



Comments on National Strategic Plan for Advanced Manufacturing

Office of Science and Technology Policy (OSTP)

Docket No. OSTP-NSTC-2025-0001

March 2026

Executive Summary

The Business Software Alliance (BSA)¹ welcomes the opportunity to respond to OSTP's Request for Information on the next National Strategic Plan for Advanced Manufacturing.

BSA represents the world's most innovative enterprise software companies, whose products underpin virtually every segment of US advanced manufacturing: from computer-aided design (CAD), computer-aided manufacturing (CAM), and Building Information Modeling (BIM) to enterprise resource planning (ERP), industrial cloud platforms, as well as cybersecurity and productivity tools, customer relationship management (CRM), artificial intelligence (AI), and quantum computing. The enterprise software industry is central to the US manufacturing competitiveness that OSTP's Strategic Plan seeks to strengthen.

This submission makes four principal points:

- BSA strongly supports the core objectives of the National Strategic Plan for Advanced Manufacturing, including advancing manufacturing technology innovation, growing the advanced manufacturing workforce, and building resilient US supply chains.
- Enterprise software — spanning CAD/CAM, EDA, BIM, ERP, industrial cloud, CRM, HR, and related tools — is an indispensable driver of US advanced manufacturing competitiveness. No serious strategy to revitalize American manufacturing can succeed without policies that sustain US enterprise software leadership.
- BSA's US Enterprise AI Adoption Agenda provides a concrete, actionable blueprint for accelerating AI adoption in manufacturing and across the broader economy — one that is directly aligned with the Administration's AI Action Plan and its manufacturing goals.
- A high-quality US innovation system — including a patent system that faithfully corrects errors and protects US manufacturers rather than enabling foreign-backed non-practicing entities (NPEs) to weaponize invalid patents against them — is foundational to US manufacturing competitiveness. Unfortunately, current USPTO patent quality standards and patent review processes policies undermine this objective and the Administration's stated manufacturing goals.

I. BSA Supports OSTP's Advanced Manufacturing Objectives

The 2022–2026 National Strategy for Advanced Manufacturing established three enduring top-level goals: (1) develop and implement advanced manufacturing technologies; (2) grow the advanced manufacturing workforce; and (3) build resilience into manufacturing supply chains and ecosystems. OSTP's RFI asks whether these goals remain appropriate for the next four to five years and what emerging needs might require additional priorities.

BSA continues to support these three pillars of the 2022-2026 National Strategy for Advanced Manufacturing. The US manufacturing sector contributes more than \$2.3 trillion to GDP annually, employs approximately 13 million Americans, and supports millions more in related supply chain and service roles. In advanced manufacturing specifically — semiconductors, aerospace, automotive, industrial equipment, medical devices — the US faces intensifying competition from state-backed industrial policies in China, Europe, and elsewhere. The Strategic Plan must provide a robust federal framework to counter these pressures and sustain US leadership.

On the second question, BSA believes the next Strategic Plan should reflect two emerging realities that cut across all three goals. First, enterprise software and AI are no longer auxiliary tools in manufacturing — they are critical drivers of manufacturing competitiveness, quality, efficiency, and innovation. Second, the US innovation ecosystem — particularly the patent system — must function as a genuine asset for US manufacturers, not as a liability that benefits foreign adversaries and NPEs at American companies' expense. Both points are developed below.

II. Enterprise Software: The Competitive Core of US Advanced Manufacturing

Enterprise software is not a supporting actor in US manufacturing — it is, increasingly, the decisive competitive variable. Enterprise software enable manufacturers to operate more safely and efficiently, enhance product and service development, and increase opportunities for innovation and growth. Across the manufacturing sector, enterprise software performs this role comprehensively: enabling manufacturers to engage in R&D, manage supply chains, document regulatory compliance, reach new customers, and continuously improve business processes.

The scale of this transformation is measurable. Global digital transformation spending among companies in discrete or process manufacturing industries has surpassed \$816 billion annually, with more than 90 percent of manufacturing leaders reporting that digital transformation is important to their success.² Ninety-one percent of senior manufacturing leaders have increased their digital transformation investments in the last year.³ The specific enterprise software categories driving these outcomes include:

A. CAD/CAM and Electronic Design Automation (EDA)

Computer-aided design and computer-aided manufacturing software form the foundational layer of the modern manufacturing process. CAD/CAM systems allow manufacturers to translate digital designs directly into physical products with precision and speed, eliminating human error, reducing production flaws, and shortening time-to-market. Computer-aided manufacturing (CAM), for example, writes the code to control the machinery that creates the part, telling the machine exactly where and how to move so that the part is made to exact specifications — saving hours of hand-programming time while continuously analyzing stock material for warping or other defects.

In semiconductors — which the Administration's AI Action Plan has identified as a critical domestic manufacturing priority — EDA software is foundational. No advanced chip can be designed or manufactured without it. BSA member companies are global leaders in EDA, and their tools underpin every major US semiconductor fabrication facility. Maintaining US leadership in EDA is not optional for semiconductor manufacturing leadership: it is a prerequisite.

The impact of advanced CAD/CAM tools on manufacturing outcomes is concrete and documented. Using AI-based generative design software from Autodesk, General Motors engineers designed a seat bracket

that is 40 percent lighter and 20 percent stronger than the previous part, consolidating eight components into a single 3D-printed unit — directly reducing material cost and improving fuel efficiency.⁴ These are the kinds of product improvements that aggregate across millions of manufactured components to produce decisive competitive advantages.

