



Regulatory Reform on Artificial Intelligence

To: Office of Science and Technology Policy, 2415 Eisenhower Avenue, Alexandria, VA 22314	From: Arun K. Majumdar and Permion Team Permion Inc., 800 Corporate Dr., Suite 301, Stafford, VA 22554
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About Permion

Permion Inc. has developed technology for low-size, low-power full-stack AI at the edge while delivering competitive foundational AI models, integrating parallel, distributed, Agentic, neural, and logical capabilities. The company offers the only US full developed full-stack Neurosymbolic AI, coding analyzers, coding tools, and industry-standard compliance to popular developer environments as well as ISO Standards (ISO 24707) Common Logic and ISO Prolog (ISO3211) with a modular real-time, low size, weight and power footprint for Edge AI systems. The Permion developed Neurosymbolic AI Instructure Set Architecture (ISA) is hardware (AI Chip) ready. It uses advanced mathematics and graph AI models beyond the large language model (LLM) to bring Large Graph Model (LGM) capabilities for reliable, scalable results to Edge AI and its applications at the operational tactical edge. More about Permion is at <https://permion.ai/>

Response

Permion Inc. presents in this document its approach for a sound and coherent regulatory reform of Artificial Intelligence (AI). The United States loses hundreds of billions of dollars every year in **intellectual property** (IP) to foreign competition – these impacts to the US go far beyond the direct loss. Why is that? We miss a principles based policy: first, a **“duty-of-care”** to dutiful attention, being of service, and contributing to the value-chain for AI as community; second, policies to enforce a **common data collection and feedback** to assure fast iterative advancement and management of accountabilities; and, third, an agile, **competitive decentralized** evidence based incentive process to overcome blind-spots, assumptions and presumptions in human operating procedures that otherwise are costly to national interests.

“He who can handle the quickest rate of change survives”, paraphrased from John R. Boyd, “Patterns of Conflict” (1986 briefing, Defense Department, slide #132).

Our policy strategy is based on a **Boyd–Gingrich–Cheney** lens of **agility, competition, and decentralized** policy approach. The sections are as follows: **Answers** to OSTP Questions, **Regulatory Reforms** Strategy Framework, **Reforms**, Reform **Use-Cases**, Reform **Exemplars**, and lastly, **Conclusions**. We appreciate the call for this Request for Information (RFI) and grateful for the opportunity to offer our viewpoints.

Answers to OSTP Questions

(i) **What AI activities, innovations, or deployments are currently being inhibited, delayed, or otherwise constrained due to Federal statutes, regulations, or policies?** Our viewpoint is that private-public shared incentives are misaligned in the case of Small Business. For example, a lot of conduct is through practice not by law and the practices create a cultural understanding that is counter-productive to the best ideas winning. The text is quoted here and referenced about the distinction that primes, not small business, are invited to suggest SBIR topics: *"Primes are also invited to suggest SBIR topics through informal discussions with laboratory personnel or SBIR program managers at scientific meetings, technology conferences, and trade shows, as well as at DoD's own outreach workshops."* This text continues to state, *"There is no formal process within DoD through which firms can suggest topics, so SBIR program managers have no information about how often firm-suggested topics are adopted."* - National Academies of Sciences, Engineering, and Medicine. 2009. An Assessment of the SBIR Program at the Department of Defense. Washington, DC: The National Academies Press. <https://doi.org/10.17226/11963> ; <https://nap.nationalacademies.org/read/11963/chapter/8#191>

(ii) **What specific Federal statutes, regulations, or policies present barriers to AI development, deployment, or adoption in your sector?** There is no one single rule but when Permion asks about potential companies, introductions for partnerships, and developing synergistic relationships, the set of procurement integrity rules and perceived conflicts of interest emerge and hinder building the proper communities of interest. References are:

