



Lab to Market:

A Short Guide and Playbook for
Transitioning Intellectual Property from
Research to Utilization Through
Licensing and Other Agreements



**MISSISSIPPI DEFENSE
DIVERSIFICATION INITIATIVE**



Introduction

Licensing intellectual property (IP) from a laboratory to create value in the commercial sector – whether involving a government laboratory, an industry laboratory, or a university laboratory – is an area that is often discussed and greatly invested in, but that, in many instances, has failed to deliver on its promise.

Over 50 years ago, the product that we know (and many of us consume) as Gatorade set the standard for technology transfer successes with its licensure from the University of Florida to Stokely – Van Camp Co. that earned the school more than \$80 million. Since that time, there has been a challenge that has been felt by all research organizations to measure up to that success.

Nearly every government, industry, and university research organization of reasonable size has established a technology transfer organization with its principal focus being ensuring that IP created in laboratories and by researchers reach commercial markets and, if possible, generate financial returns for the research organization and its researchers.

While Gatorade-level achievements are few and far between, successful technology transfer and commercialization activities occur each year; however, at most research organizations, there is room for improvement on the approaches and activities that support moving IP to commercialization.

Building a stronger process for transitioning IP from research to utilization involves six critical components:

- BUILDING A COMMERCIALIZATION CULTURE;
- ANALYZING & TRACKING ASSETS;
- ASSESSING MARKETS;
- PERFECTING INTELLECTUAL PROPERTY;
- FINDING PARTNERS; AND
- STRUCTURING LICENSES AND OTHER TRANSACTIONS.



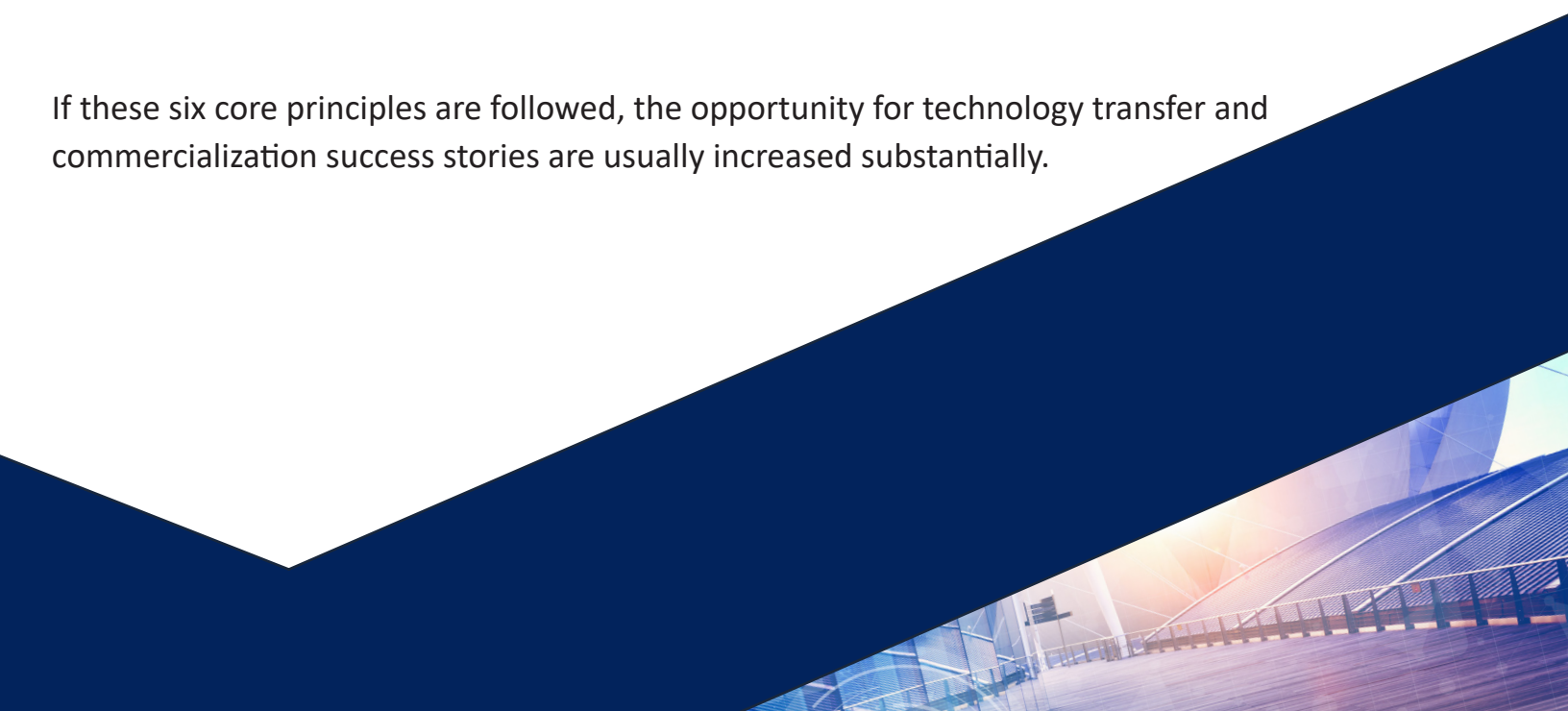
Building a Commercialization Culture

For every research organization, creating a culture of commercialization is key.

