

The ETHOS Manifesto: Independent System-Level Researchers and Builders

Introduction

In an era of rapid change and institutional inertia, a new class of innovators is rising **outside traditional organizations**. These are the autonomous thinkers, ethical technologists, system designers, and bold builders working beyond the confines of academia or corporate labs. They value **freedom of inquiry** over credentials, moral purpose over profit, and **systemic solutions** over narrow projects. This manifesto affirms their identity and offers a guiding framework for all who aspire to join this **independent, system-level vanguard**. Together, we reclaim the spirit of innovation that thrives in garages and hackspaces, echoing the fact that many scientific greats – from Newton to Einstein – **did pivotal work before ever holding formal posts** ¹. We call this identity **ETHOS**, underscoring its core values and philosophical depth.

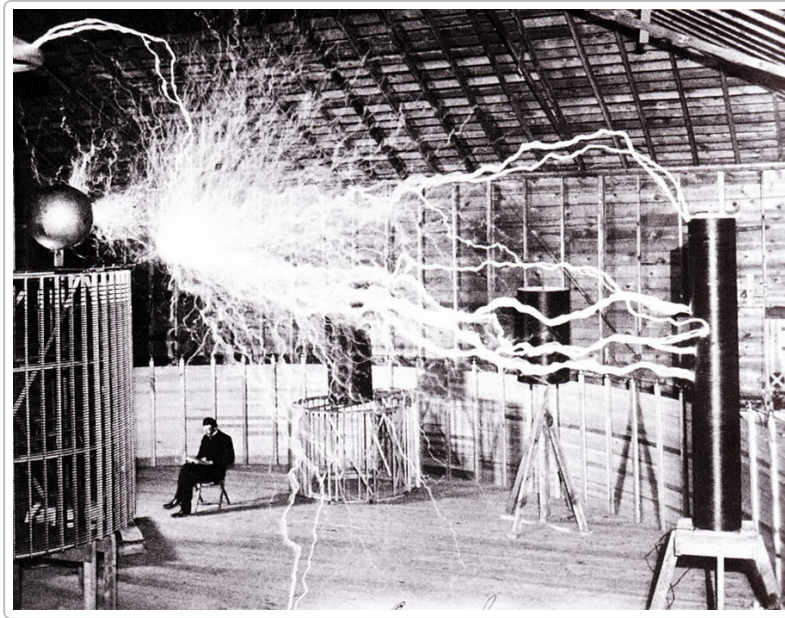
The ETHOS Identity

ETHOS stands for **Ethical, Transparent, Holistic, Open, Sovereign** – a fitting acronym for independent researchers and builders forging their own path. *Ethical* signifies a commitment to moral responsibility and beneficence. *Transparent* reflects a dedication to honesty and clarity of purpose. *Holistic* denotes system-level thinking – understanding problems in context and at scale. *Open* embraces open science and collaboration, sharing knowledge freely. *Sovereign* captures autonomy and self-governance, the freedom to pursue ideas outside institutional dictates. This ETHOS identity represents a modern “tribe” of **autonomous innovators** with a shared character and purpose. Each member of ETHOS is:

- **Ethical:** Upholds strong moral boundaries, prioritizing humanity and well-being over personal gain or power. Every project is guided by principles of justice, beneficence, and respect for life.
- **Transparent:** Maintains openness in methods and motives. Goals and funding sources are disclosed, and processes are visible to peers and the public, building trust through honesty ².
- **Holistic:** Approaches problems with systems thinking and rigor. Rather than treating symptoms in isolation, they examine root causes, interdependencies, and long-term impacts, designing solutions at scale.
- **Open:** Embraces open science and hacker culture values – sharing data and tools, collaborating across boundaries, and democratizing knowledge. Research outputs are made freely accessible for others to scrutinize and build upon ³.
- **Sovereign:** Exercises autonomy and self-direction. These individuals work *outside institutional hierarchies*, free from bureaucratic constraints, yet remain disciplined and accountable to the communities they serve. They answer to conscience and reason, not arbitrary authority.