B. Building Information Modeling (BIM)

Building Information Modeling is among the most consequential enterprise software innovations for the construction, infrastructure, and industrial facilities sectors. BIM is not a single tool but an ecosystem encompassing technologies, standards, skills development, budgeting, and project management throughout the entire life cycle of a building or facility — from initial design through construction to ongoing operations. With BIM, project data flows freely, removing traditional barriers between stages of the value chain and enabling architects, engineers, contractors, and owners to collaborate in real time from anywhere in the world.

The productivity implications are substantial. McKinsey has found that if construction sector productivity were to catch up with that of the total economy, it would add approximately 2 percent to global GDP.⁵ Digital transformation within the construction and infrastructure sector, McKinsey found, could reduce costs by 4–6 percent and increase productivity by 14–15 percent.⁶ For US manufacturing facilities specifically, BIM enables manufacturers to plan, simulate, and optimize factory layouts before a single piece of equipment is installed — reducing costly errors and accelerating production readiness. In factory settings, the use of digital twin technology has been shown to enable a 200 percent increase in manufacturing capacity and a 20 percent improvement in productivity.⁷

C. Enterprise Resource Planning (ERP) and Industrial Cloud

Modern ERP systems are the operational nervous systems of advanced manufacturing companies. They integrate financial management, procurement, inventory, supply chain, production planning, quality control, compliance, and human resources into a single, data-driven platform. The next-generation ERP systems now available leverage AI and cloud computing to provide real-time visibility across every dimension of manufacturing operations — enabling faster, smarter decisions at every level of the enterprise.

The competitive impact of cloud-based ERP adoption in manufacturing is documented and significant. Detroit Manufacturing Systems — a value-add assembly and contract manufacturing provider for the automotive, defense, and aerospace industries — transitioned from an on-premises ERP system to SAP S/4HANA Cloud and recorded a 15–20 percent gain in production efficiency while reducing negative inventory by 90 percent, cutting it from \$2 million to \$200,000.⁸ These are the kinds of operational improvements that directly support the Administration's goal of revitalizing US manufacturing competitiveness.

IBM survey data show that 67 percent of manufacturers currently identify next-generation ERP systems as among the top technologies helping them meet their operational goals.⁹ Enterprise cloud adoption is also a prerequisite for deploying AI tools across the manufacturing floor, making industrial cloud infrastructure foundational to the AI transformation of manufacturing discussed below.

D. Digital Twins, IoT, and AI-Enabled Manufacturing

The convergence of digital twin technology, Industrial Internet of Things (IIoT) sensors, 5G connectivity, and AI analytics is enabling a fundamental reimagining of how factories operate. Digital twins — computerized models of physical products, production processes, or entire factory environments — allow manufacturers to simulate and optimize operations before committing to physical changes, dramatically reducing waste and downtime. Using IoT data and AI, digital twins can improve goods, predict maintenance needs, increase energy efficiency, and determine optimal production processes.

The operational results achievable through this convergence are striking. Toyota's Indiana Assembly plant — which produces a new vehicle every minute — deployed IBM Maximo with AI and IoT technologies and reduced downtime by 50 percent, reduced breakdowns by 70 percent, and cut overall maintenance costs

by 25 percent.¹⁰ Corning's fiber optic cable manufacturing facility in Hickory, North Carolina, teamed with Verizon to deploy 5G Edge service, dramatically speeding data collection, enabling real-time machine-to-machine communication, and improving the efficiency of autonomous guided vehicles on the factory floor.¹¹ L'Oréal deployed IBM AI and edge computing solutions to make its manufacturing operations smarter and more agile, enabling faster product innovation while maintaining quality standards.

E. CRM, HR, and Other Enterprise Software

Customer relationship management (CRM) software enables manufacturers to understand customer sentiment, anticipate demand, and align production with market realities at a level of precision previously unattainable. Oracle AI tools, including Oracle Supply Chain Management Cloud, can analyze thousands of product reviews to provide manufacturers with real-time insight into customer sentiment, feeding directly into product development cycles.¹² Another CRM software provider — which operates a World Economic Forum-designated Global Lighthouse smart factory in Lexington, Kentucky — enhanced its CRM platform with AI tools that ingest data from accounts, orders, customer assets, and IoT sensor data to identify clients who may need to upgrade or modernize their systems.

Human resources software is equally important to the manufacturing competitiveness agenda, enabling manufacturers to identify, recruit, and retain the skilled talent that advanced manufacturing requires. According to Autodesk's 2025 State of Design & Make report, 59 percent of business leaders in design and manufacturing now say lack of access to skilled talent is a barrier to their company's growth — up sharply from 44 percent the year before.¹³ AI-powered HR and workforce tools can help manufacturers close this gap by matching candidates to roles, identifying skills gaps, and personalizing training programs at scale.

In short, the full suite of enterprise software capabilities is not peripheral to the US manufacturing competitiveness agenda. It is central to it. Any National Strategic Plan that focuses on physical capital, infrastructure, or workforce development without equally prioritizing the enterprise software ecosystem that makes modern manufacturing possible will fall systematically short of its objectives.

