



**NINTH ANNUAL REPORT
TO THE MAINE LEGISLATURE
FY08: July 2007 - June 2008**

**Prepared for:
The Business, Research and Economic Development Committee**

The Maine Technology Institute “shall encourage, promote, stimulate and support research and development activity leading to the commercialization of new products and services in the State’s technology-intensive industrial sectors to enhance the competitive position of those sectors and increase the likelihood that one or more of the sectors will support clusters of industrial activity and to create jobs for Maine people.”

1999, 5MRSA c407 § 15302

www.mainetechnology.org

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Executive Summary

The Maine Technology Institute (MTI) supports technology development by Maine businesses and entrepreneurs in the state's targeted sectors, helping them bring to market cutting edge products, processes and services. With MTI's support, companies become more competitive, provide higher-paying jobs for people across the state and purchase goods and services from other Maine companies, thus stimulating Maine's economy.

Early-stage technology development is the most challenging step to finance on the way to profitability and growth. As the state's only financial support for private sector research and development (R&D), MTI funding provides the crucial link that helps drive ideas from the laboratory to the marketplace. There is a direct correlation between investment in R&D and job growth. With MTI's success in supporting new technologies, resulting in the growth of higher paying jobs, it is clear that Maine's economy benefits greatly from the expansion and reach of MTI's programs.

MTI accomplishes its purpose by cost-sharing R&D and industry-cluster building projects with Maine companies through competitive award programs and by helping Maine companies secure federal funds for these projects. Per its legislative mandate (5MRSA §15302), MTI's funding programs target seven technology sectors designated by the State of Maine:

- Advanced technologies for forestry and agriculture
- Aquaculture and marine technology
- Biotechnology
- Composite materials technology
- Environmental technology
- Information technology
- Precision manufacturing technology

MTI also administers programs financed by state bonds that aim to move Maine technologies to the commercial market by helping fund capital and related expenditures for R&D, particularly for collaborative technology projects of the for- and non-profit sectors; and by helping build the research and development capacity of Maine's nonprofit research laboratories and strengthen the State's biomedical and marine industries, while expanding the state's technology employment base.

The Institute is a private nonprofit corporation, governed by a private-sector led Board of Directors (Appendix A). The president of the Institute is appointed by the Governor and reports to the Commissioner of the Department of Economic and Community Development via the Director of the Office of Innovation.

MTI's success is due in large part to the dedication of over 100 business leaders and technology experts, who serve as volunteers on MTI's Board of Directors and seven technology boards (Appendix B). Each year these volunteers contribute over 5,000 hours to proposal evaluation, funding recommendations and providing guidance on matters of policy and direction, based on their in-depth knowledge of their industries' technologies and needs in Maine.

MTI employs a lean staff of 10 full-time employees, who with the MTI president implement the policies and programs of the Board (Appendix C).



MTI staff at the gazebo of historic Gardiner's Common. Top row: Patti Sutter, Hal Norvell, Roger Brooks. Middle row: Elizabeth Crabtree, Jessie Gogan, Joe Migliaccio, Betsy Biemann. Bottom row: Shane Beckim, Andrea Phillips, Linda Adams.

The Maine Technology Institute During Fiscal Year '08

The Institute fulfills its mission by co-funding high-potential technology development projects with Maine entrepreneurs and organizations that bring new products, systems and services to the market, invigorate Maine's industry clusters and create good jobs across the State. During this fiscal year, MTI launched two ambitious new programs, Maine Technology Asset Fund and the expanded Cluster Initiative program. In addition, MTI consolidated its Seed Grants, Development Awards, Phase 0 Awards and Accelerated Commercialization Fund under one program area, the Business Innovation Program, to provide a more seamless suite of resources for Maine entrepreneurs, as well more efficient administration of these programs.