What are the steps to create a culture of commercialization?

1. Developing an understanding of market opportunities within the research organization
2. Aligning research objectives to potential market opportunities (to the extent possible)
3. Aligning incentives (to the extent possible) to support early disclosure and licensure/agreements for researchers
4. Investing in the creation of IP rights around the most market-viable IP
5. Developing the skills to cultivate partners to license or otherwise commercialize IP
6. Moving IP to licensing and other commercialization transactions as early as possible

If these six core principles are followed, the opportunity for technology transfer and commercialization success stories are usually increased substantially.






Analyzing & Tracking Assets

Since no research organization is ready – from Day 1 – to support technology transfer and commercialization, it is important to consider the best potential leverage points for technology transfer and commercialization.

The leverage points can be IP assets that have been protected through patent filings, new research programs that are just beginning to develop IP, unique business capabilities, or some other assets.

Determining which assets are the strongest candidates for commercialization can be a time-consuming process and involve significant examination of not only what assets your research organization possesses, but rethinking precisely what assets your organization might possess that have not been identified to date. You may need to consider if your best assets might be “hidden assets” that could be technology components inside of deliverables that you produced for a government client or a certain business process that you’ve been using to support the work of your own organization.






Taking an organized approach to determining and cataloging your assets that you can leverage is important. There are many approaches to this process, but it is important to remember that your very best assets to support commercialization might be “trapped inside” of products or capabilities that you have today and may be starting to form in early stage research that has not yet produced disclosed IP findings.

Today, many research organizations catalog their IP assets for potential partners. Unfortunately, however, these current catalogs only chronicle perfected IP, which, in most instances, is IP protected by patents or, at a minimum, patent applications. Of course, this understates the potential assets that could be licensed or commercialized.

Thus, we offer the following steps to develop a complete catalog and tracking system for assets:

1. Create a comprehensive IP asset tracking system with a public version and a private version (with the private version including unperfected IP that may only be disclosed under a confidentiality or non-disclosure agreement)
 2. Develop and maintain a catalog of perfected IP assets – such as those assets protected by patent-filings (which is likely being done currently)
 3. Establish a process for “mining” undisclosed IP assets and supporting disclosures by researchers
 4. Develop and maintain a catalog of potential IP assets established through the asset mining process
- 




Assessing Markets

As you analyze your IP assets, you will want to also devote some resources to assessing market opportunities in your organization's fields of research to help support your determinations of how best to make your investments in perfecting your IP.

There are two main ways that you can analyze the markets – the first is expensive in terms of cash, while second is expensive in terms of personnel time (and that associated cost).

1. For markets that have already developed, analysis of size and growth for markets (and even many of market segments) can be straightforward, as you can purchase market research reports or find information through Web searches.
2. For markets that are usually the ones that your research would target – markets that haven't developed yet or evolving segments of developed markets, this assessment of markets can be a bit more of a labor-oriented task. To determine the viability of markets that don't exist yet, you could use a top-down assessment, through which you would find a large market number, then estimate what percentage of this total market, and, finally, estimate your percentage of this larger market – OR – a bottom-up analysis in which you would estimate the market by evaluating the number of potential sales, the value of each sale, and the frequency of each sale (utilizing numbers, values, and frequencies for comparable products or services).

Once you do some initial market assessments for your research domains, it is best to update these market assessments – at least annually – to ensure that you have the best information available to help you to determine how best to make your investments of time or resources on your protecting IP assets, as larger market opportunities will often result in more licensing and other transaction opportunities to support commercialization.





