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Before the Committee on the Judiciary
of the U.S. Senate

Hearing on "From Genes to Machines: The Patent Eligibility Debate"

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Chairman Grassley, Ranking Member Durbin, and Members of the Committee:

Thank you for the opportunity to testify about the state of patent eligibility law in the United States and the urgent need to pass the Patent Eligibility Restoration Act (PERA).[1] I have twice testified on this subject before this Committee's Subcommittee on Intellectual Property, in January 2024 and again in October 2025. I am honored to now address the full Committee, because the problem I will describe is not merely a technical concern for patent specialists. It goes to whether the United States will remain the world's innovation leader—and it is a problem that only Congress can fix.

My message today is simple, and it comes down to three points.

First, Congress has not meaningfully changed the law that defines what is patentable in America since 1793. Technology has changed beyond recognition since then; the rules need to keep up. The United States needs an intellectual property system that works for 21st Century technologies and beyond.

Second, over the past fifteen years the courts have grafted judge-made exceptions onto that 233-year-old text—exceptions Congress never wrote and that the lower court judges who must apply them say they cannot apply consistently or fairly. The result is driving investment, jobs, and entire industries away from the United States, in precisely the fields that will define this century: computer-implemented inventions, medical diagnostics, biotechnology, and advanced computing.

Third, deciding what belongs inside the patent system—and what stays out—is a major national policy question. The Constitution assigns that question to Congress, not the courts. As a society,

[1] The views expressed herein are personal to me, and do not represent the views of Sullivan & Cromwell LLP or its clients.

we need to have that debate, resolve it, and replace today's confusion with clear statutory rules. PERA (S. 1546 and H.R. 3152) does that.

I. A Law Written in 1793 Governs Today's Technology

Defining what can be patented is one of Congress's oldest responsibilities. The Constitution empowers Congress "[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."[2] James Madison wrote that the utility of this power "will scarcely be questioned" because "the public good fully coincides . . . with the claims of individuals."[3] In other words, when inventors are protected, society benefits as a whole.

One of the first acts of the new Congress was the Patent Act of 1790, amended in 1793. In that 1793 statute, Congress defined for the first time the categories of invention eligible for a patent: "any new and useful art, machine, manufacture, or composition of matter, or any new and useful improvement thereof."[4] Those words—written by the Founding generation—remain, almost verbatim, in Section 101 of the Patent Act today.

Consider what that means. The provision that decides whether artificial intelligence systems, gene-based medicines, quantum computers, and life-saving diagnostic tests can be patented was drafted when the cutting edge of technology was the cotton gin. Congress has not legislated on the fundamental question of what belongs in the patent system in more than 230 years. Courts can be forgiven for struggling to fit 21st-century technology into an 18th-century statute. But struggle they have—and the whole country is paying the price.

For most of our history, the breadth and simplicity of the 1793 formulation worked, and Congress kept the system in good repair in other ways. In the Patent Act of 1952, Congress deliberately organized the requirements for a patent into separate provisions, each with its own job—an architecture the next section describes.[5] Keeping those lanes separate gave inventors, examiners, and judges decades of clarity.

II. Eligibility Is a Threshold Requirement—Not the Entire Patentability Inquiry

To understand what has gone wrong—and what PERA would fix—it helps to understand the structure of the patent statute. Obtaining a patent does not depend on a single test, but on several distinct requirements.

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[2] U.S. Const. art. I, § 8, cl. 8.

[3] *The Federalist No. 43* (James Madison).

[4] Patent Act of 1793, ch. 11, § 1 (1793).

[5] Patent Act of 1952, Pub. L. No. 82-593 (1952) (codified at Title 35, United States Code); *see also In re Bergy*, 596 F.2d 952, 959 (C.C.P.A. 1979) (Rich, J.) (explaining the logic behind separating eligibility into a separate category in § 101 in the 1952 Act, adding a new, explicit test for non-obviousness in § 103, and warning against "commingling" the categories of invention in § 101 with the conditions for patentability in §§ 102, 103, and 112).

Section 101 asks only a threshold question: Is the claimed invention the kind of subject matter the patent system may protect in the first place: a process, machine, manufacture, or composition of matter? Satisfying that requirement does not entitle anyone to a patent. It merely allows the invention to be evaluated under the more demanding requirements that follow.