MTI's core programs are:

- Business Innovation Programs
 - Seed Grants
 - Development Awards
 - Accelerated Commercialization Fund
 - SBIR/STTR Phase 0 Awards and Federal Funding Assistance
- Cluster Initiative Program
- Maine Technology Asset Fund

In 2007, the Maine State Legislature authorized and the voters of the State of Maine approved \$50 million in bond funds for research, development and commercialization projects that boost economic development and create jobs across the State. The

Legislature directed MTI to administer this venture based on its track record of administering high-impact innovation funding programs in the for-profit, nonprofit and university sectors. In January, the MTI Board established the Maine Technology Asset Fund in response to this directive and approved the application review and award approval process that included third party review by the American Association for the Advancement of Science. At that same time, MTI released a request for applications for the first of two rounds of awards for the Fund and then conducted nine workshops across the state in preparation for the application deadline. Sixty-six Maine companies, nonprofit groups and universities requested a total of \$112 million for projects spanning the seven state technology sectors. The first round of awards—14 awards totaling approximately \$30 million—were announced in August of the following fiscal year.

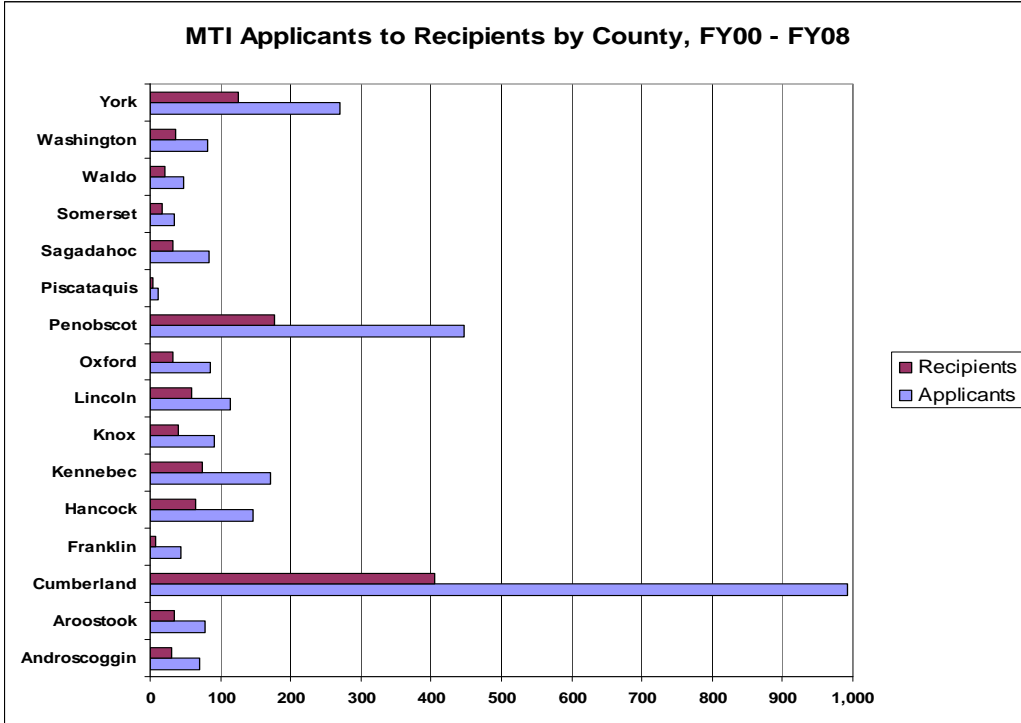
In April, MTI and the Office of Innovation released the report “Maine’s Technology Sectors and Clusters: Status and Strategy” authored by Dr. Charles Colgan of the University of Southern Maine, written together with Battelle, PolicyOne Research and Planning Decisions. The report found that Maine’s effort to grow a more technology intensive economy is well underway and identified sixteen technology clusters that are sustained or in development. While there are weaknesses and challenges, the foundations are strong and can be further supported, particularly through nurturing these clusters as proposed in a series of recommendations. In the previous session, the Legislature appropriated additional funds for MTI’s cluster development program with \$2.5 million in funding (later reduced to \$2.28 million), to be launched in the 2008-2009 fiscal year.

