural sector's overall economic growth and vitality.

Importantly, funding from the Department of Economic Development to the incubator does not cause government dependence because the incubator receives funding from a diverse array of nonprofits, investors, and higher education partners. By shifting away from only government-funded research, we free small businesses from government dependency and influence.

For a complete list of all the startups and programs that the Department of Economic Development has supported, read the 2023 Annual Report.<sup>83</sup>

**Broadband and Starlink:** The Good Life Report mentions that tech incubators and hubs are needed to ensure that Nebraska retains its vitality, including the agricultural sector.<sup>84</sup> The Good Life Report discusses broadband, emphasizing the importance of increasing rural broadband access. It notes that "the percentage of broadband access in urban areas is 97.9%, while only 58% in rural areas. This disparity disproportionately affects the state's farmers and ranchers and will put the state's standing as a leader in production agriculture at risk."<sup>85</sup>

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<sup>83</sup> [https://opportunity.nebraska.gov/wp-content/uploads/2024/06/Dept-of-Economic-Development\\_2023-Annual-Report-op.pdf](https://opportunity.nebraska.gov/wp-content/uploads/2024/06/Dept-of-Economic-Development_2023-Annual-Report-op.pdf)

<sup>84</sup> <https://platteinstitute.org/blueprint-nebraskas-growing-the-good-life-report/>

<sup>85</sup> <https://files.platteinstitute.org/uploads/2021/12/Growing-the-Good-Life.pdf>



With better broadband infrastructure, farmers can access the digital tools and resources essential for modern agriculture, helping them implement advanced farming techniques and remain competitive in the agricultural sector. This connectivity gap hinders that. The Federal Communications Commission has a digital map that shows broadband dead zones across the country.

To address this gap, the Nebraska Broadband Bridge Act, LB 388 (2021), provides \$20 million yearly to improve broadband access across the state, aiming to close the gap and support rural communities, including farmers.<sup>86</sup> As a stop-gap measure, private partnerships like those between are working and companies like Starlink help bridge the connectivity gap, ensuring farmers have access to commodity markets and cutting-edge technology.<sup>87</sup>

Legislators should be open to exploring alternatives to new technology that might be faster than broadband. Additionally, they should consider private partnerships that could provide these advancements at a lower cost, potentially reducing the need for the current \$20 million annual expenditure. This approach would ensure that Nebraska remains at the forefront of agricultural innovation without overburdening the state's budget. For instance, if Starlink gained reliability and was cheaper than broadband, the legislator should be open to pursuing that role.

The state also received \$128,740,178, in part, for broadband infrastructure from the federal government as part of the American Rescue Plan Act of 2021. However, the state should be wary of accepting federal funds. As we've noted previously, those funds often come with straightjacket provisions that hinder the state and, thereby, hinder its citizens.<sup>88</sup> Frequently, the cost of compliance exceeds that of such projects if the state pays for it themselves.

## **Recommendations**

**Small-Scale Farmers and Food Freedom (Recommendation):** Nebraska's current cottage food laws restrict the sale of homemade foods to specific venues and types of products, limiting opportunities for small-scale food entrepreneurs. A comprehensive Food Freedom Law needs to improve their ability to expand their businesses and sell a broader range of homemade

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<sup>86</sup> <https://broadband.nebraska.gov/media/mhabohyj/nbo-2023-annual-report-on-the-status-of-broadband-development-final.pdf>

<sup>87</sup> <https://www.nefb.org/09/22/2023/nebraska-farm-bureau-members-save-on-new-starlink-service/>

<sup>88</sup> <https://platteinstitute.org/federal-dollars-and-federalism/>

foods directly to consumers. This restriction stifles the growth of local food markets and limits consumer access to diverse, homemade food products.

To address the restrictive nature of Nebraska's current cottage food laws, the legislature should pass the previously proposed bills LB 321 and LB 662, which died in session.<sup>89</sup> LB 321 sought to amend the Nebraska Pure Food Act to allow time and temperature-controlled foods to be made from private homes under certain conditions. LB 662 aimed to amend the “Right to Farm Act” definitions of public and private nuisances. These bills would support small-scale food entrepreneurs, stimulate local food markets, and provide consumers greater access to diverse, homemade food products.

E-commerce and online platforms let small food producers sell directly to consumers, cutting out the middlemen. This means consumers can buy from a variety of sources, like online farmers’ markets or subscription-based food delivery services, giving them more food options that they might not find in regular grocery stores.

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<sup>89</sup> [https://nebraskalegislature.gov/bills/view\\_bill.php?DocumentID=50327](https://nebraskalegislature.gov/bills/view_bill.php?DocumentID=50327)

## Nebraska Transportation Technology Policy Review



Life is good on the open road. Let's get Nebraskans to drive forward and talk about how technology can help us get there. Welcome to our comprehensive transportation policy review. Below, you'll find thorough assessments of transportation policies and some innovative ideas dealing with technology.

### Kei Cars

Advancements in technology have enabled a surge in marketplaces where Kei cars, small Japanese trucks, can be imported into the United States as long as they are 25 years old, according to the Imported Vehicle Safety Compliance Act of 1988 (49 U.S.C. § 30112(b)(9)).<sup>91</sup> A Kei car, also known as a Kei-class vehicle, is a small, lightweight vehicle popular in Japan.<sup>92</sup> These cars were designed to meet Japan's specific sizes, engine capacity, and power output regulations.<sup>93</sup>

They typically have an engine displacement of up to 660 cubic centimeters and are restricted to a maximum length of 11.2 feet and a width of 4.9 feet. A minitruck is a small, lightweight truck that shares many characteristics with Kei cars but is specifically designed for carrying goods and performing utility tasks. I use them interchangeably.

Kei cars are a cheaper alternative to 4x4 vehicles, which have become prohibitively expensive. Platforms like eBay, Alibaba, and specialized import websites have made it easier for farmers to browse, purchase, and import Kei trucks. These online marketplaces connect buyers with sellers from Japan and other countries, expanding the range of available vehicles. A bigger market means that people have more choices and more opportunities.

Kei trucks are small and highly maneuverable, which makes them especially beneficial for farmers.<sup>94</sup> Their compact size allows them to navigate tight spaces and narrow paths on farms, which larger vehicles cannot easily access. They are excellent for efficiently transporting goods like produce, feed, and equipment around the farm.

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<sup>91</sup> <https://www.congress.gov/bill/100th-congress/house-bill/2628/text>

<sup>92</sup> <https://www.motortrend.com/features/what-is-a-kei-car/>

<sup>93</sup> <https://www.wsj.com/articles/BL-DSB-9062>

<sup>94</sup> <https://www.economist.com/united-states/2023/04/20/rural-americans-are-importing-tiny-japanese-pickup-trucks>

However, some states have banned the registration of these imports, citing safety and environmental concerns.<sup>95</sup> These states refuse to issue titles for Kei cars, reflecting a nanny-state approach that limits private choices to protect citizens. This regulatory stance highlights the ongoing tension between individual freedom and state control over vehicle ownership, even in freedom-bound states like Texas, which back down when owners voice concerns.<sup>96</sup> Worse, owners are often left wondering why their vehicles are being banned, which is arguably a constitutional due process violation.<sup>97</sup>

Nebraska should be proud of its reputation as one of the first states to legally recognize that the Kei car (or mini trucks, another name) are worthy of a title and Nebraska's roads.<sup>98</sup> The 2010 law deleted "except" in this sentence, "Motor vehicle means any self-propelled vehicle which is designed for use upon a highway, including trailers designed for use with such vehicles, except any minitrucks."<sup>99</sup> This change allowed these imported trucks to be driven on open roads

State senators and those in the executive branch should stay alert to special interest groups that might try to ban Kei cars and minitrucks from the road, creating barriers to innovation. Just because Kei cars are old technology does not mean they are not valuable. Farmers must have a choice to use what kind of technology they need and ensure that what they use is legal on their roads. Ensuring regulations support technological advancements and practical solutions that benefit urban and rural communities is crucial to economic independence. Allowing Kei cars could help lower the prices of ATVs that farmers commonly use by increasing competition and offering farmers a more affordable alternative.