Section 102 asks whether the invention is new; if it has already been disclosed, no patent may issue. Section 103 asks whether it is more than an obvious variation of what came before; if a skilled person would have readily arrived at it, no patent may issue. Section 112 asks whether the inventor has described the invention clearly and fully enough to teach others how to make and use it; if not, no patent may issue.

These other provisions address most of what critics mean when they refer to "bad patents"—claims that are trivial, overbroad, already known, or broader than what the inventor actually invented and disclosed. Those concerns are properly addressed under Sections 102, 103, and 112, not through the threshold inquiry under Section 101.

Congress designed these provisions to perform different functions. Judge Giles Rich, a principal architect of the 1952 Patent Act, cautioned that they should not be "commingled."[6] Yet modern eligibility doctrine has increasingly blurred those boundaries. Courts now use Section 101 to decide questions that belong elsewhere—whether claimed steps are "routine" or "conventional," which overlaps with novelty and obviousness under Sections 102 and 103, or whether a claim contains enough detail, which is a disclosure question under Section 112. The result is that inventions may be declared categorically ineligible before courts ever determine whether they are actually new, non-obvious, and adequately described.

PERA addresses only the subject matter question in Section 101. The other requirements for patentability under Sections 102, 103, and 112 remain undisturbed.

III. The Courts Have Rewritten the Statute—and Confused Everyone, Including Themselves

Beginning in 2010, in a series of four decisions—*Bilski*, *Mayo*, *Myriad*, and *Alice*—the Supreme Court took narrow, judge-made exceptions to Section 101 for "abstract ideas," "laws of nature," and "natural phenomena" and, together with subsequent application by the lower courts, expanded them beyond recognition.[7] None of those exceptions appears anywhere in the statute. As Justice Thomas himself acknowledged, these exclusionary principles, if applied too broadly, risk "swallow[ing] all of patent law," because at some level every invention rests on a law of nature or an abstract idea.[8]

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[6] *In re Bergy*, 596 F.2d at 959.

[7] Bilski v. Kappos, 561 U.S. 593 (2010); Mayo Collaborative Servs. v. Prometheus Labs., Inc., 566 U.S. 66 (2012); Ass'n for Molecular Pathology v. Myriad Genetics, Inc., 569 U.S. 576 (2013); Alice Corp. Pty. Ltd. v. CLS Bank Int'l, 573 U.S. 208 (2014).

[8] *Alice*, 573 U.S. at 217.

That is precisely what has happened. Lower courts applying these decisions now routinely reject genuine technological inventions at the threshold—without ever asking whether they are new, non-obvious, or well described. Outcomes turn more on how a patent lawyer drafted the claims than on the substance of the invention. The confusion is so deep that, by 2021, all twelve then-sitting judges of the Federal Circuit—the specialized court that hears every patent appeal in the country—had publicly lamented the state of eligibility law, describing it as incoherent and unworkable.[9] When the judges who apply this law every day say they cannot tell what is eligible for a patent, inventors and investors certainly cannot.

I saw this confusion firsthand as Director of the U.S. Patent and Trademark Office (USPTO), an agency that now receives over 600,000 patent applications each year. In 2019, we issued guidance that synthesized the case law into a clearer framework for our examiners. It worked: according to the USPTO's Chief Economist, uncertainty in first-action eligibility determinations dropped by 44 percent in the following year.[10] That is proof that clearer rules produce more consistent results. But agency guidance cannot bind the courts, and it can be rewritten with every change of administration. A patent that survives examination under one framework can still be invalidated in court under another. Only a statute—binding on the agency and the courts alike—can close that gap. And only a statute has the permanence needed to enable industry to rely on the rule of law as they plan for the future.

IV. What This Means in the Real World

These are not hypothetical problems. Consider a few concrete examples.

