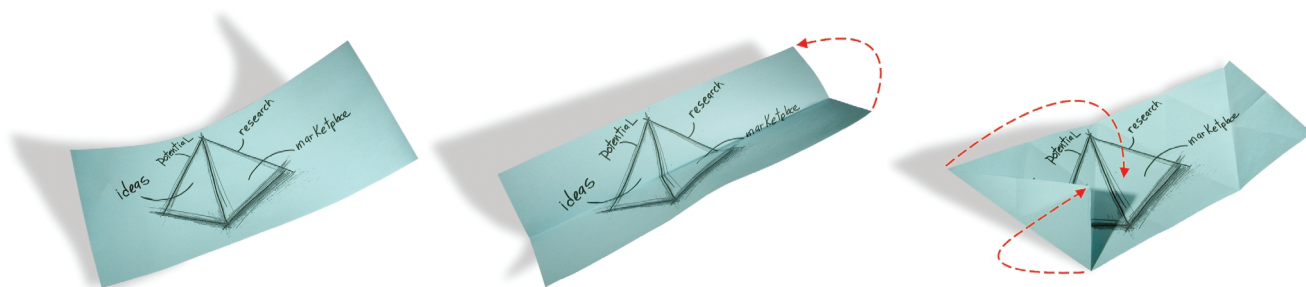


TURNING IDEAS INTO COMMERCIAL REALITY



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THERE ARE MANY MISCONCEPTIONS about universities and the world of intellectual property, the licensing of inventions and the launching of spin-out companies. Yet one thing is true beyond doubt – the transfer of new technology from universities to businesses has had a positive and growing impact on the U.S. economy.

The Association of University Technology Transfer Managers reports that most licensing income is generated by a small number of the many patents licensed, and those home-run patents tend to be in the life sciences. Nonetheless, since the early 80s, over 3,400 new companies have been formed based on licensing an invention from an academic institution.

Transferring technological discovery to the marketplace with the help of the Office of Technology Development is integral to NJIT's educational, research and economic-development missions. Involving students in research, scientific publication, creation and protection of intellectual property, negotiation of licenses and linkage with companies in the NJIT business incubator are all mechanisms for translating research into commercial reality. However, this does not happen automatically or overnight.

Proactive management of intellectual property, starting well before ideas are conceived, is at the heart of the NJIT strategy for growing the university's research capacity and contributions to the

regional economy. The word proactive should be emphasized, since the direction that the university ultimately takes with an intellectual-property asset is often determined by provisions in the agreement negotiated for the researchers before they begin their work.

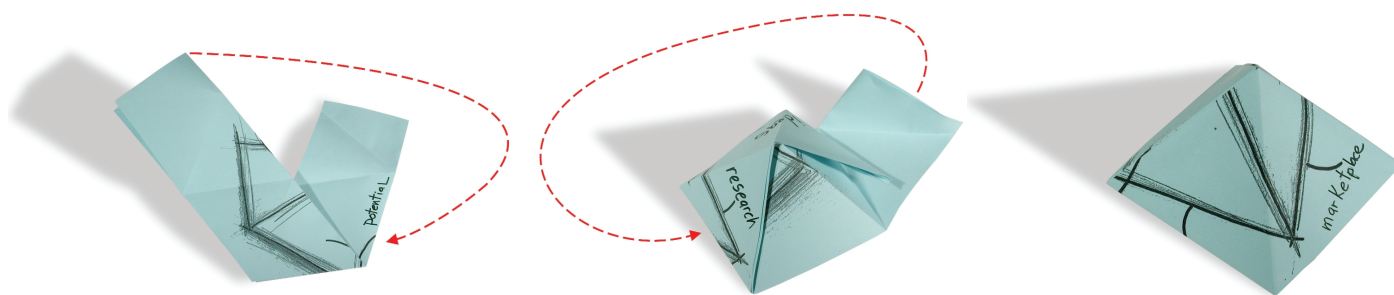
Successful technology transfer and development depend on two relationships: the university's relationship with inventors/principal investigators and the relationship between the university and industry. Reflective of how NJIT's Intellectual Property Management Program is being strengthened under the leadership of President Robert Altenkirch, NJIT inventors can receive as much as 50 percent of any royalties generated by their efforts. This percentage is among the highest in the nation.

Inventions that do result from university-based research are most often embryonic, requiring additional significant technical development as well as a degree of detailed market insight that university administrators generally cannot provide. Therefore, input about commercial potential from the inventors themselves is key. NJIT researchers have been able to provide this feedback by participating in industry-sponsored research initiatives, attending relevant conferences, and serving on the university's industry advisory boards and companies' scientific advisory boards. In fact, if an industrial partner has sponsored the work, licensing of an invention is almost assured.

The Office of Technology Development tracks the research being conducted in all the university's labs and centers. One of our goals is to educate inventors about the importance of protecting intellectual property as an element of commercialization. Without such protection, it can be difficult to entice a company to commercialize an invention, since its competitive advantage may be seriously compromised. Given the global nature of the economy, we

leading edge of science and exceedingly relevant to real-world problems.

In the past, NJIT has executed a handful of licensing agreements with small start-up companies that have returned limited dollars to the university. The Office of Technology Development is reviewing the entire NJIT patent portfolio to realign and refocus our efforts. In addition, we are working with inventors to help strengthen their relationships with



want to maximize our ability to protect foreign filing rights for inventions. That's why we encourage researchers to tell us about potential inventions early in the development process, well before any public disclosure, and to keep us informed about their progress.

The process of reviewing inventions at NJIT has been reengineered to be more responsive to inventors. The Technology Commercialization Committee meets monthly to review new disclosures. However, if public disclosure or publication (including publication on the Web) is imminent, a disclosure can be reviewed on an expedited basis. Over the past ten months, the number of invention disclosures by NJIT researchers has doubled compared to previous years. Recent disclosures have included inventions in the areas of microfluidics, homeland security/defense, advanced membrane technology, biomedical devices and engineered particulates.

Successful technology transfer typically requires an on-going relationship with industry that goes beyond patent licenses. University inventors are often able to contribute technical improvements that enhance a product's potential for commercial success. As virtually all industries have curtailed R&D activity in the past decade, they have come to view universities as strong partners in their development programs and valuable sources of concepts for innovative products and services. This new relationship between industry and the academic community can stimulate research that is at the

industry by establishing formal industrial-partnership programs and increasing the number of research agreements sponsored by industry. In this context, linkages with start-up companies and the NJIT incubator are extremely important.

NJIT has a wealth of potential inventions that can benefit both society and the university. The intellectual-property policies at the core of the Office of Technology Development's program address the needs of researchers as well as the requirements for enhanced industry/government collaboration. Proactive management of intellectual property and technology development promises to increase the value returned to NJIT and individual inventors – both in terms of license income and more sponsored-research dollars.

Given the diversity of the research under way at NJIT, this is challenging and extremely fascinating work. It is also very rewarding to know that there can be a huge payoff in terms of public good as a result of technology commercialization, which is the ultimate measure of our success. ■

Companies interested in licensing NJIT intellectual property or participating in sponsored-research can contact either:

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