## Peer-to-Peer Vehicle Sharing Program

A new form of transportation is vehicle sharing. Peer-to-peer carsharing is an innovative shared-use vehicle model under which privately owned vehicles are available for use by members in the surrounding area on an hourly or daily basis.<sup>100</sup> A peer-to-peer vehicle-sharing program is a

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<sup>95</sup> [https://www.bloomberg.com/news/articles/2024-06-27/japan-s-mini-kei-truck-sales-surge-in-us-despite-safety-concerns?utm\\_campaign=bw&utm\\_medium=distro&utm\\_source=yahooUS](https://www.bloomberg.com/news/articles/2024-06-27/japan-s-mini-kei-truck-sales-surge-in-us-despite-safety-concerns?utm_campaign=bw&utm_medium=distro&utm_source=yahooUS)

<sup>96</sup> <https://www.theautopian.com/texan-becomes-the-first-state-to-win-the-battle-against-imported-car-bans/>

<sup>98</sup> <https://nebraskalegislature.gov/laws/statutes.php?statute=60-121.01>

<sup>99</sup> <https://nebraskalegislature.gov/FloorDocs/101/PDF/Slip/LB650.pdf>

<sup>100</sup> <http://innovativemobility.org/wp-content/uploads/2015/07/Peer-to-Peer-Carsharing-Public-Perception-and-Market-Characteristics-in-SF.pdf>

service that allows private car owners to rent out their vehicles to others through an online platform. This sharing economy model leverages existing resources, enabling car owners to earn extra income and giving renters more flexible and affordable vehicle access.

This model promotes efficient use of resources, convenience, and cost savings for both parties involved. This is all done through a mobile smartphone app or the internet. This app functions as a marketplace, bringing together willing buyers and sellers and promoting the general welfare by facilitating efficient resource use and cost savings for both parties.

LB446 passed in the 2024 legislative session and seeks to create an environment allowing the peer-to-peer vehicle-sharing market to flourish.<sup>101</sup> This legislation aims to provide a structured framework to support platforms like Turo, ensuring they can operate effectively and fairly.

One concern with the passed bill is that it imposes liability on the company if the owner does not have sufficient insurance for third-party claims. The requirement begins once the owner gives the keys to the driver and ends when the vehicle owner takes possession of it. This could hinder participation in the program by creating a barrier to alternative transportation options. By placing an undue burden on the platform, the legislation may discourage people from using these services, thus limiting access to flexible and affordable transportation solutions.

This law is also self-defeating because it still allows a car-sharing platform to sue the owner of a car for third-party damages if the terms and conditions place the liability on the owner. This creates a conflicting situation where the platform is held liable by law but can still pursue legal action against the car owner. This leads to potential legal complications and undermines the legislation's intent to create a clear and supportive framework for peer-to-peer vehicle sharing. Such legal complications can lead to rising costs for the platforms. They might make companies reluctant to do business in Nebraska, ultimately hindering the growth and accessibility of alternative transportation options in the state.

## **Mobile Drivers Licenses**

The REAL ID Modernization Act of 2020 introduced significant changes that have enabled market-driven alternatives in the identification and security sectors.<sup>102</sup> By allowing remote identity verification and electronic documentation submission, the Act has opened the door for private

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<sup>101</sup> <https://nebraskalegislature.gov/FloorDocs/108/PDF/Intro/LB446.pdf>

<sup>102</sup> <https://www.congress.gov/bill/116th-congress/senate-bill/4133#:~:text=This%20bill%20revises%20requirements%20for,REAL%20ID%20Act%20of%202005.&text=eli minates%20documentation%20requirements%20for%20Social%20Security%20numbers%20and%20permanent%20addresses.>

companies to innovate and provide advanced digital identity solutions. This has led to better services and lower costs due to increased competition. The Act also opened opportunities for new businesses and public-private partnerships, improving the overall identity verification system.

Waiting at the State DMV to renew your Driver's License is a significant barrier for several reasons. First, it often involves long wait times, which can be frustrating and time-consuming even without someone throwing fish and carrots around.<sup>103</sup> People usually have to take time off work or rearrange their schedules, leading to lost productivity and inconvenience. While the state is working to improve the system by experimenting with only booking programs in a few locations, there still is the hassle of going there.<sup>104</sup>

When you show a regular driver's license to verify your age, you often reveal more information than necessary. The driver's license card shows your age, full name, address, and other personal details. This means you're sharing more information than required to prove your age. All this makes me want to throw fish and carrots around myself.



A Mobile Driver's License (mDL) is a digital version of your driver's license stored on your smartphone.<sup>105</sup> Setting up an mDL is relatively simple for those who can.<sup>106</sup> It's more convenient than carrying a physical card and uses security features to protect your information. Most states are now studying, creating, or having some form of mDL.<sup>107</sup> As of 2024, Nebraska is not one of them.

Three parties are involved in making mDL work: the issuing authorities (state licensing agencies), the credential company creating the technology, and the relying party (such as DHS, TSA, and other federal and state government agencies, as well as law enforcement, airlines, and other travel-related businesses). These parties rely on photo IDs to verify identity and grant security and related access privileges to the license holder.

The option for people to have a Mobile Driver's License (mDL) breaks down economic barriers for people who need it the most. The DMV represents government influence in everyday

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<sup>103</sup> <https://www.1011now.com/2024/05/20/lincoln-police-say-man-vandalized-new-dmv-location-opening-day/>

<sup>104</sup> <https://nebraska.tv/news/local/new-dmv-to-open-in-lincoln-with-improved-customer-service-system-gov-jim-pillen-and-rhonda-lahm-director-of-the-nebraska-department-of-motor-vehicles>

<sup>105</sup> <https://www.dhs.gov/science-and-technology/publication/next-generation-identity-mobile-drivers-license-fact-sheet>

<sup>106</sup> [https://www.wired.com/story/how-to-put-drivers-license-digital-id-on-your-phone/?\\_sp=e48393a2-9b8b-4f4d-a63f-e2b0246b5591.1720878706163](https://www.wired.com/story/how-to-put-drivers-license-digital-id-on-your-phone/?_sp=e48393a2-9b8b-4f4d-a63f-e2b0246b5591.1720878706163)

<sup>107</sup> <https://www.mdlconnection.com/implementation-tracker-map/>

Nebraskans' lives, and spending hours there is particularly tough for those with low-paying jobs due to the higher opportunity cost of missing work. Worse yet, the DMV is not immune to the workforce shortage. In recent years, the DMV offices in rural communities have reduced hours partly because of the workforce shortage. This situation hinders communities and their future vitality. A mDL would help these communities access government services more efficiently.

Picking a vendor for the mDL is very important. Florida had to start over when its vendor failed to satisfy the required regulation needs.<sup>108</sup> People who downloaded the Florida smartphone app had to delete it, and now the state is out \$2 million, as it must start from zero. Ensuring the proper vendor selection is critical to avoid such setbacks and meet the requirements efficiently.

This also creates barriers for people moving into the state.<sup>109</sup> Out-of-state transplants have only 30 days to get a card, but that often doesn't happen because of the strict requirements.<sup>110</sup> These hurdles can delay their ability to settle into the community entirely. Having an mDL could better facilitate the interstate flow of information, making it easier for new residents to comply with state regulations and integrate into the community. The author made three trips to the DMV because the documents were not valid according to the DMV.

## Recommendations

**mDL Recommendation:** To address the challenges faced by new residents in obtaining a Nebraska driver's license and to explore the potential benefits of implementing Mobile Driver's Licenses (mDLs), the state should form a study group. This group should include representatives from the DMV, technology experts, policymakers, and community stakeholders. The study group would evaluate how mDLs could streamline the licensing process, reduce barriers for new residents, and enhance overall efficiency. They would also weigh the privacy concerns of having a digital license. They would also examine the potential for improving interstate information flow, making it easier for new residents to comply with Nebraska's licensing requirements.