A camera declared an "abstract idea." An inventor patented an improved digital camera: two lenses, two image sensors, circuitry, memory, and a processor that uses one image to enhance the other. In *Yu v. Apple*, the Federal Circuit held this device ineligible for a patent—not because it was old, and not because it was obvious, but because, in the court's view, it was "directed to" the "abstract idea" of "taking two pictures . . . and using one picture to enhance the other."[11] A camera is a physical machine you can hold in your hand; the multi-lens design it claimed is an approach now found in virtually every smartphone sold in America. As Judge Newman wrote in dissent, the camera "is a mechanical and electronic device of defined structure and mechanism; it is not an 'abstract idea.'" She warned that the "inconsistency and unpredictability of adjudication have destabilized technologic development in important fields of commerce."[12] If a camera can

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[9] *See* Athena Diagnostics, Inc. v. Mayo Collaborative Servs., LLC, 927 F.3d 1333 (Fed. Cir. 2019) (denial of rehearing en banc, with eight separate opinions); Interval Licensing LLC v. AOL, Inc., 896 F.3d 1335, 1348 (Fed. Cir. 2018) (Plager, J., concurring in part, dissenting in part); Berkheimer v. HP Inc., 890 F.3d 1369, 1375 (Fed. Cir. 2018) (Lourie, J., concurring).

[10] Office of the Chief Economist, *Adjusting to Alice: USPTO Patent Examination Outcomes After Alice Corp. v. CLS Bank International*, U.S. Patent and Trademark Office (Apr. 2020).

[11] Yu v. Apple Inc., 1 F.4th 1040, 1043 (Fed. Cir. 2021).

[12] *Id.* at 1046, 1049 (Newman, J., dissenting).

be an abstract idea, those words have lost their meaning—and no inventor in any field can be confident of anything.

A test for a debilitating disease that doctors could not diagnose invalidated. Researchers invented a laboratory test to detect a rare neurological disorder, myasthenia gravis—an autoimmune condition that breaks down the communication between the nerves and the muscles, producing a progressive weakness that, left unchecked, can rob a patient of the ability to swallow or even breathe, but that is highly treatable once it is correctly diagnosed.[13] Before their invention, roughly 20 percent of patients suffering from the disease could not be diagnosed. The courts held the test ineligible as a "law of nature"—though many appellate judges, denying rehearing en banc, wrote that they regretted the result but felt bound by Supreme Court precedent.[14] This was not an isolated case. As Chief Judge Moore of the Federal Circuit observed, since the Supreme Court's *Mayo* decision, the court has held "every single diagnostic claim in every case before [it] ineligible"—a de facto rule that medical diagnostics cannot be patented in the United States.[15] Congress never considered, debated, or enacted any such rule. The consequences are measurable: independent analysis estimates that investment in U.S. diagnostic technologies fell by more than $9 billion in the years after *Mayo*, relative to what it otherwise would have been.[16]

Making a component of a car, struck down as a "law of nature." An American auto-parts manufacturer patented a method of manufacturing automobile driveshafts so that they vibrate less. The claim recites concrete manufacturing steps—providing a hollow shaft, tuning the mass and stiffness of a liner, and inserting the liner into the shaft. The Federal Circuit nonetheless held the claim ineligible because, in the court's view, it was "directed to" a law of nature—Hooke's law—even though the patent never mentions Hooke's law.[17] As the dissent warned, every mechanical invention applies the laws of physics.[18]

Uncertainty for a breakthrough therapy for a fatal childhood disease. Consider what Section 101 uncertainty means for one of medicine's most promising technologies. Researchers developed a foundational gene-therapy invention—a recombinant, human-engineered molecule

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[13] For a general overview of myasthenia gravis—its effect on the neuromuscular junction, its potential to progress to life-threatening weakness of the muscles used to swallow and breathe, and its treatability when diagnosed—see *Myasthenia Gravis (MG)*, Cleveland Clinic, https://my.clevelandclinic.org/health/diseases/17252-myasthenia-gravis-mg.

[14] Athena Diagnostics, Inc. v. Mayo Collaborative Servs., LLC, 915 F.3d 743 (Fed. Cir. 2019); *id.* at 757 (Newman, J., dissenting) (noting that "until discovery of the diagnostic method described in [the patent-at-issue], some 20% of patients suffering from the neurological disorder Myasthenia Gravis were not capable of being diagnosed").

[15] *Athena Diagnostics*, 927 F.3d at 1352 (Moore, J., dissenting, joined by Judges O'Malley, Wallach, and Stoll).

[16] A. Sasha Hoyt, *The Impact of Uncertainty Regarding Patent Eligible Subject Matter for Investment in U.S. Medical Diagnostic Technologies*, 79 Wash. & Lee L. Rev. 397 (2022).

