



Unleash Revenue Potential by Re-Imagining the Patent Pipeline

In today's volatile higher education environment, institutions are looking to diversify their revenue flows. Academic research institutions have a unique opportunity in leveraging their intellectual property (IP), yet properly tracking, managing and evaluating the full value of their research portfolios can be overwhelming. By utilizing cloud-based machine-learning platforms, institutions can effectively monitor their portfolios against market activity, and collect revenue from underutilized patents — creating a new stream of revenue previously unrealized.

“We didn't know what the strengths in our portfolio were and how we could monetize them.”

— Cary Chandler, Senior Director at Auburn Research & Technology Foundation

Fueling Discovery and Monetizing Intellectual Property

To understand the true value of IP and maximize its return on investment (ROI), institutions need to re-imagine their technology platforms. Without cloud- and crowd-sourced data and a powerful engine to analyze and unlock patterns, similarities, opportunities and infringements, any investment in market valuation could quickly outweigh its return, a phenomenon all too common in the higher education sector. In 2018 alone, U.S. universities spent more than [\\$71 billion](#) in university-sponsored research and over [\\$425 million](#) in patent-related legal expenses, but yielded only [\\$2.9 billion](#) in licensing revenue.

Even with a team of dedicated experts on hand, predicting the strategic and market value of research and monitoring IP- and patent-related activity is as expensive, complex and time- intensive as it is necessary.

“You could never monitor the portfolio by hand— no one could afford all those people,” notes Ed Powell, [IPX](#) chief executive officer (CEO). And while academic staff may play a role in issuing new disclosures or developing new patents, policing existing ones is rarely a top priority.

Auburn University, a top-ranked land grant university and Tier 1 research institution, was operating with a vision and mission that placed it at the intersection of discovery and innovation. Yet, like many of its peers,

Benefits of optimizing research portfolios

Huron and IPX are working together to bring revenue opportunities to higher education institutions. The IPX platform is designed to help research leaders leverage the strategic, social and economic value of their IP portfolios, including:

Understanding the True Value of IP

- Ongoing patent portfolio analysis empowers leaders to maximize return on investments in licenses and disclosures.
- Market estimates and IP value ranges help leaders identify top commercial candidates.
- Continuous monitoring throughout the patent life cycle highlights opportunities to optimize investments in early-, mid- and late-stage IP.

Monitoring and Managing IP

- The IPX network of technology experts, investment bankers, licensing professionals and legal partners helps leaders scale and execute a plan to monetize IP.
- The automatic reporting of violations or patent infringements enables the university to collect revenue consistently.

Maximizing and Diversifying Revenue

- The model predicts the best course for strategic investment upfront to maximize ROI.
- The investment allows for diversification of revenue supporting academic research, creating a platform for growth.
- The process positions IP as a strategic revenue driver for academic research.

the university did not have an efficient way to assess the commercial value its research portfolio held in the form of IP. When the need for revenue diversity

emerged as a strategic priority, Auburn looked to its portfolio of academic research.

In 2010, Auburn launched the proprietary IPX platform — an innovative, cloud- and crowd-based machine-learning engine. Developed in partnership with invention thought leaders, the platform was specifically designed to help research leaders optimize the strategic, social and economic value of their IP portfolios. Auburn’s success in wielding this platform hinged on its cost-effective and strategic approach to unlocking the revenue potential of IP.

With IPX, Auburn is using this innovative platform to illuminate the true value of IP and build a pipeline to maximize the revenue potential of its research portfolio, identify the most valuable opportunities for technology transfer and generate a healthy ROI in IP licensure and disclosures.

“Auburn’s collaboration with IPX is an example of the power of re-imagining the patent pipeline to generate new sources of revenue,” says Gregory Bedell, managing director at Huron. “In higher education, finding alternative sources of revenue is smart business. The alliance between Huron and IPX provides universities with an innovative way to generate new revenue and make an institution’s IP portfolio more productive.”

Optimizing Investments to Drive Revenue

Prior to using the IPX platform, and without the infrastructure to support continuous portfolio and market valuation, Auburn lacked data and insights into the market of similar existing patents. It was not equipped to track, manage and leverage the commercial potential of its IP, let alone build a strategic patent pipeline to grow and diversify revenue. “We didn’t even have a true electronic research database that was visible and accessible across campus, let alone the market,” recalls Cary Chandler, senior director at Auburn Research & Technology Foundation.

Auburn's leaders realized that to effectively commercialize IP, they would need a clear picture of the current and future market value of each patent in the university's research portfolio. With IPX, they began to:

- Analyze the portfolio.
- Establish market estimates and value ranges for each patent.
- Determine the best candidates for commercialization.

This helped university leaders balance their investments and accurately predict the ROI on research, licensing, disclosure or patenting. "We were able to benchmark to see, for the amount of research expenditure we have, whether we have the right number of disclosures and patents," recalls Chandler. "The tool has been eye-opening."