By conducting a comprehensive analysis, the study group can provide evidence-based recommendations on the feasibility and implementation of mDLs, ultimately supporting better

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<sup>108</sup> <https://www.govtech.com/transportation/florida-will-pull-digital-id-app-from-stores-redo-it>

<sup>109</sup> <https://www.wowt.com/2022/03/16/new-nebraska-resident-battles-red-tape-get-drivers-license/>

<sup>110</sup> <https://dmv.nebraska.gov/dl/new-nebraska-resident-drivers-licensing>

integration and community vitality. Importantly, any mDL software or program should be opt-in, allowing individuals to choose the best. This approach ensures everyone can decide whether to adopt the new technology based on their preferences and comfort levels. By making participation voluntary, the state respects individual autonomy and supports a diverse range of needs and choices within the community.

**Autonomous Driving Recommendation:** Nebraska was one of the first states to recognize the transformational potential of self-driving cars, allowing them on state roads and highways.<sup>111</sup> Although this innovative thinking has yet to materialize fully, the University of Nebraska-Lincoln is doing fascinating work in this field.<sup>112</sup> Nebraska's generally easy conditions and flat roads make it perfect for autonomous vehicles. This technology has the potential to change the lives of people with disabilities and elders who cannot drive.<sup>113</sup> With the US experiencing an epidemic of loneliness, breaking barriers in transportation should be a high priority for people who cannot drive a car.<sup>114</sup> Autonomous vehicles could provide greater independence and reduce isolation for many individuals, enhancing their quality of life. By prioritizing the development and integration of AV technology, Nebraska can lead the way in offering new mobility solutions that foster social connections and improve overall well-being.

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<sup>111</sup> <https://nebraskapublicmedia.org/en/news/news-articles/autonomous-vehicle-bill-signing/>

<sup>112</sup> <https://avrlab.unl.edu/>

<sup>113</sup> <https://nebraskaexaminer.com/2023/12/12/people-with-disabilities-hope-autonomous-vehicles-deliver-independence/>

<sup>114</sup> <https://www.hhs.gov/sites/default/files/surgeon-general-social-connection-advisory.pdf>



## Nebraska Data and Health Privacy

Your data is valuable. It's not just your business—others are also profiting from it. The Nebraska Privacy Data, LB1074, passed in the 2024 session and will go into effect on January 1, 2025.

In the information age, personal data privacy has become increasingly important. Today, digital footprints, browsing habits, and personal preferences can combine to create a detailed and intimate portrait of an individual, making protecting personal data more crucial than ever.

Tech companies play a pivotal role in this data collection process. They gain user data by tracking online activities, collecting personal information during account creation, and monitoring user interactions with their services. This data can include browsing history, search queries, location data, and social media interactions.

These companies make money off the collected data by selling targeted advertising space to businesses.<sup>115</sup> Advertisers pay a premium to reach specific audiences likely to be interested in their products or services based on the detailed profiles created from user data. This targeted advertising is a significant revenue stream for tech companies, driving much of their profitability and enabling them to offer free services to users. This business model has been particularly lucrative for Facebook.

A viral video of Mark Zuckerberg responding to a naive senator who asked how it can be free to use Facebook went viral six years ago, demonstrating that the company's business model can be challenging to understand for someone who did not grow up in a digital world.<sup>116</sup>

Personal digital data can include the following types of information: • Bio • activities • news article activity • books activity • check-ins • current city • education history • events • fitness activity • games activity • groups • hometown • interests • likes • music activity • notes • online presence • Open Graph activity • photos • questions.

As Cato notes, data mining for targeted ads allows for a consumer surplus, where the price they pay is lower than the actual cost of the product.<sup>117</sup> Millions of people have shared in the benefits of the information age with no barriers to entry, enjoying services and content that would otherwise be costly. Additionally, those targeted ads tailor the online experience to the consumer,

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<sup>115</sup> <https://about.fb.com/news/2019/01/understanding-facebooks-business-model/>

<sup>116</sup> <https://www.youtube.com/watch?v=n2H8wx1aBiQ>

<sup>117</sup> <https://www.cato.org/sites/cato.org/files/2023-03/cato-handbook-9th-edition.pdf>

making their interactions more relevant and personalized. The target advertisement regime established a win/win marketplace trade.

Privacy data protection advocates suggest that these targeted ads are flanked by personalized recommended content, which promotes radicalization. Since these data collections are responses to get you to watch more and more, the content needs to be more addictive. There is a definite problem with the polarizing nature of online discourse. Still, some of the studies that have been done recently give a skeptical eye to that viewpoint of YouTube as a rabbit hole – at least for the majority of the population.<sup>118</sup>

## Terms of Service and Privacy

When a user consents to having their data used in Terms of Service (ToS), users often agree to these terms without fully understanding how their data will be used and monetized. Online terms of service agreements are legal documents that dictate the relationship between a user and an online content provider. These agreements outline the rules, responsibilities, and expectations for both parties. When users agree to the ToS, they consent to abide by the provider's guidelines



and policies. In turn, the provider outlines what services they will deliver and under what conditions. The ToS covers data collection, privacy policies, user behavior, intellectual property rights, and dispute resolution. By agreeing to these terms, users enter a binding contract governing their interactions with the service and using their data.

Standard Terms of Service (ToS) contracts are often long and filled with complex legal wording that the average person would not understand. These documents typically contain detailed clauses and legal jargon designed to cover all aspects of the service provider's operations and protect them from liability. This complexity makes it difficult for users to fully grasp the implications of what they are agreeing to. As a result, many users may skim through or bypass reading the ToS entirely, consenting to terms they need to comprehend fully. A survey by Deloitte found that 92 percent of users do not read any website's TOS.<sup>119</sup> This practice can lead to a lack of informed consent, as users might not be aware of the extent of data collection, usage rights, or potential legal obligations they accept.

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<sup>118</sup> <https://cyber.fsi.stanford.edu/news/study-finds-extremist-youtube-content-mainly-viewed-those-seeking> P. 504

<sup>119</sup> <https://www.businessinsider.com/deloitte-study-91-percent-agree-terms-of-service-without-reading-2017>

Tech companies make their Terms of Service agreements interactive by requiring users to scroll to the bottom of the contract before they can consent. This practice ensures that users at least see the entire document, even if they do not read it thoroughly. By making the Terms of Service interactive, companies can claim that users can review the terms, thus providing a legal basis for collecting and using their data. It is a façade. Everyone knows no one reads it.

This scrolling requirement is designed to create the appearance of a more informed consent process.<sup>120</sup> However, many users still do not fully understand the implications of agreeing to these terms. This consent effectively limits their ability to seek redress under state privacy laws, as they have agreed to the collection and use of their data by the tech companies. Even if there were no requirement to scroll down, Nebraska courts would likely uphold the conditions in the agreement. Ignorance of contract terms is not a valid reason for a court to invalidate an agreement. Courts generally maintain that individuals are responsible for understanding the contracts they enter, regardless of whether they have read all the terms.

## Change in ToS

Companies can change the terms of service without warning or require users to agree to the new terms if they are granted permission in the original terms of service agreement. Even if a company gives them consent, people typically do not want to switch tasks from what they are doing to read the updated terms. This often results in users agreeing to the new terms without fully understanding the changes or their implications, just like the original terms. It frequently takes a diligent journalist to read the entire terms of service and alert people to any red flags for privacy. As the New York Times' Eli Tan has reported, these changes are often only a few words a user would likely miss in the age of AI.<sup>121</sup> This vigilance helps users become aware of potential privacy concerns hidden in the legal jargon of these agreements. Even these changes are likely to be held up in court as a valid contract, and not without incurring a significant expense.