[17] American Axle & Mfg., Inc. v. Neapco Holdings LLC, 967 F.3d 1285, 1292-93 (Fed. Cir. 2020).

[18] *Id.* at 1319 (Moore, J., dissenting) ("Every mechanical invention must apply the laws of physics—that does not render them all ineligible, or maybe it does now.").

used to treat Duchenne muscular dystrophy, a fatal disease that progressively destroys muscle and typically claims patients' lives by early adulthood. In January 2024, a federal district court invalidated the patent, explaining that "the mere fact that the [] patent's inventors combined natural products and put them in a host cell does not make the invention patentable under § 101,"[19] even though, as the Federal Circuit later explained, the claimed molecule "does not and cannot exist in nature" and is assembled by human hands from genetic material drawn from different species.[20] The decision sent shockwaves through the gene-therapy industry. If an artificial molecule of this kind could be treated as a product of nature, investors could reasonably wonder whether any patent in this field was secure. Two years later, in February 2026, the Federal Circuit reversed. But the reversal only underscores the problem: for two years, an entire industry was left uncertain whether the patent system would recognize an invention that plainly did not exist in nature.

Information processing treated as an abstraction. Another particularly broad exclusion courts have created relates to the processing of information itself. The Federal Circuit has acknowledged that it has "frequently held" claims reciting generalized steps of collecting, analyzing, and presenting information—performed through computer operations—to be directed to abstract ideas.[21] That "information-based category" can sweep together the storage, analysis, transmission, and display of data. Two recent decisions illustrate its reach. In *AGI SureTrack v. Farmers Edge*, the court held ineligible a precision-agriculture system that uses sensors on farm equipment to capture, decode, and transmit agronomic data, reasoning that the claims merely "collect, analyze, and transmit" information. Weeks later, in *Dental Monitoring v. Align Technology*, the court held ineligible a method that uses a trained deep-learning system to analyze images of a patient's teeth and guide orthodontic treatment.[22] The use of machine learning, the court concluded, "does not change our analysis." These decisions expose the problem for technologies likely to define this century. In the "information age," much innovative technology is based on collecting, processing, storing, and presenting information. A doctrine that treats those functions as presumptively abstract does not create a narrow exclusion. It places a barrier across a vast and increasingly important domain of innovation.

A camera, a diagnostic test, making a car part, a gene therapy, and types of machine-facilitated information processing: concrete inventions, in different industries, each caught in a doctrine so unstable that whether they belong in the patent system can turn on which judge hears the case—all under rules no Congress ever wrote. The stakes could hardly be higher. Thousands of diseases

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[19] REGENXBIO Inc. v. Sarepta Therapeutics, Inc., No. 20-cv-1226-RGA, 2024 U.S. Dist. LEXIS 3076, *13 (D. Del. Jan. 5, 2024) (granting summary judgment of ineligibility under § 101).

[20] REGENXBIO Inc. v. Sarepta Therapeutics, Inc., 167 F.4th 1206, 1213 (Fed. Cir. 2026).

[21] AGI SureTrack LLC v. Farmers Edge Inc., 176 F.4th 1373, 1382–83 (Fed. Cir. 2026) (quoting Mobile Acuity Ltd. v. Blippar Ltd., 110 F.4th 1280, 1293 (Fed. Cir. 2024), and Elec. Power Grp., LLC v. Alstom S.A., 830 F.3d 1350, 1355 (Fed. Cir. 2016)).

[22] Dental Monitoring SAS v. Align Tech., Inc., No. 2024-2270 (Fed. Cir. July 7, 2026) (nonprecedential).

still have no reliable diagnostic test or effective therapy—of the more than 10,000 known rare diseases alone, which affect over 30 million Americans, most have no FDA-approved treatment.[23] The same is true for solutions to the challenges that will define this century—advanced computing, next-generation manufacturing, and the technologies our national security depends on. Progress on all of them turns on the long-horizon, research-intensive investment that a reliable patent system exists to encourage.

Meanwhile, our competitors have moved in the opposite direction. China now leads in 66 of 74 critical emerging technologies tracked in a recent study.[24] Capital follows certainty: when American inventions cannot be reliably protected in the United States, the research, the funding, and eventually the industries move abroad.

