



# NATIONAL ETHICS CASE COMPETITION

**Lead Ethically. Think Boldly. Win Big.**



***Sample Essays 2025***





# Essay Prompt

## Introduction

Advances in technology create new and challenging ethical questions. From crossbows to stethoscopes to genetic engineering, the creation and development of tools and techniques force us to consider how the use of these innovations align with or undermine our core values.

To address these questions, some begin with a controversial framework – called “the technological imperative” – that asserts:

- a. If a development is technically possible then the advance ought to be taken as a moral imperative, or
- b. That the development must be taken as an operational requirement, or
- c. That inevitably, the development simply will be taken in time. This contentious idea was perhaps most famously articulated by the French anthropologist and politician Jacques Soustelle, who said of the atomic bomb: “Since it was possible, it was necessary.”

## The Context

The technical advances in artificial intelligence (“A.I.”) over the last five years have been profound. By its very nature, A.I. is a technology created to disrupt and – at least in its purest form – to challenge the way decisions are made. As a barrier-breaking technology in its infancy, some argue that A.I.’s development and use must not be limited by any blunt, arbitrary or poorly conceived rules that could intentionally or inadvertently decrease A.I.’s potential value to humanity.

At the same time, advancements in A.I.-related technologies may be moving faster than our ability to evaluate the current or future impact on human beings. In 2024, stories of harm and bias in the application of A.I. led to advocacy for limitations on its development and use. Some advocates proposed voluntary limits, others mandatory limits, while still others proposed some combination of the two.

One example of a voluntary limit on A.I. is where A.I. developers and integrators would freely agree to halt their work on advanced artificial intelligence systems for a period of time, allowing an opportunity for companies to address potential risks, and establish safety protocols before continuing. Other examples of voluntary limits are “codes of conduct for A.I.” and statements of guiding principles that companies or industry associations freely adopt as a type of self-regulation. To be effective, voluntary limitations require trust between fierce competitors: a shared belief that all market players are equally committed to a moratorium or other limits, have a common understanding of the same principles, and are not taking advantage of each other in secret.



# Essay Prompt *(Continued)*

In the US and in Europe, governments are proposing to establish mandatory limits on the development and use of A.I. through legislation. For example, the Biden Administration has advanced its “Blueprint for an A.I. Bill of Rights,” the European Union has debated “The A.I. Act,” and the National Conference of State Legislatures documents that, “in the 2024 legislative session, at least 45 states introduced A.I. bills, and 31 states adopted resolutions or enacted legislation.” Those opposed to this mandatory approach argue that these laws, while well-intentioned, cannot understand the evolving technology they attempt to regulate, and inherently prevent the advances that make A.I. (and the companies developing and deploying A.I.) valuable.

## Your Assignment

Pick an industry within the global free market economy that is benefiting (or can benefit) from the advance of artificial intelligence. Then, identify (or imagine) one trade association, industry trade group, business association, etc., that represents the business interests of companies in this industry. This industry organization has hired your team to advise it on A.I. development and acceptable use in its industry.

The industry organization wants your recommendation: should it a) advise its members to resist all limitations (formal and informal) on the development and implementation of A.I., or b) coordinate with and advocate on behalf of its membership for the specific voluntary or mandatory limitations (or some combination) that you suggest.

In about 2,000 words (you may add supporting visuals to provide clarity):

- Utilize a thorough process of analysis to understand and then articulate the primary risks, along with the ethical and free-market dilemmas related to A.I. that are or will be most common to the industry you’ve chosen. Explicitly articulate these risks and dilemmas faced by industry association members, and be clear about why these are difficult and complex for members.
- Apply the Daniels Fund Ethics Principles to resolve these ethical and free-market dilemmas related to A.I. and offer recommendations that reflect sound business sense for the association’s membership. Given the risks and dilemmas that you have identified and seek to address, what are the specific limitations on A.I. (if any) that you advise? How do you justify the limitations you propose?
- Acknowledge, appreciate, and respectfully address alternate viewpoints (different ways of analyzing and resolving these dilemmas) that do not align with your own.
- Present your analysis, recommendations, and recognition of differing perspectives in a clear, logical and persuasive style appropriate to an executive audience.



# Essay Prompt *(Continued)*

In addition to these four components above, judges will also consider:

- Did your work articulate the long-term impact of ethical behavior on the marketplace?
- Did you demonstrate a solid understanding of “the free market” and “the profit motive,” and their inherent value?
- Did your work demonstrate courage? Were your recommendations for resolving dilemmas bold and innovative?



*This essay prompt was prepared for the Daniels Fund by John Truslow. Mr. Truslow has been a leader and practitioner in the ethics field for 25 years, and currently directs an ethics program for a global defense manufacturer. He has coached collegiate ethics bowl teams that have won competitions hosted by the Association for Practical and Professional Ethics and the International Business Ethics Case Competition.*



## **Daniels Fund Essay Competition**

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### **AI in Education: Balancing Innovation and Ethics in Charter Schools**

In an era of unprecedented educational challenges, charter schools find themselves at a critical juncture. As they grapple with budget shortfalls amid rising enrollments, AI-driven tools offer a transformative solution: significant cost reductions in administrative tasks through automated grading, personalized learning algorithms, and predictive analytics. Yet, this technological revolution is met with significant resistance, as educators harbor deep ethical concerns about its implementation (MSU, 2021).

Of course, the promise of AI in education extends far beyond mere financial considerations. It represents a revolutionary paradigm shift in how we conceptualize learning, assessment, and educational access. With U.S. teacher shortages persisting, and 250 million children globally out of school, AI-driven efficiencies allow charter schools to redirect limited funds toward underserved student populations, and focus resources on student success rather than bureaucratic overhead (UNESCO, 2023). Withholding productivity tools that expand access violates the Daniels Fund principle of “honoring commitments to build sustainable organizations that benefit society.” Bill Daniels believed that innovation and ethical conduct could coexist to create sustainable, society-benefiting organizations. In this context, the ethical implementation of AI in charter schools becomes not just an opportunity, but an imperative.

Indeed, the ethical implications of AI in education are profound and multifaceted. Predictive analytics, while powerful, risk perpetuating or exacerbating existing biases in educational assessment. Automated decision-making systems, if not carefully designed and monitored, could inadvertently disadvantage students from marginalized communities, contradicting the very mission of equitable access that charter schools often espouse. To navigate this complex terrain, we propose a framework guided by four key Daniels Fund Ethics Principles: integrity, trust, accountability, and fairness.

By rigorously applying these principles, we aim to harness the transformative potential of AI, while simultaneously upholding the ethical foundations of education. In the paragraphs that follow, we will present a thorough argument, apply the Daniels Fund Ethics Principles to identified dilemmas, propose a framework for ethical AI implementation, and address counterarguments. Through this essay, we will comprehensively demonstrate that the path forward for charter schools lies in a carefully calibrated approach that leverages AI to enhance educational outcomes while steadfastly upholding ethical principles. This strategy not only aligns with the Daniels Fund's vision of principled leadership in the free market, but also positions charter schools at the forefront of responsible AI adoption in education. By embracing AI-driven

efficiencies, charter schools can fulfill their commitment to building sustainable organizations that truly benefit society, expanding access to quality education for all.

In classrooms across the world, teachers juggle endless responsibilities. Between grading assignments late into the night, crafting personalized lesson plans, and striving to give every student the attention they deserve, a lot of work goes into the vocation. Meanwhile, students face their own challenges, from struggling with concepts that go unaddressed, to falling through the cracks of an overburdened system. What if technology could change that? What if AI could be harnessed not just as a tool for efficiency, but as a force for equity, sustainability, and student success?

The rise of AI presents an opportunity to reimagine education. By reducing inefficiencies and optimizing resources (what AI does best), AI has the potential to amplify human impact rather than replace it. Automated grading systems, for example, save teachers an estimated 14 hours per week, allowing them to focus on what truly matters—mentoring students, especially those in English Language Learner (ELL) and Special Education (SPED) programs (Brookings, 2024). Beyond reducing workload, AI's predictive analytics have helped identify at-risk students early, preventing over 34,700 students from academic failure (artsmart.ai). Even more remarkably, dropout rates have declined by 18% in institutions leveraging AI-driven interventions, as highlighted by a Stanford CREDO study.

Education is not just about instruction; it's about opportunity. Ethical AI adoption aligns with the Daniels Principles, which emphasizes sustainability and societal well-being over self-interest. Consider Phoenix AI charter schools: by reinvesting cost savings from AI-driven tutoring programs, they've provided free devices to 42% of low-income students, ensuring access to quality learning tools regardless of socioeconomic status. Similarly, AI-powered Individualized Education Programs (IEPs) have helped close achievement gaps for neurodiverse learners, reinforcing the principle that technology should uplift rather than exclude.

One of the most pressing issues in education today is the growing teacher shortage. By 2025, the National Education Association (NEA) estimates a nationwide deficit of 300,000 educators which will place a burden of understaffing and overworking on the current educator workforce. AI can alleviate this burden by handling time-intensive administrative tasks, such as grading, which it can reduce by up to 90% (Forbes, 2024). More importantly, AI-enhanced schools demonstrate cost-per-student efficiencies, making quality education more accessible to all. This is not about replacing teachers—it's about empowering them to do what they do best: teach, mentor, and inspire.

“With great power comes great responsibility.” While AI's potential is undeniable, its implementation must be guided by ethical principles to ensure fairness, transparency, and inclusivity. Algorithmic accountability is crucial to preventing bias and ensuring equitable

outcomes for all learners (OPIT, 2024). The goal is not merely to introduce technology, but to use it thoughtfully, ensuring it serves as a bridge to opportunity rather than a barrier.

If AI has proven its ability to enhance education, streamline inefficiencies, and support students equitably, then the real ethical dilemma is not whether we should use it, but whether it is wrong not to. Educators, policymakers, and technologists have the opportunity to build a system that is more efficient, more inclusive, and better suited to the diverse needs of students. AI should not replace human connection—it should strengthen it. The pressing question now is, knowing what we know, can we justify not leveraging AI to improve the educational experience for all?

The integration of AI in education presents a complex interplay of free market dynamics and ethical considerations. On one hand, the potential for AI to revolutionize learning and address critical issues like teacher shortages and educational inequity is immense. The market demand for such solutions is clear, with the global AI in education market projected to reach \$88.2 billion by 2032, growing at a CAGR of 43.3%. This rapid growth reflects the pressing need for innovative solutions in an industry facing significant challenges.

However, the free market's drive for efficiency and profit maximization can sometimes conflict with educational equity goals. For instance, the deployment of AI technologies risks widening the digital divide, potentially leaving behind students and schools with limited resources. This raises a fundamental question: should the development and distribution of AI educational tools be left entirely to market forces, or is there a need for regulatory intervention to ensure equitable access?

Furthermore, the market-driven approach to AI in education has led to a proliferation of products and services, some of which may prioritize commercial interests over pedagogical efficacy. The challenge lies in balancing innovation and competition with quality control and ethical standards. As noted by the Brookings Institution, there's a risk that AI systems could perpetuate or even exacerbate existing biases and inequalities in education. For instance, the implementation of AI systems requires substantial upfront investment in technology and training. Charter schools in affluent areas may more readily access these resources, potentially widening the gap between well-funded and underfunded institutions. This scenario challenges the Daniels Fund principle of fairness, as it could create an uneven playing field in the educational marketplace.

The free market also faces the dilemma of data privacy and ownership. The charter school model inherently promotes educational innovation, and AI presents unprecedented opportunities for personalized learning and administrative efficiency. However, the rapid pace of AI development often outstrips regulatory frameworks, raising concerns about data privacy, algorithmic bias, and the potential displacement of human educators. In addition to this, AI systems require vast amounts of student data to function effectively, but the commercialization of

this data raises serious ethical concerns. The question of who owns and controls student data in a market-driven educational technology landscape is a critical issue that needs addressing.

Lastly, the market's push for AI adoption in education must contend with the potential displacement of human educators. While AI can enhance teaching, there's a delicate balance to strike between technological efficiency and the irreplaceable human elements of education. The market must navigate this tension to ensure that AI complements rather than replaces human interaction and mentorship in the learning process. In essence, while the free market can drive innovation and efficiency in AI-powered education, it must also grapple with ensuring equitable access, maintaining ethical standards, protecting student privacy, and preserving the crucial role of human educators. Striking this balance is key to harnessing AI's potential for the betterment of education as a whole.

The tension between market-driven AI development and educational equity presents a quintessential test of the Daniels Fund principle that “ethical principles must be consistently integrated into the analysis and resolution of free market dilemmas.” While AI's potential to reduce per-student costs by 37% creates strong market incentives for adoption, the current landscape reveals a critical conflict: 68% of AI educational tools are developed by for-profit entities prioritizing scalable solutions over tailored interventions for marginalized learners (Brookings, 2024). This market reality challenges the Daniels mandate that “the free market relies on trust and ethical behavior to build sustainable organizations,” particularly when predictive analytics systems in underfunded schools demonstrate 22% higher error rates for non-native English speakers (Stanford CREDO, 2025). The profit motive driving AI innovation risks creating a two-tiered system where affluent districts access bias-mitigated algorithms while underserved populations receive standardized tools ill-suited to their needs—a direct contradiction of the Daniels principle that “doing what is ethically right should take precedence over self-interest.”

This dilemma manifests acutely in data ownership disputes, where 89% of charter schools using third-party AI platforms relinquish control of student performance metrics to private corporations (EdWeek, 2024). While this arrangement fuels the “virtuous cycle” of machine learning refinement, it violates Daniels’ emphasis on “honoring commitments to build long-term relationships,” as schools become dependent on opaque algorithms whose profit-driven updates may suddenly alter educational pathways. The market’s solution—paywall-protected premium features for bias auditing—further compounds inequities, forcing schools to choose between financial constraints and ethical obligations.