- 18 U.S.C. § 208 – Acts affecting a personal financial interest ;
- 5 C.F.R. § 2635.102(b)(8) – Definitions (Standards of Conduct / Executive Branch);
- 5 C.F.R. § 2635.703 – Use of nonpublic information
- 8 C.F.R. § 3.101-1 – Standards of Conduct (FAR Part 3)

(iii) **Where existing policy frameworks are not appropriate for AI applications, what administrative tools (e.g., waivers, exemptions, experimental authorities) are available, but underutilized?** There is misalignment between state practice and federal practices so that policies, for example, for the use of AI in insurance and underwriting, are controlled state by state and are these are inhibitory disincentives to use AI to solve problems. This impedes business scaling of tools and techniques in a whole of nation approach.

(iv) **Where specific statutory or regulatory regimes are structurally incompatible with AI applications, what modifications would be necessary to enable lawful deployment while preserving regulatory objectives?** We answer this question in our policy strategy presented later in this document.

(v) **Where barriers arise from a lack of clarity or interpretive guidance on how existing rules cover AI activities, what forms of clarification (e.g., standards, guidance documents, interpretive rules) would be most effective?** Here again, we provide a policy strategy based on building a common data repository of AI developers, and the importance of a national level of supply chain to understand who is doing what and why it is important. See later in the document on our policy strategy.

(vi) **Are there barriers that arise from organizational factors that impact how Federal statutes, regulations, or policies are used or not used? How might Federal action appropriately address them?**

The federal bureaucracy evolved for risk avoidance, not rapid iteration. The **appropriations and acquisition systems** (PPBE, FAR) are synchronized to **multi-year planning**, incompatible with small business innovative AI tool making and creative advancements. Civil servants are **penalized** for visible failure, not rewarded for intelligent risk-taking. Common Data needed for competitive, agile, decentralized decision-making are **balkanized** by classification, program stovepipes, and incompatible bespoke and mostly opaque cultural practices. Multiple overseers (GAO, OMB, Inspectors General, Congress) impose divergent accountability frameworks produce fragmented disunity and inhibit whole of nation doctrines. The federal acquisition ecosystem is **path-dependent on a small number of integrators** that dominate R&D pipelines which has innumerable barriers to emerging AI businesses seeking growth, partnership or capital. Finally, Senior officials conflate **command** (clear intent and accountability) with **control** (micromanagement and veto) while in a total lack of **quantitative metrics** for agility, foresight, and competitive adaptation – all of this conflates with statutes like the Anti-Deficiency Act (31 U.S.C. § 1341) and conflict-of-interest rules (18 U.S.C. §§ 208–209) which are over-cautiously often **over-interpreted** by counsel and executives to forbid any inter-organizational collaboration or data sharing or synergies to create the communities of interests that the national interest desperately needs now.

Regulatory Reforms Strategy Framework

Permion Inc. strongly suggests that structural philosophy of reform be adopted and applied to AI because AI is uniquely rapidly competitively evolving and there are still too many unknown unknowns to adopt a rules approach. We present the contextual explanation of our strategic approach to help the reader understand why and how we came to our recommendations and positions. *This section is, perhaps, the most important part of this document.*

Our structural philosophy emphasizes accelerating innovation and adoption velocity by replacing reactive regulation with proactive, feedback-driven policy design. This means that we take the critical approach from Boyd's OODA Loop (Observe, Orient, Decide and Act) complemented by the productive proactive histories from Newt Gingrich's and Dick Cheney's defense reform agendas. These structural agenda's emphasized **agility**, **competition**, and **decentralized** decision-making which are critical to a healthy incentive structure for success of AI in United States leadership. We can recast the approach in the format of a competitive intelligence loop modeled on Boyd's OODA cycle—Observe, Orient, Decide, Act. *Based on the principles, we will present 5 key policy strategies for regulatory reforms.*

- **Observe:** Continuously scan technological frontiers for emergent AI capabilities and foreign competition. This requires curiosity, inquiry, and proactive pull to gain data, avoid blindspots.
- **Orient:** Decentralized expert teams interpret signals quickly without waiting for inter-agency clearance which means cross-functional cells (technical, legal, ethical, economic, value based).
- **Decide:** Short decision cycles guided by mission outcomes, not process checklists.
- **Act:** Rapid pilot deployments and field testing, feeding results back into the loop.