## AI and Privacy

The rise of AI has made privacy an even more significant political lightning rod, touching on issues of consent and the privacy of a person's data.<sup>122</sup> As more information is needed to train

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<sup>120</sup> [https://www.goodwinlaw.com/en/insights/publications/2022/08/08\\_10-recent-court-decisions-shed-light](https://www.goodwinlaw.com/en/insights/publications/2022/08/08_10-recent-court-decisions-shed-light)

<sup>121</sup> <https://www.nytimes.com/2024/06/26/technology/terms-service-ai-training.html?searchResultPosition=2>

<sup>122</sup> <https://www.reuters.com/legal/legalindustry/privacy-paradox-with-ai-2023-10-31/>

existing models, companies are changing their terms of service to allow them to use their users' data to train models. Adobe, for example, recently changed its terms of service, which contained the privacy policy, to enable it to use user data to train machine learning models, but it backtracked after the public outcry, as reported by The Verge.<sup>123</sup> (Adobe changing its terms and then changing them back occurred while FTC sued it for making it difficult to cancel subscriptions.<sup>124</sup> This may have played some element in the consumer's anger.)

The Adobe Ordeal was a great example of how the free market can solve an existing problem by focusing on users' concerns. No government regulation was needed, just an outcry of consumers who had the choice to voice their concerns about their privacy. The free market solved this when government intervention was not effective. Consumers put a number on the cost of giving up their privacy and found it beyond the value they were willing to pay.

## Right to Privacy and the Constitution

The Fourth Amendment protects against unreasonable searches and seizures.<sup>125</sup> This constitutional safeguard ensures that individuals have a right to privacy and protection from unwarranted government intrusion into their personal lives. The Fifth Amendment upholds the principle of due process by requiring law enforcement to obtain a warrant based on probable cause before conducting searches or seizing property. It protects citizens from arbitrary actions by the state via the 14th Amendment.

Constitutional provisions do not apply to private companies. The protections offered by amendments like the Fifth Amendment, which prohibits unreasonable searches and seizures, are designed to **limit government actions**, not those of private parties. This means that private companies are not bound by these constitutional constraints in the same way that government entities are.

The right to privacy gained footing late in the 19th century. Lawyers Samuel D. Warren and Louis D. Brandeis (later a Supreme Court justice) used common law to infer that a tort of privacy enabled people to seek redress from those who misused their information. This judicial

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<sup>123</sup> <https://www.theverge.com/2024/6/18/24181001/adobe-updated-terms-of-service-wont-train-ai-on-work>

<sup>124</sup> <https://www.ftc.gov/legal-library/browse/cases-proceedings/222-3055-adobe-inc-us-v>

<sup>125</sup> [https://www.law.cornell.edu/constitution/fourth\\_amendment](https://www.law.cornell.edu/constitution/fourth_amendment)

recognition provided a legal basis for individuals to protect their data and seek compensation for invasions of privacy by others.<sup>126</sup>

Most states have codified some private right of action into law, giving people the right to sue in state court. This legal framework allows individuals to seek redress for violations of their privacy. It ensures they have a mechanism to hold parties accountable for misusing their personal information, not on constitutional grounds. (“Additional state protections of privacy beyond what the Fourth Amendment requires are exclusively matters of state law.”) *State v. Hoehn*, 316 Neb. 634, 650 (Neb. 2024).

Nebraska has enacted such a privacy interference statute found in Neb. Rev. Stat. § 20-203. It is divided into three distinct causes of action: “...three different paths: (1) exploitation of the plaintiff for advertising or commercial advantage, (2) trespass or intrusion upon the plaintiff’s solitude, and (3) publicity which places the plaintiff in a false light. (*Sabrina W. v. Willman*).<sup>127</sup> 540 N.W.2d 364 (1995). These paths provide clear legal avenues for individuals to seek redress for different types of privacy violations, ensuring comprehensive protection of personal rights. This protection extends to your privacy where warranted, such as in changing rooms and sensitive information, including data stored electronically. This comprehensive approach ensures that individuals have legal recourse for various privacy violations. This does not mean that any online privacy violation is actionable.

The Nebraska civil action for the private right of action can be canceled by waiving that right. Any well-crafted Terms of Service will include a clause that contractually prohibits this action. Again, Courts are usually reluctant to entertain the argument that online Terms of Service are invalid because the user did not read them carefully. This means that even if users do not fully understand the terms, they are still bound by the agreement if the Terms are consented to or “clicked.” This is contract law 101: you are bound by the terms you agree to and cannot get out of them by arguing that you did not read the agreement.

This is reasonable because, as one of the prevailing sentiments in the primer suggests, using existing common law principles to regulate technology is better than demanding new ones to regulate new environments. By applying established legal frameworks, we can address the challenges posed by modern technology without overcomplicating the regulatory landscape. This

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<sup>126</sup> <https://faculty.uml.edu//sgallagher/Brandeisprivacy.htm>

<sup>127</sup> 4 Neb. App. 149, 154-55 (Neb. Ct. App. 1995)

approach ensures consistency and uses time-tested legal concepts to manage contemporary issues effectively.

Free enterprise's foundation is the right to choose, even if that choice is ill-informed by not reading the specific website's terms of service. Government paternalism that seeks to right these wrongs is itself wrong. Individuals should be free to make decisions and learn from the consequences rather than having the government intervene to correct every oversight. This principle upholds the autonomy and responsibility of the consumer in a free market.

That said, it is easy to see why consumer advocates are alarmed by the enforcement of contract provisions that have a strong "take it or leave it" bitter aftertaste. "Consumers currently possess very limited power to protect their personal information in the digital economy, while online businesses operate with virtually no limitations on how they collect and process that information (so long as they note their behavior somewhere in their privacy policy).<sup>128</sup>

Since civic life has been digitalized by a few companies, choosing not to agree would mean a loss of community and connection. This monopolistic control over digital interactions forces users into agreements that may not serve their best interests. It is a genuine and legitimate concern that there are too many powerful companies controlling the defacto public sphere because of the one-sidedness of these terms of services that fits into a broader, well-popularized concern that our civic life is being taken over by few, creating a kind of digital feudalism.<sup>129</sup>

Yet, this idea that the idealization of the public sphere is being digitalized makes any private right of action difficult, even if terms of service and privacy policy were not in place. Since social media is public, anyone who presents information, such as a picture of their new tattoo, cannot claim it was private. Posting on social media platforms inherently means sharing content with a broad audience; thus, the expectation of privacy is significantly reduced. This public nature of social media makes it clear that once something is shared, it is accessible to anyone within the platform's reach as long as the user has opted for their profile to be public. As the Ninth Circuit noted, "... members' privacy expectations regarding information they have shared in their public profiles are "uncertain at best" *HiQ Labs, Inc. v. LinkedIn Corp.*, 938 F.3d 985, 998 (9th Cir. 2019) (Preliminary Injunction Decision).<sup>130</sup> This comment would be valid even if the social media platform did not want to share the information with third parties, as with *HiQ labs*.

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<sup>128</sup> <https://advocacy.consumerreports.org/wp-content/uploads/2024/01/Consumer-Reports-%E2%80%94-Nebraska-L.B.-1294-Nebraska-Consumer-Privacy-Legislation-%E2%80%94-OPPOSE-UNLESS-AMENDED-1-1.pdf>

<sup>129</sup> <https://www.nytimes.com/2011/02/14/business/media/14carr.html>

<sup>130</sup> <https://cdn.ca9.uscourts.gov/datastore/opinions/2022/04/18/17-16783.pdf>

## **FTC Enforcement Actions**

It is a different ball game if an online platform acts deceitfully and actively undermines the rule of law, such as Meta, the parent company of Facebook. The Federal Trade Commission steps in only when a content provider engages in deceitful behavior in the Terms of Service or overall, especially when giving data to third parties. Although their enforcement can be sporadic, their rulings show that Big Tech faces some accountability. This indicates that there is oversight to protect consumers from deceptive practices, even if it is not consistently applied.

An example of this is the case with Meta, Facebook owner, where the Federal Trade Commission fined the company \$5 billion for privacy violations allowed by 15 U.S.C. § 53(b), granting them power to sue companies to “from using unfair methods of competition in or affecting commerce and unfair or deceptive acts or practices in or affecting commerce.” 15 U.S.C. § 45.<sup>131</sup> This penalty was imposed after it was revealed that Facebook had misled users about their ability to control the privacy of their data and had shared that data with third parties without proper consent, including sharing it with Cambridge Analytic. The consent decree was issued in 2013.