III. The BSA AI Adoption Agenda and US Manufacturing

BSA's US Enterprise AI Adoption Agenda establishes that the broad adoption of enterprise AI by organizations across the economy is a strategic priority for the United States. As BSA's Agenda states: "Winning with AI is not only about creating the most powerful tools, but it is also about enabling the best tools to make sectors across the economy more successful and globally competitive."¹⁴ This principle applies with particular force to manufacturing.

According to the Manufacturers Alliance Foundation, nearly 80 percent of US manufacturers expect to increase their AI use over the next two years. BSA's Digital Transformation Network report on AI and Manufacturing found that AI is transforming manufacturing across every stage of the value chain, from product design through factory optimization to post-production performance improvement. PwC has described AI as a "game-changer at every level of the manufacturing value chain," with product design, predictive maintenance, reduced downtime, improved safety, lower operational costs, and faster decision-making among the measurable benefits. The cost of not adopting AI in manufacturing is also concrete: the Siemens True Cost of Downtime 2024 report estimates unplanned equipment downtime at \$36,000 per hour in the fast-moving consumer goods sector and \$2.3 million per hour in automotive manufacturing — costs that AI-powered predictive maintenance can substantially reduce.

BSA's AI Adoption Agenda identifies three pillars that the federal government must support to realize AI's manufacturing potential:

First, Talent and Workforce. AI can augment human capabilities and drive innovation, productivity, and opportunity across the economy, but only if the workforce is equipped to use it. Autodesk's 2025 State of Design & Make report shows that 47 percent of manufacturing leaders say the ability to work with AI will be a top hiring priority in the coming years. By 2033, the Manufacturing Institute and Deloitte project that 3.8 million manufacturing jobs will need to be filled. BSA recommends that the Strategic Plan include a national

AI Education Framework aligned with President Trump's Executive Order on Advancing AI Education for American Youth, expansion of regional Tech Hub partnerships, and extension of federally subsidized grants and loans to students pursuing AI-relevant short-term training.

Second, Infrastructure and Data. Enterprise cloud adoption is a necessary prerequisite for deploying AI tools in manufacturing. BSA's Agenda urges the federal government to reduce costs for organizations using AI by addressing energy infrastructure requirements, promote investment in AI and connectivity infrastructure, and expand access to non-sensitive government data to catalyze AI research and industrial applications. Microsoft's construction of the Fairwater AI datacenter in Mount Pleasant, Wisconsin — representing a \$3.3 billion investment and described as the world's most powerful AI datacenter — exemplifies the kind of private investment the Administration's AI Action Plan is designed to catalyze. NVIDIA and Oracle's planned Solstice supercomputer for the Department of Energy, featuring 100,000 NVIDIA Blackwell GPUs, further illustrates the scale of AI infrastructure investment now underway. According to a 2025 NAM survey, 80 percent of manufacturers want the Trump Administration and Congress to advance comprehensive permitting reform to accelerate infrastructure modernization — supporting both AI growth and the broader industrial economy.

Third, Governance Frameworks. Clear regulatory frameworks and practical AI governance structures are critical to building customer confidence and promoting adoption. BSA's Agenda recommends establishing workable AI governance structures that promote customer confidence, ensuring clear national frameworks that advance privacy and cybersecurity, strengthening international harmonization to ensure globally compatible policies, and avoiding a patchwork of varying state, provincial, or local regulations that create duplicative compliance obligations for US manufacturers operating nationally.

The Strategic Plan should explicitly incorporate these three pillars and treat enterprise AI adoption as a top-level goal alongside technology development, workforce, and supply chain resilience. Countries that promote secure AI adoption most effectively — in both private and public sectors — will see the greatest economic benefits, stimulate further innovation, and deliver substantial gains across every industry sector. That is as true of manufacturing as of any part of the economy.

IV. A High-Quality Innovation System Is Foundational to US Manufacturing Competitiveness

No advanced manufacturing strategy can succeed without a patent and innovation system that genuinely protects US inventors and manufacturers. A strong, accurate, and reliable patent system incentivizes R&D investment, protects the fruits of that investment from appropriation by competitors, and ensures that US companies can defend themselves against abuse. The converse is equally true: a patent system that routinely issues low-quality patents and then refuses to correct those errors imposes substantial costs on US manufacturers, diverting resources from productive investment to litigation defense and enabling foreign-backed adversaries to exploit US legal processes against the very companies the Administration seeks to protect.

BSA — together with the Alliance for Automotive Innovation, the High Tech Inventors Alliance, and US*MADE, representing the automotive, semiconductor, and industrial machinery sectors (among others) — wrote to USPTO Director Squires on March 24, 2026, to raise these concerns in the context of the USPTO's recent Director's Memorandum on discretionary Inter Partes Review (IPR) institution. That letter's analysis applies with full force to the OSTP Advanced Manufacturing Strategic Plan.

USPTO should return to AIA first principles: institute IPR when the statutory standard under §314(a) is met, focus on patent validity rather than extraneous procedural barriers, and use IPR efficiently to correct invalid patents. USPTO should prioritize patent examination quality to reduce the volume of low-quality patents that provide the foundation for NPE abuse of US manufacturers and other US companies. The Strategic Plan should explicitly recognize that a high-quality innovation system — one in which patents are granted for genuine inventions and USPTO errors are corrected through the congressionally established review process — is foundational to US manufacturing competitiveness and national security.