ETHOS is more than an acronym – it’s a revival of the original spirit of scholarship. It recalls the Greek word *ethos*, meaning the character or guiding beliefs of a community. Adopting this identity means joining a lineage of **independent thinkers** and creators united by values instead of institutions.

Autonomy Outside Institutions



Independent experimentation outside traditional institutions – exemplified by a lone inventor in a high-voltage laboratory, circa 1900.

Autonomy is the foundational pillar of this manifesto. ETHOS researchers operate with intellectual sovereignty, choosing their topics and methods according to curiosity and conscience, not institutional agendas. History shows that **academic affiliation is not a prerequisite for groundbreaking work** – indeed, many legendary contributors thrived as outsiders. Isaac Newton developed calculus and theories of motion at home; Albert Einstein conceived special relativity as a patent clerk. Such cases are not anomalies: *“Scientists didn’t need the resources of a university, they simply needed a means of support that gave them enough time to think”* ¹. Even in recent times, **over half of major American inventors** interviewed in one study spent a substantial part of their creative careers **outside institutional contexts** ⁴. Far from hindering them, this independence enabled bolder, cross-disciplinary insights.

Over the 20th century, research became professionalized and siloed – *“researcher”* turned into a job title, and **work done by unaffiliated individuals was often viewed with suspicion** ⁵. This institutionalization, as sociologists note, is reinforced by “boundary-work” that labels outsider knowledge as illegitimate to protect the prestige of accredited experts ⁶. Funding structures further gatekeep expertise: for example, many government grants outright exclude independent scholars ⁷. Yet in reality, **innovators, campaigners, and risk-takers capable of transforming systems do not always work as full-time academics** ⁸. The **hacker ethos** long embraced this truth, insisting that skill and results matter more than credentials – *“Hackers should be judged by their hacking, not bogus criteria such as degrees, age, race, or position”* ⁹. In line with that spirit, ETHOS individuals mistrust rigid authority and bureaucracies, seeing them as **flawed systems that can stifle creativity** ¹⁰. Autonomy means refusing to let one’s genius be caged by red tape or groupthink.

Today, thanks to digital technology, independent researchers are experiencing a renaissance. The barriers that once required big institutions – access to journals, expert networks, computing power – are crumbling.

"Anyone with a laptop and internet can access most of the key tools that professors use, often for free", from open-access literature to public datasets and software ¹¹. Collaborative platforms and preprint servers allow unaffiliated scholars to publish and contribute. In fields like artificial intelligence, **the cutting-edge has largely moved outside academia** as nimble startups and independent labs outpace ivory towers ¹². The ETHOS community leverages these open resources to work on their own terms. They are modern heirs to what economist Vannevar Bush envisioned: a world where people pursue science as *"their avocation while earning their livelihood in other ways"*, liberated from bureaucratic constraints. By asserting intellectual independence, ETHOS practitioners can tackle unconventional questions and pioneer radical ideas that risk-averse institutions shy away from. They answer Kant's Enlightenment call: *Sapere aude!* – "Have courage to use your own reason!" ¹³ – thereby escaping the "self-incurred tutelage" of imposed thought. In sum, **autonomy is the oxygen of innovation**: it allows creativity to flourish wherever brilliant minds may be, unconstrained by gatekeepers.

Ethics and Moral Purpose

The ETHOS movement is defined by an unwavering ethical compass. **Ethics** in this context means both **moral integrity of the individual researcher** and **a commitment to positive social impact**. Unlike the caricature of the amoral "mad scientist," ETHOS members hold themselves to high ethical standards, *especially because* they operate outside external oversight. They establish their own "north star" principles to guide research choices: minimizing harm, respecting privacy and consent, and ensuring their work serves human and ecological well-being. This self-imposed moral framework acts as a **safety harness on autonomy**, preventing freedom from devolving into irresponsibility.