Since then, Facebook has consistently and unambiguously not been compliant with the decree terms, as if they were modeling the users who did not read the Terms of Service. The rule of law must be applied and enforced fairly and impartially for the free market to flourish. When companies that have committed privacy violations are allowed to continue with their business without any consequences, the rule of law is significantly compromised, even if that company is relied upon to connect people to each other.

## **Nebraska's Data Privacy Act**

Nebraska's Data Privacy Act, was folded into and passed as LB1074 in 2024. It was a significant step towards enhancing the privacy and protection of Nebraskans' data.<sup>132</sup> The governor signed the act into law in April, and it will go into effect in January 2025. More than 15 states, including Nebraska, have introduced legislation to address privacy concerns.

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<sup>131</sup> <https://www.justice.gov/opa/pr/facebook-agrees-pay-5-billion-and-implement-robust-new-protections-user-information>

<sup>132</sup> <https://nebraskalegislature.gov/FloorDocs/108/PDF/Slip/LB1074.pdf>

This legislation requires businesses to implement reasonable security measures to protect personal information and mandates prompt notification to affected individuals during a data breach. It aims to hold companies accountable for safeguarding consumer data and ensures transparency when data is compromised. Notably, Nebraska joins 14 other states that have passed similar privacy bills, reflecting a growing nationwide commitment to data privacy and protection.

If a business meets the definition of a small business, it is exempt from the Data Privacy Act. Neb. Rev. Stat. § 87-1103. To qualify as a small business, you must have 500 or fewer employees or generate less than \$7.5 million in revenue. This exemption reduces the regulatory burden on smaller companies, allowing them to operate without the extensive compliance requirements that larger businesses must follow.

The Data Privacy Act also does not apply to state governments, agencies, entities, or business associates using HIPAA rules, Children's Online Privacy Protection Act (COPA), non-profit organizations, and colleges and universities. (Neb. Rev. Stat. § 87-1103). This ensures that these groups, governed by other stringent privacy regulations or have different operational structures, are not subjected to overlapping or redundant compliance requirements under the Data Privacy Act.

It also does not apply to private actors processing their data. This means that individuals and businesses handling their data for internal purposes are not subject to the regulations of the Data Privacy Act.

Under the Act, a consumer can submit a request to confirm that a company has their data, correct inaccuracies, delete their data, or obtain a copy of their data if it is readily accessible in digital format. This empowers consumers to have greater control over their personal information. The newly enacted law allows a person to opt out of “profiling in furtherance of decisions that produce legal or similarly significant effects concerning the consumer.” Most importantly for the online business community, the Data Privacy Act allows consumers to opt out of targeted advertisements. A company has 45 days to respond to a consumer request, and the consumer can request up to two times a year without cost to themselves.

**Enforcement:** The attorney general can enforce Nebraska's Data Privacy Act, but no private right of action exists. This means individuals cannot sue for violations themselves. Enforcement responsibility is centralized within the attorney general's office. The Attorney General shall post on the Attorney General's website (a) The responsibilities of a controller under the Data Privacy Act, (b) The responsibilities of a processor under the Data Privacy Act, and (c) A



consumer's rights under the Data Privacy Act; and (2) An online mechanism through which a consumer may submit a complaint under the Data Privacy Act to the Attorney General. The law strictly forbids a private right of action. Individuals cannot sue for violations of the data.

## **Analysis of the Nebraska Privacy Law**

This bill also prevents companies from avoiding their responsibilities by waiving any conditions that limit consumer rights in the Terms of Service. This change is intended to put consumers on equal footing with companies. The "take it or leave it" adhesion contract game is diminished.<sup>133</sup> Companies cannot punish consumers for requesting under the Data Privacy Act. For instance, they cannot deny services or impose additional charges because consumers exercise their rights under the Act. Not only must a website and service comply with the law, but covered organizations must also put a clear privacy policy in place that outlines the rights of consumers.

The act also only allows a company to collect personal information that is "adequate, relevant, and reasonably necessary." Once a company has that data, it must take reasonable safeguards to protect it. This ensures that businesses handle consumer data responsibly and prioritize privacy and security in their operations, and they cannot use the Terms of Service to avoid the law.

This helps to prevent another Facebook-Cambridge Analytica scandal. The Cambridge Analytica scandal caused significant uproar among privacy advocates because the people who played the personality quiz game did not consent to give third-party access to their information, nor did they consent for their data to be used for political purposes.<sup>134</sup> Additionally, their friends' data was scraped without their knowledge or consent, leaving them unaware that their personal information was being collected and used in this manner. Only hundreds of thousands played the game, contrasting with the staggering 50 million users whose data was collected by Cambridge Analytica.

This rule of sites only collecting out "adequate, relevant, and reasonably necessary" is fair, as data selling conjures images of unwanted political text messages and spam phone calls, undermining the purpose of the law. Clear disclosure ensures transparency and helps maintain consumer trust by preventing the misuse of personal information. Such data can be sold on

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<sup>133</sup> <https://nebraskalegislature.gov/FloorDocs/108/PDF/Slip/LB1074.pdf>

<sup>134</sup> <https://www.wsj.com/articles/facebook-scandal-what-to-know-about-cambridge-analytica-and-your-data-1521806400>

unregulated markets on the dark web where consumers have no idea what nefarious purposes the data is used for.

### **Consent to Sell Data to Third-Party Concern**

Yet, for all the wording that protects the consumer, the bill has one gaping hole that allows websites to sell users' data to a third party with their consent. It is concerning that a law aimed at protecting consumer privacy and preventing Terms of Service from opting out of any provision of the Privacy Act still permits the selling of data to a third party simply through the Terms of Service by the controller of that data if it “clearly and conspicuously disclose that process and how a consumer may exercise the right to opt out of that process.” Neb. Rev. Stat. § 87-1114. This loophole undermines the core intent of the Privacy Act, leaving consumer data vulnerable to exploitation. This is a serious concern because the third party buying the data could resell the data to another third party without the consumer’s consent. However, it can also be said that it gives the consumer the right to contract with any company to sell data, which allows the individual consumer more freedom and is based on existing contract law, which

### **Market Choice and Personalized Ads**

The ability to opt out of personalized advertisements based on the collected data is problematic because it is the primary source of revenue, not only for social media sites like Facebook and Google. Neb. Rev. Stat. § 87-1107 (“Remember the “Senator, we sell ads video””) The online ecosystem is built on ad revenue and the consent to use data for advertising purposes. The Privacy Act essentially flips the switch, changing the narrative from oligarchical tech firms controlling the narrative based on "take it or leave it" Terms of Service to one where their business model of the whole internet is challenged. But was it needed?

As mentioned in the introduction, government regulations tend to create new problems while trying to fix existing ones. These issues have often been addressed before the enforcement of new rules. Facebook and Google allow you to turn off personalized ads that are narrowly tailored to the user's demographics. Other websites use contextual advertising. Cameron F. Kerry and Mishaela Robison of the Brooking Institution explain that contextual advertising is “based on

the context in which an ad appears, not based on specific information about each individual viewer.”<sup>135</sup>

This was in part due to customer demand, not regulation. Consumers demand increasing privacy in their online lives. This is a classic case where the consumer requested that a feature be added to the system, and the system ended up being more secure and private than it. Now, well-intended privacy regulation threatens to rob the online world of its choice.

## **Anti-Competitive Regulation**

One might be concerned that the internet might be further entrenched by dominant players who have the resources to comply with the law or, as with Facebook, pay off the government in settlements when they habitually do not adhere to the law. Targeted advertising allows platforms and publications to generate significantly more ad revenue than generalized advertisements. Even with the small business exemption, Nebraska's data privacy law could jeopardize entrepreneurial startups that rely on targeted online revenue to survive. These dynamic risks consolidating power within a few large tech companies while stifling innovation and growth among smaller competitors.

The Nebraska Data Privacy Act could hurt small businesses that want to advertise their products because they may not be able to afford to blast their advertisements to a large audience. Targeted advertising helps them reach those within the demographic range of their customer base more effectively. Free-market advertisement allows the best flow of information to the people most interested, enabling small businesses to maximize their advertising budgets and compete with larger companies. Limiting targeted advertising through stringent privacy regulations could disadvantage small businesses and restrict their ability to connect with potential customers.

