

FLC MID-ATLANTIC REGION REGIONAL APPRECIATION AWARD

Maryland Technology Development Corporation

INTRODUCTION

Since it was established in 1998 by the Maryland General Assembly to help create and foster new business through the commercialization of technology, the Maryland Technology Development Corporation (TEDCO) has proved to be an outstanding champion for technology transfer to and from the federal laboratories located in Maryland.

TEDCO has more than 130 companies in its funding portfolio, and nearly 80 are involved in federal laboratory technology transfer projects. Within the past 12 months, technology transfer projects in just three laboratories alone have received more than \$3 million in funding from TEDCO.

Many of the collaborations between private enterprise and federal research organizations stem from TEDCO's extensive outreach efforts, in particular the annual technology transfer showcases conducted by TEDCO in partnership with individual laboratories. Over the last six years, TEDCO has hosted nearly 30 technology showcases drawing more than 4,000 attendees.

Interest in these events grows every year. In the last 12 months, TEDCO conducted five showcases as well as a multi-agency Small Business Innovation and Research (SBIR) conference, presenting more than 100 technology transfer opportunities with federal laboratories to more than 1,000 attendees.

It is through these efforts and more that TEDCO demonstrates its exceptional initiative in the promotion and transfer of federal technology, earning this nomination for a Regional Appreciation Award.

ABOUT TEDCO

An independent entity, TEDCO has helped Maryland become a leader in research and development spending by pursuing its mission to facilitate the creation of businesses and foster their growth in all regions of the state through the commercialization of technology.

TEDCO is governed by a 15-member Board appointed by the Governor with the advice and consent of the Senate. The Board is comprised of leaders from Maryland's technology community with representatives from the private and public sectors, academia and the nonprofit community. The Secretary of the Maryland Department of Business and Economic Development serves as an ex-officio member.

TEDCO's staff of 12 represents a combined technology transfer and economic development experience base of nearly 100 years with more than 10 advanced degrees. Most come from professions focused on technology transfer and technology-based economic development.

INTERACTION WITH THE FEDERAL LABS

TEDCO's success in achieving its mission is directly tied to its efforts in support of federal technology transfer projects.

The company currently has formal agreements with 12 federal research organizations covering more than 40 major research laboratories, centers, institutes and activities. These agreements, negotiated and signed by top management within the federal organizations, are typically of multi-year duration and cover a broad range of technology transfer activities. Often, they become the model for similar interactions.

For instance, the Partnership Intermediary Agreement (PIA) between TEDCO and Indian Head Division, Naval Surface Warfare Center (IHDIV, NSWC) was the Navy's first PIA. It became the standard for all future Navy PIAs thanks to boilerplate language that allows tailoring of the agreements to the needs of the individual labs.

As Maryland's leading source of funding for seed capital for technology transfer and business development, TEDCO has gained national recognition for its success in helping to create new businesses including earning *Entrepreneur* magazine's top ranking as the most active investor in early-stage companies in the nation for the last three years.

Three of TEDCO's five funding programs are federal grant programs that support the technology transfer needs of specific federal organizations:

- *Aberdeen Technology Transfer Program (ATTI)*. A dual-use program, ATTI has funded 12 companies for a total of more than \$600,000 in the last 12 months.
- *Fort Detrick Technology Transfer Program (FDTTI)*. Within the last year, \$550,000 was awarded to 11 companies for technology transfer projects through FDTTI. A second round of funding through this dual-use program is anticipated for this fall.
- *NAVAIR Technology Commercialization Initiative (NTCI)*. This fund facilitates the transfer of advanced technology from the private sector to the Naval Air Systems Command (NAVAIR). In the last year, TEDCO has awarded more than \$1.5 million in NTCI funds.

TEDCO also has two state funding programs. The Maryland Technology Transfer Fund (MTTF), which provides non-equity investment funds that companies are required to pay back over time, is designed to help small businesses transfer technology from Maryland universities and federal laboratories into the marketplace.

The University Technology Development Fund (UTDF) provides funding to researchers to test the feasibility of their new inventions, develop prototypes, conduct proof of principle research and expand the scope of patent coverage to transfer technologies into commercial projects.

To make it easier for entrepreneurs and companies to submit proposals to all of its funding programs, TEDCO launched an online application system in 2006 that walks applicants through each step of the process. Applicants can then track the progress of their proposals online.

BENEFITS TO ORGANIZATIONS

TEDCO's outreach and funding efforts benefit private and federal organizations alike.