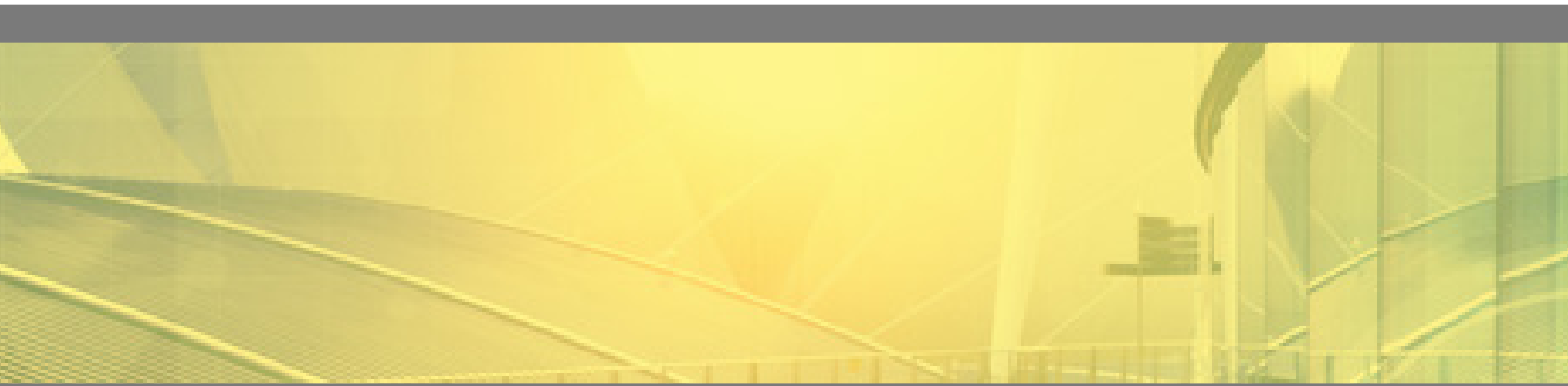
Perfecting Intellectual Property

If you've found some new potential IP assets and market opportunities that look compelling, it is time to consider how best to protect your IP that you haven't yet protected.

Options might include patents, trade secrets, copyrights, and trademarks, among other options; however, in some scenarios, acquiring IP protections may be costly. You can reduce these costs by doing some of your own research on the United States Patent and Trademark Office (USPTO) website, but, this is one area in which you will likely need to consult an expert – an IP or patent attorney – to assist you with formally securing IP rights, if possible.

In general, we would recommend the following steps on perfecting IP:

1. If you can license or reach some other type of commercialization agreement early in the IP development process, you may be able to get the licensee or partner to fund the patent or other IP protection activities (and protect your IP during the negotiation process through a confidentiality / non-disclosure agreement); and
2. If you feel that licensing or another form of commercialization agreement may be either a long negotiation process or a requirement for licensure (due to legalities or realities), consult an IP counsel to assist you with your IP protection activities at your own cost.



Finding Partners

One of the most important rules of operating successful research organizations is that cultivating partnerships is everyone's job.

The development, nurturing, and formalization of partnerships cannot be left exclusively to technology transfer, external relations, or business development teams, as there are simply too many potential partnership opportunities for everyone in the research organization not to participate.

Thus, we recommend the following:

1. Set up an enterprise-wide customer relationship management (CRM) system to input, track, and manage potential partnerships
2. Empower researchers, technology transfer personnel, external relations personnel, and business development personnel to enter new partnership leads and provide detailed descriptions on the opportunities
3. Anoint technology transfer leadership to manage the CRM and the opportunities
4. Do not discount any potential partner – large or small

Structuring Licenses & Other Transactions

A critical notion to contemplate when planning to transition IP from research to utilization is that licensing is not the only option.

In fact, many organizations – including federal research laboratories – may be restricted from licensing IP that has not already been granted patent protection.

Unfortunately, given the pace of technology development and maturation, by the time that a patent is granted, the useful life of a technology for a license may have been dramatically shortened or even completely eclipsed.

Further, the value of certain IP could be undermined if full rights to the IP are not permitted to be secured by a third-party acquirer of a licensee or other grantee.



As a result, we suggest that research organizations:

1. Pursue licensing and other commercialization arrangements as early as possible during the research cycle
2. Consider cooperative research and development agreements (CRADAs) or other alternative forms of commercialization agreements instead of licensing agreements (when licensing agreements cannot be advanced due to requirements for patent grants or other reasons)
3. Consider securing investments from the grantee (whether through a license, CRADA, or other agreement) in the form of supporting IP protection costs for the research organization, additional research funding commitments, and other investments – in lieu of up-front royalty payments
4. Consider inclusion of full IP right issuance options within the agreement for a grantee in exchange for a reasonable percentage of the acquisition based upon the royalty arrangement (in the event of an acquisition by a third-party of the grantee in the event of an acquisition by a third-party of the grantee)

Conclusion

The path to transitioning IP to commercialization requires analysis, planning, investment, and lots of hard work, but, in the end, it will benefit your research organization and its team.

Email us at assistance@msdefense.net to allow us to help you get started on the path to transitioning IP from research to commercial utilization.



MISSISSIPPI DEFENSE DIVERSIFICATION INITIATIVE

Sponsored by:

The University of Southern Mississippi

The United States Department of Defense Office of Economic Adjustment