**First Amendment Concerns:** The Nebraska Data Privacy Act may trigger First Amendment freedom of speech concerns since advertising is considered protected speech, although not like other types of speech. By imposing restrictions on targeted advertising, the Act could potentially limit businesses' ability to communicate with their desired audience.

**Regulatory Compliance Cost:** The most wide-reaching and potentially problematic part of the bill is the mismatched patchwork of state privacy laws with competing and sometimes conflicting regulations. As Jennifer Huddleston and Gent Salihu from CATO point out, the

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<sup>135</sup> <https://www.brookings.edu/articles/rulemaking-in-privacy-legislation-can-help-dial-in-ad-regulation/>

regulatory burden will cost companies over a billion dollars over ten years.<sup>136</sup> As expressly recognized in the introduction, the authors note that compliance costs lead to fewer features and offerings, resulting in a shortage of entrepreneurship. This stifles innovation and limits the ability of new businesses to enter the market, ultimately harming the overall economy.

## Important Privacy Bills As of 2024

In recent legislative sessions, efforts have been made to regulate how biometric data can be used or how technology like Apple AirTags can be used to track people. To date, neither of those has passed, but ensuring robust protections and oversight is essential to safeguarding the privacy rights of all individuals

**Failed Biometric Bill:** LB954, called the Biometric Autonomy Liberty Law, was introduced in January 2024 by Senator Kathleen Kauth and others. The bill aimed to regulate how biometric data is collected and used, focusing on protecting people's privacy and autonomy over their personal biometric information. Essentially, it required that individuals give explicit consent before their biometric data could be gathered, used, or shared. The bill faced opposition, was indefinitely postponed on April 18, 2024, and will not become law.

**Failed Privacy Tracking Bill:** Another failed bill aimed to extend privacy protections to the real world, or more accurately, the actual road. This bill would have prevented tracking people using technology such as Apple AirTag devices without their permission. Consent would not have been required if the person being tracked was a minor or a vulnerable adult, as long as their guardian or parents agreed. Apple AirTags already have a feature that notifies people when they have an AirTag that does not belong to them.<sup>137</sup> If this proposed law is taken up again, we hope there will be a discussion of privacy for vulnerable adults, whose privacy could be compromised when there is no oversight for the guardian. Ensuring robust protections and oversight is essential to safeguarding the privacy rights of vulnerable individuals.

## Recommendations

**Recommendation #1:** The unicameral should create a new sandbox for companies that innovate with privacy technology brought on by the latest data privacy law.<sup>138</sup> This sandbox would provide

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<sup>136</sup> <https://www.cato.org/blog/patchwork-strikes-back-state-data-privacy-laws-after-2022-2023-legislative-session>

<sup>137</sup> <https://www.apple.com/newsroom/2022/02/an-update-on-airtag-and-unwanted-tracking/>

<sup>138</sup> <https://spn.org/articles/what-is-a-regulatory-sandbox/>

a controlled environment where businesses can develop and test new privacy-focused solutions, encouraging innovation while ensuring compliance with regulatory standards. Importantly, this initiative should be designed in a way that does not rob the consumer or the company of choices or options. By fostering such an ecosystem, Nebraska can lead the way in advancing privacy technologies and enhancing consumer data protection.

**Recommendation #2:** The Nebraska Privacy Act should be amended to include safe harbor provisions for out-of-state companies that substantially comply with a similar privacy act in another state. This would provide clarity and consistency for businesses operating across state lines, reducing the regulatory burden and encouraging compliance with robust privacy standards while maintaining strong consumer protections. Another safe harbor position that could be considered would be if a company substantially conforms to the NIST Privacy Framework they would be safe from civil liability. That is what Tennessee chooses.<sup>139, 140</sup>

**Recommendation #3:** The Attorney General must provide clear guidance on how businesses can comply with the Nebraska Privacy Act. This guidance should use plain language to explain the responsibilities of companies subject to the law. By offering straightforward instructions, the Attorney General's office can help ensure that businesses understand their obligations and implement the necessary measures to protect consumer privacy effectively.

## Natural Disasters, Emergency Response, and Technology



Since the pandemic, public health has become a flashpoint, unleashing some of the most demagogic rhetoric and even becoming banned from the list of Thanksgiving conversation topics. However, this does not mean that emergency public health should be ignored. Exploring how technological advancements can improve our emergency response systems and public health infrastructure is crucial, ensuring we are better prepared for future crises.

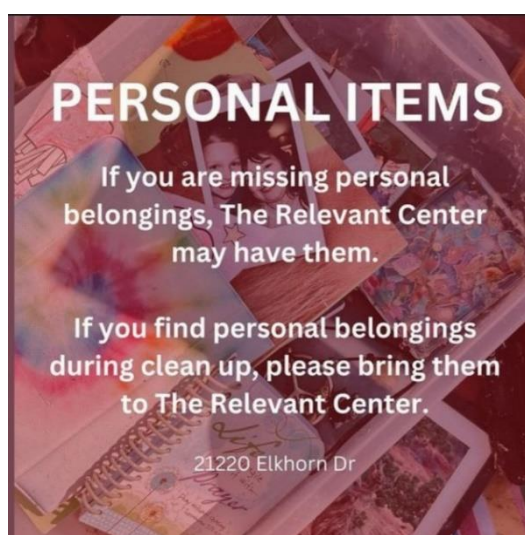
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<sup>139</sup> <https://www.dwt.com/blogs/privacy--security-law-blog/2023/05/tennessee-information-protection-data-privacy>

This year, 2024, we have experienced several unprecedented disasters, the combined cost of which is between one and two billion.<sup>141</sup> In May, multiple tornadoes wreaked havoc in Eastern Nebraska and Western Iowa, marking the worst tornado outbreak in decades, possibly ever.<sup>142</sup> Plattsmouth was directly in the path of one tornado, but there were only some broken sirens.<sup>143</sup>

When Plattsmouth investigated the issues around their sirens, they discovered some were over 50 years old. Working together with the city government, the all-volunteer fire department resolved the problem quickly and with determination. Their swift and coordinated effort ensured the community's emergency alert system was updated and functional.

The city also signed up for a text notification system to send out alerts about tornadoes and any emergency it deems necessary, including missing person reports.<sup>144</sup> This technology is readily available and tremendously cheap, providing an efficient way to enhance public safety. By implementing this system, the community ensures residents are promptly informed about critical situations, significantly improving their ability to respond to various emergencies effectively.



## Social Media as a Public Square

The tornado did not hit Plattsmouth but caused devastation in other areas. While no life was lost, many houses and cherished memories were.<sup>145</sup> For hundreds of people, the destruction of their homes meant losing not only their possessions but also the memories and future they had envisioned.<sup>146</sup> Such a loss's emotional and psychological impact is profound, as homes are often the center of family life and personal history.

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<sup>141</sup> <https://www.ncei.noaa.gov/access/billions/state-summary/NE#:~:text=Tornado%20Alley-Nebraska%20Summary.and%201%20winter%20storm%20event>.