V. Conclusion

BSA strongly supports OSTP's effort to develop a forward-looking National Strategic Plan for Advanced Manufacturing. The three existing strategic goals — advancing manufacturing technology, growing the workforce, and building supply chain resilience — remain exactly right for the challenges ahead. BSA's core message is that achieving those goals in the current environment requires explicit recognition that enterprise software and AI are the primary drivers of manufacturing competitiveness; that BSA's US Enterprise AI Adoption Agenda provides an actionable framework for government support of AI adoption in manufacturing; and that a high-quality, manufacturer-friendly innovation system is foundational to everything else.

Enterprise software powers the design tools, the factory floor, the supply chain, the customer relationship, and the workforce systems of US advanced manufacturing. AI is transforming every one of those functions at unprecedented speed. The Strategic Plan should treat enterprise software and AI adoption not as a technical aside, but as the central competitive lever they are. And it should ensure that the broader policy environment — including USPTO's approach to patent quality and IPR access — reinforces rather than undermines the manufacturing goals the Administration has made central to its economic agenda.

BSA and its member companies stand ready to work with OSTP, NIST, and the broader interagency team developing this plan. We are committed to ensuring that enterprise software and AI capabilities are fully integrated into America's manufacturing strategy and that the policy environment enables US manufacturers to compete and win on the global stage.

Annexes

Advanced Manufacturing and Industrial Technology Coalition Submissions on USPTO Patent Policies

¹ The Business Software Alliance (www.bsa.org) is the global trade association of the enterprise software industry, representing companies that are leaders in artificial intelligence, cybersecurity, cloud computing, quantum, and other breakthrough technologies. We work in over 20 markets in the US, Europe, and Asia, advocating for policies that build trust in technology so that every industry sector and the public can benefit from innovation.

BSA's members include: Adobe, Alteryx, Amadeus, Asana, Atlassian, Autodesk, Avalara, Bentley Systems, Box, Cisco, Cohere, Cohesity, Dassault Systemes, Databricks, Datadog, Docusign, Dropbox, Elastic, EY, Graphisoft, HubSpot, IBM, Kyndryl, MathWorks, Microsoft, Notion, Okta, OpenAI, Oracle, PagerDuty, Palo Alto Networks, PTC, Rubrik, Salesforce, SAP, ServiceNow, Shopify Inc., Siemens Industry Software Inc., Trend Micro, TriNet, Veeam, Workday, Zendesk, and Zoom Communications Inc.

² [A Guide to Digital Transformation in Manufacturing - The Manufacturing Leadership Council](https://manufacturingleadershipcouncil.com/a-guide-to-digital-transformation-in-manufacturing-31506/), <https://manufacturingleadershipcouncil.com/a-guide-to-digital-transformation-in-manufacturing-31506/>

³ Digital Transformation Network, Manufacturing – Digital Tools Transform How Things Get Made (2022), at <https://dxnetwork.org/downloads/03312022dtnmanufacturing.pdf> (internal citation omitted) (*hereinafter* DTN Manufacturing Report).

⁴ [Autodesk, Generative Design in Car Manufacturing \(2018\)](https://www.autodesk.com/customer-stories/general-motors-generative-design), at <https://www.autodesk.com/customer-stories/general-motors-generative-design>

⁵ McKinsey, Reinventing Construction Through a Productivity Revolution, at: <https://www.mckinsey.com/capabilities/operations/our-insights/reinventing-construction-through-a-productivity-revolution>

⁶ McKinsey, Decoding digital transformation in construction (2018), at <https://www.mckinsey.com/capabilities/operations/our-insights/decoding-digital-transformation-in-construction>

⁷ See DTN Manufacturing Report, *supra* Note 2.

⁸ See DTN Manufacturing Report, *supra* Note 2.

⁹ IBM, AI Poised to Drive Smarter Business Growth Through 2030 (2026), at <https://newsroom.ibm.com/2026-01-19-ibm-study-ai-poised-to-drive-smarter-business-growth-through-2030>

¹⁰ See DTN Manufacturing Report, *supra* Note 2.

¹¹ *Id.*

¹² *Id.*

¹³ *Id.*

¹⁴ BSA, Enterprise AI Adoption Agenda (2026), at <https://www.bsa.org/policy-filings/us-enterprise-ai-adoption-agenda>



SIIA



March 24, 2026

The Honorable John A. Squires
Under Secretary of Commerce for Intellectual Property
Director, United States Patent and Trademark Office
600 Dulany Street
Alexandria, VA 22313-1450

Dear Director Squires:

We write on behalf of America's advanced manufacturing and industrial technology sector – spanning semiconductors, automobiles, precision machining, and industrial software, artificial intelligence, and quantum technologies, among other related industries. The member companies of the undersigned organizations collectively employ more than 90 million American workers.

We understand that the March 11, 2026 Director's Memorandum on "*Additional Discretionary Institution Considerations*" ("Memorandum" or "USPTO Memorandum") reflects a recognition that the USPTO's broad curtailment of access to Inter Partes Review (IPR) proceedings has harmed US manufacturers and related industries in many sectors. We welcome that recognition.

However, we are concerned that the Memorandum does not address the underlying problem. It may instead exacerbate it. We offer these views in the hope of returning USPTO to the framework Congress established.

I. Core Problem

The fundamental challenge facing US manufacturers is not that too many IPRs are being filed. It is that too many low-quality patents are being granted – patents that "should not have issued" under any reasonable reading of the prior art.