For example, TEDCO provided a \$75,000 seed grant to Baltimore Shipping Technologies (BST) after the startup entered into an agreement with IHDIV, NSWC to exclusively license the Navy's Joint Modular Inter-Modal Container technology. The funding supported development of prototypes of the highly durable, cost-effective containers that were demonstrated at the World's Best Technologies Showcase 2006, in Arlington, TX.

These reusable containers—which are collapsible, interlocking and built for all modes of shipping—will save the Department of Defense millions of dollars a year in shipping costs. IHDIV, NSWC anticipates large royalties, while BST, which made its first commercial sale of the containers branded as OmniPak in June 2006, will continue to work with the Navy inventor on new commercial markets.

In another example, in 2006 TEDCO provided \$75,000 in NTCI funding to Nano Solutions, Inc., to develop novel energy devices called nanocapacitors to provide efficient and environmentally safe devices for military and commercial users. As envisioned, the nanocapacitors will combine the best features of batteries and capacitors, delivering very high energy densities and equivalent power densities, along with other benefits such as no use of toxic materials, reduced weight, fewer cells and lower transportation costs.

Without TEDCO seed funds, BST and Nano Solutions might never have gotten off the ground. These are not isolated cases. Entrepreneurs and small companies throughout Maryland now look to TEDCO for seed funds as well as support in leveraging opportunities with federal research organizations.

Companies learn about TEDCO's services through its comprehensive formal and informal outreach effort. In the last year, TEDCO has organized technology showcases with the U.S. Army APG; the Beltsville Agricultural Research Center; IHDIV, NSWC; the U.S. Army Medical Research and Materiel Command (USAMRMC) at Ft. Detrick; and the National Institute of Standards and Technology (NIST).

Each event is organized to ensure that attendees—who range from entrepreneurs and economic development representatives to members of the investment community—have sufficient opportunity to meet with federal researchers and learn more about the technologies that interest them. In addition, care is taken in scheduling and promoting the events to draw the most targeted participants. Oftentimes, it is a matter of getting beyond preconceived perceptions.

For example, while IHDIV, NSWC is known for its energetics systems, the focus of its June 2006 showcase was micro-electro-mechanical systems (MEMS) technology. By attracting those who get the most value from the event, TEDCO helps position the lab for successful collaborations. At IHDIV, NSWC's event, 22 Navy technologies were presented to private industry, directly resulting in 6 patent license applications and several collaborative research and development agreements (CRADAs).

In addition to the showcases, TEDCO hosts at least four funding briefing sessions a month and participates in numerous outreach presentations such as the Maryland Association of

Counties annual convention. These events allow both formal and informal opportunities for matchmaking between Maryland businesses and the federal laboratories.

IMPACT ON FEDERAL LABORATORY TECHNOLOGY TRANSFER PROGRAMS

TEDCO's funding of technology transfer projects and its expertise in connecting qualified companies with federal technology transfer opportunities have advanced technology transfer in Maryland both directly and exponentially.

Because of TEDCO's rigorous due diligence of applicants, companies who gain funding through TEDCO for technology transfer projects have a high success rate in securing third-party, follow-on funding for technology development and commercialization activities.

For example, 55 pre-seed and seed-stage companies that received MTTF funding and completed technology transfer projects have leveraged the state's investment of \$3.1 million to attract an additional \$108.3 million in downstream funding from federal agencies, venture capital, angel investors and other sources. In addition, 60 projects have been funded via UDF and 43 projects completed. Of those, 17 have licensed their technologies to private companies, 12 of which are located in Maryland.

Given that more than 60 percent of all TEDCO-funded projects involve federal laboratory technology transfer, TEDCO has had a significant impact on federal technology transfer programs.

Nor is that impact limited to the state of Maryland. The TEDCO technology showcases attract regional, national and even international attendees. In addition, the TEDCO-managed federal funding programs (ATTI, FDTTI and NTCI) are open to all small businesses in the United States and currently support national federal technology transfer projects.

CONCLUSION

When the Maryland General Assembly launched TEDCO in 1998, it did so with the intention of leveraging the vast opportunities for economic development related to the federal research organizations. At the time, these were an untapped resource. No more.

Over the last 12 months, TEDCO has continued its outstanding work promoting spin-in and spin-out technology transfer projects with the federal laboratories to meet the needs of the military and other agencies while building the state's economic base. In so doing, TEDCO has proven to be an outstanding partner of the Federal Labs and has become a model for other states to envy.

Primary Contact: Renee Winsky, Maryland Technology Development Corporation (TEDCO), 5575 Sterrett Place, Suite 240, Columbia, MD 21044, Phone: 410-740-9442, Fax: 410-740-9422, E-mail address: rwinsky@marylandtedco.org