A core ethical tenet of ETHOS is *transparency of purpose*. Working in the shadows breeds mistrust, so ETHOS researchers strive to be clear about why they pursue a project and who it benefits. They document their methods and openly share results, inviting critique and collaboration. This norm aligns with the principles of the **open science movement**, which seeks to make knowledge creation **accessible, transparent, and inclusive** ³. By publishing in open-access journals, releasing source code, or blogging about findings, independent scholars build public trust and contribute to the commons. Their **knowledge is a public good**, not a proprietary asset. As Richard Stallman described in the hacker ethic, *"knowledge should be shared with other people who can benefit from it, and important resources should be utilized rather than wasted"* ². ETHOS researchers thus reject secrecy and hoarding of information; they see teaching, open-source contributions, and community engagement as ethical obligations.

Moreover, ETHOS entails **choosing problems and methods with moral intent**. These innovators often focus on systemic issues like climate change, social justice, or democratizing technology – areas where institutional research may lag due to political or profit constraints. They explicitly consider the broader **implications of their designs**. For example, an ETHOS-aligned data scientist might decline to develop a surveillance algorithm that violates civil liberties, no matter the technical challenge it poses. Instead, they might work on privacy-preserving encryption tools or open education platforms. This echoes the Romantic era's ideal of the scientist as a moral agent seeking truth and human betterment, not just technical mastery. In practice, ETHOS labs and startups often embed ethical review into their process, mirroring institutional IRBs but with even more stringent values-based criteria since they answer to conscience rather than compliance departments. They may draft their own **ethical codes** or manifestos (much as we do here) to codify these values.

Ethics also guides **how** ETHOS individuals innovate. They favor participatory approaches, co-designing solutions with communities rather than imposing top-down “expert” fixes. They credit collaborators and acknowledge intellectual debts, rather than engaging in the cutthroat competition sometimes seen in academia. In short, they cultivate an *ethos* of humility and service. The fruits of independent research – be it a new medical device, an AI model, or a scientific theory – are pursued *for the benefit of society and the planet*. This moral orientation is not a vague idealism; it is reinforced by literature on responsible innovation which stresses that technologists must align their work with societal values. ETHOS builders internalize this duty. By operating transparently and virtuously, they also help **dispel the skepticism** that outsiders sometimes face. They prove through action that one can be *ungoverned yet principled*. In doing so, they are creating a culture of ethical innovation that just might outshine the old institutions in public esteem.

Safety, Security, and Discipline

With great freedom comes great responsibility for **safety** and operational excellence. ETHOS practitioners recognize that working outside formal institutions does not exempt them from rigor – in fact, it demands *more* vigilance to maintain high standards and protect themselves, their data, and the public. A key pillar of this manifesto is a commitment to **safety and security**, both in the physical sense (safe lab practices, risk mitigation) and the digital sense (cybersecurity, data privacy). This echoes the ethos of the DIY biology and hacker communities, which have proactively adopted **codes of conduct emphasizing safety, openness, and accountability** ¹⁴. Independent does not mean careless; on the contrary, ETHOS researchers hold themselves accountable for mastering the *discipline* of their craft.

First, consider **operational safety**. In a traditional lab, institutional oversight (ethics boards, safety committees) provides guardrails. An independent researcher must become their own safety officer. They rigorously follow protocols for handling materials or running experiments, often going above and beyond regulatory minima to avoid accidents. For instance, a biohacker working with microbes will implement sterilization and containment procedures as diligently as any university lab – not because someone mandates it, but because they *choose* to uphold a culture of safety. The global community of garage scientists has in fact fostered norms where “**safe practices**” are explicitly promoted ¹⁵. The ETHOS movement formalizes this: its members *prioritize* safety at every step. That can mean consulting experts, conducting thorough risk assessments before deploying a new technology, and being ready to halt a project if unforeseen dangers emerge. It also involves maintaining **personal discipline** – managing time, documenting work meticulously, double-checking results – to ensure reliability and reproducibility. In essence, ETHOS researchers treat *rigor* as their unofficial supervisor. Sloppiness is not an option when you’re self-directed; peer review from the broader community and your own conscience are the enforcers of quality.