However, market forces could be strategically harnessed through the Daniels principle advocating “bold, innovative solutions.” A consortium of charter schools in Denver has pioneered an ethical AI marketplace where districts collectively negotiate data rights and algorithm transparency requirements—reducing licensing costs by 41% while ensuring all

participants benefit from system improvements (Charter School Growth Fund, 2025). This model aligns with Bill Daniels' historic intervention in the Denver Grand Prix, demonstrating how collaborative market structures can preserve competition while embedding ethical safeguards. By reorienting the profit motive toward trust-based consortium models rather than proprietary hoarding, charter schools can fulfill their dual mandate of educational innovation and equitable access.

To conclude, in charting a course for AI integration within charter schools, the path forward demands a synthesis of both technological ambition and unwavering ethical commitment. While the allure of AI-driven efficiencies presents an undeniable opportunity to enhance educational outcomes, address teacher shortages, and expand access for underserved populations, we believe it to be imperative that these advancements are tempered by a robust ethical framework. By embracing a carefully calibrated approach that prioritizes transparency, accountability, and fairness, charter schools can harness the transformative power of AI, while mitigating the risks of bias, inequity, and undue commercial influence. Ultimately, our argument underscores that the true measure of success lies not in the uncritical adoption of technology, but in our capacity to wield it responsibly—guided by the enduring principles of the Daniels Fund—to create a more equitable and sustainable educational ecosystem for all.

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Ethical AI in Defense: Navigating  
Ethical Challenges in Defense  
Contracting to Ensure Responsible AI  
Development and Long-Term  
Profitability

## **Introduction**

This report outlines key ethical risks in defense AI development, including issues with accountability, transparency, and dual-use technology. It offers strategic recommendations to address these issues and ensure responsible AI integration and innovation to enhance national security, secure government contracts, and maintain public trust.

### **Ethical Risks in the Defense Contracting Industry: The Case of Palantir, Lockheed Martin, and Raytheon Technologies**

The defense contracting industry operates at the critical intersection of national security, technological innovation, and ethical responsibility in an era of Great Power Competition. Companies like Palantir Technologies, Lockheed Martin, and Raytheon Technologies, which increasingly specialize in artificial intelligence (A.I.), face a complex landscape of ethical risks that goes beyond regulatory compliance to encompass broader societal and ethical implications.

The most pressing ethical risks in the defense sector revolve around the development and deployment of A.I.-driven technologies in military and intelligence operations. Companies like Palantir work with defense and intelligence agencies and have raised significant concerns regarding the ethical implications of using A.I. in strategic command and control, surveillance, and warfare. The potential for A.I. systems to be misused or to operate without adequate human oversight poses serious risks to human rights and civilian lives. This is particularly critical when A.I. technologies are deployed in conflict zones, where decisions can have life-or-death consequences, and the margin for error is minimal.

Furthermore, A.I.-driven military technologies challenge traditional ethical frameworks, especially concerning accountability and transparency. Systems without human involvement can be devoid of humane ethical considerations. Additionally, when an autonomous system with minimal human involvement makes a critical decision, it becomes difficult to assign responsibility for errors or unintended consequences. This difficulty can result in a lack of accountability which results in a loss of stakeholder trust and potential future contracts. Additionally, this raises ethical dilemmas about the role of human judgment in warfare and the potential erosion of moral responsibility in combat situations.

Another key ethical risk involves the dual-use nature of A.I. technologies, systems developed for ethical, national defense purposes can often be repurposed for civilian surveillance for oppressive regimes. Palantir in particular faces scrutiny over how its technologies might be used by governments or entities in ways that conflict with democratic values and human rights standards. This concern extends to issues of data privacy, mass surveillance, and the potential for A.I. to be leveraged in ways that infringe on individual freedoms.

In addition to these risks, the defense contracting industry must grapple with the ethical implications of its influence on global security dynamics. Companies like Palantir operate within geopolitical environments where their technologies can shift the balance of power, potentially escalating conflicts or enabling authoritarian practices under the guise of security.

To address these ethical risks, it is incredibly important that the National Defense Industrial Association (NDIA) implement some controls. Palantir and other defense contractors must embed strong ethical principles into their operational frameworks. This includes implementing robust ethical risk management strategies, establishing clear accountability structures, and fostering a corporate culture that prioritizes ethical decision-making. Engaging with ethicists, policymakers, and international organizations can also help navigate the complex moral landscape of A.I. in defense, ensuring that technological advancements align with both the profit motives of corporations competing in the free market as well as global ethical standards.

### **Key Ethical Principles for Regulating A.I. in the Defense Industry**

Any recommended regulation of A.I. in defense must be grounded in solid, testable ethical principles. We believe that the Daniels Fund Ethics Principles provide such a framework. The four most critical ethical principles for the responsible development and deployment of A.I. in the defense industry are the Rule of Law, Transparency, Accountability, and Viability.

**Rule of Law** ensures that A.I. deployment in the defense sector operates under a clear, universally accepted legal framework. This prevents arbitrary decision-making, promotes fairness among competitors, and protects human rights even during conflicts. Adherence to the rule of law helps maintain the legitimacy of defense operations internationally, reducing the risk of unlawful or unethical activities that could undermine global security as well as future contracts. Ethical impact assessments (EIAs) and clear accountability structures further reinforce this principle by embedding legal and ethical compliance into every stage of A.I. development.

**Viability** is foundational to ensuring that ethical frameworks remain sustainable within defense practices. Nations are hesitant to compromise their strategic capabilities, and industries are wary of financial impacts that might stem from stringent ethical constraints. Ethical principles must be compatible with the operational needs of defense systems to maintain security effectiveness. By integrating ethical considerations into sustainable business strategies, companies can remain competitive, while upholding their ethical responsibilities.

**Transparency** in A.I. models is paramount. The complexity of A.I. systems can obscure critical ethical issues with catastrophic consequences, such as civilian casualties or mission failures. Transparent systems allow for continuous ethical oversight, early detection of biases or flaws, and public trust in defense technologies. When A.I. models are designed with clear, auditable processes, stakeholders can identify potential ethical concerns early on, such as biased data sets that might skew targeting priorities or faulty algorithms that could compromise mission objectives.

**Accountability** ensures that both governmental and corporate entities can be held responsible for the outcomes of A.I.-driven decisions. Defense companies may be prone to prioritizing short-term profitability over ethics, making strong accountability measures essential to guarantee that actions align with ethical obligations. Without accountability, it is difficult to determine where the fault lies for a faulty strike, whether with the A.I. developers, military

operators, or defense contractors. Establishing clear lines of responsibility, oversight bodies, and transparent reporting procedures prevents misuse and ensures that ethical breaches are addressed effectively. This alignment ensures continuous trust between defense companies and their stakeholders, which promotes long-term profitability.

## **Recommendations to Mitigate Ethical Risks in A.I. Defense Technologies**

To effectively regulate A.I. in the broader defense industry, defense companies under the National Defense Industrial Association (NDIA) must adopt the following tangible, ethical alignment strategies in order to best align the industry with the best practices that will create sustainable economic advantages through government contracts and societal trust. Without these recommendations, A.I. development may become devoid of proper human oversight, lack proper risk assessment and transparency, be used by malicious actors to violate human rights, or be developed without adequate ethical awareness. These recommendations aim to mitigate these ethical issues in the industry while still allowing for adaptability and innovation.

### **1. Establish a Unified Ethical A.I. Framework Focused on Human Oversight**

- **Implement human-in-the-loop protocols:** requiring human verification before executing critical military decisions to prevent autonomous errors. This ensures compliance with Accountability, as it holds human operators responsible for AI-based actions, preventing unintended harm.
- **Assign explicit responsibility for A.I.-driven decisions:** to maintain legal and ethical accountability. Ensuring decision-makers bear responsibility reinforces the Rule of Law, preventing unchecked A.I. control.
- **Develop continuous ethics training programs:** for A.I. developers and defense operators to reinforce ethical judgment in real-world applications. Ethical education supports Integrity, ensuring decisions are made with moral responsibility.

### **2. Implement Ethical Impact Assessments (EIAs) for High-Risk Technologies**

- **Conduct comprehensive risk assessments:** to identify potential misuse of A.I. in surveillance, human rights violations, and risks of bias in autonomous systems. Transparency is achieved by openly addressing A.I. risks before deployment.
- **Publish public transparency reports:** to foster trust and demonstrate ethical diligence while maintaining national security interests. These reports enhance Transparency, ensuring open communication between stakeholders.
- **Establish independent ethics oversight boards:** with ethicists, legal experts, and community representatives to evaluate A.I. projects impartially. This

measure aligns with Fairness, ensuring decision-making is guided by unbiased, external evaluations.

### 3. **Strengthen Dual-Use Technology Governance**

- **Develop stringent licensing protocols:** that include end-use verification to ensure A.I. technologies are not repurposed for unethical surveillance or oppressive activities. Integrity is upheld by enforcing compliance with ethical A.I. deployment.
- **Incorporate ethical contract clauses:** in defense agreements that prohibit A.I. misuse, with clear legal consequences for breaches. These safeguards promote Trust, reassuring stakeholders that A.I. technologies are used responsibly.
- **Collaborate with international organizations:** to create unified standards for A.I. ethics across borders, reinforcing global confidence in AI-powered defense technologies.

### 4. **Foster a Culture of Ethical Responsibility Through Continuous Engagement**

- **Regularly update ethics training programs:** to reflect emerging A.I. challenges, ensuring that employees understand the evolving ethical landscape. Ongoing education cultivates Integrity, keeping ethical principles at the forefront of A.I. development in all circumstances.
- **Cultivate leaders who prioritize ethics in decision-making:** creating role models within the organization who uphold long-term ethical sustainability. Ethical leadership fosters Trust, reinforcing moral decision-making at all levels.
- **Establish secure, anonymous channels for employees to report ethical concerns:** related to A.I. projects without fear of retaliation, ensuring that ethical violations are properly addressed. This encourages a culture of Accountability, ensuring ethical breaches are swiftly mitigated.

### **The Ethical A.I. Advantage: Ethical A.I. as a Revenue Driver**

Beyond mitigating ethical risks, implementing these recommendations enhances long-term business viability and revenue growth. In a competitive defense market, trust and reliability are critical factors influencing procurement decisions by governments and allied organizations. Governments are hesitant to invest in projects that may become liabilities or prove themselves to be unreliable. Ethical A.I. practices foster transparency and accountability, reducing risk by allowing the end-user to see and understand the inner workings of the A.I. and have faith that it will operate effectively and efficiently thus increasing investor confidence. Reliable and trustworthy companies position themselves as defense industry leaders, securing lucrative, long-term contracts as well as building lasting relationships with global defense partners. By

adhering to ethical A.I. development, defense firms not only protect civilian lives and national security but also establish themselves as reliable government contractors with a sustainable and profitable future in the free market.

### **Alternate Viewpoint: Voluntary Limitations Impede Innovation**

Critics argue that voluntary ethical limitations, such as industry codes of conduct or self-imposed restrictions, could stifle technological advancement in the defense sector. They contend that A.I. innovation is crucial to maintaining a competitive edge in global security, and placing additional constraints on development could allow adversarial nations, unencumbered by similar ethical concerns, to outpace the United States in A.I. warfare capabilities. Ethical constraints, from this perspective, introduce inefficiencies, delay progress, and hinder the potential for A.I. to enhance battlefield decision-making, improve operational efficiency, and reduce human casualties.

While these concerns are well-intentioned, ethical A.I. frameworks do not inherently oppose innovation; rather, they guide it toward sustainable, responsible progress. In the defense industry, ethical outcomes support mission effectiveness by completing national objectives with minimal collateral damage. The Daniels Fund principles of Trust and Integrity underscore the importance of maintaining honest and trustworthy conduct even in all situations, including competitive markets. Ethical A.I. development ensures that advancements align with international laws and democratic values, preventing unintended geopolitical consequences that could arise from unchecked A.I. proliferation. By embedding ethical considerations early in A.I. design, companies create resilient, adaptable technologies that gain the trust of defense clients and strategic allies, ensuring long-term viability in the global market.

### **Alternate Viewpoint: Profit Motive Compromises Ethical Decisions**

Another criticism posits that corporate profit motives are fundamentally misaligned with ethical A.I. development. Given the immense financial incentives in the defense contracting industry, companies may prioritize short-term revenue over long-term ethical responsibility. Without strict external oversight, critics argue that corporations could be incentivized to minimize transparency, neglect robust accountability measures, or market AI-driven weapons with questionable ethical implications. This perspective suggests that market forces alone cannot be relied upon to ensure responsible A.I. use in defense applications.

However, ethical A.I. practices and financial success are not mutually exclusive. The Daniels Fund principle of Trust supports the idea that ethical business practices cultivate long-term profitability by fostering credibility, customer loyalty, and regulatory stability. Companies that proactively integrate ethical guidelines are more likely to secure long-term government contracts through their reliability, attract high-caliber talent through their credibility, and mitigate reputational risks that could arise from unethical A.I. use. Moreover, firms that demonstrate commitment to responsible A.I. development will be well-positioned to influence emerging global A.I. governance structures, ensuring both ethical integrity and sustained competitive advantage in a rapidly developing market.

## **Conclusion**

Ethical A.I. development in the defense sector is not just a moral imperative, it is a strategic necessity. By embedding integrity, transparency, accountability, and viability into A.I. systems through tangible industry recommendations, companies like Palantir, Lockheed Martin, and Raytheon can drive ethical innovation while maintaining profitability as well as national security priorities. This balanced approach ensures competitiveness, compliance, and credibility in the evolving global defense landscape.



