

TECHNOLOGY ASSESSMENT GUIDE

A framework to assess intellectual property and develop a plan to protect and commercialize it

This document provides a set of seven questions that are intended to provide a framework to assess intellectual property and develop a plan to protect and commercialize it.

0. Is There Previous Disclosure Risk?

It is quite common for an academic to seek publications, make presentations, or engage in conversations without a confidentiality agreement, however, each of these activities may start a legal clock that has the effect of narrowing filing options and/or eliminating rights in markets outside the United States. The remainder of this worksheet is predicated on IP rights still existing. Question Zero assesses disclosure risk and impacts immediate next steps and urgency. If any item below is checked Yes, contact your TTO before completing the remainder of the worksheet.

RISK FACTOR	ACTION REQUIRED
Paper, preprint, or abstract submitted or in preparation	Contact TTO today. Identify the submission date and expected publication date.
Conference presentation, poster, or invited talk scheduled	Contact TTO today. Flag the event date. A provisional can often be filed in days.
Thesis defense scheduled or recently completed	Determine whether the defense was public and whether the thesis is indexed. International rights may already be affected.
Technical details shared with anyone outside institution without a signed NDA	Describe what was shared, with whom, and when. Your TTO needs this to assess remaining options.
Press release, media coverage, or public website description exists	Identify the date of first public appearance. US grace period may still apply; international rights may not.
Work posted to a preprint server (arXiv, bioRxiv, SSRN, etc.)	Identify the posting date. This is public disclosure. Contact TTO immediately.

1. Is this IP?

Not every research output is intellectual property in a legally protectable sense. Before investing time in the TTO process, confirm your work qualifies.

TYPE OF IP	WHAT QUALIFIES	ACADEMIC EXAMPLES
Invention / Patent	A novel, non-obvious process, method, machine, composition, or improvement with practical utility.	New assay method, novel compound, device architecture, software algorithm with technical effect, manufacturing process.
Trade Secret	Confidential information that provides competitive advantage and can realistically be kept secret.	Proprietary formulation, manufacturing know-how, dataset or trained model that cannot be reverse-engineered.
Copyright	Original creative or authored work fixed in a tangible medium. Arises automatically on creation, no registration required.	Software source code, datasets, training materials, written works. Protects expression, not the underlying idea or method.
Tangible Research Property	Physical materials with commercial value that are not protectable by patent but can be licensed or transferred.	Cell lines, biological materials, research tools, unique chemical libraries, engineered organisms.

2. Who Owns It?

Ownership determines whether you have the right to make commercialization decisions at all. Commercializing technology with a clouded ownership chain creates problems that are expensive and sometimes impossible to fix. This must be resolved before anything else moves forward.

OWNERSHIP FACTOR	WHAT IT MEANS FOR YOU
University employment	If you are a faculty member, staff researcher, or graduate student employed by the university, your institution almost certainly owns inventions you created using university resources, within your field of work, or on university time. Read your employment agreement.
Federal funding involved	If any federal agency funded the research, Bayh-Dole applies. The university retains title but must disclose to the funding agency. The government holds a royalty-free license and march-in rights. Disclose to your TTO immediately.
Industry-sponsored research	Review the sponsored research agreement. Many contain provisions giving the sponsor a license or right of first refusal. These must be identified before any commercialization path is chosen.
Co-inventors at other institutions	Joint ownership with another university requires an inter-institutional agreement. Either party may be able to license independently without the other's consent and/or block commercialization. Get this resolved early.
Student contributors	Undergraduate students often have not signed IP assignment agreements. Graduate students may or may not have, depending on their funding source. If a student contributed to conception, their rights must be formally assigned.
Prior employer of any inventor	If a co-inventor worked at a company in a related area before joining your institution, their prior employer may claim rights. Rare but real. Flag it.

3. Is It Novel?

Novelty is a legal standard your TTO and patent counsel will formally assess, however, there is value in preliminary self-assessment before that conversation. Founders who have done basic prior art awareness have better TTO meetings and

produce better disclosures. The goal is not a comprehensive review but a sense of why this is unique within the context of the wider technology landscape.