Next, **digital security and privacy** are paramount. Independent researchers often tackle sensitive problems (whistleblowing investigations, encryption software, citizen science in authoritarian regimes) where data and communications need protection. ETHOS individuals therefore become adept at using encryption, secure communication tools, and anonymity where necessary to **shield their work and collaborators** from malicious interference. They uphold data ethics, securing personal information and following best practices for cybersecurity. Being outside large organizations can actually be an advantage here – they avoid centralized databases and monolithic systems that are lucrative targets, instead employing decentralized, privacy-preserving approaches. Many ETHOS-aligned technologists draw inspiration from the **cypherpunk movement** and digital rights groups, integrating privacy by design. They may practice threat modeling and “operational security” akin to investigative journalists or activists to keep

their projects safe from corporate espionage or political suppression. The manifesto thus encourages every independent lab to treat **safety and security training** as core skills, just as important as coding or statistics. Fortunately, the community often shares guidelines and toolkits openly (for example, the EFF's Security Education Companion), making it easier to self-educate on these matters.

Finally, **emotional and mental safety** is also acknowledged. The independent path can be lonely and high-pressure. ETHOS builders cultivate resilience and mutual support networks to protect against burnout. They recognize the need for ethical intuition *and* emotional intelligence – creating a safe space for diverse voices and taking care of one's well-being as part of sustainable innovation. In summary, ETHOS independence is not a wild west; it is a **disciplined freedom**. By adhering to strict safety protocols, data security measures, and personal rigor, these autonomous researchers prove that one can achieve institutional-grade (or higher) standards on one's own. As a result, their work earns respect and trust. An ETHOS innovator's lab notebook might never be audited by a university committee, but it should be kept **with such clarity and care that any knowledgeable peer could audit it** and reproduce the results. This self-imposed exacting standard is what separates the true ETHOS practitioner from the dilettante. In the end, *safety is a mindset* – it's how one honors the underlying ethical promise to *do no harm*. By living up to that promise, independent researchers ensure their liberty never imperils the very society they aim to serve.

Systemic Design and Rigor

ETHOS individuals are **system-level thinkers and builders**. Rather than chipping away at narrowly defined problems, they set their sights on whole systems – whether technological, social, or ecological – and design solutions with an architect's mindset. This pillar of **systemic design** reflects both ambition and methodological rigor. Freed from the silos of academia or corporate R&D, independent innovators often have the vantage point to see the “big picture” and connect dots across disciplines. They combine the analytical precision of a scientist with the creative vision of an engineer-artist. The result is work that is *comprehensive* in scope and *meticulous* in execution.

Systemic thinking means considering how different elements interplay within a larger network. For example, an ETHOS environmental researcher addressing urban pollution might simultaneously examine technology (sensors, data analytics), human behavior (community engagement), and policy (regulatory frameworks) to craft a multifaceted intervention. This broad approach harks back to polymaths of the past (think of Leonardo da Vinci or Ada Lovelace) who were not constrained by single fields. Ada Lovelace, in fact, provides a classic example of system-level design in independent research. In 1843, working outside any formal institution, she devised the first published **algorithm intended for a computing machine**, complete with a comprehensive diagram tracing the computations step by step ¹⁶ ¹⁷. **This was effectively the execution trace of a program**, running through 25 iterative steps and showing which operations would act on which variables ¹⁷. Lovelace's holistic understanding of Babbage's Analytical Engine – blending mathematical rigor with imaginative foresight – allowed her to foresee how the machine could handle complex tasks beyond mere calculation. Her work illustrates how an independent mind can produce a **methodically rigorous design for an entire system**, arguably birthing computer programming as a discipline. We honor such examples by striving to emulate their combination of **visionary breadth and technical depth**.