<sup>142</sup> <https://www.youtube.com/watch?v=9yvml0Pltho>

<sup>143</sup> <https://www.wowt.com/2024/05/03/nebraska-tornadoes-city-plattsmouth-repairs-broken-outdoor-warning-sirens/>

<sup>144</sup>

[https://member.everbridge.net/77929497231396/login?fbclid=IwZXh0bgNhZW0CMTEAAR130Khp34vpgUtwGJykoXOp\\_QScnPfa77mK9tbxhzPKuyVaAmnnhYlBpnc\\_aem\\_GGxysy4OAXdOoZu77hrorQ](https://member.everbridge.net/77929497231396/login?fbclid=IwZXh0bgNhZW0CMTEAAR130Khp34vpgUtwGJykoXOp_QScnPfa77mK9tbxhzPKuyVaAmnnhYlBpnc_aem_GGxysy4OAXdOoZu77hrorQ)

<sup>145</sup> <https://nebraskaexaminer.com/2024/04/26/historic-nebraska-tornadoes-storms-leave-damage-in-their-wake/>

<sup>146</sup> [https://omaha.com/news/state-regional/wedding-rings-baby-pictures-graveside-memories-lost-objects-found-far-from-omahas-tornado-zone/article\\_5905ac54-070d-11ef-97b7-6fe403f10ca8.html](https://omaha.com/news/state-regional/wedding-rings-baby-pictures-graveside-memories-lost-objects-found-far-from-omahas-tornado-zone/article_5905ac54-070d-11ef-97b7-6fe403f10ca8.html)

This was the first natural disaster where the internet became the central hub for communication and coordination. Disaster response teams used Facebook to reach out to thousands of volunteers across different communities.<sup>147</sup> Through Facebook, they could quickly share information, organize relief efforts, and direct resources where needed. This platform allowed even the smallest voices to be heard, fostering a sense of community and collective action. The effective use of social media demonstrated how technology can play a crucial role in disaster response and recovery, ensuring that help reaches those in need swiftly and efficiently.

On August 1st, the Ralston Police Department announced on X (formerly Twitter) that their phone number was temporarily out of service.<sup>148</sup> When the traditional communication system failed, the department used the platform to communicate with the public. Known as the modern-day "town square," these platforms allow authorities to reach a broad audience instantly, providing updates on critical situations, safety instructions, and alternative contact methods. The Ralston Police Department's use of X, in this instance, underscores the growing reliance on social media to ensure public safety and maintain communication during unexpected events.

On that very same day, the Douglas County Sheriff's Office posted a video on X,<sup>149</sup> reminding those who might try to take advantage of the storm's scattered path to victimize people that they will be prosecuted. This highlights X's broad audience, demonstrating that government entities use it not only for public announcements but also to warn potential troublemakers. Law enforcement's proactive use of social media underscores its critical role in modern emergency communication strategies, ensuring public safety and the dissemination of crucial warnings to deter criminal activities during vulnerable times.

A plus is that data is inflowing in real-time. Now that our town square has been digitized, any data can be harvested in real-time to make more informed decisions and improve efficiency.<sup>150</sup>

## **Redundancy and 911 Emergency**

In the agricultural chapter, we discussed the critical need to keep our broadband policy current since it is how rural farmers stay updated about crops and the wider community. Farmers, like the rest of the state, are dependent on high-speed internet access. This connectivity is essential

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<sup>147</sup> <https://www.facebook.com/share/p/VTofbuuykfe9BVaG/>

<sup>148</sup> <https://x.com/RalstonPolice/status/1818978592430149864>

<sup>149</sup> <https://x.com/DCSheriffNE/status/1819107568578371931>

<sup>150</sup> <https://research.facebook.com/publications/facebook-disaster-maps-aggregate-insights-for-crisis-response-recovery/>

for monitoring agricultural developments and integrating them into the broader economic and social landscape. Ensuring reliable and fast broadband access for rural areas is vital for maintaining the competitiveness and sustainability of our agricultural sector. We return to the broadband issue and examine it from a public safety perspective.

It is far too familiar that a contractor installing broadband cable can take out the 911 emergency system with a single act of carelessness. The Public Service Commission governs the emergency management system.<sup>151</sup> According to the Public Service Commission, the elected officials overseeing the system, even if a fiber wire is cut in a bordering state, broadband to 911 calls can be disconnected, and the system could be plagued in years to come.<sup>152</sup> The most recent outage happened a week before this paper was written and affected some of the state's most populated areas.<sup>153</sup> Some commenters have pointed out the problem as the lack of workforce shortage in the broadband industry.

This trend is more prevalent than we realize and must be recognized. Public safety requires a robust and immediate response capability in 911 calls. We cannot continue to be lax until someone gets hurt; proactive measures must be taken to ensure the integrity and reliability of our emergency response systems. A reliable and immediate connection for 911 calls is critical, and addressing this issue with urgency is essential to prevent potential harm. State senators are very concerned about the reliability of 911 and broadband services and have been pressing for answers.<sup>154</sup> According to some senators, finding answers to their questions takes months.

Natural disasters that stress existing services might be a honey pot for hackers looking for a good opportunity to steal valuable data.<sup>155</sup>

In the meantime, the Public Service Commission is upgrading its 911 services with RapidSOS technology to enhance emergency response at a discount from the company.<sup>156</sup> This new technology allows dispatchers to receive more accurate location data from smartphone users during emergencies. This improvement aims to increase the speed and efficiency of emergency responses, ensuring that help can reach those in need more quickly. Most importantly, it will add

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<sup>151</sup> <https://psc.nebraska.gov/>

<sup>152</sup> <https://www.ketv.com/article/nebraska-psc-commissioner-911-outages-likely-continue-for-years/61561909>

<sup>153</sup> <https://www.youtube.com/watch?v=B9iN17ySPI4>

<sup>154</sup> <https://nebraskaexaminer.com/2023/12/06/agency-assures-state-senators-that-finding-the-cause-of-911-outages-is-top-priority/>

<sup>155</sup> <https://stateline.org/2021/10/25/natural-disasters-can-set-the-stage-for-cyberattacks/>

<sup>156</sup> <https://www.govtech.com/em/safety/nebraska-contracts-with-rapidsos-to-boost-911-capability>



redundancy to 911 systems that many 911 systems in other states have. If the Broadband fails, 911 will still work- or that is the hope.

### **Recommendations**

**Recommendation 1:** The State Emergency Agency should update its Local Nebraska Emergency Manager’s Handbook to include guidelines on using Facebook and other social media sites before and after a disaster strikes.<sup>157</sup> This information can include where the emergency is and what resources are needed. This update will ensure that emergency response teams can effectively communicate, organize, and mobilize volunteers and resources, leveraging the power of social media to enhance disaster response and recovery efforts.

**Recommendation 2:** The state emergency agency should provide information on low-cost or free technology to utilize existing resources better and enhance public safety. The agency can help communities improve their emergency response capabilities by offering guidance on affordable tech solutions without incurring significant expenses. Heatmap would be an excellent example of inexpensive technology. It allows for real-time monitoring of COVID-19 outbreaks via Google searches.<sup>158</sup>

**Recommendation 3:** The governor should investigate AI-specific jobs or tasks that can complement the state agency's responsibilities and use data to create forecast models. This initiative can enhance the agency's effectiveness by leveraging advanced technologies to improve decision-making and resource allocation during emergencies. The Deloitte article “Leveraging AI for effective emergency management and crisis response” provides a comprehensive starting place.<sup>159</sup>

**Recommendation 4:** The Public Service Commission should continue investigating how to create a more robust emergency response system, focusing on minimizing 911 outages. It should facilitate communication with Nebraska’s Public Safety Answering Points and ensure that any technology is consistently applied across the state, avoiding a patchwork of different software. By exploring advanced technologies and innovative solutions, the Commission can ensure that our 911 infrastructure is resilient, efficient, and capable of handling future crises. This ongoing effort is essential for enhancing public safety and preparedness across the state.

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<sup>157</sup> [https://nema.nebraska.gov/admin/assets/files/public/publications/Local\\_Emergency\\_Managers\\_Handbook.pdf](https://nema.nebraska.gov/admin/assets/files/public/publications/Local_Emergency_Managers_Handbook.pdf)

<sup>158</sup> <https://www.healthmap.org/en/>

<sup>159</sup> <https://www2.deloitte.com/us/en/insights/industry/public-sector/automation-and-generative-ai-in-government/leveraging-ai-in-emergency-management-and-crisis-response.html>

**Recommendation 5:** Any state emergency preparedness plan must include how state and local agencies will interface with existing consumer-facing communication technology, like the iPhone's emergency response system and social media. This integration will ensure effective public communication and allow agencies to leverage widely used platforms to disseminate crucial information quickly and efficiently during emergencies. Using familiar technologies can enhance the reach and effectiveness of emergency alerts and updates.