MTI Funds Innovative Maine Companies

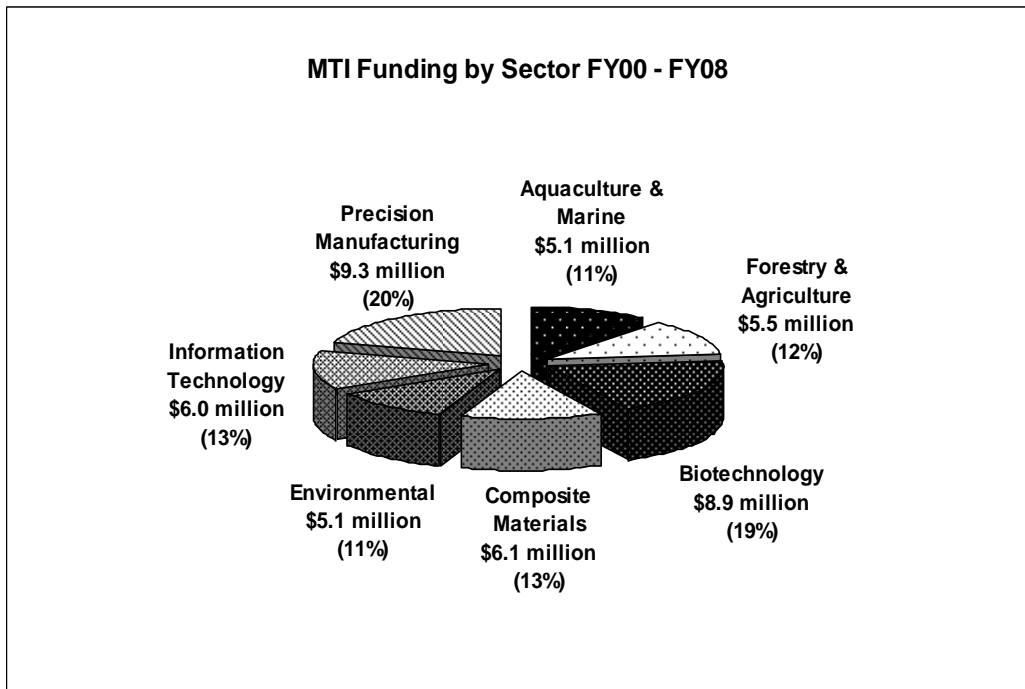
During FY08, MTI funded 165 new technology development projects, totaling just over \$7 million. This funding leveraged an additional \$16 million in matching capital investment by the companies themselves.

Since its inception in 1999, MTI has funded 1,153 technology development projects throughout the state of Maine, a financial commitment of nearly \$50 million that has leveraged an additional \$80 million for a total \$130 million. These resources have enabled Maine companies to secure their intellectual property, launch more competitive products and services, grow faster than average companies across the state, generate jobs and purchase goods and services from other Maine companies.

These early stage R&D efforts are helping to drive new products and services to the market, creating jobs in the technology-intensive sectors. Independent researchers from the University of Southern Maine note that evidence already shows that “MTI programs have been very successful in a short time supporting substantial innovative activity, particularly in the private sector, that is likely to have positive economic impacts throughout Maine.”



MTI funding reaches all 16 counties in Maine and across the State's targeted technology sectors, as shown in these tables.



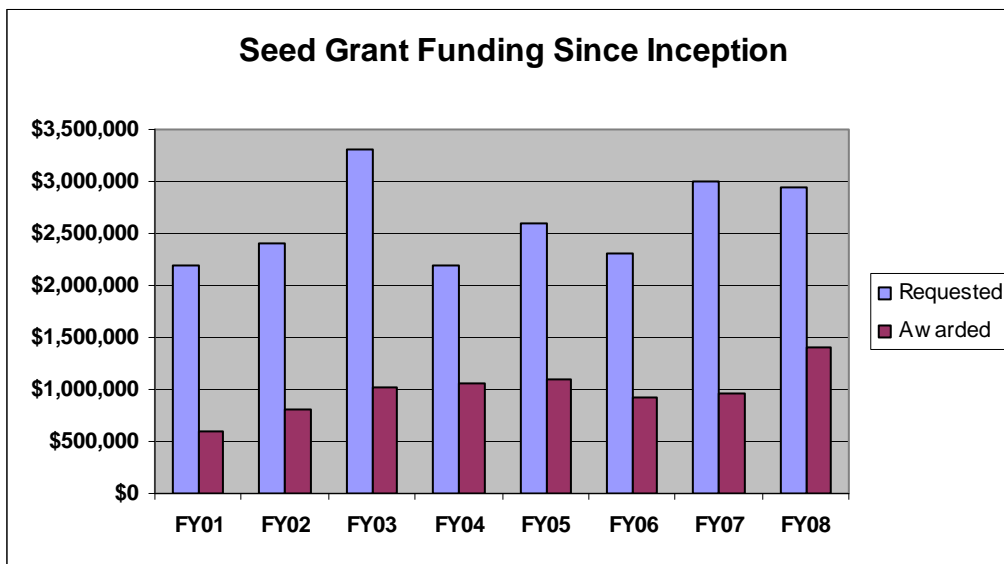
Since MTI's inception, the total number of awards among the sectors have ranged from 124 for Biotechnology to 245 for Precision Manufacturing.