Modern ETHOS builders apply similar rigor in diverse domains. They often create their own **tools and methodologies** when existing ones fall short. Many breakthroughs in software and hardware have come from independent “makers” who prototyped in workshops and home labs. The personal computer

revolution itself owes much to outsiders: as one study noted, **computer-related innovation benefited greatly from independent inventors** – for instance, “*Bill Gates and Linux originator Linus Torvalds both began as hobbyists,*” and their garage-style tinkering seeded industries that spurred massive growth ¹⁸. In the spirit of these tinkerers, ETHOS innovators embrace open-source development and agile experimentation. They are quick to adopt and remix emerging techniques, unburdened by departmental politics or legacy systems. This agility lets them **solve problems at scale** in creative ways. For example, a data activist might integrate satellite imagery, crowdsourced ground reports, and machine learning in a novel pipeline to monitor deforestation globally – a system-of-systems approach that cuts across conventional silos. Such ambitious projects require meticulous planning and iterative refinement. ETHOS researchers typically iterate rapidly, but with an eye toward **robust design principles** (modularity, fault tolerance, user-centered design, etc.) to ensure their solutions can scale and endure.

A hallmark of ETHOS methodology is **cross-disciplinary synthesis**. System-level challenges rarely respect academic boundaries, so these independent researchers become adept “bridge builders” between fields. They read widely and collaborate with specialists as needed, acting as integrators of knowledge. This boundary-crossing is supported by what sociologists call “**trading zones**” – interdisciplinary spaces often created by outsiders where new hybrids of knowledge emerge. Because ETHOS individuals are not siloed in one department, they more readily form such trading zones on forums, in hacker cons, or online communities devoted to specific grand challenges. They also practice what some scholars term “*Mode 2*” *knowledge production* – context-driven, problem-focused research done in flexible networks rather than stable institutions ¹⁹ ²⁰. The rigor in these collaborations comes from constant peer feedback and real-world testing, rather than formal peer review alone. For instance, an open-source hardware designer may release schematics publicly; the ensuing contributions and critiques from a global community act as a distributed review process, often more stringent and diverse than a closed group of experts.

In all these ways, ETHOS upholds **rigor** as strongly as any academic lab. The difference is that rigor is achieved through *transparency and community engagement* rather than top-down enforcement. Independent system designers frequently publish technical whitepapers, maintain detailed version control logs, and welcome others to reproduce or stress-test their systems. This aligns with the open science goal of making research **freely shared and built upon by others** ³. It also connects to the hacker culture value of meritocracy: designs succeed or fail based on their elegance and reliability, not the prestige of one’s job title ²¹. An ETHOS engineer takes pride in clean code and thorough documentation, knowing that their credibility rests entirely on the *quality of their work*.

To summarize, **Systemic Design and Rigor** in the ETHOS model mean thinking big but executing small details precisely. It’s about addressing root causes, not just symptoms, and doing so with engineered diligence. Whether it’s developing a decentralized internet protocol, a community-driven scientific study, or a humanitarian technology, ETHOS builders plan for **scale, sustainability, and interoperability**. They heed lessons from history’s independent geniuses and today’s open-source triumphs, proving that one can architect complex systems outside the halls of big institutions. By holding themselves to exacting standards and iterative improvement, they ensure that their autonomy yields **high-integrity innovations**. In the words of Machiavelli – himself an independent scholar of power – “*the times are more powerful than our brains*”, but by understanding the system of forces at play, one can ride and direct those forces. ETHOS designers seek to do exactly that: deeply understand complex systems and then **reshape them for the better**, with rigor and integrity as their guide.

