

Technology Transfer Tactics™



The monthly advisor on best practices in technology transfer

If old rules don't work, work around them

U of Akron beats out larger schools in rate of return

Smaller institutions take note: You can outperform larger universities with the right strategies and proper implementation.

Proof comes from the University of Akron (UA), which was ranked first in the state by the Ohio Board of Regents with the highest rate of return per research dollar, ahead of Ohio State University and Case Western Reserve University, among others.

So what's the UA advantage? **Kenneth G. Preston**, PE, JD, associate vice president for research and director of technology transfer, points out that having a research foundation is a good start -- a strategy that a growing number of universities are adopting.

"We set up a separate corporation referred to as the University of Akron Research Foundation and we're able to circumvent the typical issues, problems and drawbacks that technology transfer offices encounter in dealing with a public university," he explains. "The bureaucracies at universities can make it difficult to move quickly and efficiently. But we're able to do that at our research foundation. We have enormous flexibility to take risks and move forward."

Rights to technologies are transferred under contract to the research foundation, which in turn manages those rights for the university. The foundation enters into licenses with companies and spins out start-ups through the separate corporation.

One reason for a separate foundation, especially for public institutions, is that some state laws prohibit or diminish the ability of public institutions to engage in many aspects of technology transfer effectively, Preston says. For example, the Ohio constitution includes a prohibition against a public

institution holding equity in a private entity, which dates back 100 years to early railroad investments when the state took a bath related to liabilities.

"When you're trying to spin out a company, the new ones don't have money but they do have equity. The inability of the university to take equity in a private enterprise is a real disadvantage." Many public universities are also prohibited from taking on liability, which is also a prerequisite for launching a company, he adds.

Preston says he often hears that corporations hesitate to work with universities because of the bureaucracy and the extended length of time putting deals together. Because UA now has a separate entity through which to transfer technologies, they are able to work more quickly and effectively. But that's only one part of the reason the group has been so effective.

Ohio's tech transfer scoring system

UA's top ranking comes out of a scoring system based on productive technology licenses, formation of start-up companies, and direct industry research support by Ohio companies. Preston says. (See the article on the next page.)

The score shows that the university does extremely well in producing new business start-ups licensing new intellectual property to Ohio business. Thirteen start-up companies have been spun out of UA technology in Ohio from 2001-2006. That may not sound like a lot compared to larger institutions, but Preston points out the key phrase related to the award is rate of return. "We certainly do not produce the highest return in total. We're a much smaller operation than others in this state. But the rate at which we perform is the key," he says.

Preston says the basic “secrets” to UA’s success are fairly straightforward:

- **You must have an enlightened, visionary leadership** committed to growth and wealth creation. UA’s research commercialization efforts are headed up by VP of Research **George Newkome**, a scientist himself “who has spent years in research roles and understands the whole research process.”

- **You must have a deep understanding of corporate business.** The UA team has more than 100 years of combined corporate experience. “We really do understand the other side of licensing. Many technology transfer staff people at many institutions don’t have a large amount of corporate experience.” Staff members at UA come from major organizations such as Exxon and Goodyear. Other staffers have legal backgrounds.

- **There must be a willingness to take risks.** “There are lots of people who are not necessarily risk takers and/or they don’t have the freedom to take the risks that we have here,” Preston says.

- **Faculty must be convinced that you are with them and not against them.** “So often I see technology transfer offices viewed as being confrontational with faculty instead of being a partner. I believe it’s the case because the tech transfer office views itself as an enforcement arm of the rules of the university. In fact, any university office must be active in trying to ensure the policies and practices are carried out in the proper manner,” says Preston. “We don’t try

to circumvent university operations, we just approach these issues in terms of finding a way to make things work. It’s a positive, proactive approach. That’s really a key issue as I talk to so many people in technology transfer. They continually talk about what they can’t do because of rules.”

The foundation approaches both faculty and licensees or companies on the basis of working together to achieve some common goals. And the goal Preston likes to shoot for is taking equity in start-ups, rather than royalties. “We really like equity stakes. When dealing with large companies, getting an equity stake is not usually an option, but it is with smaller companies. It can be far better than a royalty stream down the road,” he says.