Core Funding Programs

Business Innovation Programs

Seed Grants

Seed Grants of up to \$12,500 each are offered six times a year to support early-stage R&D activities, such as market research, patent filings, feasibility studies and early prototype development. A company may win multiple Seed Grants, but may not exceed \$25,000 for any one technology. In FY08, 126 Seed Grants totaling nearly \$1.4 million were awarded in six rounds that averaged 45 applications per round. The matching funds leveraged by these awards totaled over \$2.3 million (Appendix D). Since 2002, MTI has approved 867 Seed Grants for over \$8 million and matched by over \$13 million.



Grant Recipient Profile: mWave Industries, LLC, Gorham

As a start-up in 2004, mWave Industries applied the first of three MTI Seed Grants to design and manufacture an advanced prototype circularly-polarized antenna that was not available in the marketplace. Once built with all the characteristics of a production model, the antenna was presented to a radio manufacturing company in the United Kingdom for independent testing and acceptance. An initial order led to significant sales and contributed to the hiring of additional staff. mWave has used two later

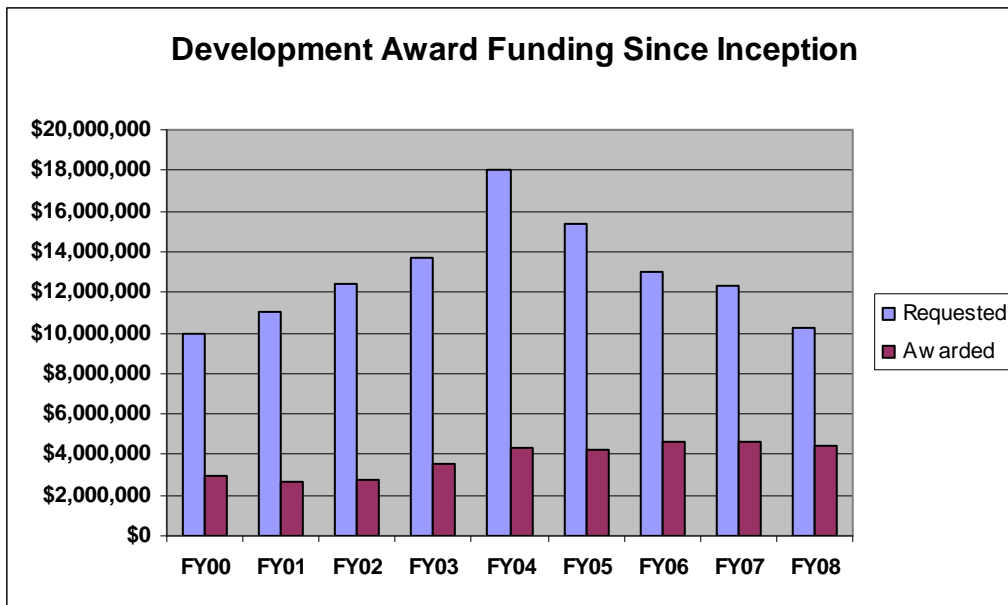
MTI Seed Grants to explore other antenna designs also not available in the market. The prototype products and engineering knowledge gained from these grants have led to applications in other models and the continued addition to mWAVE's antenna product offerings. mWave started with the three founders and currently employs another eight full-time staff. In early 2008, the company moved to a new 6,000 square-foot facility in Windham.



Development Awards

Development Awards are conditional loans of up to \$500,000 offered three times a year to fund later stage R&D activities leading to commercialization, such as prototype development, testing and manufacturing pilot projects. This year a number of changes were made to simplify the award structure, broaden the scope of projects supported and expenses allowed, and modify the repayment terms when companies succeed in bringing their new technologies to market.