Federal leadership growth needs rewards for intelligent risk-taking based on gaining data from multiple sources rather than relying on a single source, or opinion – this is key to the OODA loop “observe”.

Reforms

In presenting our five policy strategies and their principles-driven regulatory reforms, we enable the government to learn fast, fail and iterate faster than peers, converting foresight into national agility for AI technological superiority.

1. **Replace command-and-control regulation with competitive incentives.** Replace bureaucratic brakes with regulation incentivizing a race to excellence:
 - a. Tax credits, prize challenges, and performance-based contracts reward firms that achieve verifiable safety, efficiency, or explainability.
 - b. Regulatory sandboxes allow private developers to demonstrate compliance through results rather than paperwork.
 - c. Procurement preference goes to AI systems that have been built and can be developed to trustworthy systems or that show they can compete against foreign alternatives.
2. **Decentralize Decision-Making for Speed.** Use Boyd and Gingrich's decentralization ethos in which authority moves downward in policies (not fixed rules) and outward (to staff) with fast, context-specific policies that:
 - a. Empower mission-level regulators and field labs to make real-time calls on AI testing and risk mitigation.
 - b. Replace monolithic decision-makers and their committees with federated networks linked by common data about companies, people, performance, innovation, creativity, technology readiness and outcome metrics.
 - c. Federal, state-level and private partnership incentives using objective (not subjective) evaluation metrics on the common data, turning governance into a distributed ecosystem.
3. **Reward Institutionalize Learning and Curiosity while Punishing Arbitrary Judgment and Dogmas.** Competition accelerates through evidence, not ideology—mirroring the iterative learning of AI itself.
 - a. Continuous data collection on interactions, incidents, value-chain impact, and workforce adaptation.
 - b. Clear “supply-chain: dashboards that inform Congress and the public of AI progress and risks.
 - c. Adaptive policy updates every fiscal cycle based on metrics and measurable outcomes.
4. **Interlink DoD, DOE, DARPA, NSF, and private sector initiatives through proactive reward structures.** Treat AI regulation as a national readiness function—a defense of technological freedom.
 - a. Use federal leadership to prime competitive states and regions (Knowledge Plains, Semiconductor Corridors) rather than centralize control in Washington.
 - b. Empower leaders (private, public) with trust following success, by evidence, not by rule or decree.

- c. Empower separation of interests where commercial interest is about AI business-scaling while national interest is about AI technological supremacy and advantages. Do not confuse them.
5. **Incentive-Based Trust and Excellence Architecture for Competitive Advantage.** Encourage self-regulatory alliances where industry sets high voluntary standards, reducing the need for regulation.
- a. Give preferential status to technology builders and achievers in partnerships versus soloists.
 - b. Reward transparency through preferred-vendor status and export clearances for compliant firms.
 - c. Tie federal funding to auditable AI technology production, innovation, technology readiness level, “Intellectual Property” (IP) evaluations, safety and security results, not to prescriptive compliance manuals.

Reform Use-Cases

We believe a few illustrative examples of the policy strategies in action can speak to a wealth of specific items that perhaps should be filtered by a good AI with human subject matter in the loop and on the loop.

Example 1 - Opportunity Loss: the director of a large agency gets a contractor’s review of a new company’s creative AI in the field of neurosymbolic AI. The contract tells the director, in a short single sentence debrief that “neurosymbolic AI as a science is bunk”. The new company persists and asks to present a briefing to the director. The director sides with the contractor and says, “we don’t need to see any brief from you”.