The foundation also avoids taking ownership of any intellectual property; it all remains university property. “We have a contract with the university that gives the foundation all rights to the tech in the way of an exclusive license, but not title. So everything we deal with is a license, whether it’s exclusive, sublicense or non-exclusive,” Preston says.

“When you work with the private sector, they don’t need to own a patent, they just need a license to use the technology,” he says. “In many cases, when companies learn how we work, they really like it. They incur no costs. The university then protects the technology and fronts the costs so the company has an option to acquire those rights after they have time to assess the value.”

Quantifying the rate of return on research dollars

The University of Akron has the highest rate of return per research dollar leading to technologies commercialized by Ohio industry, according to the Ohio Board of Regents, which set up a three-component algorithm for making the awards under a statewide incentive program.

The university’s research foundation won top billing based on a scoring system that judges a combination of productive technology licenses, formation of start-up companies, and direct industry research support by Ohio companies.

“One feature they tried to emphasize was to take into account the amount of research flowing through a institution,” says **Kenneth G. Preston**, PE, JD, associate vice president for research and director of technology transfer at UA. “If you just used raw facts, clearly the bigger institutions would come out on top. The idea here was to give the smaller institutions somewhat of an equal shot, demonstrating that their offices are also very effective in contrast to larger institutions.”

Akron established the Technology Commercialization Incentive Fund (TCI) in 2007 to reward universities for successful technology transfer to Ohio businesses. An advisory board for this fund established the following criteria for judging performance:

- Research dollars flowing directly from Ohio-based business and industry to each Ohio public or private university in the most recent fiscal year comprises 50% of the formula.

- The total number of productive technology licenses executed with Ohio-based businesses during the past six years normalized per \$1 million of total academic research and development makes up 25% of the formula.

- The total number of new start-ups based on the university’s intellectual property that have third-party validation and are physically located within Ohio during the past six years normalized per \$1 million of total academic research and development completes the final 25% of the formula. ►

- **Find creative ways to make deals happen.**

"We don't have set rates we try to achieve in terms of licensing," he says. "We have flexibility in putting together deals to meet the companies' needs. It's all about getting a firm understanding of the company's goals and objectives. Part of our strategy is to make sure that you very accurately understand the objectives of the other side so when you're trying to strike a deal you meet their needs. You'd be surprised to know how many negotiators have a fairly deaf ear to understand what the other party is trying to accomplish."

Organizing the angels

A fair share of credit for UA's outstanding performance can also be given to a fairly unique enterprise which organizes angel investors there.

The ARCHAngel (Akron Regional CHange Angel) Network is a regional forum that serves to introduce investors to market-driven, technology-based investment opportunities in Northeast Ohio and particularly within the greater Akron area. The network, made possible through the UA foundation's sponsorship, brings together promising technology companies and angel investors with a particular focus on businesses that leverage the region's strengths in health care, information technologies, polymers and other advanced materials.

Formed in 2005, ARCHAngel conducts quarterly meetings to introduce investors to promising investment opportunities. The network also provides opportunities for ARCHAngel volun-

teers to mentor and advise young technology companies. The leadership team includes members of UA, enterprise accelerators, regional initiatives, local government, private sector and investment partners.

"I think it's uncommon for a university to have this sort of enterprise spring up," says Preston. "Certainly there are angel organizations in other places, but I don't think it's customary for technology transfer offices to have stimulated and promoted this kind of thing."

From lab to prototype

ARCHAngel has achieved a significant amount of interest on a national basis. A representative group of the 300 angel investors from the region screen a number of opportunities quarterly. The group is focused on the notion that many TTOs lack the funding to take their technology from the lab to the point of prototyping or beyond, when a company or venture capitalist would be more interested. "In my view, it's the single most difficult part of commercializing technology -- that space between benchtop to prototype -- to demonstrate viability," says Preston.

As it turns out, more than half of the opportunities ARCHAngel has presented have been funded. "This gives us an enormous advantage," says Preston. The angel investments have ranged from \$250,000 to \$1.5 million.

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