# **Autonomous Vehicles: The Ethics of Deregulation**

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## Executive Summary

Since the invention of the automobile in the 20th century, road fatalities have been among the leading causes of death in the United States.<sup>1</sup> Artificial Intelligence (AI) is expected to dramatically advance the safety of both passenger and commercial vehicles in the form of autonomous (or automated) vehicles (AVs).<sup>2</sup>

Our client is the Autonomous Vehicle Industry Association (AVIA), a trade organization comprised of automobile manufacturers advocating for the safe and timely deployment of AVs. The group works closely with lawmakers, regulators, and the general public to promote policy stances in alignment with their mission.

**We recommend that the AVIA formally adopt a standpoint to resist all limitations surrounding the use of artificial intelligence in automated vehicles.** We argue that unfettered innovation in the AV space is the most ethical way to provide the safest vehicles to consumers in the shortest amount of time. However, we recognize that such rapid advancement introduces ethical dilemmas, particularly regarding consumer attitudes, manufacturer liability, and job security related to AVs. The AVIA has an obligation to viably address these ethical dilemmas while protecting the lives of end consumers and promoting shareholder value among membership. To uphold this duty, the AVIA must build trust among potentially skeptical consumers, facilitate a viable AV insurance landscape, and demonstrate transparency regarding projected shifts in the labor market.

## Safety

Primary considerations for AV innovation concern the safety of operators and passengers during use, as well as the attitudes of the consumer towards this technology. Although innovation shows significant improvements in driving safety when using AVs<sup>3</sup>, existing regulations restricting a vehicle's independence from

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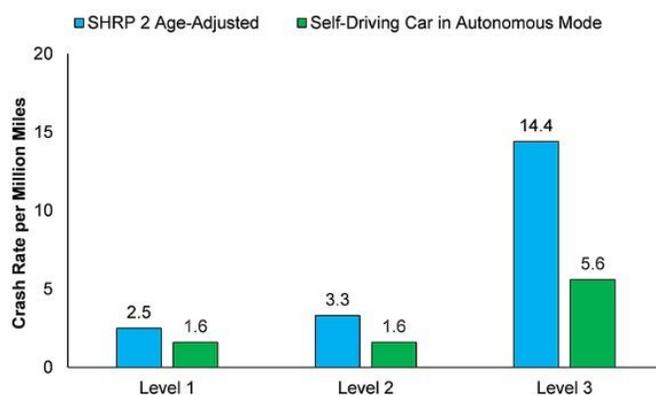
<sup>1</sup> "About Transportation Safety," CDC, November 19, 2024, <https://www.cdc.gov/transportation-safety/about/index.html>.

<sup>2</sup> In this paper, we define AVs as cars, trucks, or any form of automobile with the capability to drive itself without human intervention. When discussing AVs, we are referring to both the software (AI algorithms) and the hardware (vehicle) components. Still in the initial phases of testing and subject to strict government oversight, AVs are currently not available to individual consumers. See "Automated Vehicles for Safety," National Highway Traffic Safety Administration, U.S. Department of Transportation, accessed February 7, 2025, <https://www.nhtsa.gov/vehicle-safety/automated-vehicles-safety>.

<sup>3</sup> Jack Caporal et. al., "Driving the Future of AV Regulations: Barriers to Large-Scale Development," Center for Strategic and International Studies, May 28, 2021, <https://www.csis.org/analysis/driving-future-av-regulations-barriers-large-scale-development>.

human operation significantly inhibit existing AV capabilities from being utilized.<sup>4</sup> The present regulatory framework has stonewalled manufacturers from releasing fully capable AVs to the market. In attempting to address these inconsistencies, AV manufacturers have collaborated with state legislatures to implement more innovation-friendly regulations, but a lack of federal adoption of such proposals has led to an uneven and uncertain regulatory environment for AVs.<sup>5</sup> Federal actors have expressed support for regulatory adjustments. For instance, the National Highway Traffic Safety Administration (NHTSA) committed to advocate for improved regulatory adjustments through their AV 3.0 pledge.<sup>6</sup> Despite this, legislators have yet to make meaningful regulatory progress. The inability to innovate within this regulatory environment significantly impedes the ethical imperative to improve road safety through technological development.

**Figure 1: Crash Rate per Million Miles of Human Drives (Second Strategic Highway Program, or SHRP 2) and Self-Driving Cars<sup>7</sup>**



In light of these obstacles, we recommend that the AVIA take a proactive stance in encouraging members to resist all formal and informal safety limitations on the development and implementation of AI in the AV industry. Instead, the AVIA should advise members to prioritize cultivating consumer trust, ensuring that manufacturers take accountability for the safety of their products. Historically, technological innovation has driven regulatory evolution. The free market, unencumbered by rigid regulatory environments, will naturally adapt to

<sup>4</sup> “The Regulatory Road for Autonomous Vehicles: Absence of Federal Law Hampers U.S. Development,” Tucker Ellis LLP, December 2018, <https://www.tuckerellis.com/alerts/the-regulatory-road-for-autonomous-vehicles-absence-of-federal-law-hampers-u-s-development/>.

<sup>5</sup> “Preparing for the Future of Transportation: Automated Vehicles 3.0,” U.S. Department of Transportation, October 4, 2018, <https://www.transportation.gov/av/3>.

<sup>6</sup> “Preparing for the Future of Transportation: Automated Vehicles 3.0,” U.S. Department of Transportation, October 4, 2018, <https://www.transportation.gov/av/3>.

<sup>7</sup> **Figure 1** outlines crash rates per vehicle miles operated by human drivers (SHRP 2 Age-Adjusted) and autonomous systems (Self-Driving Car in Autonomous Mode). The levels represent the severity of the crash, with Level 1 being the most dangerous and Level 3 being the least. *See* Myra Blanco, et. al., “Automated Vehicle Crash Rate Comparison Using Naturalistic Data,” Virginia Tech Transportation Institute, January 8, 2016, <https://featured.vtti.vt.edu/2016/01/safety-on-city-streets/>.

improvements in innovation and by proxy, consumer demands.<sup>8</sup> Taking this proactive stance today will be the catalyst for stronger standards and better products in the future.

Opposition to this strategy may propose that a lack of governmental regulations will lower the bar for automotive safety standards. Some might worry about the loss of life as a result of reduced regulatory oversight. We acknowledge the concerns surrounding AVs being perceived as an unproven, untested technology with a high potential for disaster. We also acknowledge that no technological revolution is without risk, and there is always an ethical imperative to minimize loss of life. However, delaying AV deployment through excessive regulation does not eliminate fatalities; rather, it maintains a status quo where human error causes tens of thousands of deaths annually.<sup>9</sup> In a landscape where innovation outpaces lawmakers' abilities to adapt to technological innovation, regulation risks prohibiting development. The ethical imperative is to recognize that continuing reliance on human drivers is demonstrably worse than facilitating technological innovation.

The free-market has empirically solved safety standards through innovation successfully. In the automotive industry, airbags were initially extremely controversial due to early-stage deployment issues causing injuries and fatalities. Through deregulation and by proxy, industry adjustment, the technology was refined and now saves countless lives daily.<sup>10</sup> Similarly, many critical advancements in traditional automotive safety—such as automatic emergency braking, lane departure warnings, and adaptive cruise control—were largely pioneered by private industry and free-market competition before becoming regulatory requirements.<sup>11</sup> If the regulatory environment were overly restrictive at the inception of these technologies, their widespread deployment would have been delayed and cost many more lives in the long run. Additionally, current industry trends corroborate that AI technology in the AV space is promising for favorable safety outlooks, if further progress is facilitated.<sup>12</sup>

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<sup>8</sup> “Innovation versus Regulation: Can creativity and safety co-exist?,” RISKworld, Risktec, 2023, <https://risktec.tuv.com/knowledge-bank/innovation-versus-regulation-can-creativity-and-safety-co-exist/>.

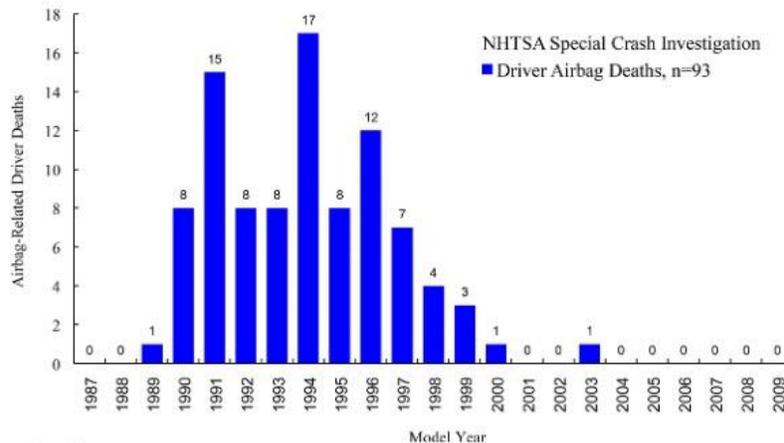
<sup>9</sup> Tan, H., Zhao, F., Song, H., & Liu, Z. (2023). Quantifying the Impact of Deployments of Autonomous Vehicles and Intelligent Roads on Road Safety in China: A Country-Level Modeling Study. *International journal of environmental research and public health*, 20(5), 4069. <https://doi.org/10.3390/ijerph20054069>

<sup>10</sup> David Viano, “History of airbag safety benefits and risks,” *Traffic Injury Prevention*, 25(3), 268–287, February 26, 2024, <https://doi.org/10.1080/15389588.2024.2315889>.

<sup>11</sup> Alfred Kahn, “Airline Deregulation,” Library of Economics and Liberty, accessed February 10, 2025, <https://www.econlib.org/library/Enc1/AirlineDeregulation.html>.

<sup>12</sup> “Preparing for the Future of Transportation: Automated Vehicles 3.0,” U.S. Department of Transportation, October 4, 2018, <https://www.transportation.gov/av/3>.

**Figure 2: Driver Deaths Caused by Airbags by Vehicle Model Year<sup>13</sup>**



While unregulated innovation is essential, rapid development may spur consumer skepticism and limit the viability of the AV market. Current market trends show that while the adoption of semi-autonomous vehicles is relatively popular amongst consumers, “readiness to support” fully autonomous vehicles is dropping.<sup>14</sup> Consumers noted that an increase in transparency from companies and better safety, among other attributes, would reduce their reluctance as shown in **Figure 3**. Thus, the AVIA should motivate members to disclose safety test results in order to build trust among the public, a strategy corroborated by Harvard Business Review.<sup>15</sup> This could include releasing testing footage of vehicles, algorithmic principles, and other contributing metrics to their development. Subsequently, the free market will resolve any inefficiencies—such as unsafe products—by reflecting public opinion through product demand.<sup>16</sup>

We contend that the prioritization of human life is the most important, ethical imperative. For this reason, we advocate for an approach that reduces the total number of lives lost over time. A deployment strategy of measured deregulation, real world testing, and transparent accountability will facilitate AVs to reach their full life-saving potential as quickly as possible.

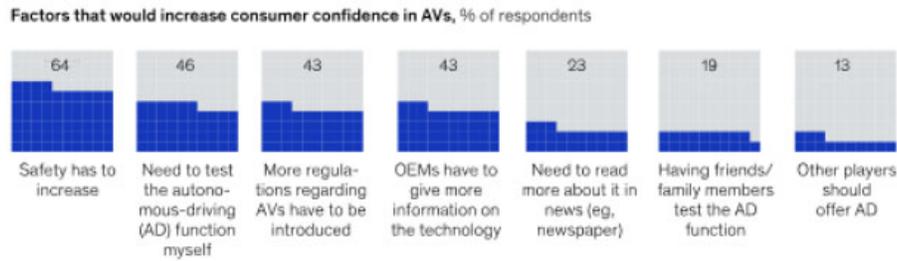
<sup>13</sup> David Viano, “History of airbag safety benefits and risks,” *Traffic Injury Prevention*, 25(3), 268–287, February 26, 2024, <https://doi.org/10.1080/15389588.2024.2315889>.

<sup>14</sup> Johannes Deichmann et. al., “The Future of Autonomous Vehicles (AV),” McKinsey & Company, January 8, 2023, <https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/autonomous-drivings-future-convenient-and-connected>.

<sup>15</sup> Harvard Business Review notes that researchers have found both in company and country trends that increased transparency leads to greater credibility, and thus, value. See Jeffrey Bussgang, “Why Startups Should Embrace Radical Transparency,” *Harvard Business Review*, November 22, 2022, <https://hbr.org/2022/11/why-startups-should-embrace-radical-transparency>.

<sup>16</sup> “Innovation versus Regulation: Can creativity and safety co-exist?,” *RISKworld*, Risktec, 2023, <https://risktec.tuv.com/knowledge-bank/innovation-versus-regulation-can-creativity-and-safety-co-exist/>.