This disadvantage is not hypothetical, and it is not confined to China. Our principal economic peers—the European Union, China, Japan, and South Korea—all take a more permissive and coherent approach to patent eligibility than the United States now does, protecting categories of computing, diagnostic, and biotechnology innovation that our own courts increasingly turn away.[25] On the threshold question of what may be protected at all, those jurisdictions today offer inventors greater certainty than we do—a competitive advantage they gained largely because we surrendered it. PERA would end that self-inflicted disadvantage and realign the United States with the rest of the developed world, so that an inventor has at least as much reason to build here as anywhere abroad.

The burden falls hardest on startups and small inventors. Large incumbents can protect their positions through scale, trade secrecy, and litigation budgets. A startup has none of those. Its patents are often its principal asset—the thing that persuades investors to fund years of risky development. Studies confirm that venture capitalists familiar with today's eligibility case law invest less in the affected technologies.[26] The patent system was designed to democratize innovation; today's Section 101 does the opposite.

Some argue that this concern is overstated, pointing to studies suggesting that software startups more exposed to the *Alice* decision fared no worse, on average, in raising venture capital or

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[23] *See Rare Diseases at FDA*, https://www.fda.gov/patients/rare-diseases-fda (more than 10,000 rare diseases affect more than 30 million Americans, and most have no FDA-approved treatment).

[24] Jenny Wong-Leung et al., *ASPI's Critical Technology Tracker: 2025 updates and 10 new technologies*, The Strategist (Dec. 1, 2025), https://www.aspistrategist.org.au/aspis-critical-technology-tracker-2025-updates-and-10-new-technologies/ (reporting on Australian Strategic Policy Institute study).

[25] *See* U.S. Patent & Trademark Office, *Patent Eligible Subject Matter: Public Views on the Current State of the Law in the United States* (Report to Congress, June 2022), https://www.uspto.gov/sites/default/files/documents/USPTO-SubjectMatterEligibility-PublicViews.pdf (summarizing stakeholder concerns that U.S. subject-matter-eligibility law is less clear and more restrictive than that of major foreign jurisdictions, to the detriment of U.S. competitiveness).

[26] David O. Taylor, *Patent Eligibility and Investment*, 41 Cardozo L. Rev. 2019 (2020) (reporting that venture capitalists aware of the § 101 case law invest less in areas of uncertain protection).

reaching a successful exit than their less-exposed peers. But an average across all startups conceals who won and who lost. A more comprehensive analysis—one that used artificial intelligence to assess the patent portfolios of thousands of firms before and after *Alice*—found that the decision's effects were sharply uneven. Large firms came out ahead—higher sales growth, higher profits, fewer lawsuits—while smaller firms faced intensified competition from venture-backed rivals and saw their valuations fall.[27] Weakening eligibility, in short, did not lift innovators as a class; it tilted the field toward the largest incumbents and away from the smaller innovators the patent system exists to empower.

V. Innovation Needs Clear Rules of the Road

Innovation is a long game. Turning a scientific insight into deployed technology often takes years—sometimes decades—of development, validation, regulatory review, and manufacturing scale-up, at a cost that routinely runs into the hundreds of millions of dollars, depending on industry. Investors commit that capital at the *beginning* of the journey. They need to know the rules that will apply at the *end* of it. The only way to achieve significant investment at scale in the risky technologies of the future is with a robust, stable, and predictable system of laws.

That is what industry means when it asks for clear "rules of the road." Businesses can adapt to almost any clear rule; what they cannot do is plan long-horizon research and development around a rule that changes from panel to panel and case to case. When the rules are predictable, capital flows to new technologies. When they are not, investment stalls—or moves to jurisdictions with firmer ground. Legal certainty is not a lawyer's nicety. It is economic infrastructure, every bit as much as roads and power lines.