Philosophical and Historical Roots

The ETHOS movement, though forward-looking, draws inspiration from a long lineage of thinkers and doers who operated at the edges or outside of mainstream institutions. This manifesto proudly situates ETHOS in the context of these **philosophical and historical roots**, showing that our core values have echoes in diverse eras – from antiquity to the modern age. Knowing this heritage helps affirm the identity of those who resonate with ETHOS today: you are not alone; you walk a path blazed by visionary predecessors. Below, we highlight key influences and parallels:

- **Ancient Inspirations:** The ethos of independent inquiry can be traced to antiquity. In ancient Mesopotamia and Egypt, for example, scholar-priests and engineers pursued knowledge of the stars and built grand systems (calendars, irrigation works, pyramids) that required holistic thinking outside everyday craft ¹⁹. The *Library of Alexandria* in Ptolemaic Egypt stands as a symbol of knowledge for knowledge's sake – attracting thinkers from different lands to collaborate free from immediate political aims. In classical Greece, the concept of intellectual autonomy was epitomized by philosophers like **Socrates**, who questioned authority and tradition relentlessly (at the cost of his life) in the pursuit of truth. The Greek term **autonomía**, implying self-governance, underpins our pillar of Autonomy. We also see early attention to ethics and knowledge in Aristotle's Lyceum and the Hippocratic Oath's mandate to "do no harm," which resonates with our safety and ethics commitments. Thus, from the start of recorded history, we find examples of *individuals pushing the boundaries of conventional wisdom*, accountable mainly to their own reason or spiritual conscience. ETHOS renews that ancient **dare to know** and to create boldly, channeling the independent spirit of sages, inventors, and polymaths of old.
- **Enlightenment and Modern Philosophy:** Fast-forward to the 18th century Enlightenment – a time that explicitly celebrated independent thought against institutional dogma. **Immanuel Kant's** rallying cry "*Sapere aude!* ('Dare to know!)" ¹³ urged people to use their own understanding without guidance from authorities, a direct philosophical ancestor of ETHOS's autonomy and rigor. Kant argued that remaining under intellectual tutelage was a form of cowardice, and that maturity required courage to think for oneself ²². Our manifesto answers that call, asserting that scholars need not be tethered to universities or orthodoxies to contribute meaningfully. The Enlightenment's emphasis on reason, transparency (think of the first scientific journals and public lectures), and humanist ethics all inform ETHOS values. At the same time, we draw lessons from **Niccolò Machiavelli**, a Renaissance-era civil servant turned independent author. Writing *The Prince* after exile from Florentine power, Machiavelli systematically analyzed political dynamics with a cold realism unencumbered by the church's moralizing or courtly euphemism. While his conclusions on ethics diverge from our stance (he infamously put expediency above morality), we admire his unsparing **system-level analysis** of institutions. Machiavelli demonstrated that an outsider could decipher the "code" of a system – in his case, power structures – more frankly than insiders. ETHOS researchers similarly examine systems (be they technological or social) without flinching at inconvenient truths, though we temper pragmatism with ethical purpose. The **Romantic movement** that followed the Enlightenment further contributes to our heritage by celebrating individual creativity, emotion, and the rebellious genius. Figures like **Mary Shelley** questioned the hubris of science without conscience (as in *Frankenstein*), reinforcing our emphasis that innovation must align with ethical responsibility. The Romantics' insistence on authenticity and personal vision emboldens ETHOS individuals to trust their creative instincts over conformist thinking. In sum, modern philosophy provides us both the

intellectual tools (reason, critique, analysis) and the **cautionary tales (unethical science, loss of authenticity)** that shape our balanced approach.