**Figure 3: Factors in Consumer Confidence in AVs<sup>17</sup>**



## Liability

AI innovation will have significant ethical ramifications for insurance and legal liability in the automotive industry, and the AVIA has an obligation to uphold a viable insurance environment that protects manufacturers, their shareholders, and consumers. Many experts agree that the technological advances of AVs will significantly reduce vehicle crashes.<sup>18</sup> Nonetheless, accidents are bound to occur. If an algorithm—not a human being—is operating the car, then who bears the burden of responsibility when such incidents arise? In the status quo, drivers choose from an extensive array of auto insurance options to cover both bodily injury and property damage liabilities.<sup>19</sup> Culpability in car crashes is typically assessed through police reports, traffic laws, and insurance investigations to determine which party is deemed at fault and responsible for damages. This legal precedent implies the at-fault party is *morally responsible* for the accident. In this case, at-fault is defined as behavior arising from an agent’s exercising of their “powers and capacities”.<sup>20</sup> In a future with wide-scale adoption of AVs, it would be unfair to apply today’s standards for determining fault among passengers who are not exercising their powers or capacities to operate the vehicle in the traditional sense. We, therefore, expect a fundamental disruption of the auto insurance system regarding which party is determined to be at fault and who bears the legal and financial burden for causing and rectifying an accident.<sup>21</sup>

<sup>17</sup> Johannes Deichmann et. al., “The Future of Autonomous Vehicles (AV),” McKinsey & Company, January 8, 2023, <https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/autonomous-drivings-future-convenient-and-connected>.

<sup>18</sup> Robert Shapiro and Isaac Yoder, “Innovation Highway: Cover Unlocking the Social and Economic Benefits of Autonomous Vehicles,” U.S. Chamber of Commerce Technology Engagement Center, July 2023, [https://www.uschamber.com/assets/documents/CTEC\\_InnovationHighwayReport\\_July23.pdf](https://www.uschamber.com/assets/documents/CTEC_InnovationHighwayReport_July23.pdf).

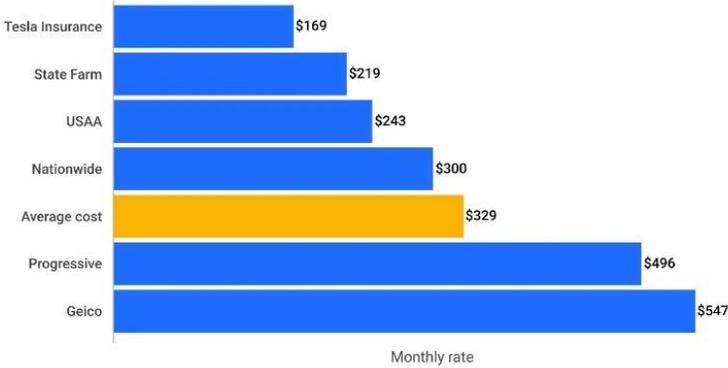
<sup>19</sup> “Car Insurance Requirements by State,” Progressive, accessed February 7, 2025, <https://www.progressive.com/answers/state-car-insurance-information/>.

<sup>20</sup> Matthew Talbert, “Moral Responsibility,” The Stanford Encyclopedia of Philosophy (Fall 2024 Edition), edited by Edward N. Zalta and Uri Nodelman, Fall 2024, <https://plato.stanford.edu/archives/fall2024/entries/moral-responsibility/>.

<sup>21</sup> Tanguy Catlin, “Connected Revolution: The Future of US Auto Insurance,” McKinsey & Company, October 27, 2023, <https://www.mckinsey.com/industries/financial-services/our-insights/connected-revolution-the-future-of-us-auto-insurance>.

In order to devise a viable insurance infrastructure, the AVIA ought to collaborate with insurance companies and AV manufacturers. One such infrastructure could include large-scale insurance policies paid for by AV manufacturers, rather than individual drivers. Another option could involve manufacturers developing in-house insurance arms, which would reduce transaction costs by extinguishing litigation between insurance companies and manufacturers. AV manufacturers offering in-house insurance would be responsible for collecting data to understand the circumstances of a crash and for tailoring their policy pricing accordingly, unrestricted by peculiarities that may not be accounted for in traditional insurance coverage. Tesla, a pioneer in the self-driving insurance space, created its own policy, which costs 20% to 30% less than competitor quotes on average.<sup>22</sup> In the pursuit of this viable insurance system, we recommend that the AVIA partner with AV manufacturers to conduct robust feasibility analyses and construct in-house insurance structures unique to their vehicles.

**Figure 4: Insurance Cost by Insurer for Tesla Vehicles<sup>23</sup>**



*All quotes are statewide averages in Texas across all 2022 Tesla models.*

Opponents of these recommendations may be wary that the cost of AV insurance policies could be passed onto the consumer. However, as a result of free market competition, AVs will become safer, and the price of insurance policies will be driven downward. This progression has already occurred in the automotive industry, as insurance premiums decrease in tandem with increased safety features.<sup>24</sup> To provide a catalyst for the transition into a more affordable AV insurance environment, the AVIA should be responsible for beginning the

<sup>22</sup> Matt Timmons, “How Much Does Tesla Insurance Cost? Rates by Model,” ValuePenguin, September 26, 2024, <https://www.valuepenguin.com/tesla-car-insurance>.

<sup>23</sup> Ibid.

<sup>24</sup> Tanguy Catlin, “Insurers’ Digital Reality—Fewer Premiums, More Competition,” McKinsey & Company, May 18, 2017, <https://www.mckinsey.com/featured-insights/digital-disruption/insurers-digital-reality-fewer-premiums-more-competition>

collaboration process with manufacturers and insurance companies immediately. These parties can build trust and show respect to customers by transparently disclosing the key factors determining the price of any given insurance policy. We expect this to result in an environment where the free market dictates viable AV insurance infrastructure as consumers weigh various options among both manufacturers and traditional insurers.

Moreover, we recommend that the AVIA inform AV manufacturers of likely impending shifts of legal liability as this technology penetrates the market. After an October 2023 incident in which a Cruise robotaxi struck and dragged a pedestrian in San Francisco, parent company General Motors paid a \$1.5 million penalty in damages (CBS, 2024). This directly implies the company that created the AV was legally responsible. Critics may cite increased legal costs as a barrier to entry into the market, potentially stifling innovation and competition. Indeed, manufacturers must be prepared to comply with the rule of law and bear any related legal costs. However, the AVIA can emphasize that this may not result in higher overall legal costs; in fact, we recommend that the AVIA reiterate how resisting all restrictions on the development of AVs will improve the technology due to market competition, reducing driving fatalities<sup>25</sup> and rendering any assumptions manufacturers are responsible for the technology and vehicles they create, the free market holds them accountable for ensuring their vehicles function properly, risking both higher insurance premiums and declines in market share in the event of malfunctions.

## **Job Market**

As AI innovation facilitates the ubiquity of fully autonomous vehicles, an outsized impact on the labor market will occur. A notable risk associated with this shift is a displacement of up to four million workers from logistics and transportation, ride-share, and delivery driver positions.<sup>26</sup> To ignite a responsible transition toward AV adoption and fulfill their ethical obligation, we recommend the AVIA transparently inform key stakeholders by publishing an annual report detailing labor shifts, market dynamics, and other key trends pertaining to the automotive and interrelated industries.

Those in favor of AV regulation may argue that the subsequent displacement of jobs cannot be adequately addressed through a report and that AV

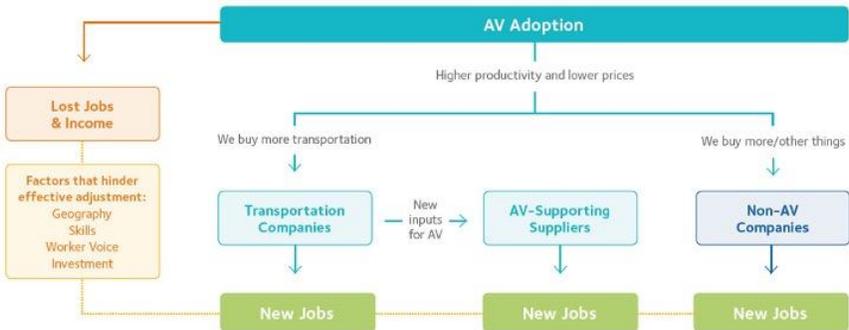
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<sup>25</sup> Robert Shapiro and Isaac Yoder, "Innovation Highway: Cover Unlocking the Social and Economic Benefits of Autonomous Vehicles," U.S. Chamber of Commerce Technology Engagement Center, July 2023, [https://www.uschamber.com/assets/documents/CTEC\\_InnovationHighwayReport\\_July23.pdf](https://www.uschamber.com/assets/documents/CTEC_InnovationHighwayReport_July23.pdf).

<sup>26</sup> Algernon Austin et al. "Stick Shift: Autonomous Vehicles, Driving Jobs, and the Future of Work," Center for Global Policy Solutions, 2017, <https://www.law.gwu.edu/sites/g/files/zaxdzs5421/files/downloads/Stick-Shift-Autonomous-Vehicles-Driving-Jobs-and-the-Future-of-Work.pdf>.

technology should be restricted in order to save the jobs of millions of Americans. We appreciate the concern for and agree with the prioritization of the well-being of the millions of individuals whose employment may be impacted by AV innovation. This view, however, presupposes all of the job displacement to occur in one instantaneous wave. Many of the jobs will not be displaced outright, but rather gradually *reallocated*. Consider grocery stores as an analogy. Many disapproved of the introduction of self-check-out aisles, viewing the displacement of jobs for cashiers as an unfair business practice. Yet, most at-risk cashiers were offered an alternate position.<sup>27</sup> Supermarkets maintained the same overall number of staff and reallocated employees to maximize productivity.<sup>28</sup> Likewise, the bulk of jobs threatened by AVs are highly sensitive to the supply and demand balances of their respective industries. Truck drivers, for instance, dynamically enter and exit the industry according to the supply of cargo that needs to be transported. In parallel, the free market economy will aid in the gradual process of rerouting displaced jobs among truck and ride-share drivers into alternative positions determined by dynamic market demands in the future.

**Figure 5: Framework of AV Impact on Labor Market<sup>29</sup>**



The responsible action, therefore, is to proceed with the deregulation of AVs and to concurrently provide an honest, transparent view of the impacted job market. Even if current regulation successfully slows the development of AVs, their introduction is inevitable. To maintain integrity with the labor force, the AVIA should acknowledge the inevitability of this looming job displacement and take a fair and pragmatic approach by publishing the proposed annual report. Furthermore, setting this precedent of transparency now—before any large-scale labor shifts even occur—will not only better prepare stakeholders for the future by setting realistic expectations, but also develop strong rapport with all parties

<sup>27</sup> Elliot Nesbo, “Will Self-Checkout Really Eliminate Jobs?” Make Use Of, January 30, 2023, [https://www.makeuseof.com/will-self-checkout-really-eliminate-jobs/?utm\\_source=chatgpt.com](https://www.makeuseof.com/will-self-checkout-really-eliminate-jobs/?utm_source=chatgpt.com).

<sup>28</sup> Ibid.

<sup>29</sup> “America’s Workforce and the Self-Driving Future,” Securing America’s Future Energy, June 2018, <https://avworkforce.secureenergy.org/workforce/>.

involved. Ultimately, the AVIA will be viewed as not just a trade organization, but rather a fair and trustworthy partner that ensures a viable business environment for all stakeholders, including individual workers.

## **Conclusion**

Current advancements in AI technology offer a promising outlook for a future free of vehicular fatalities caused by human error. It is an ethical imperative for the AVIA to motivate their members to achieve this goal as soon as possible to mitigate the loss of human life. We contend that the only way this can be facilitated today is for the AVIA to advocate for resistance against all limitations on AI development within the AV industry.

However, we also recognize that rapid technological development does not come without challenges. Consumer skepticism, insurance adaptation, and labor market shifts must be addressed proactively to ensure a sustainable transition to an AV-dominated future. The AVIA has a responsibility to lead this transition by fostering transparency, facilitating collaboration between insurers and manufacturers, and ensuring that workforce disruptions are managed ethically.

The AVIA has an ethical commitment to protecting lives and protecting their members' businesses. We reiterate that resisting all limitations surrounding artificial intelligence within automated vehicles is the best way to achieve these goals. The transition into a world with wide-scale adoption of AVs is inevitable, and the AVIA should communicate strategically with all stakeholders—manufacturers, logistics companies, passengers, and insurers alike—to ensure this happens in a viable manner.

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# The Future of Drug Discovery Starts with Ethical AI

Reid Boorman | Camilla Kenning | Veronica Ladwig | Anh Nguyen

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## To the Alliance for Pharmaceutical AI,

We're honored to work with your organization to help U.S. pharmaceutical companies leverage innovation and profits through ethical AI integration.

The pharmaceutical industry gains immense benefits from generative AI in drug discovery by reducing costs, accelerating treatments, and generating \$60-110 billion a year in economic value.<sup>1</sup> While the benefits are clear, the risks of mismanagement are substantial.

Government regulations have historically harmed pharmaceutical innovation—reducing industry profits by up to 20%<sup>2</sup>—and discouraging the development of life-saving therapies. The Alliance must act now to self-regulate or risk falling prey to restrictive external controls.

We recommend four strategies to prevent heavy-handed regulation: 1) protect data privacy, 2) self-regulate economic pricing, 3) adopt ethically developed AI models to reduce bias, and 4) lobby for balanced policies on drug patents. These recommendations are anchored in core principles of integrity, trust, accountability, transparency, fairness, respect, viability, and rule of law to ensure the industry and stakeholders make ethical changes.

## 1. Data Privacy

Data privacy is critical at the intersection of technology, healthcare, and privacy law, especially as generative AI becomes integral to drug discovery. These systems rely on vast datasets, including but not exclusively chemical molecular structures, clinical trial results, patient health records, and genomic information. Without robust protections, pharmaceutical companies face significant risks—regulatory penalties, lawsuits, and reputational damage—that could cripple operations.

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<sup>1</sup> "Economic potential of generative AI: the next productivity frontier," McKinsey & Co., published Jun. 14, 2023

<sup>2</sup> Investopedia, "How Does Government Regulation Impact the Drugs Sector?" accessed February 12, 2025.