SEARCH AREA	WHERE TO LOOK	WHAT YOU ARE LOOKING FOR
Academic literature	PubMed, Google Scholar, Web of Science, arXiv in your field plus adjacent fields	Papers describing the same technical approach, similar mechanisms, or the same application domain.
Patent databases	Google Patents, USPTO Full-Text Database, Espacenet (European Patent Office)	Issued patents and published applications. Search technical terms, not product names. Look at claims, not just titles.
Commercial products	Market search, competitor websites, product databases	Existing products that solve the same problem. A commercial solution that predates your filing can be prior art.
Your own prior work	Your publications, presentations, theses, grant applications	Anything you have already disclosed publicly that describes the invention. Your own prior art counts.

4. What Mechanism of Protection?

Assuming patent is the answer is a common mistake academic founders make. The right form of protection depends on what the technology is, how it will be commercialized, and what the competitive environment looks like. If the technology is in a field like software and AI applications where the product cycle is faster than patent prosecution, trade secret or first-mover strategies should be considered before defaulting to a patent filing.

5. What Specifically Is Patentable?

If a patent is the right path, the next question is scope: what exactly can be claimed, and how broadly? This determines the competitive protection. There are three legal requirements to be patentable:

1. *Novel*: not previously disclosed anywhere in the world
2. *Non-obvious*: not an obvious next step to a skilled practitioner
3. *Useful*: has a specific, credible, substantial practical application

If this threshold is met, patent claims will exist on a spectrum from broad to narrow. Broad claims are harder to get granted but more valuable. Narrow claims are easier to grant but easier for competitors to design around. Consider alternative embodiments explicitly, different materials, configurations, process steps, or use cases, as claims that cover only your preferred embodiment will leave gaps.

CLAIM LEVEL	WHAT IT COVERS	QUESTION TO ASK YOURSELF
Broadest	The core technical principle or mechanism, independent of how it is implemented.	What is the most general version of what I invented? If someone solved this problem a different way but used the same core insight, would my claim cover them?
Mid-level	A specific class of implementations or a particular approach to the core mechanism.	What are the key variations of my approach? What would a competitor's version look like if they tried to avoid my broadest claim?
Narrowest	The specific embodiment you built and tested.	If my broad and mid-level claims are rejected, does my narrow claim still protect something commercially meaningful?

6. What Is the Commercial Value of Protecting It?

Something can be patentable and not worth patenting at the same time. Protection costs money, time, and management attention. The question is whether the protection creates a barrier to entry, a licensing asset, an investor signal, or a negotiating position.

QUESTION	STRONG SIGNAL	WEAK SIGNAL
Does protection create a barrier to entry?	Competitors would need to design around your claims at significant cost or cannot achieve the same result without your approach.	Competitors can easily replicate the outcome through an alternative method not covered by your claims.
Is there a licensing market?	Multiple companies in an identifiable market would benefit from this technology and have resources to pay for it.	Technology is too early-stage, too narrowly applicable, or targets a market where licensing is not standard practice.
Does it support a startup valuation?	Investors in this space routinely look for IP as a signal of defensibility. A patent application changes the financing conversation.	Market moves faster than patents grant; investors in this space value traction and team over IP position.
Is the market large enough to justify prosecution costs?	Addressable market is large enough that even a small licensing royalty rate or equity position would justify \$50–150K+ in prosecution costs.	Market is niche, early, or uncertain. Prosecution costs may exceed realistic licensing revenue.
Does it support an acquisition?	Likely acquirers routinely purchase companies for their IP portfolios. Clean title to a filed patent is a diligence requirement.	Acquirers in this space buy for team and traction; IP is reviewed but not the primary driver of deal value.

IP Assessment

Based on the responses to the previous questions, this table is used to determine potential next steps.

IF YOUR ASSESSMENT SHOWS...	YOUR NEXT STEP
Immediate disclosure risk identified (Question Zero)	Contact TTO. Everything else in this worksheet can wait. Disclosure risks cannot.
Unclear IP type or uncertain whether this qualifies	Discuss with your TTO before taking any action. Bring a written description of the work and your specific uncertainty.
Ownership is complicated or unclear	Engage your TTO and legal counsel before anything else moves. Do not form a company, share with partners, or file anything until ownership is resolved.
Novelty self-assessment finds close prior art	Bring your prior art findings to your TTO meeting. The question of whether prior art exists is almost always true, so the concern is whether the approach is meaningfully distinct.
Patent is the right protection mechanism	Complete the invention disclosure preparation checklist and schedule a TTO meeting. Time your submission against upcoming publications or presentations.