Segmenting Opportunities by Patent Stage

By monitoring patents throughout their life cycles, Auburn is illuminating its best options for licensing, startup ventures, selling various assets and asserting patent rights when needed. And by identifying who holds the patents in each class, it is also helping Auburn identify its best partners for co-development. The patent classification system is "like the Dewey Decimal System for technology," as IPX CEO Ed Powell notes, because it creates a taxonomy for patents based on the most relevant technology areas.

IPX strategically segments opportunities based on the calculated value, class, investment and stage in the patent life cycle. In doing so, the platform highlights important investment opportunities such as:

- **Early-stage ventures:** Early IP opportunities with a long patent life cycle ahead may be good candidates for commercialization through a startup venture. To guide the development of IP before it crosses the chasm of licensing, invention disclosure, and patenting, many institutions invest in startup funding to prime the invention for the market. Over the last few

Leveraging research portfolios with machine-learning technology

Auburn optimized its research portfolio using the IPX platform to great results.

- Benchmarked disclosure and patent cost against research expenditure
- Aligned patent portfolio to support 43% increase in sponsored programs year over year
- Identified IP with the highest social and economic value to maximize patent ROI
- Identified strategic development partners for semantically similar patents
- Built a pipeline of high-value patents to diversify funding for academic research and reduce grant reliance
- Reduced cost of patent maintenance by focusing on high-value opportunities
- Continue to monitor IP throughout its life cycle to maximize returns
- Maintain accurate ROI estimates for patents and IP, lending clarity to strategic and financial plans

years, startups have emerged as a profitable strategy for technology transfer ventures that are in the early stages of their patent life cycle.

- **Midstage opportunities:** Licenses that are on track for invention disclosure and, eventually, patenting, are less profitable candidates for a startup investment, but may generate a strong ROI.
- **Late-stage patents:** Patents that are already nine or more years into their life cycle should be monitored. When infringements or violations occur, the university can collect revenue.
- **The last mile:** Identify technologies that are in the last mile of their commercialization life cycle and have high potential for sale, just needing to "cross the finish line."

While Auburn's pursuit of large-scale deals is ongoing, leaders are not just hunting for landmark technology transfer opportunities. They are also planting seeds for strategic opportunities and mining the university's portfolio of existing IP to build a diverse patent revenue pipeline. By assessing its portfolio, Auburn has made significant discoveries—but it recognized that windfalls are the exception, not the norm. "A few years ago, we made a drug discovery that became a 40-year overnight success. Now, we are leveraging IPX to mine our portfolio for similarly outstanding projects. And, to get more of those kinds of returns, we're willing to plant seeds," Chandler explained.

"We have a platform that can continuously monitor the mid-stage and the latestage patents that become important — like cyber security technology, for example, when it is suddenly referenced by Oracle and Google. Watching our network grow, we are tracking and capitalizing on all of that activity."

— Ed Powell, CEO at IPX

Driving the Future of Technology Transfer

Auburn's launch of IPX offers an exciting preview of the rewards that come from tapping into the innovative and entrepreneurial energy that is sweeping across university and college campuses. With a powerful platform to diversify revenue during a challenging economic climate, Auburn's leaders are positioned to help drive change, establish agility and improve the sustainability of academic research. But this is just the tip of the iceberg.

As Auburn's leaders continue to hone the university's IP strategies and investments, they are writing the next chapter in higher education's technology transfer legacy. [Technology transfer](#) is a developing enterprise for research universities with faculty entrepreneurs. By driving partnerships in the commercial world, institutions can evaluate, protect and transfer IP from the lab to the marketplace. These transfers can take the form of corporate engagements, startups and entrepreneurial support, or economic development.

Technology transfer efforts often focus on the development of new patents, but with its new platform, Auburn has adopted a broader strategic investment plan. By continuously tracking the market of IP activity for semantic similarities, violations or patent infringement, Auburn is identifying opportunities to collect or invest in the mid and late stages of development. This ensures that, as new patents join the portfolio, the university is positioned to maximize revenue from the start and enforce ownership of its patents.

In partnership with IPX, Auburn is revising a common narrative that equates technology transfer pursuits with finding the proverbial needle in the haystack. By exploring, organizing and managing its patent portfolio, Auburn is making a powerful statement: Understand the value of your patent portfolio, and empower your institution to unlock its potential, seize opportunities to monetize patents in process and invest strategically to maximize IP and patent revenue.

“This is the right time for us to be understanding more about our portfolio. How we can continue to grow areas of strength, capitalize, and commercialize those — these are valuable insights.”

— Cary Chandler, Senior Director at Auburn
Research & Technology

Key Takeaways

Institutions can untap new revenue streams by effectively monitoring, managing and monetizing IP. To do so, leaders must:

Think differently.

Utilizing cloud-based technology can help track, manage and evaluate the full value of your research portfolio more effectively and efficiently.

Plan differently.

By analyzing and realizing the full value of your research portfolio, you can strategize and monitor the patent life cycle to optimize investments in early-, mid- and late-stage IP.

Act differently.

Build the patent portfolio evaluation into a wider financial strategy to realize new revenue streams and invest early in promising patents.



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