We identify two primary data privacy challenges in this space and propose immediate solutions:

## 1. Re-identification Risks and Cybersecurity Threats

Even when patient data is anonymized, advanced re-identification techniques can expose individual identities, violating privacy and risking serious breaches. This threat grows for individuals with extensive digital footprints—smartphone users, wearable tech owners, or those frequently using GPS and credit cards are especially vulnerable. A single cyberattack can result in compromised proprietary data, class-action lawsuits, and fines as high as \$1.5 million per violation under HIPAA regulations.

To protect the industry and ensure **trust**, **viability**, and **respect**, you must make sure consent for AI use is front and center in conversations with partners, such as patients, physicians, researchers, and staff. Once permission has been established, we suggest you hire a contractor firm to process this data, labeling it for future use while stripping it into untraceable parts fitting for machine learning. This approach reduces the risk of cross-referencing and re-identifying datasets, ensuring compliance with privacy laws like the General Data Protection Regulation (GDPR) and the California Consumer Privacy Act (CCPA). By securing these relationships, companies can reduce unauthorized data collection and demonstrate **accountability** and the **rule of law**.

## 2. Proprietary Data and Ownership Challenges

Proprietary health data is crucial for developing differentiated AI models. Companies that rely on publicly available or unethically sourced datasets (e.g., web scraping) face heightened risks of legal action for copyright and patent infringement. Licensing data directly from trusted sources—hospitals, universities, or health-tech companies—ensures data quality, mitigates legal risks, and provides a competitive edge. Solution: Co-create a proprietary data marketplace. This marketplace would operate on a transparent bidding model where stakeholders can buy and sell datasets, with prices determined by market forces. **Transparency** regarding data ownership (without revealing content) would foster trust and prevent AI drug discovery outcomes manipulation.

Failure to address these challenges will expose pharmaceutical companies to multimillion-dollar liabilities, reputational damage, and potential regulatory shutdowns. Cyberattacks on healthcare organizations rose 55% in 2023, costing an average of \$11 million per breach. Without immediate intervention, the risk to patient privacy and corporate viability will escalate rapidly.

Implementing these strategies will ensure robust data privacy, build consumer trust, and allow AI to thrive in an ethical, legally compliant framework—driving innovation while protecting the industry's long-term health.

## 2. Economic Pricing

While AI reduces R&D clinical trial costs by 50%,<sup>3</sup> pharmaceutical companies who price drugs at premium levels unethically will face public outrage, regulatory intervention, and lawsuits.

For instance, Turing Pharmaceuticals increased the price of Daraprim from \$13.50 per pill to \$750 per pill (an increase of 5,000%) in 2015. The sudden price hike triggered public outcry, media scrutiny, and multiple government investigations. The Daraprim case became a symbol of unethical pharmaceutical pricing and led to increased calls for drug pricing reforms in the U.S.<sup>4</sup>

To protect the free market, avoid price regulation and costly lawsuits, the alliance must self-regulate. We recommend the alliance follow a hybrid pricing model when they sell a new drug, rolled into four phases:

### **Phase 1: Reduce R&D cost allocation through generative AI**

AI-driven drug discovery can lower the cost of bringing a drug to market from \$2.6 billion to nearly half.<sup>5</sup> Reduced costs improve company operating income (EBIT) and frees cash flows for future investments and shareholder returns.

### **Phase 2: Set Competitive Pricing Corridor**

Set a transparent pricing range tied to market competition and clinical value. Use a lower price limit to recover costs and an upper limit based on competitor pricing and clinical outcomes. Adjust prices according to market conditions and supply-demand dynamics to avoid accusations of price manipulation.

### **Phase 3: Value-Based Pricing Strategy**

Link prices to clinical and economic value. Indicators such as Incremental Cost-Effectiveness Ratio (ICER) and Quality-Adjusted Life Years (QALY) ensure drug prices reflect measurable outcomes. Use Real-World Evidence (RWE) to monitor performance and adjust prices every 6–12 months based on updated clinical data.

### **Phase 4: Dynamic Lifecycle Pricing Adjustments**

Maximize revenue across a drug's lifecycle while avoiding regulatory scrutiny. Choose a higher price level for a drug's initial launch to recoup any R&D costs and capitalize on early demand.

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<sup>3</sup> "Generative AI in the pharmaceutical industry: Moving from hype to reality," *McKinsey & Co.*, Jan. 9, 2024.

<sup>4</sup> Stanford Law School, "Daraprim and Drug Pricing," *Stanford Law*, October 5, 2015.

<sup>5</sup> Life Science Leader, "AI, POS, and ROI: An Alphabet Soup of 21st Century Drug Development," accessed February 12, 2025.

As the drug matures in the market, use moderate price reductions or targeted discounts to sustain market share and expand the customer base.

Failure to self-regulate pricing puts the entire industry at risk. Public goodwill, price caps, and government intervention could slash revenues by 30%. Once regulations take hold, companies lose control over pricing and profits, with long-term damage to shareholders and operations.

Implementing this proactive strategy protects profitability while ensuring access to life-saving treatments. This hybrid pricing model balances free-market principles with ethical, sustainable practices—upholding fairness, accountability, and long-term viability. The window to act is closing. The industry must lead the change or risk losing price control.



### 3. Algorithmic Bias

While AI promises to improve the laborious drug discovery process dramatically, AI demonstrates an algorithmic bias. This flaw creates skewed results, leading to ineffective or even dangerous drugs that result in profit losses, loss of reputation, and harmful effects on users. This threat may not even be detectable until large-scale implementation.<sup>6</sup> Using our ethical framework, we provide recommendations to curb this potential danger by employing the principles of **fairness**, **accountability**, and **transparency** without losing the utility of AI tools.

In a shocking study of COVID-19 screenings, AI tools biased specific individuals from receiving a “high risk” marker who would normally receive this label due to a lack of screening information from select subgroups, specifically African Americans in the U.S.<sup>7</sup> Rite Aid was banned by the Federal Trade Commission from using facial recognition software that generated “false

<sup>6</sup> Kiyasseh, D. et al. Human visual explanations mitigate bias in AI-based assessment of surgeon skills. NPJ Digital Med. 6, 54 (2023).

<sup>7</sup> Obermeyer, Z., Powers, B., Vogeli, C. & Mullainathan, S. Dissecting racial bias in an algorithm used to manage the health of populations. Science 366, 447–453 (2019).

positives” of customers from a watchlist utilizing video and photo records.<sup>8</sup> Both cases show that, while AI is a powerful predictor, it is prone to undetectable bias and potential for external regulation exists if bias is not appropriately addressed.

AI models rely on large data sets to perform their predictive behaviors. Even with an extensive amount of data, there will be a bias if the data is not diverse or complete. Model development and implementation can also introduce bias. No method eradicates all bias in generative AI because no statistically comprehensive data on drug development problems exists. Instead, we recommend acknowledging the extant bias in AI and placing safeguards to allow AI to be profitably implemented while preventing adverse business outcomes.

Our recommendations implement the principles of **fairness**, **accountability**, and **transparency** to protect businesses from the dangers of AI bias while harnessing its incredible potential in drug discovery. With the rise of proprietary datasets, pharmaceutical companies should seek AI models utilizing ethically acquired and diverse data sets to encourage **fairness** in the results. In addition, drug development companies should apply bias grades to AI models to encourage **accountability** for algorithmic bias and **trust** in AI tools. Secondly organizations should utilize models with “adversarial training.” This training uses a secondary model to aggressively seek bias and identify it to the end user<sup>9</sup>, indicating relative trustworthiness of a model's outcome and creating **transparency** within a model. Another guideline is implementing linkage with AI developers. Pharmaceutical companies utilizing AI tools should directly communicate with developers to tailor AI tools for their specific uses and adjust for bias through the emplacement of a liaison within a research team or incorporating AI developers in routine meetings. This creates **transparency** in AI model operations and **accountability** for their results. Companies will leverage AI's impressive utility with these guidelines, prevent external regulation, and maximize value creation.

## 4. Drug Patents & Exclusivity

AI-assisted drug discovery leads to groundbreaking innovation in pharmaceuticals that inevitably leads to questions of how and to whom to patent these discoveries.<sup>10</sup> Drug patents typically last 20 years and give pharmaceutical companies three to seven years of proprietary rights to market and sell the drug exclusively.<sup>11</sup> Patents and exclusivity rights encourage a profit motivation for pharmaceutical companies to spend capital on costly research and development - usually decades before the FDA approves the product.<sup>12</sup> With the rise of AI, pharmaceutical

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<sup>8</sup> “Coming Face to Face with Rite Aid's Allegedly Unfair Use of Facial Recognition Technology,” Federal Trade Commission, December 2023.

<sup>9</sup> Yang, J., Soltan, A.A.S., Eyre, D.W. et al. An adversarial training framework for mitigating algorithmic biases in clinical machine learning. *npj Digit. Med.* 6, 55 (2023).

<sup>10</sup> Morrish, A. (2021). AI and Patents: Finding Harmony Between Protection of Intellectual Property Rights and Innovation. *Intellectual Property Journal*, 33(3), 253-278.

<sup>11</sup> U.S. Food and Drug Administration. (n.d.). Frequently asked questions on patents and exclusivity. U.S. Department of Health and Human Services. Retrieved February 6, 2025.

<sup>12</sup> Möhrle, J. J. (2024). How long does it take to develop a new drug? *The Lancet Regional Health – Europe*.

developers lack clarity regarding who enjoys patent rights and exclusivity with AI-assisted drug development within their purview.

There are ethical, economic, and legal implications with AI drug patenting. Ethically, laws prohibiting patents for AI-assisted drug discoveries could stunt the market and restrict life-saving therapies.

Economically, there will be a loss of profit motive for drug companies. Although drug discovery can include substantial AI assistance, human involvement is still necessary to test and manufacture the discovery. An element of **fairness** is lost without the promise of patent and exclusivity rights, the benefit of investing in research and development. Drug companies often enjoy profit margins of 15-20% largely due to exclusivity rights.<sup>13</sup>

Legally, the **rule of law** provides patents and exclusivity for drug manufacturers, an essential motivator for developing new therapies, which, if lost, could be catastrophic for the AI-assisted drug discovery industry.

We recommend avoiding further regulation of drug discovery patents and exclusivity when AI tools are used, from conception to FDA approval-exclusivity-patent. A significant need for human involvement in drug discovery with AI still exists, so the existing patent process should be sufficient to ensure **integrity** in pharmaceutical manufacturing.

We recommend that members of your alliance pursue lobbying efforts to convince regulators it is in their best interest to limit regulations on AI-assisted drug discovery. As an industry, if we can self-regulate that earns the public's **trust**, outside regulators will not need to step in and create further legislation surrounding AI-assisted drug discovery. Pharmaceutical companies spend \$233M in federal lobby efforts.<sup>14</sup> Payoffs could be enormous. Limiting regulation on drug patents discovered with AI assistance ensures the profitability of drug discovery efforts. Potential profits would be more realizable, and drugs could be developed faster and at a lower cost, further enlarging margins. Patent lawsuits cost \$2.3-\$4 million dollars<sup>15</sup>, which eats into those margins. Successful lobbying can limit government regulation on AI-assisted drug discoveries and prevent costly litigation while ensuring continued development and innovation of AI-assisted drug discovery.

The pharmaceutical industry is historically one of the largest lobbying entities<sup>16</sup>, so the lobbying efforts are already strong. If the industry can self-regulate in a manner that aligns with the mission and values of the industry, we can continue to award drug patents in a fair manner that

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<sup>13</sup> U.S. Government Accountability Office, "Drug Industry: Profits, Research and Development Spending, and Merger and Acquisition Deals," U.S. Government Accountability Office, November 17, 2017.

<sup>14</sup>Wouters OJ. Lobbying Expenditures and Campaign Contributions by the Pharmaceutical and Health Product Industry in the United States, 1999-2018. *JAMA Intern Med.* 2020;180(5):688-697. doi:10.1001/jamainternmed.2020.0146

<sup>15</sup> DrugPatentWatch, "How Much Does a Drug Patent Cost? A Comprehensive Guide to Pharmaceutical Patent Expenses," DrugPatentWatch, last modified January 15, 2025.

<sup>16</sup>Wouters OJ. Lobbying Expenditures and Campaign Contributions by the Pharmaceutical and Health Product Industry in the United States, 1999-2018. *JAMA Intern Med.* 2020;180(5):688-697. doi:10.1001/jamainternmed.2020.0146

creates a healthy free market profit motive as the amount of AI-assisted pharmaceuticals continues to grow.

## Conclusion

The decision horizon for our recommendations will be (numbers are in thousands):

1. In the next 6 months:
  - a. Establish a super PAC called Ethical AI in Drug Discovery. We will aim to raise \$300M for lobbying efforts. (+\$300,000)
  - b. Hire Covington & Burling LLP, a premier Washington, D.C. law firm specializing in drug-making and technology, to draft the AI clause on the consent form. (-\$350)
  - c. Hire Scale AI, the most well-known data labeling firm, to establish protocols for in-house data labeling OR hire a contractor to complete this job before the data is ready for machine learning. (-\$5,000)
2. Within a year:
  - a. Establish a framework for the creation of the data marketplace. For example, sellers and buyers must be registered, provide an EIN, and comply with our rules of fair trade, etc. (-\$2,000)
  - b. The super-PAC will identify and back candidates in House and Senate races for the midterm elections who are ethical AI-use advocates. The ones with healthcare or health policy backgrounds can be hired later as your spokespeople.
3. Within 3 years:
  - a. Establish your position with the media, through the court system with frequent amicus curiae briefs, by training and community outreach, that ethical AI is the shortest way to better, cheaper drugs. (-\$70,000)

Generative AI implementation is the beginning of a drug discovery revolution. While there are risks associated with AI, they can be prevented through a marketplace of proprietary datasets for data privacy, following a hybrid pricing model, implementing “trained” and adaptable AI models to limit bias, and leveraging lobbying activities to ensure patents and exclusivity are awarded to pharmaceutical companies. By implementing our ethically informed guidelines, pharmaceutical companies will increase access to new, more effective drugs for broader populations.