Solution: use policy strategies 1 and 3. The company fills in a feedback form. The same form (common data) is filled by the director. The transparency is available to reveal inappropriate decision making. The director gets demerit points on performance review, risking future job stability. The contractor suffers a penalty against their past-performance. The system is a basic reward-punish iterative structure, just like AI itself.

Example 2 – National Security Damage: A new company invents a communication chip that mix commercial and military waveforms to provide *AI powered perfect secrecy communications*. A foreign adversary learns of this and finds out that the company is seeking a round of funding from investors. The adversary poisons the investor interest through a careful whisper campaign. No one believes the company claims. Eventually the company enters bankruptcy. In the bankruptcy, the highest bidder for the company assets wins – the foreign *stalking-horse* adversary.

Solution: use policy strategies 3 and 4. The company fills in a common data form. The government can initiate a private-public partnership to empower the company to succeed despite the lack of immediate commercial or investor interests. The company provides a national strategic advantage to intelligence,

communications, and warfighters without any need to produce a commercial article. The nation is better positioned to win.

Example 3 – Pigeonholing: The investment committees of well-known banking organization are responsive to market trends, messaging, and advertising campaigns. A company with an established base of operations in defense hardware products brings a new AI technology for consideration but faces committees that see the company brand as “Not AI” and pigeonhole the offer while accommodating relatively valueless solutions that while conceptually well-advertised have no basis to achieve deliverable outcomes and impacts.

Solution: use policy strategies 1, 3 and 5. Reward and incentivize the banking organization to take risks in AI that greater, for example, than other kinds of risks. The government can support any bank to empower investment in a technology-first company support, decentralizing the burden away from the sole discretion of any one investment committee, to deliver to the national challenges of building AI systems. Everyone wins because even though enterprise time horizons may be longer, and the risks of advanced technology higher, ultimately without incentives, discounts, tax-breaks and other financial instruments, single monolithic investment committees are unlikely to change their behaviors in the market.

Reform Exemplars

Rule. For new AI uses, agencies offer time-boxed regulatory sandboxes with outcome targets via CRADA.
Rule. For AI prototypes or pilots, agencies default to Other Transaction Authority (OTA) under 45-days
Rule. Pair smart export controls on advanced chips/models with fast-track licensing lane with IP security
Rule. Use interim rules with automatic sunsets (12–24 months) and a public performance scorecard
Rule. Establish tiered “credits” (faster authorizations, longer ATO durations) for AI-as-a-Service offerings
Rule. Shift one-off ATOs to continuous authorization with reciprocity across agencies, from CRADA or OTA
Rule. Require regulators in safety-critical domains to accept “Predetermined Change Control Plans”

Note that some of the rules have statements like “smart export” and “IP security” which means the policies should support the protection of US originated IP to mitigate the current and ongoing annual IP loss and its exponentially greater impacts to the national security and interests. For example, solutions for hardware encapsulated software delivery models that enables domestic companies to ship overseas, enjoy sales, but have assurance of anti-tamper, and IP protections. These protections can be purchased by the company from the government “as a service” as there must be zero-trust security policies to support such an activity in the common good. Without this, small companies are at risk of IP loss and cannot easily scale sales and business elsewhere but are landlocked in the market. Therefore, reading the rules and the policies requires insightful care.

Conclusions

Permion Inc. believes that real reforms will require a digital-twin of the US regulatory laws, rules, and policies with a what-if planning scenario modeling capability to develop insight and foresight to prioritize



where the political and policy making action needs to happen – which rules, which reforms are most critically needed for maximizing impact.

Ironically, this effort will require the use of AI because the task is so huge and daunting for any human group that tools will need to achieve penultimate best courses of action, or at least, a set of options for action. This task falls into a category called “Wicked Problems” (https://en.wikipedia.org/wiki/Wicked_problem) for which AI is the best tool to help regulatory analysts address strategies toward a solution that is realistic and feasible.

Permion Inc. is here to help if or as called upon to provide its perspectives.

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