IPR petitions are a diagnostic signal, not the disease. Each petition identifies a patent claim that – in most cases – the Patent Trial and Appeal Board (PTAB) would consider "reasonably likely" to contain an examination error bearing on the claim's validity.

Rather than adding new administrative barriers to IPR access, USPTO should focus its energy on correcting its own errors via the IPR process and improving examination quality. These steps will reduce opportunities non-practicing entities (NPE) to weaponize invalid patents against US companies. Reducing IPR access does not reduce the incidence of bad patents; it simply leaves them in place to be misused in litigation. That outcome is contrary to US economic and national security interests.

II. Statutory Mandate

Congress established the IPR framework through the America Invents Act (AIA) with a clear statutory standard: to institute IPR if a petitioner demonstrates "a reasonable likelihood" of prevailing on at least one challenged patent claim. This is a merits-based, validity-focused standard – and it is the law.

USPTO is required to execute Title 35, including instituting IPRs under §314(a). Likewise, the Constitution provides patent protection to "inventors" for their "discoveries"—not to non-inventors for non-inventions.

These legal authorities do not permit a different role for the agency. Notably, they do not permit the Director to refuse to correct the agency's own errors or to sustain invalid patents based on *ad hoc* judgments designed to restrict IPR access to a small subset of otherwise qualified petitioners.

III. The Memorandum's First Factor Discourages US Advanced Manufacturing

The Memorandum's first factor – which could be used to deny meritorious IPR petitions due to any foreign sourcing or processing – will disadvantage the US manufacturing companies it purports to protect.

Modern US manufacturing does not occur in a vacuum. Even highly domestic manufacturers rely on some foreign inputs or processing: A semiconductor fabricated in Texas may incorporate specialized chemicals from Japan. An automobile assembled in Michigan may use ball bearings processed in Canada. A medical device manufactured in Minnesota may incorporate precision optics from Germany.

Under the Memorandum's framework, these manufacturers could be denied IPR access. In fact, the more complex and advanced the manufacturing operation, the more likely it fails the test.

This creates the wrong incentives: It is a policy that penalizes US-based advanced and high value-added manufacturing operations.

IV. The Memorandum's Second Factor Promotes NPE Assertions of Invalid Patents

The Memorandum's second factor – which allows NPEs to rely exclusively on their own patent assertion, litigation, and licensing activities (even involving invalid patent claims) – creates a striking asymmetry.

Under this factor, an NPE asserting an invalid patent need not manufacture anything in the United States to continue to be able to assert an invalid patent against US companies in US courts. Even in the case of NPE patent claims that the USPTO agrees are “reasonably likely” to be invalid, US producers' statutory right to IPR review is conditioned on an obligation to show US manufacturing of an accused product, while non-producing NPEs face no such obligation whatsoever.

For example, in the automotive sector – which supports over 11 million well-paid jobs in high valued-added US manufacturing – this framework would favor foreign-backed NPEs that manufacture nothing in the United States over US-based companies that manufacture end products with some imported inputs.

This is not the right balance. It tilts the system towards foreign-funded litigation and away from a strong, durable, high-quality US patent system that protects US economic and national security.

V. The Memorandum Conflicts with White House AI and Commerce Manufacturing Goals

Surprisingly, the USPTO Memorandum does not address, or even reference, AI – let alone the [President's AI Action Plan](#). The AI Action Plan is a major White House priority that places US AI leadership at the center of national economic and security strategy. For example, the AI Action Plan states:

America must bring semiconductor manufacturing back to U.S. soil. A revitalized US chip industry will generate thousands of high-paying jobs, reinforce our technological leadership, and protect our supply chains from disruption by foreign rivals. The Trump Administration will lead that revitalization without making bad deals for the American taxpayer.

The Memorandum undercuts this objective. USPTO has repeatedly denied IPR petitions filed by semiconductor manufacturers against invalid NPE patents. USPTO has gone so far as to support injunctions against US chip manufacturing activities in favor of NPEs that manufacture nothing in the United States.

A similar conflict exists between the USPTO Memorandum and a bipartisan US government call to strengthen American AI leadership. Thousands of American companies across the AI stack have responded to this call by collectively investing over [\\$1 trillion](#) to build out America's AI infrastructure and by taking steps to develop new American AI products and services. This includes products and services intended for export under the [American AI Export Program](#).

Unfortunately, the USPTO Memorandum's approach would appear to disqualify these same American companies from being able to access IPR if these entities do not meet its highly restrictive definition of US "manufacturing."

In fact, the USPTO Memorandum is much more generous to foreign NPEs that neither manufacture in the United States, nor invest in AI infrastructure in the United States, nor produce any AI-related services or goods in the United States, nor export such goods or services. In fact, USPTO would consider the mere assertion by a foreign NPE of a patent claim – even an erroneously issued claim that USPTO has refused to correct – as a "US manufacturing" activity, provided that that NPE's litigation activity results in a licensing payoff from a US manufacturer. In other words, a foreign sovereign wealth fund or hedge fund that manages – through aggressive litigation tactics – to extract a payment from a US manufacturer will be deemed to be engaging in "US manufacturing," while most US companies building the AI stack will not. This is not – we submit – the right balance.

The IPR institution framework directly affects the environment in which the US companies across the AI stack innovate and defend against spurious litigation involving invalid patents. The Memorandum's failure to consider implications for US AI leadership and the government's AI priorities is a serious analytical gap.