## Ethical AI Consultant Group

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# HOW TO TRAIN YOUR AI DRAGON... ETHICALLY

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## A Bold Approach to AI in the Animation Industry

From Mickey Mouse’s first appearance in *Steamboat Willie* to Hiccup’s first ride in *How to Train your Dragon*, animation has evolved from simple sketches to a massive industry worth, in 2024, a staggering \$436.24 billion—and it’s expected to double by 2033. This rapid growth suggests a thriving market, but the reality is a highly concentrated oligopoly crippled by the dominance of just a few mammoth firms. The advent of creative AI tools is both a threat and an opportunity.

Currently, The Animation Guild (TAG) — the industry’s most powerful alliance consisting of Disney, Dreamworks, Sony, and smaller studios—is strongly resisting AI, concerned that members’ intellectual property will be stolen. “There is an inherent dishonesty”, it wrote in 2024, “in using a model trained by peeking over the shoulders of others without them knowing.” We understand its reaction, but suggest instead a policy that allows AI to train freely on all member content. This would promote **ethical** behavior, encourage **competition**, foster **innovation**, and **expand the market** even further.

Using Barbara Minto’s organizational framework and Bill Daniels’ ethical principles, we will analyze market data, propose a bold solution, apply lessons from relevant cases, acknowledge complications, and present a draft AI policy for TAG to discuss with its members.

**Written by:**

**Abigail Beus, Olivia Hopkin, Sienna Imes, & Anna Oldroyd**

# Market Analysis

An analysis using Porter's Five Forces reveals how the animation industry imposes obstacles for incoming firms. Barriers to entry are high; starting an animation studio requires enormous capital and extensive networks. Established studios dominate due to strong brand recognition and a fat pipeline of resources. The animation industry is **profitable**, but only for a few players. Incumbent firms effectively monopolize the market, making it nearly impossible for smaller animation studios to compete.



This anti-competitive market is further revealed by the Four-Firm Concentration Ratio (C4) analysis. Using content consumption data, we found that the top four firms in animation account for fully 75% of the market share.\* Disney and Pixar alone produce almost half of total animation content. Unharnessed, AI is likely to exacerbate this strangled market. However, an **ethically** trained AI could lower barriers and enable a vibrant **freely competitive** market.

## Proposal

We recommend developing an open-source AI database for the use of all TAG members. By democratizing AI tools, this approach fosters true **competition** in a **free market**, while **ethically** spurring market growth. Success would be driven by creativity rather than by existing content volume.

\*Calculated by team members using data from Sony, Statista, and Academy of Art.

# Proposal *(Continued)*

The TAG AI database would be trained on the creative content of all TAG members. Although existing content would inform the model, no company would forfeit ownership of its characters or works. Studios would remain bound by **copyright laws** that ensure **ethical** use. This approach simply mirrors the age-old process of artists honing their skills by studying and copying masters such as Rembrandt—their intent is not to claim or sell the work, but to learn and improve their craft. Of course, AI **transparency** is critical. For instance, OpenAI shares Sora's diffusion model but withholds training data, which raises ethical concerns and stifles fair competition. TAG's model would be transparently trained.

An open-source model accomplishes two tasks simultaneously: it prevents the moral hazard of animators using AI tools trained on stolen media, and it levels the playing field for peers with less data. Although technological change can feel threatening, embracing it wisely can enhance both creative output and profitability. The advent of CGI increased animated film **profit margins** by 30% over live-action.

## Applying Market Examples



### Who Is the Fairest of Them All? | Respect and Rule of Law Create Value

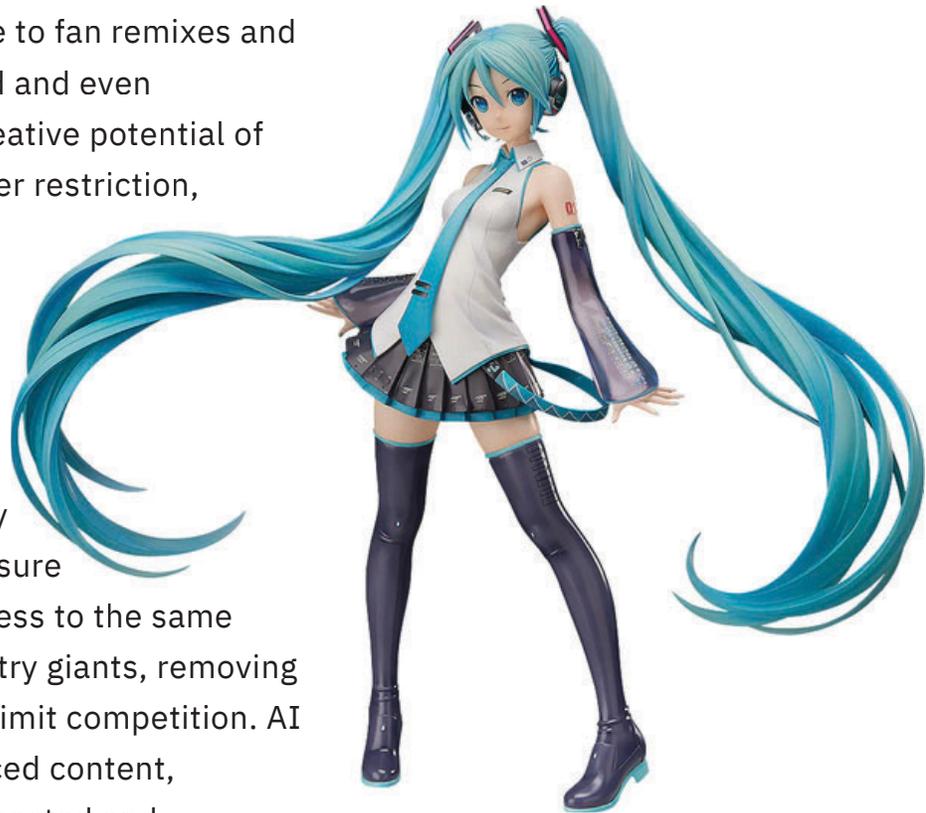
In 2007, music software developer Crypton Future Media created Hatsune Miku, a digital character, to market a vocal synthesizing tool. They claimed only limited copyright restrictions while maintaining correct usage policies, allowing the public to freely use her likeness and voice both privately and commercially. In doing so, Crypton unleashed a wave of creativity that made Miku into a global cultural phenomenon. This open approach encouraged **fair competition** by enabling creators large and small to innovate, expanding the Crypton brand globally. Far from being disadvantaged by their approach, Crypton's increased visibility led to lucrative partnerships with companies like SEGA and Toyota. Miku even toured with Lady Gaga in 2014, generating over \$84 million.



Similarly, Korean singer Psy’s song “Gangnam Style” became a global success partly due to fan remixes and reinterpretations, which he allowed and even encouraged. By tapping into the creative potential of millions, Psy prioritized **respect** over restriction, leading to greater cultural impact and profit.

Just as Crypton and Psy’s strategies enabled smaller creators to thrive, an open-source AI database for TAG would similarly **level the playing field**. It would ensure fairness by giving smaller firms access to the same training material and tools as industry giants, removing the barriers to entry that currently limit competition. AI would be trained on **ethically** sourced content, ensuring that the **rule of law** is respected and maintaining proper licensing and copyright compliance.

This approach would create a **transparent**, collaborative environment where the rights and freedoms of creators and their products are protected, while still fostering **competition, innovation, and creativity** in the free market.



## Faith, Trust, and Pixie Dust | Disney Proves that Trust & Transparency Leads to Profitability



Animation behemoth Disney spends millions each year protecting its intellectual property, suing even small entities like day care centers and Etsy creators for using character images. However, when the animated film *Frozen* was released, Disney changed its approach, **trusting** its audience to create content based on the song “Let It Go” from the movie *Frozen*. This bolstered the song’s popularity and Disney’s image, and *Frozen* ended up making \$1.28 billion at the box office; it’s one of the top 5 highest-grossing animated films of all time. There is a correlation between Disney’s more generous use policies and the success of the *Frozen* franchise.

Disney experience shows that allowing access to content in a controlled way—as with our proposed open-source AI database—leads to greater creativity and profitability. A shared database for AI training would enable new animators while simultaneously enhancing the reputation of the original creators. Although human nature urges us to cling to current advantages, both **trust** and **transparency** enable both legal protections and **market growth**.



## Daniels’ Battle for Integrity and Accountability in the Entertainment Industry



Bill Daniels’ efforts to break up a cable monopoly serve as our model for the animation industry today. When Daniels was president of the National Community Television Association (NCTA), he successfully lobbied to dismantle the cable industry monopoly. Today, we urge TAG to fight a similar battle within its own Guild. This will require studios to be **accountable** to each other and to consumers about how their AI models are being trained.



When Daniels won the battle with the cable industry, “he saw it as a victory for the consumer and a classic case of the **free enterprise** system at its best.” Similarly, open-source AI training in animation is the first step toward power for the consumers and freedom for the industry.

The animation industry can exercise **integrity** and **accountability** by being **honest** about how AI models are trained. Currently, little **transparency** exists regarding how animators train AI models. TAG highlights this issue in its 2024 report on AI, noting that “images [are] scraped from the internet without consent, and with no traceable way to credit or compensate the owners of the images.” Our proposal will make AI tools both more ethical and more effective.

# Acknowledging Complications

TAG has hesitantly begun to take steps to help its members use AI ethically by conducting surveys and supporting potential legislation, however fear permeates their suggestions. A 2024 [TAG survey](#) found 67% of members did not feel favorably about AI being used in the workplace, and another 61% said that they were worried about AI negatively affecting job prospects. Big studios are scared of relinquishing control of their significant content bases and having their copyrighted material stolen. As a large body representing both big and small companies, TAG needs a holistic approach that solves the problem, not merely addresses fears.

In the context of the **technological imperative**, AI's adoption in the animation industry is inevitable, especially amongst dominant animation studios, so allowing fair access to this tool is critical. DreamWorks Animation co-founder [Jeffrey Katzenberg](#) has encouraged animators to consider AI another tool. TAG mustn't try to restrict access to this tool anymore than it should to pencils or CGI. Guild-wide **transparency** will motivate all of the members of the Guild to be more honest, and research done at [Imperial College](#) is enabling individual artist protections using tools that identify original creators.

TAG's current approach is insufficient and reactionary. Our bold plan of open-source AI training will:

1. Allow for more **competition** in the market
2. Reduce creative theft, encouraging **ethical** behavior
3. Enable the most creative and talented animation studios to **win market share**

# An Ethical AI Policy for the Animation Guild

The Animation Guild stands at a crossroads with AI. Inspired by Bill Daniels' actions and principles, we suggest that it approves open AI training while ensuring proper credit and compensation for both large and small studios. We suggest TAG discuss the following policy draft with its members:

## Proposed AI Policy

The Animation Guild recognizes the transformative potential of artificial intelligence (AI) in the animation industry and aims to foster its ethical and innovative use. To promote **fair competition**, protect members' intellectual property, and ensure long-term sustainability, TAG encourages the development of an **open-source AI database** trained on ethically sourced content from its members. This shared resource will empower smaller studios, democratize access to AI tools, and encourage **transparency** in AI training practices. Members are expected to **respect** each other's animated property by **complying with applicable copyright laws**, and to engage in **honest** data sourcing and model training. By embracing this collaborative approach, TAG seeks to balance the benefits of AI with the values of **integrity, accountability, and respect** for creators' rights, ensuring that the animation industry remains a vibrant and competitive free market. (NotebookLM, Feb 2024)

By creating an open-source AI database where AI is used **responsibly** and **ethically**, the animation industry can break free from the monopolistic barriers that currently stifle competition. This **forward-thinking** approach will ensure that **innovation** is not only possible but encouraged. Just as Bill Daniels advocated for the value of embracing technology to empower consumers and improve **competition**, the animation industry must now take bold steps to ensure AI can be integrated in a way that maximizes its benefits, now and in the future.

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# 2025 Daniels Fund National Ethics Case Competition

## *Soft Regulation of A.I. in SAG-AFTRA Script Writing*

Eve Pickering, Medhansh Rajdeo, Kolby Erwin, and Pearl Kapoor



### **Introduction: The Ethical and Economic Challenges of AI in Screenwriting**

As economist Robert J. Schiller states, “We cannot wait until there are massive dislocations in our society to prepare for the Fourth Industrial Revolution.” (1) Artificial Intelligence could be the greatest boon of humanity or its downfall. The differentiator will be how we regulate, develop, and adapt to the new tools of the modern age. The first battlegrounds of the AI Revolution are already emerging, and how we handle them will echo for generations.

Writing is among the first industries to experience a significant challenge in implementing AI. Large Language Models (LLMs) lead AI innovation, fueled by vast datasets, new algorithms, and high demand. Freely accessible LLM platforms can generate an essay in seconds and a novel in hours. Although these models have yet to match human quality and creativity, they’re progressing rapidly toward this goal.

Screenwriting is particularly vulnerable to AI innovations because of the large demand for media, encouraging studios to seek every avenue for efficiency and making AI an attractive solution. It generates scripts in minutes, is incredibly cost-effective, and never suffers from writer's block, exhaustion, or other human issues. As AI develops the ability to create more nuanced writing, it appears poised to redefine the industry.