Nowhere is the need for reliable patent rights more tangible than in the effort to rebuild American manufacturing. Companies generally make the investment needed to build manufacturing facilities only when they can reasonably expect to protect the underlying inventions long enough to earn a return. Clear, predictable patent rights are therefore part of the foundation for domestic manufacturing, encouraging firms to build—and keep—their production, technology, and expertise in the United States. It is no coincidence that IP-intensive industries are a significant source of America's manufacturing output and high-wage jobs.[28]

Some argue the opposite—that broad eligibility challenges under Section 101 help American manufacturing by eliminating so-called "bad patents." Recent history suggests otherwise. Over

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[27] Utku U. Acikalin, Tolga Caskurlu, Gerard Hoberg & Gordon M. Phillips, *Intellectual Property Protection Lost and Competition: An Examination Using Large Language Models*, 182 J. Fin. Econ. 104306 (2026) (finding that, after *Alice* weakened patent protection, large firms gained—in sales growth, profitability, and reduced litigation—while small firms faced increased competition, greater venture-backed entry into their markets, and lower valuations).

[28] *Intellectual Property and the U.S. Economy: Third Edition*, U.S. Patent and Trademark Office & U.S. Department of Commerce (2022), https://www.uspto.gov/sites/default/files/documents/uspto-ip-us-economy-third-edition.pdf (finding that IP-intensive industries accounted for 41% of U.S. GDP and supported 44% of U.S. employment, and paid wages roughly 60% higher than other industries).

the past two decades, patent rights have steadily narrowed through decisions limiting injunctions and patent eligibility, together with new administrative mechanisms for canceling issued patents.[29] If weaker patent rights were the key to reviving domestic manufacturing, the United States should have experienced a renaissance. Instead, it lost roughly five million manufacturing jobs over the same period.[30] Weakening patent protection did not bring factories home, and there is little reason to believe that weakening it further will.

There is a more fundamental answer as well. As explained above, Section 101 was never meant to be the patent system's quality filter—that is the work of Sections 102, 103, and 112, which PERA leaves fully intact. What PERA eliminates is not the ability to challenge invalid patents, but the tactical opportunity to exploit the shifting, judicially created exceptions that have made eligibility litigation unpredictable. Defendants should prevail when a patent fails the law Congress enacted—not because an amorphous judicial doctrine creates an opening to invalidate an otherwise patentable invention. Ending that uncertainty is a principal virtue of PERA, not a weakness.

VI. When Patent Protection Fails, Innovation Goes Dark

Predictable patent rights also serve the public in a less appreciated way: they encourage public disclosure. The patent bargain exchanges public disclosure for a limited period of exclusivity. When that exclusivity becomes unreliable, companies stop disclosing, at least in industries where trade secrecy is a viable alternative. Some technologies, such as pharmaceuticals, must ultimately be sold in forms that can be reverse engineered, making patents indispensable. Others, however, can shift between patent and trade secret protection. Diagnostics are a good example. An innovative diagnostic can be commercialized as a test kit when patent protection is reliable, but if patents offer little protection, the same innovation often can instead be provided as a laboratory service, with the underlying methods kept confidential as trade secrets. There is evidence that uncertainty surrounding U.S. patent-eligibility law has pushed parts of the diagnostics industry in precisely this direction.[31] The result is less public disclosure, less diffusion of technical knowledge, and a patent system that no longer delivers the bargain Congress intended. In the long run, this slows down innovation in the United States, precisely at a time when we must increase innovation in order to maintain our competitiveness and technological edge.

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[29] eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388 (2006); Leahy-Smith America Invents Act, Pub. L. No. 112-29 (2011) (establishing inter partes review and other administrative procedures for canceling issued patents).

[30] *See* Katelynn Harris, *Forty Years of Falling Manufacturing Employment*, U.S. Bureau of Labor Statistics (2020), https://www.bls.gov/opub/btn/volume-9/forty-years-of-falling-manufacturing-employment.htm. U.S. manufacturing employment declined by roughly five million jobs between 2000 and 2017.

[31] *See* Johnathon Liddicoat, *The Effects of Myriad and Mayo on Molecular-Test Development in the United States and Europe: Interviews from the Frontline*, Vanderbilt J. of Entertainment & Tech. Law (2020), https://scholarship.law.vanderbilt.edu/cgi/viewcontent.cgi?article=1031&context=jetlaw.

When patents become less reliable and trade secrecy remains a practical alternative, rational companies choose secrecy. The public then loses the very benefit the patent system is meant to provide. We do not learn how these transformative technologies work, and there is no point at which that knowledge enters the public domain—trade secrets can last indefinitely. Perhaps most importantly, secrecy reinforces the advantages of incumbent firms. Large companies can accumulate vast stores of proprietary know-how that competitors cannot access or lawfully use, making it harder for smaller, innovative entrants to challenge established players.