- **Visionary Rebels and Innovators:** The ETHOS identity is perhaps best illuminated through the lives of radical innovators who operated on the fringes of or in opposition to established institutions. **Nikola Tesla** is a quintessential example: a maverick inventor who conducted audacious experiments in electricity and envisioned global wireless energy transmission. Tesla's work, often self-funded and carried out in makeshift labs, exemplified autonomy and system thinking – he wasn't just inventing gadgets, he was reimagining the entire electrical infrastructure of society. Despite clashing with industrial titans and dying relatively underappreciated, Tesla's breakthroughs (AC power, radio technology) proved how much a determined outsider could achieve. We see in Tesla the embodiment of *Autonomy* (he formed his own lab after leaving Edison), *Rigor* (meticulous engineering calculations), *Safety* (he understood and respected the dangers of high voltage, using cages and distancing in demonstrations), and *Ethics* (he ultimately aimed to provide free energy to humanity, an altruistic if unrealized goal). Similarly, **Ada Lovelace**, often hailed as the first computer programmer, worked outside the academic establishments of her time (which in any case excluded women). Collaborating with Charles Babbage as an independent scholar, she brought a unique interdisciplinary insight – fusing mathematics, logic, and artistic imagination – to foresee that computing machines could someday create music or art given the right algorithms ¹⁶ ²³. Lovelace's Notes on the Analytical Engine stand as a manifesto of holistic system design and open scientific communication (she published them in an English science journal of the day, freely sharing what she had deduced). Her fearless intellectual independence amid a conservative Victorian milieu foreshadows the ETHOS commitment to pursue visionary ideas regardless of societal expectations. Then there is **Alan Turing**, a mathematician who, while educated at Cambridge, did his most pivotal work in less formal settings – devising the concept of the Turing machine in an academic paper largely on his own, and later cracking Nazi ciphers at Bletchley Park, which was a secret wartime effort rather than a university program. Turing exemplified rigor and brilliance, laying foundations for computer science and artificial intelligence through pure thought and minimal resources. Importantly, Turing's personal story – persecuted by the British government for his sexuality – reminds us why **Ethics and Safety** matter: institutions can wrong the very innovators who propel humanity forward. ETHOS embraces Turing's legacy by insisting on inclusive, humane values and by protecting the privacy and rights of independent researchers (no one should suffer as he did for being an outlier). Countless other “outsider” figures enrich our tradition: **Grace Hopper** developing compilers on her own initiative, **J.C.R. Licklider** dreaming up the internet from a non-mainstream department, or modern open-source pioneers and citizen scientists whose names are lesser known but whose contributions are profound. Each offers lessons and inspiration. They show that **genius and drive often flourish in the margins**, and that pushing systems to the next paradigm frequently requires stepping outside them. ETHOS claims this lineage proudly. We stand on the shoulders of these radical forerunners, learning from both their triumphs and trials, as we forge a new collective identity for the independent scholars and system-builders of the 21st century.

Conclusion and Call to Action

In presenting the ETHOS manifesto, we affirm an identity and path for those who already feel at home outside the ivory towers and corporate labs – and we extend a welcoming guide to those who aspire to join this fellowship of independent, ethical innovators. The challenges of our time – climate change, pandemics, inequality, digital authoritarianism – **demand system-level solutions** and moral courage that often exceed

the capacity of slow-moving institutions. We believe the ETHOS approach, characterized by autonomy, principled action, and holistic design, is uniquely suited to meet these challenges. If you see yourself in this description, consider this manifesto an invitation to stand taller, connect with like-minds, and **intentionally craft your practice** as an ETHOS practitioner. Here we summarize guiding commitments for all who heed this call:

1. **Cherish Your Autonomy:** Protect your intellectual freedom and use it wisely. Pursue the questions that truly matter, even if they fall between academic disciplines or contradict prevailing assumptions. Remember that, like the innovators before you, your independent perspective is a strength – it lets you see solutions others miss. Never let external skeptics or lack of credentials shake your confidence; *let results and integrity speak for you*.
2. **Adhere to the Highest Ethics:** Make ethical considerations the foundation of every project. Define for yourself a clear purpose: know *why* you are building something and who it will benefit (or harm). Commit to transparency, honesty, and altruism in equal measure. As a community, we will hold each other accountable to these moral standards, proving that independent science can be **deeply responsible science** ².
3. **Prioritize Safety and Security:** Institute rigorous safety protocols in your work, whether it's physical experimentation or handling data. Educate yourself continuously on best practices – from lab safety measures to cybersecurity and privacy tools. Your independence does not isolate you; your actions can impact others, so take that responsibility seriously. By adopting safe practices and a disciplined methodology, you ensure your innovations are trusted and sustainable ¹⁴.
4. **Embrace Openness and Collaboration:** Cultivate an open mind and an open work style. Share your knowledge and results openly whenever possible – through open-source code, open-access publishing, or community forums. Seek diverse collaborators across fields and geographies; this diversity will strengthen your system-level perspective. Be generous with credit and mentorship. In the hacker spirit, *“all information should be free”* for peaceful and constructive use ²⁴, so long as privacy and ethics are respected. An open ethos will accelerate innovation and invite allies to your cause.
5. **Think in Systems, Act with Rigor:** Always zoom out to see the whole system around a problem – the technical components, human factors, and institutional dynamics. Let this holistic awareness guide your design. At the same time, drill down into the details with scientific rigor. Test your ideas, gather evidence, iterate and refine. Marry imagination with analysis. By designing thoughtfully and validating thoroughly, you will build things that *endure and uplift*. Your independence allows you to iterate rapidly and explore boldly; ensure that each iteration meets the high standards you set for yourself.