However, it's important to see this development for what it truly is: the canary in the coal mine for human labor. Because of rapid technological innovations and the nature of writing, screenwriting is one of the first industries in which AI could replace humans. If this is allowed, it will set the precedent for how we integrate AI into other industries. Furthermore, screenwriting is an art, and art is inherently human. Allowing AI to dictate the stories billions consume daily risks eroding a vital part of our collective identity and creativity.

We believe SAG-AFTRA should promote a balanced relationship between human writers and AI by implementing key measures. All lead writers on projects should be human, ensuring creative oversight remains in human hands, a "human-authored" trademark should be established to distinguish scripts primarily written by human writers, and SAG-AFTRA should incentivize human creativity by introducing awards for human-written scripts at the SAG Awards, encouraging other major academies to follow suit. We believe in soft regulation and positive motivators to foster a sustainable coexistence between AI and the labor force, ensuring free market success while upholding the ethical implications of AI in the workforce.

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## **AI in the Free Market**

The rise of AI in screenwriting has created a free-market paradox—while AI has the potential to increase efficiency and lower production costs, it also threatens to eliminate fair competition by favoring large studios with access to cutting-edge AI models. AI could widen the gap even further in an industry already defined by a power imbalance, making it even harder for new and diverse voices to break through. The entertainment industry has historically thrived on creative diversity, but overreliance on AI-generated scripts will push small creators out of the market. Writers without access to AI-driven tools or high-end models will find themselves at a competitive disadvantage, as their work takes longer to produce and is less cost-effective than AI-assisted alternatives. This shifts the criteria for success from talent to AI access.

AI in screenwriting parallels high-frequency trading (HFT) on Wall Street. Initially, HFTs were praised for their efficiency. Giants like Goldman Sachs and Citadel Securities invested billions into AI-driven systems, while others were left behind, unable to match the speed and efficiency of AI-powered transactions. This resulted in a market where only a handful of firms controlled the majority of trades, leading to concerns over market fairness and manipulation. To prevent further monopolization, regulatory bodies stepped in to introduce rules ensuring algorithmic trading didn't eliminate human traders or destabilize financial markets.

If AI in screenwriting follows the same trajectory, major studios with proprietary AI models could dominate content creation, leaving independent screenwriters and smaller studios unable to compete. Without intervention, we risk a future where storytelling is dictated by algorithms rather than human creativity. Just as financial regulators introduced oversight mechanisms to keep AI-driven trading in check, the entertainment industry must implement soft regulations to ensure AI serves as an assistive tool rather than a monopolistic force. These regulations should guarantee that human writers remain central to storytelling like financial markets require human oversight in AI-driven trading to maintain fairness. Soft regulations can ensure that AI remains a tool to enhance competition rather than a weapon that erodes it.

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## **Applying Ethical Principles to AI in Screenwriting**

### **Viability: Maximizing Long-Term Returns**

As we consider how to implement AI into our workplaces, it's important that we look to humanity's past to chart a course for the future. The lightbulb, steam engine, steel, and computers all completely reshaped the landscape of how we worked, and they brought with them significant amounts of trepidation as to how workers would fit into the new economic order. In each of these circumstances, however, humans adapted and innovated, creating a better world than before. A 2023 study by MIT found that AI can produce skilled writers production by up to 40% (2) by instantly checking for grammar and continuity errors, providing insight into strengths and weaknesses of a script, and creating new workflows centered less on the use of human processing power for trivial tasks. By implementing AI with soft regulations, we ensure that the process of reaping these benefits will be viable in the long-term, as it ensures all stakeholders are protected while we progress into the future.

### **Respect: Honoring the Rights of Writers**

In 2023, the US watched the screenwriting industry push back against AI in the SAG-AFTRA Writers Guild strike. After a long-fought strike, they finally concluded that AI could not be used to rewrite scripts, and writers would have the liberty to choose whether or not to use the software. This conclusion shows where people's fear truly lies. It is important to acknowledge these fears and work to establish respect for writers' needs. SAG-AFTRA is a powerful labor union, and writers make up the cornerstone. Writers need to feel that they are prioritized over AI and that the software is only meant to be used as a tool for efficiency and quality. To respect the needs of our employees we must carefully incorporate AI into the workforce without diminishing the rights of SAG-AFTRA's writers.

### **Fairness: Creating an Even Playing Field for All**

When AI became mass consumable, many saw it as a cheat code. It is the optimal worker: able to work 24/7/365 without complaints, mistakes, and wages. What industry could resist this golden opportunity, even at the cost of laying off workers and diminishing the meaning of human

work? However, just because the option exists does not mean it should be taken. Robert Frost wrote, “Two roads diverged in a yellow wood”. We are at a paramount point where companies are deciding every day to follow the path toward AI supremacy or to resist. Companies that resist find themselves in an unfair competition as they fight against machine intelligence. The screenwriting industry has a choice to allow companies to try to gain an advantage over others by sprinting ahead on AI implementation, or we could lean towards soft regulation and create fair competition within the writing industry. So, “Somewhere ages and ages hence, I shall be telling this with a sigh, I took the road less traveled and that has made all the difference.” We must take the higher and harder road by setting limitations on the use of AI in screenwriting.

### **Accountability: Making a Choice We can Stand Behind**

In the 2023 strike, SAG-AFTRA was treading on tense ground. The conversation around AI implementation into screenwriting raises strong emotions. We must be very careful that whatever decision is made is in the best interest of our workers. Whatever the future effects of soft regulation may be, accountability must be taken. When standing in a room with our writers, face-to-face, we will have to stand by our decision, fully accepting all of its repercussions. By implementing soft regulations, we can fight to protect their rights and jobs while honoring our free market principles.

### **Transparency: Openly Communicating AI’s Role**

AI is here to stay, but the screenwriting industry must decide how to openly and honestly integrate this technology. If AI is being used in script development for any reason, everyone involved—writers, studios, and audiences—deserves to know. The 2023 strike proved that one of the biggest fears surrounding AI is that it would silently replace human creativity while studios pocket the savings. Writers demanded that studios disclose AI involvement, ensuring that creatives weren’t unknowingly competing against machine-generated scripts. Without transparency, trust erodes, and creative labor is devalued. If studios want AI to be a tool rather than a takeover, they must be upfront about its role in production. Labeling AI-assisted scripts and committing to truthful communication will foster an environment where AI is embraced responsibly. Transparency isn’t about restricting AI—it’s about ensuring everyone knows what game they’re playing.

### **Trust: Bolstering Writer-Industry Relationships**

Trust isn’t built on promises—it’s built on actions. Right now, there’s a serious lack of trust between screenwriters and the studios that employ them. Writers aren’t sure whether AI will replace them, assist them, or reduce their work to glorified AI editors. Studios, on the other hand, worry that resisting AI will leave them behind in a fast-changing market. If we want AI to be a positive force, the first step is earning the trust of human writers who built this industry originally. In SAG-AFTRA’s 2023 contract victory, some AI protections were secured, but screenwriters weren’t given guarantees, and that lingering uncertainty breeds distrust. To fix this, studios must

do more than just promise AI won't replace human talent—they must prove it. Creating industry-wide AI guidelines, ensuring human oversight in every AI-assisted script, and giving writers the right to approve or reject AI contributions would help to repair trust. AI is inevitable, but the distrust around it doesn't have to be.

### **Integrity: Safeguarding Against Unfair Practices**

The screenwriting industry is built on honest, human storytelling, and if we allow AI to be used dishonestly, it will undermine everything that makes this profession meaningful. Integrity isn't just about truth; it's about ensuring that AI is used ethically, fairly, and transparently. One of the biggest ethical concerns is that AI is being trained on thousands of copyrighted scripts without the original writers' permission. The Atlantic revealed in 2024 that major AI models had been fed dialogue from over 85,000 movies and TV shows, often without proper licensing. This means AI-generated scripts unknowingly steal from human writers, repackaging their work while studios claim it's "original." That's not just unethical—it's a betrayal of the writers who built this industry. If the industry wants to maintain its integrity, studios must commit to responsible AI training, fair compensation for data used in models, and clear guidelines that prevent AI from regurgitating stolen work. Integrity in AI isn't just about what's legal—it's about doing what's right, even when no one's looking.

### **Rule of Law: Staying Ahead of the Curve**

The problem with AI is that the law hasn't caught up yet. Studios are racing ahead, using AI to generate content, while screenwriters are left wondering who owns what, who gets paid, and what protections they have. The U.S. Copyright Office recently ruled that AI-generated content cannot be copyrighted unless there's meaningful human involvement (3), which means studios could start favoring AI-written scripts precisely because they aren't bound by the same copyright protections. That's a dangerous loophole that could allow corporations to bypass fair compensation and protection for writers. Soft regulations should ensure that any AI-assisted scripts must have legally recognized human authors, preventing studios from exploiting copyright gaps to cut writers out of ownership rights. Studios can't afford to wait for lawsuits to dictate ethical AI use. If AI is to be a tool rather than a legal liability, fair regulations must be set now.

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## **Conclusion: Stepping Into the Future the Right Way**

There are various thought processes on how to regulate AI. Many argue that humans thrive on unobstructed innovation, so any regulation is excessively burdensome. Others would claim that any AI is the antithesis of human creativity, a Pandora's box that should've never been opened. While both arguments are valid, they are short-sighted and fail to grasp the situation fully. Despite the perpetual need for innovation, authentic creativity must be preserved.

We recommend that SAG-AFTRA adopt soft regulation mandating scripts to be majorly written by humans, to label scripts that use AI, and to reward human writers through awards. We believe that this best protects a free, diverse market that gives all writers a competitive chance while not excessively restricting the burgeoning development of new technologies. In doing this, we feel that SAG-AFTRA will be taking a significant step toward creating a world that prioritizes fairness, accountability of industry leaders, respect for the rights of writers, compliance with the law, transparent practices, fostering stakeholder trust, and acting with integrity, which will all serve to create the most viable market for long-term returns, both moral and economic.

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# Air Traffic Control's Free Market Transformation: Powered by AI

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## **Executive Summary**

America's Air Traffic Control (ATC) system is at its breaking point.

According to the Federal Aviation Administration (FAA) – the governmental entity that manages American air traffic control – during fiscal year 2023, there were 503 air traffic control safety lapses categorized as “significant,” a 65 percent increase over the prior year. On January 29, 2025, an American Airlines jet collided with a military helicopter above Washington, D.C., resulting in the deadliest American aviation disaster in 23 years.

Aging infrastructure, labor shortages, and outdated technology systems across the ATC system are resulting in rapidly escalating incidents and life-threatening failures. As of January 2025, 90% of air traffic control facilities in the U.S. are operating below recommended staffing levels (Krolik, NYT)<sup>2</sup>. In a recent request, the FAA identified more than \$5 billion in infrastructure improvements for ATC centers where controllers still “use paper strips to track flights and floppy disks to upload data to IDS4 computers from the early 1990's<sup>3,4</sup>.”



*Air traffic controllers work with paper flight strips in the radar approach room at Portland International Jetport on Thursday, Oct. 26, 2017. Credit: Getty Images*

America's current ATC system threatens American lives and the viability of the nation's commercial airline industry. However, as long as Air Traffic Control operates as a government-run monopoly, there will be few incentives to attract resources and innovations to this market.

**The necessary solution for this crisis is the transformation of Air Traffic Control into a more competitive, innovative, free market system, led by the strategic integration of Artificial Intelligence (AI).**

In this report, we outline recommendations for the acceptable use of AI technology to transform ATC, from the tarmac to the control tower. We also address ethical concerns regarding accountability, fairness, and transparency that replacing human control with technology could raise.

## AI's Acceptable (and Necessary) Integration with Air Traffic Control

In its current form, ATC consists of more than 20,000 air traffic controllers working across 21 regional air traffic control centers and 500 airport traffic control towers<sup>5</sup>. Consistently ranked as one of the most stressful jobs in America, an individual air traffic controller has numerous responsibilities including monitoring and directing the movement of aircraft in the air and on the ground, ensuring safe separation between planes by issuing takeoff and landing instructions, communicating weather conditions, alerting airport personnel in emergencies, and doing all this while maintaining a smooth flow of air traffic in their assigned airspace.

With 90% of air traffic control facilities in the U.S. operating below recommended staffing levels and controllers still manually tracking 45,000 daily flight routes with paper strips, adopting capacity-increasing technology is urgent. Based on our analysis (**see Table 1**), the airline industry and the FAA should embrace and implement the following AI enhancements for ATC operations.

- **Monitoring Aircraft Positions (Highest Priority for AI Enhancement):** AI technology is highly capable of managing and processing large amounts of real-time data, making it ideal for tracking aircraft positions. Rather than tracking flights with paper strips – a system implemented in 1947 – radar and tracking systems can be augmented with AI-driven algorithms to continuously monitor aircraft locations, speed, altitude, and movement patterns within a given airspace. AI could automate the identification of potential conflicts or traffic congestion, presenting controllers with predictive alerts while allowing for human judgment to interpret and resolve issues.
- **Managing Ground Traffic (AI Enhanced):** AI is well suited for managing ground traffic, particularly in high-density airports. By automating the coordination of taxiing aircraft, sequencing departures, and even coordinating deicing operations, AI could improve ground operations. This shift would reduce wait times and congestion on taxiways and runways, ultimately saving airlines and ATC operations money.
- **Weather and Flight Updates (AI-Enhanced, Not Fully Replaced):** AI systems can analyze and predict weather patterns, arrival times, and flight delays far more accurately than a human. By integrating weather data sources, AI can provide real-time weather updates, including wind speeds, turbulence, visibility, and other hazards, directly to pilots and controllers. Building on Aircraft position tracking, it can also help automatically adjust and queue take-off and landing slots – two of the most critical tasks for controllers – in response to delays and weather conditions.