VI. Path Forward

We raise these concerns constructively. USPTO should be a champion of US advanced manufacturing and technology leadership. The current trajectory, regardless of its underlying motivations, risks producing outcomes that none of us want.

We urge a return to AIA first principles. USPTO should:

- Institute IPR when the statutory standard under §314(a) is met;
- Focus on patent validity, not extraneous procedural barriers; and
- Use IPR to correct invalid patents efficiently.

USPTO's role is to execute the law that Congress enacted – ensuring that patents are valid and that USPTO errors are corrected. Doing those things well is the most powerful contribution USPTO can make to US competitiveness, US innovation, and US jobs.

We remain committed to working constructively with the Office on these critically important issues and would welcome the opportunity for further dialogue. Thank you for your consideration.

Respectfully submitted,

Alliance for Automotive Innovation
Business Software Alliance
High Tech Inventors Alliance
Software & Information Industry Association
United for Patent Reform
US Manufacturers Association for Development & Enterprise (US*MADE)

CC: US Senate and House Judiciary Committee members, White House components, relevant USG departments and agencies



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PATENT REFORM



USPTO's Patent Policy Shift – Undermining US Industrial Capacity and the Manufacturing Workforce

This report documents how US Patent and Trademark Office (USPTO) – by refusing to correct its own patent examination errors – is undermining national policy goals of rebuilding US industrial capacity and growing well-paid manufacturing jobs for American workers.

The USPTO Director has: (1) undertaken a policy of refusing to grant most petitions to review USPTO errors in granted patents; (2) [proposed regulations](#) in Oct. 2025 that would deny access to IPR based on extra-statutory procedural criteria; and (3) published a March 2026 Director's memo that would limit IPR access based on highly restrictive criteria relating to company size and profile.

None of these restrictions are permitted by statute. All of them hurt productive companies and their workers in the US. The primary beneficiaries are the foreign sovereign wealth funds, litigation speculators, and the “non-practicing entity” (NPE) shell companies they create. From 2021-2023, [4 out of the top 5 NPEs](#) were based outside the US or ultimately controlled by foreign interests. These speculators are among the few “winners” of USPTO's new policy stance. The broader US economy and American workers stand to lose.

This situation is of serious concern to the above-listed organizations, which represent America's advanced manufacturing and industrial technology base – from [automobiles](#), [semiconductors](#), and [precision machining](#), to [industrial software, AI, and quantum](#), including [small and medium-sized enterprises](#) (SMEs). Collectively, our organizations' member companies employ over 90 million American workers.

The USPTO Should Follow the Law and Correct its Own Errors

The Patent Trial and Appeal Board (PTAB) administers the Inter Partes Review (IPR) process – a streamlined, expert-driven, congressionally-mandated mechanism for correcting invalid patents inside the agency that originally issued them. IPR is a critical safeguard: it costs a fraction of court litigation, avoids invasive judicial discovery, and allows the USPTO to correct its own errors before they cause greater harm.

The USPTO has heavily curtailed access to IPR. The USPTO policy shift blocks manufacturers and others from accessing IPR even when they present compelling evidence that a patent claim is invalid. The USPTO policy shift favors non-practicing entity (NPE) patent plaintiffs – a type of patent litigant that “hold patents but [do not produce or sell any goods or services based on those patents](#).” NPEs use their patents to attack manufacturers and other productive companies in US courts.

USPTO's Actions Undermine US Industrial Reshoring Efforts

Reshoring US production already requires enormous upfront capital: specialized equipment, land, labor, and infrastructure. Manufacturers face substantial regulatory, equipment, and financing demands – effectively turning every new facility into a high-risk, multi-billion-dollar capital bet. The manufacturing sector remains in contraction territory, with [declining construction spending](#) for new industrial facilities and [substantial reductions in US manufacturing investment](#).

The USPTO policy shift layers aggressive patent litigation on top of these pressures. When a manufacturer knows that launching a product may trigger lawsuits based on invalid, overly broad, or abstract patents, it must factor not only engineering and capital costs into its business plan, but years of potential litigation, discovery burdens, and settlement pressure. NPE litigation correlates with lower [venture capital](#) investment, declines in [startup formation](#), reduced [patenting activity](#), and measurable drops in [R&D spending](#) – effects that are particularly damaging in manufacturing, where margins are tighter and investment cycles longer.

USPTO's Actions Favor Financial Speculators Over US Manufacturers and US Workers

[NPEs have sued 1,500 manufacturers](#) – more than any other type of firm – in recent years. The economic toll is staggering: NPEs impose roughly [\\$29 billion per year in direct litigation costs](#), over [\\$4.3 billion in damages](#) in 2024 alone, and in one notorious example, a foreign-financed NPE secured a [\\$2.18 billion verdict against Intel](#) on a patent later found invalid. Defending a [single case can cost a manufacturer up to](#)

[\\$4.5 million](#) in district court and up to \$8 million at the ITC – capital that could otherwise support hiring, automation, plant expansion, and workforce development. [Job losses for small manufacturers](#) are estimated at ten jobs in a typical plant to defend even a single lawsuit.

USPTO's Actions Favor Foreign-Backed NPEs Over US Manufacturers and US Workers

The impact of the USPTO policy shift falls hardest on US industry and US workers, given that [more than 60% of PTAB reviews are requested by US petitioners](#), while up to 80% of the (weak or invalid) patents at issue are held by Chinese and other foreign-controlled entities, particularly NPEs.