By internalizing these principles, you join a **community of like-minded explorers**. Find your peers in online groups, local meetups, or global initiatives aligned with ETHOS values. Share your manifesto – in PDF form, online, or by word of mouth – to signal your alignment and to find solidarity. As this network grows, we will develop our own support systems: journals, funding mechanisms, tool exchanges, and perhaps one day physical campuses or “guild halls” for independent scholars. But even as we create structures, we remain *resistant to bureaucracy* and gatekeeping. The goal is a **pluralistic knowledge ecosystem** where institutions are just one of many nodes, and independent researchers are recognized as equal contributors to human progress ²⁵ ²⁶.

In closing, remember that adopting the ETHOS identity is both an honor and a challenge. It means daring to stand apart, much like an oak that grows in the open field rather than the managed forest. The winds may batter you more, and you must draw strength from within. But you will also soak up more sunlight and

spread your branches wider. You carry forward the torch lit by sages, rebels, and innovators through the ages. Your work, pursued with autonomy and integrity, *is* your manifesto. Let your life be the message that independent, ethical system-builders are not only possible – they are indispensable to our shared future.

We affirm you, the ETHOS researcher, in your quest. May this manifesto serve as a compass and a creed. Go forth and build, question, collaborate, and create – wisely and freely – for the betterment of all.

Sources: 1 4 5 6 7 8 9 10 11 12 13 2 3 14 17 16 18

1 5 11 12 The Return of Independent Research – Economist Writing Every Day

<https://economistwritingeveryday.com/2022/01/13/the-return-of-independent-research/>

2 9 10 21 24 Hacker ethic - Wikipedia

https://en.wikipedia.org/wiki/Hacker_ethic

3 The academic impact of Open Science: a scoping review - PubMed

<https://pubmed.ncbi.nlm.nih.gov/40046663/>

4 18 (PDF) Independent Inventors and Innovation: An Empirical Study

https://www.researchgate.net/publication/233586645_Independent_Inventors_and_Innovation_An_Empirical_Study

6 19 20 Citizen Science and Scientific Authority: Have You Checked the Boundary Work? | Citizen Science: Theory and Practice

<https://theoryandpractice.citizenscienceassociation.org/articles/10.5334/cstp.519>

7 8 25 26 Institutional affiliation should not be a requirement for doing research - Impact of Social Sciences

<https://blogs.lse.ac.uk/impactofsocialsciences/2024/07/01/institutional-affiliation-should-not-be-a-requirement-for-doing-research/>

13 22 What is Enlightenment? - Wikisource, the free online library

https://en.wikisource.org/wiki/What_is_Enlightenment%3F

14 15 Draft DIYbio Code of Ethics from European Congress | DIYbio

<https://diybio.org/codes/draft-diybio-code-of-ethics-from-european-congress/>

16 23 Ada Lovelace - Wikipedia

https://en.wikipedia.org/wiki/Ada_Lovelace

17 Untangling the Tale of Ada Lovelace—Stephen Wolfram Writings

<https://writings.stephenwolfram.com/2015/12/untangling-the-tale-of-ada-lovelace/>