By implementing AI in these three areas to start, we emphasize that technology should prioritize tasks that involve data-heavy, repetitive, and time-sensitive functions. These areas benefit the most from AI's ability to process vast amounts of real-time data quickly and accurately, reducing human error and increasing safety. Ideally, AI would enable controllers to focus more on strategic decision-making – their core human competence – and less on data monitoring.

**Table 1: Analysis of AI-Integration into ATC Tasks**

Task	Complexity of Task			Task Assignment		Recommended Solution	Potential Dilemma
	Low	Medium	High	AI	Human		
<b>Monitoring Aircraft Positions:</b>							
<b>Radar</b>	Location	✓			✓	X	A contingency plan would need to be put in place should an issue within the AI system occur so that data is still being transmitted to those who need the data.
	Speed	✓			✓	X	
	Altitude	✓			✓	X	
	Directions	✓			✓	X	
	Weather	✓			✓	X	
<b>Instructions to Pilots:</b>							
Clearance for Takeoff		✓			X	✓	Public perception could be negative if AI controlled these tasks.
Clearance for Landing		✓			X	✓	
Directing Flight Paths				✓	✓	✓	Humans accept AI recommendation without regard.
Assigning Altitudes				✓	✓	X	Early adoption will be difficult and will need oversight.
Changes to Flight Plans				✓	✓	✓	Humans accept AI recommendations without additional verification of conditions.
Separation to prevent Collisions				✓	✓	✓	
<b>Weather Updates:</b>							
Wind Speed	✓				✓	X	A contingency plan required should AI system encounter issues.
Visibility	✓				✓	X	
Potential Hazards	✓				✓	X	
<b>Managing Ground Traffic:</b>							
Taxiways					✓	✓	Humans accept AI recommendation without discernment.
Runways		✓			✓	✓	
Sequencing Departures		✓			✓	X	A contingency plan required should AI system encounter issues.
Sequencing Arrivals				✓	✓	X	
<b>Emergency Response:</b>							
Alerting Emergency Services	✓				✓	X	Contingency plan required.
<b>Communications:</b>							
Radio communication w- Pilots		✓			X	✓	Public perception could be negative if AI controlled these tasks.
Adjacent ATC Centers		✓			X	✓	

## **Market Incentives for Innovation and Safety**

The current monopolistic air traffic control (ATC) system faces critical challenges. Inefficiencies, high barriers to entry through government procurement, and a lack of market-driven incentives stifle innovation, impacting financial viability and safety. Transitioning to AI-driven ATC systems offers a technical solution that paves the way for a more sustainable and competitive ATC market.

Airlines for America and the airline industry are encouraged to champion the adoption of AI-enhanced ATC operations. Currently, the FAA controls all systems utilized by air traffic controllers, such as navigation, communication, and on-board 'black box' monitoring of flights. Instead of a single, centralized, government-run entity, AI would open the door for market fragmentation, allowing private companies to compete for contracts, driving innovation and cost reduction. Motivated by profit, these firms will invest in research and development, continuously improving their AI systems to enhance safety and optimize air traffic flow.

This vision aligns with the airline industry's own aspirations. In May 2023, former United Airlines CEO Oscar Munoz advocated for a privatized ATC system on a Fox Business interview, arguing "the biggest issue that we have in America is broader – infrastructure, but specifically in air travel, the air traffic control system. We have the most outdated and I would say obsolete system in almost the entire world<sup>8</sup>."

The current government monopoly suffers from labor shortages, underinvestment, and bureaucratic inefficiencies that impose significant costs on airlines and passengers. A 2010 Congressional study estimated that flight delays cost the industry \$32.9 billion annually, with passengers bearing roughly half the burden<sup>6</sup>. That report also highlighted the need for a "NextGen" GPS-based flight tracking system. However, after billions in spending and 15 years of implementation by the FAA, progress has been slow, with only partial upgrades like a transition from analog to digital communication<sup>7</sup>.

In addition to fragmenting the ATC operational systems market, AI-driven efficiency also creates a compelling opportunity to test and demonstrate the viability of a market-based funding model for the entire ATC operation. Currently, the system relies on taxes collected from airlines and passengers, including fuel taxes and passenger fees. Hiring controllers is a federal process that involves procurement and lengthy contracting – a complex structure that insulates the true cost of ATC from its beneficiaries. AI-enhanced systems will enable a more transparent comparison, demonstrating the superior performance of privately run elements and justifying their expansion.

A commitment to AI-powered ATC is not just about addressing current shortcomings; it's about building a future where innovation and market forces drive continuous improvement in safety, efficiency, and cost-effectiveness.

## **Ethical Challenges Around Safety and Regulation**

While transforming ATC through the adoption of AI into a more market-driven industry is vital for the airline industry, there are also inherent risks and potential ethical dilemmas posed by

privatizing an industry that deals with high-risk areas of public safety, national security, and multiple stakeholders.

To avoid undermining public trust as AI transforms ATC, it will be critical to incentivize rigorous regulatory standards and to rely on accountability structures that leverage the voice of consumers, industry, and the proper role of government.

On the regulatory front, the FAA is currently accountable for upholding safety standards across the ATC industry, and imposing penalties on airlines and other actors who violate rules and regulations. A limited adoption of AI technology in the ATC operations areas we have identified would likely result in less need for centralized government control based on micromanaged procedures, and more potential for regulatory accountability based on performance measures.

Regulation also plays a crucial role in establishing safety for AI software. This ensures a minimum standard of safety against bad actors while still allowing companies to innovate and compete for market share. However, this creates an ethical dilemma: Should companies proactively report and lobby for the adoption of any feature that demonstrably improves safety, or should they prioritize maintaining a competitive advantage by keeping such advancements private?

Our proposed plan to integrate AI into air traffic control focuses on assigning low-risk, repetitive tasks to algorithms. These AI systems would coordinate information, presenting it in a consistent and standardized format to human controllers, but the systems would not have autonomous control over the airplanes themselves, nor would outside actors.

Perhaps most critically, a change in how ATC is managed will be necessary to responsibly manage the ethical and operational challenges raised by AI integration.

### [Governing the AI Skies: A Case for a Private Air Traffic Control Model](#)

The increasing complexity of air traffic control (ATC), particularly with AI enhancements, raises critical questions about governance. How can we ensure accountability, transparency, and adherence to the rule of law when dealing with unproven technologies and market-driven forces? Can a profit-driven entity truly manage the commons and the collective maintenance of U.S. airspace? Who is ultimately responsible when failures occur? These challenges highlight the need for a governance model that understands that the public good can be enhanced by the profit incentive and protected by the rule of law.

In our review, the public good and commons aspects of ATC are best addressed by an independent, nonprofit entity, operating outside the control of both the market and the government. This model offers a balance between responsiveness to stakeholder needs and a commitment to public safety. Numerous developed nations, including Australia, Canada, Germany, Italy, New Zealand, and the United Kingdom, have transitioned their ATC systems to similar nonprofit utility structures over the past three decades, demonstrating the viability of this approach<sup>9</sup>. The United States itself has historical precedent, having begun with a non-profit cooperative of early airlines in 1929 before government intervention in 1936<sup>10</sup>.

While the Trump administration's proposal to restructure U.S. ATC into a private, nonprofit entity in 2017 was part of a broader infrastructure reform agenda, the core idea holds merit. Such an entity, funded by user fees and operating independently of the FAA, could significantly improve operational efficiency, reduce delays, and streamline decision-making. Proponents have argued that “a private, non-profit organization managing ATC would enhance safety, reduce inefficiencies, and better manage airspace modernization<sup>11</sup>.”

A key advantage of this model lies in its inherent accountability. Unlike government agencies, which can be subject to political influence and bureaucratic inertia, or for-profit companies, which are driven by profit motives that may conflict with transparency or the management of the commons in the long-term, a nonprofit entity is directly accountable to its stakeholders. This accountability is further strengthened by a well-structured governing board.

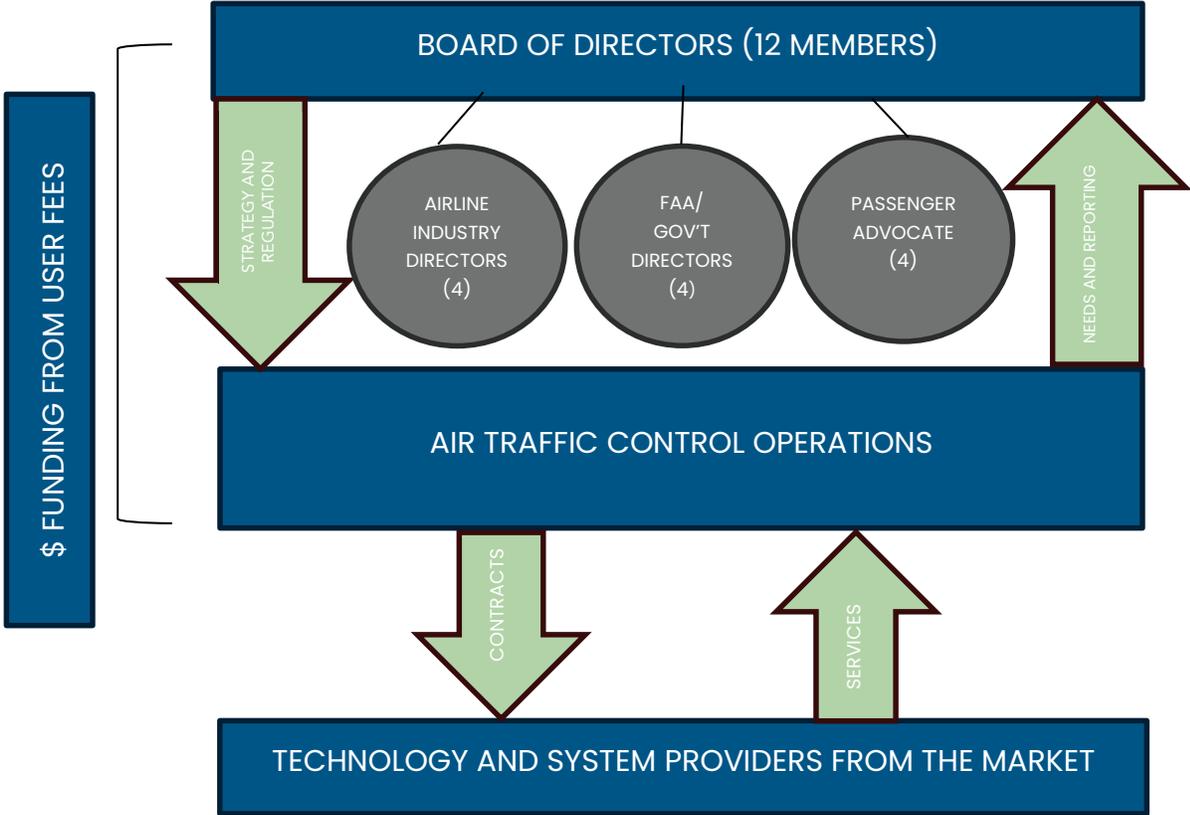
A collaborative board, composed of representatives from the airline industry, the government, and potentially even passenger advocates, would provide critical input to the nonprofit ATC provider. This multi-stakeholder model, similar to the successful Nav Canada structure, ensures that all perspectives are considered in policy and regulatory updates. As noted in the Reason Foundation in its 2023 policy paper *Air Traffic Control as a Public Utility*, “the stakeholder board concept has proved workable and effective for more than two decades at Nav Canada, the world’s second-largest ATC provider [...] It is a model that may offer governance improvements to many ATC providers currently organized as government corporations<sup>12</sup>.”

Regarding specific accountability mechanisms, the private companies developing AI algorithms would be fully responsible for the accuracy of the information they provide. Controllers relying on faulty AI data would have recourse against the algorithm creators. This accountability extends to software updates, requiring companies to address near misses and prevent future incidents. Human controllers would also remain accountable for their decisions, and the FAA would retain responsibility for ensuring adequate regulations.

The division of responsibility remains: AI coordinates and presents information, while human controllers make decisions. Near misses will occur, requiring collaboration between the nonprofit ATC provider, the FAA, and the technology companies to analyze incidents and improve algorithms. An inherent advantage of an AI-driven system is its ability to collect and analyze data on its performance in real time; private ATC providers will likely be incentivized to meet performance and safety benchmarks to avoid legal or financial penalties, including insurance costs, and to maintain customer trust.

The proposed nonprofit model (**see Figure 1**) offers a balanced approach, leveraging AI for efficiency while retaining human oversight and prioritizing safety through a transparent and accountable governance structure. It allows for innovation while mitigating the risks inherent in both purely market-driven and government-controlled systems.

**Figure 1: Possible Stakeholder Board Nonprofit Governance Structure**



**Conclusion**

The airline industry stands at a crossroads. Continuing to prop up the current failing system is not only a disservice to the flying public but also a threat to the industry's own long-term viability. Embracing a bold reimagining of Air Traffic Control, powered by the strategic integration of AI, offers the airline industry the only path toward a safer, more efficient, and truly viable system.

However, this transition must be guided by clear ethical principles. Accountability, both for the AI systems themselves and the human controllers who utilize them, must be clearly defined and rigorously enforced. This will require maintaining key human checks and balances in both the management of technology and the creation of new governance structures. With this AI-powered pivot, the result will be a high-performing air traffic control system that ensures public wellbeing alongside the profit-motivated efficiency of the free market.

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***-Bill Daniels***