The USPTO policy shift substantially strengthens the ability of such NPEs and other foreign interests to attack US interests: Between 2021 and 2023, [4 of the top 5 NPEs were either based outside the US or ultimately owned by non-U.S. persons](#), accounting for over 90% of the patent cases filed by that group. Some NPEs are Chinese-linked, such as PurpleVine IP, a [Shenzhen-based litigation investment firm](#), which has been documented funding US patent suits against semiconductor manufacturers. Similarly, Russian interests have [used litigation finance to evade US and UK sanctions](#), with the US Treasury Department [confirming to Congress](#) that third party litigation funding is used to evade sanctions.

The problem is much larger than China or Russia: A [GAO report](#) documented NPE funding from Saudi Arabia and France, while other NPEs draw funding from the UAE, Japan, Canada, Latin America, and beyond. For example, Fortress Investment Group – a prominent NPE funder – manages [\\$6.8 billion](#) in litigation finance assets and is controlled by [a sovereign wealth fund](#) based in the UAE. It was a Fortress-backed NPE shell company that secured the [\\$2.18 billion verdict against Intel](#) on a patent later found to be invalid (noted above). Another Fortress-backed NPE shell company recently attacked another semiconductor company that manufactures chips in Texas.

The problem of foreign-backed NPEs is compounded by structural opacity: even nominally US-incorporated NPEs can be layered shell companies concealing foreign control. Generally speaking, NPEs face no legal obligation to disclose their funding sources or beneficial owners, leaving courts, defendants, and the public [effectively blind](#) to who is actually waging these campaigns against American industry.

This much is clear: Collectively, NPEs are striking at the heart of US economic and national security, [using their US patents to attack thousands of productive US companies](#) – with 29.6% of NPE attacks aimed at manufacturers and 22.8% of NPE attacks aimed at high technology and other service providers.

USPTO's March 11 Memorandum on "US Manufacturing and Small Business Use of IPR Proceedings" Primarily Benefits Litigation Financiers and NPEs

On March 11, 2026, the USPTO Director issued a memorandum purporting to favor US manufacturing and small business interests. The memo does the opposite. Under 35 USC § 314(a), the Director is to institute an IPR whenever there is a "reasonable likelihood" that the petitioner will prevail on at least one patent claim. This is a merits-only, validity-focused standard. The Director's memo replaces this statutory standard with new set of administrative hurdles to IPR institution that continue to shield invalid patents from review.

The Director's memo is also an act of constitutional overreach. For years, a small group of lawmakers have sought – and repeatedly failed – to enact legislation imposing restrictive standing requirements for IPR petitions. Congress has consistently declined to do so. Rather than accept that legislative judgment, the Director now imposes similar restrictions unilaterally and in direct conflict with § 314(a)'s express mandate.

The Director's new test is also rigged to fail the very companies it claims to protect. To secure a favorable IPR institution decision, a US manufacturer facing a lawsuit from an NPE over an invalid patent must now prove [not only](#) that at least one patent claim is likely invalid, [but also](#) that its products satisfy the Director's highly restrictive domestic manufacturing criteria. Any foreign component sourcing or processing – the norm for US manufacturers operating at scale – risks disqualifying the petitioner entirely.

The Director's memo does not expand protections for manufacturers or small businesses — it confiscates a congressionally guaranteed right to merits-based IPR review, replaces it with a narrower discretionary benefit the Director controls, and then asks the victims of that substitution to be grateful for the exchange.



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USPTO's Patent Policy Shift – Opposed by 90% of US Industries Small- and Medium-Sized Enterprises, Patient Groups, and Public Interest Groups

This report documents widespread US private sector opposition to a policy shift at the US Patent and Trademark Office (USPTO), which is now refusing to correct its own patent examination errors, despite a statutory obligation to make such corrections if USPTO finds a “reasonable likelihood” that an issued patent claim is invalid in conjunction with an Inter Partes Review (IPR) petition.

The USPTO Director has: (1) undertaken a policy of refusing to grant most petitions to review USPTO errors in granted patents; (2) issued proposed regulations in Oct. 2025 that would deny access to IPR based on extra-statutory procedural criteria; and (3) published a March 2026 Director's memo that would limit IPR access based on highly restrictive criteria relating to company size and profile.

None of these restrictions are permitted by statute. All of them hurt productive companies and their workers in the US. The primary beneficiaries are the foreign sovereign wealth funds, litigation speculators, and the “non-practicing entity” (NPE) shell companies they create. From 2021-2023, [4 out of the top 5 NPEs](#) were based outside the US or ultimately controlled by foreign interests. These speculators are among the few “winners” of USPTO's new policy stance. The broader US economy and American workers stand to lose.

This situation is of serious concern to the above-listed organizations, which represent America's advanced manufacturing and industrial technology base – from [automobiles](#), [semiconductors](#), and [precision machining](#), to [industrial software](#), [AI](#), and [quantum](#), including [small and medium-sized enterprises](#) (SMEs). Collectively, our organizations' member companies employ over 90 million American workers.