This is not mere theory. The same comprehensive study of firms before and after *Alice* documented this turn toward secrecy directly: the small firms that lost patent protection responded just as one would predict—by guarding their innovations as trade secrets instead, increasing their use of nondisclosure agreements by roughly a third.[32] A reliable patent system pushes in the opposite direction: it gives a small inventor a defensible asset instead of a secret it cannot possibly guard as well as a large entity can. In short, the uncertainty in today's law does not merely chill investment. It quietly pushes our most important emerging technologies out of the open, disclosure-based system and into the shadows—worse for science, worse for competition, and worse for every innovator who is not already big.

VII. As a Nation, We Must Decide What Is In—and What Is Out—of the Patent System

Reasonable people can debate which categories of innovation should be included and which should be excluded from patenting. But here is the point on which there should be no debate: that decision belongs to Congress. The Constitution assigns patent policy to the legislative branch. Courts decide individual cases and controversies; they cannot hold hearings, weigh economic evidence across industries, or make the broad policy tradeoffs that defining the boundaries of the patent system requires. Yet for fifteen years, that is exactly the task we have left to them—and the result is a patchwork of de facto exclusions that no Congress ever voted on.

This question—what should be inside the patent system and what should remain outside it—is important enough that we need to have the debate as a society and settle it. This Committee has done the work: hearings in 2019 with 45 witnesses over multiple days, further hearings in 2024 and 2025, and years of stakeholder engagement.[33] The status quo, in which no one—not inventors, not investors, not examiners, not even federal judges—can say with confidence what the law is, is untenable. It is time to resolve the issue and replace the confusion with clear statutory guidelines.

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[32] Acikalin et al., *supra* note 27 (finding that small firms increased their use of nondisclosure agreements by approximately 32% relative to pre-*Alice* levels).

[33] *See, e.g.*, *The State of Patent Eligibility in America: Hearings Before the Subcomm. on Intellectual Property of the S. Comm. on the Judiciary*, 116th Cong. (2019).

VIII. PERA Provides the Answer

PERA is a targeted solution, and in plain terms it does four things.

First, it preserves the broad, technology-neutral categories that have served the country since 1793: any useful process, machine, manufacture, or composition of matter, or improvement thereof. Breadth matters because invention is, by definition, unpredictable; the statute should not attempt to guess where human creativity will go next.

Second, PERA eliminates the judge-made exceptions and replaces them with a clear list of matter that is statutorily ineligible for patent protection: mathematical formulas as such; processes that are substantially economic, financial, business, social, cultural, or artistic; mental processes performed solely in the human mind; unmodified human genes as they exist in the body, including genes that are merely isolated; and unmodified natural materials as they exist in nature. If those categories are to be adjusted, Congress—not the courts—will adjust them.

Third, it adds practical guardrails for the computer age. Simply saying "do it on a computer" does not make an ineligible business method eligible; but a process that cannot, as a practical matter, be performed without a machine is genuine technology and belongs in the IP system, where it must still prove itself under the other requirements of the statute.

Fourth, PERA restores each provision of the Patent Act to its own lane. Section 101 becomes, once again, a threshold question, while Sections 102, 103, and 112 do the work of testing novelty, non-obviousness, and disclosure. Eligibility is not patentability: passing through the Section 101 gate guarantees no one a patent.

IX. Conclusion

The American patent system is a growth engine when it is clear, reliable, and predictable. Today it is none of those things at its very threshold, because we are asking courts to govern 21st-century technology with an 18th-century text overlaid with judge-made exceptions. After more than 230 years, it is time for Congress to modernize the statute, decide as a nation what belongs in the patent system, and give American innovators the rules of the road they need to invest, build, and keep the next generation of breakthroughs here at home. Patents will then once again, in Thomas Jefferson's words, "give[] a spring to invention beyond [his] conception."[34]

For these reasons, I respectfully urge the Committee to advance the Patent Eligibility Restoration Act.

Thank you, and I look forward to your questions.

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[34] Thomas Jefferson, *Letter to Benjamin Vaughan* (June 27, 1790), https://founders.archives.gov/documents/Jefferson/01-16-02-0342.