(Recommendation 2 and Recommendation 5 are different. Recommendation 2 focuses on affordable technology solutions to improve emergency response capabilities, while Recommendation 5 concentrates on integrating consumer-facing technology and social media into emergency preparedness plans for better communication and public information dissemination.)

## Technology Glossary

**Accessible Technology:** a beacon of empowerment, not only refers to products, devices, services, and environments designed to be usable by people with a wide range of abilities and disabilities, but also holds the potential to revolutionize the way we interact with technology. This technology, a symbol of inclusivity, aims to remove barriers and provide equal access to information, communication, and functionality, paving the way for a more inclusive and accessible future.

**Ad Blocker:** An ad blocker is a software tool or browser extension designed to prevent advertisements from being displayed on web pages. Ad blockers work by filtering out content from ad servers and blocking scripts that deliver ads, resulting in a cleaner, faster, and less intrusive browsing experience. Ad blockers can also enhance privacy and security by eliminating unwanted ads, as they prevent tracking cookies and potentially malicious ads from loading. However, ad blockers can impact the revenue streams of websites that rely on advertising income to support their operations.

**Artificial Intelligence (AI),** a revolutionary force, is the simulation of human intelligence in machines programmed to think and learn like humans. It encompasses a variety of technologies and applications that enable machines to perform tasks that typically require human intelligence, such as visual perception, speech recognition, decision-making, and language translation.

**Bitcoin Mining** is the process by which new bitcoins are created, transactions are verified, and bitcoins are added to the public ledger, known as the blockchain. This process involves solving complex mathematical problems using specialized computers known as mining rigs.

**Blockchain** is a decentralized digital ledger that records transactions across many computers so that the record cannot be altered retroactively. It ensures transparency and security in various applications, particularly in financial cryptocurrency transactions.

**Broadband** refers to high-speed internet access that is always on and faster than traditional dial-up access. It provides users with a continuous connection to the internet and the ability to transmit data at high rates. Broadband encompasses several high-speed transmission technologies, including Digital Subscriber Line (DSL), cable modem, fiber optics, wireless, satellite, and Broadband over Powerlines (BPL).

**Cloud Computing** refers to delivering computing services—including servers, storage, databases, networking, software, and analytics—over the internet, commonly known as "the cloud." This technology allows for flexible resources, faster innovation, and economies of scale.

**Cookie:** A cookie is a small piece of data stored on a user's device by a website they visit. Cookies are used to remember information about the user, such as login credentials, preferences, and browsing activity. This allows websites to provide a more personalized and efficient user experience by retaining user-specific settings and information across sessions.

**Crowdfunding** is a method of raising capital through the collective efforts of many individuals, typically via online platforms. It allows entrepreneurs, startups, artists, and nonprofit organizations to solicit contributions from the public to fund a project, venture, or cause.

**Cryptocurrency** is a digital or virtual currency that uses cryptography for security and operates independently of a central bank. Bitcoin, Ethereum, and Litecoin are famous examples of offering a new form of digital asset and means of exchange.

**Cybersecurity** involves protecting systems, networks, and programs from digital attacks. These attacks usually aim to access, change, or destroy sensitive information, extort money from users, or interrupt normal business processes.

**Data Privacy** deals with information technology that allows an organization or individual to determine what data can be shared with third parties. It encompasses policies and practices safeguarding personal information from unauthorized access and use.

**Digital Assets** include any text or media formatted into a binary source and consist of the right to use it. Examples include digital documents, audio files, videos, and images, which are essential for businesses in the digital age.

**Digital Car Titles** are electronic versions of traditional paper car titles that provide proof of ownership for vehicles. They are stored and managed online through secure databases, allowing for more efficient and streamlined processes for transferring ownership, updating information, and verifying a vehicle's status.

**Digital Licenses** are electronic versions of traditional licenses that can be accessed and presented via mobile devices. These licenses provide a more convenient and often more secure way to manage and verify permissions and qualifications.

**Facial Recognition Technology** is a biometric software application capable of uniquely identifying or verifying a person by analyzing and comparing patterns based on the individual's

facial features. It uses advanced algorithms to map facial landmarks, such as the distance between the eyes, nose, mouth, and jawline.

**Fintech:** Short for financial technology, it refers to new tech that seeks to improve and automate the delivery and use of financial services.

**Internet of Things (IoT)** is the network of physical objects—devices, vehicles, buildings, and other items—embedded with sensors, software, and network connectivity, allowing them to collect and exchange data. This interconnectedness enables more innovative operations and efficient resource use across various sectors.

**Internet Service Provider (ISP):** An Internet Service Provider (ISP) is a company or organization offering services for accessing, using, or participating online. ISPs provide various services, including broadband internet access, email hosting, web hosting, and domain registration. They connect users to the internet through multiple technologies, such as DSL, cable, fiber-optic, and satellite connections.

**LLM (Large Language Models):** A type of artificial intelligence (AI) model designed to understand and generate human language based on vast amounts of text data. These models are built using machine learning techniques and are trained on diverse and extensive datasets to learn the nuances of language, including grammar, context, and semantics.

**Machine Learning** is a subset of artificial intelligence that enables software applications to become more accurate at predicting outcomes without being explicitly programmed. It uses algorithms and statistical models to analyze and draw inferences from patterns in data.

**Makerspace** is a collaborative workspace with various tools and resources, such as 3D printers, laser cutters, soldering irons, and hand tools, designed to facilitate hands-on learning and creative projects. These spaces are open to people of all ages and skill levels, encouraging experimentation, innovation, and knowledge sharing in areas like electronics, robotics, woodworking, and digital fabrication.

**Micro-credentials** are certifications of learning that cover a small, specific set of skills or knowledge, often delivered in a digital format. They provide a way for individuals to gain recognition for skills and competencies gained outside traditional degree programs.

**Multifactor Authentication (MFA)** software is a security tool that requires users to verify their identity using multiple methods, such as a password, a smartphone code, or biometric data like fingerprints. This added layer of security helps protect user accounts and sensitive information from unauthorized access.

**Online Banking:** Online banking is a service provided by financial institutions that allows customers to conduct financial transactions and manage their accounts over the Internet. Through online banking platforms, users can perform various tasks, such as checking account balances, transferring funds, paying bills, applying for loans, and viewing transaction history. This service offers convenience, as it can be accessed anytime and anywhere and often comes with robust security measures to protect users' financial information.

**Peer-to-peer (P2P)** describes a decentralized communications model in which each party has the same capabilities, and either party can initiate a communication session. P2P technology is commonly used in file-sharing networks and blockchain platforms.

**Regulatory Sandbox:** A framework set up by a regulator that allows small-scale, live testing of innovations by private firms in a controlled environment under the regulator's supervision. This approach aims to support innovation while maintaining regulatory standards.

**Social Media** refers to digital platforms and applications that enable users to create, share, and interact with content and connect with others. These platforms facilitate creating and exchanging user-generated content, such as text posts, photos, videos, and links, allowing individuals and organizations to communicate and engage with a broad audience. Popular social media platforms include Facebook, Twitter, Instagram, LinkedIn, TikTok, and YouTube.

**Technological Amusement Tourism** refers to travel experiences and attractions that leverage cutting-edge technology to enhance entertainment and engagement for visitors. This can include virtual reality (VR) and augmented reality (AR) experiences, interactive exhibits, theme parks with advanced robotics and AI-driven rides, immersive simulations, and digital art installations.

**Telehealth:** distributes health-related services and information via electronic information and telecommunication technologies. It allows for remote clinical services, patient education, health administration, and public health services, enhancing access to care.

**Virtual Private Network (VPN):** A Virtual Private Network (VPN) is a service that creates a secure, encrypted connection between a user's device and a remote server. This connection masks the user's IP address, making their online actions untraceable. VPNs enhance privacy and security when accessing the internet, particularly over public Wi-Fi networks. They can also bypass

geographic restrictions on content and websites by routing the connection through servers in different locations.

**Work-from-Home Technology: Tools** and applications that facilitate remote working, such as video conferencing software, project management tools, and collaboration platforms. These technologies enable employees to work efficiently from anywhere, supporting flexibility and productivity.