USPTO Should Follow the Law and Correct its Own Errors

The Patent Trial and Appeal Board (PTAB) administers the IPR process – a streamlined, expert-driven, congressionally-mandated mechanism for correcting invalid patents inside the agency that originally issued them. IPR is a critical safeguard: it costs a fraction of court litigation, avoids invasive judicial discovery, and allows the USPTO to correct its own errors before they cause greater harm.

USPTO has heavily curtailed access to IPR. USPTO now blocks petitioners from accessing IPR even when they present compelling evidence that a patent claim is invalid, heavily favoring non-practicing entity (NPE) patent plaintiffs – a type of patent litigant that “hold patents but [do not produce or sell any goods or services based on those patents](#).” NPEs use their US patents to attack productive US companies in US courts.

USPTO's Actions Are Widely Opposed

According to an analysis by [Unified Patents](#), USPTO's October 2025 Notice of Proposed Rulemaking (NPRM) drew more than 11,100 public comments – of which 97% of all submissions and 90% of unique comments were opposed. A small number of supportive comments came from entities like Fortress Investment Group – a multi-billion-dollar patent litigation investor that is a subsidiary of an Abu Dhabi sovereign wealth fund – together with a cluster of affiliated shell companies that receive funding from or are otherwise controlled by Fortress. The pattern of who supports the NPRM is as revealing as the scale of those who oppose it.

USPTO's Actions Are Opposed by Businesses of All Sizes in All Sectors

Objections to the USPTO NPRM cut across virtually every sector of the economy. Automakers – including Ford, Honda, Rivian, and Toyota – filed comments, as did a coalition of twelve leading semiconductor companies including AMD, Intel, and Micron. Ford characterized the rule as one that would entrench advantages for foreign patent applicants and NPEs at the expense of US manufacturers and US workers.

US companies across the AI stack also opposed the NPRM, highlighting risks of AI trade secret theft in US courts by NPEs. Small and medium-sized businesses were also vocal in their opposition: nearly 10% of all comments expressly cited harm to small businesses or individual inventors.

USPTO's Actions Are Opposed on Security, Affordability, and Legal Grounds

Three further categories of harm deserve particular attention. First, [national security](#): the practical beneficiaries of reduced IPR access include [state-linked Chinese entities](#) – among them PurpleVine, a Shenzhen-based litigation financier and companies such as Huawei – that have reportedly use US patents as a strategic tool against non-Chinese critical technology firms. A US manufacturing coalition concluded that a foreign adversary could scarcely have written a more favorable rule than USPTO's proposal.

Second, [healthcare affordability](#): by limiting the public's ability to challenge pharmaceutical patents through IPR, the rule insulates patents that drug companies use to delay generic competition and sustain elevated prices – directly [contradicting the Administration's stated goal of lowering costs for American patients](#).

Third, [legal authority](#): fourteen former Members of Congress who authored the America Invents Act have formally stated that [USPTO's actions conflict with the statute and exceed its scope of authority](#). The former [Solicitor of the USPTO concurred](#). Many commenters have separately demonstrated that the rule's economic impact almost certainly surpasses the \$100 million annual threshold that would require OIRA review under Executive Order 12866 – a review process the USPTO sought to bypass entirely.

USPTO's Actions Are Opposed by the Following Groups (Among Others)

- [Advanced Manufacturing and Technology Industry Submission to the White House re National Security and Economic Espionage Impacts of New PTAB Practice and Proposed Rulemaking](#)
- [Alliance for Automotive Innovation Comments on USPTO's Proposed Rulemaking](#)
- [AMD, Amkor Technology, Analog Devices, Global Foundries, Intel, Lattice Semiconductor, Micron, and Others' Comments on USPTO's Proposed Rulemaking](#)
- [American Economic Liberties Project Comments on USPTO's Proposed Rulemaking](#)
- [American Honda Motor Company Comments on USPTO's Proposed Rulemaking](#)
- [Association for Accessible Medicines Comments on USPTO's Proposed Rulemaking](#)
- [BSA Comments to USPTO on Proposed Revision to Rules of Practice Before the PTAB](#)
- [Cisco Comments on USPTO's Proposed Rulemaking](#)
- [Ford Motor Company Comments on USPTO's Proposed Rulemaking](#)
- [Former USPTO Solicitor Comments](#)
- [Generation Patient Comments on USPTO's Proposed Rulemaking](#)
- [HTIA Comments to USPTO on Proposed Revision to Rules of Practice before the PTAB](#)
- [Intel Corporation Comments on USPTO's Proposed Rulemaking](#)
- [Joint Letter from Fourteen Former Members of Congress](#)
- [Microsoft Comments on USPTO's Proposed Rulemaking](#)
- [National Retail Federation Comments to USPTO on Proposed Rulemaking](#)
- [Patients for Affordable Drugs – Comments on USPTO's Proposed Rulemaking](#)
- [Public Citizen and Law Professor Comments on USPTO's Proposed Rulemaking](#)
- [Rivian Automotive Comments on USPTO's Proposed Rulemaking](#)
- [R Street Institute Comments on USPTO's Proposed Rulemaking](#)
- [SIIA Response to USPTO's Proposed IPR Rulemaking](#)
- [Toyota Motor Company Comments on USPTO's Proposed IPR Rulemaking](#)
- [United for Patent Reform Comments on USPTO's Proposed IPR Rulemaking](#)
- [US*MADE Comments on USPTO's Proposed Rulemaking](#)
- [Volkswagen Group of America Comments on USPTO's Proposed IPR Rulemaking](#)