During the fiscal year, MTI Technology Boards reviewed 32 Development Award applications of which 13 were funded for a total of \$4.5 million and matched by nearly \$11 million (Appendix E). Companies that have received earlier development awards, which require repayment to MTI within two years of selling a new product or service, made payments back to MTI totaling just over \$126,775 during the fiscal year. These repayments are recycled through new awards for Maine companies in support of technology-intensive businesses across the state.



Award Recipient Profile: Bar Harbor Biotechnology, Inc., Trenton

Bar Harbor BioTechnology develops innovative molecular biology products and services that advance life science research and clinical medicine. Building on a previous MTI Seed Grant, the company used its FY08 Development Award to develop gene profiling products for biomedical scientists who need to study gene profile changes during human disease states and genetic risk assessment. The focus was on its dual usage QpcrArray technology for the research of human diseases with applications for molecular profiling, applying both gene expression and gene copy number variation. Bar Harbor BioTechnology began sales of its Human QpcrArrays in early 2008.



Accelerated Commercialization Fund

The Accelerated Commercialization Fund (ACF) provides follow-on funding to help successful MTI-funded companies bring their new products or services to market. The fund is available for companies that have successfully completed an MTI development award-funded project and are seeking next stage investment from outside angel investor(s) or venture capital funds. The ACF program fills a gap for companies seeking to raise equity capital needed to bring their new products and services to market. In FY08, MTI made one Accelerated Commercialization Fund investment of \$100,000 to CrossRate Technology, LLC, a company that had previously completed a Development Award-funded project. Later in the year, MTI also approved follow-on investments of \$75,000 to CrossRate and \$58,000 to Stillwater Scientific Instruments; payments for both were made early in FY09.

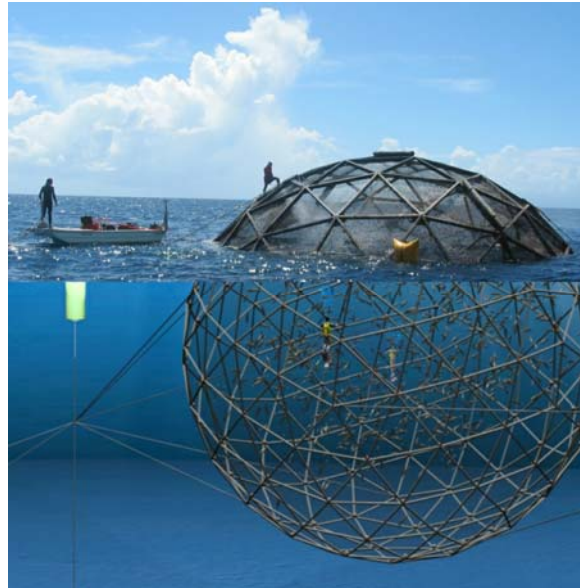
Phase 0 Awards

MTI's Phase 0 Program provides financial assistance to Maine companies that are interested in applying to the federal government's Small Business Innovation Research/Small Business Technology Transfer program (SBIR/STTR). Maine companies can request up to \$5,000 from MTI to help them prepare competitive proposals for these federal grants. Applications to MTI for Phase 0 support are accepted on a rolling basis to better coincide with the SBIR award schedules and allow maximum time for the preparation of the most competitive proposals. This increases the success rate of these proposals that bring in millions of dollars of federal R&D financing for Maine firms annually. In FY08, 18 Phase 0 awards were approved, totaling nearly \$85,000, matched by company contributions of over \$124,000 (Appendix F). Since the program's inception in early 2005, more than \$337,000 in Phase 0 awards have been approved and matched by over \$488,000. Through calendar year 2007, Maine company applications for this federal funding assisted by MTI Phase 0 awards was more than \$2.4 million in SBIR grants from federal agencies.

Award Recipient Profile: Ocean Farm Technologies, Searsmont

Ocean Farm Technologies, Inc. (OFT), manufactures innovative containment systems for marine fish aquaculture in deep water, open-ocean conditions. Its patented submersible AquaPod™ net pen is suited for extreme open-ocean conditions and a diversity of species. Constructed of recycled polyethylene and wire mesh panels fastened together in a strong, stable spherical geodesic structure, AquaPod™ net pens have set a new standard for predator resistance, escape prevention and security for marine fish farms.

With help from MTI Seed Grants and a \$250,000 Development Award, OFT has raised a million dollars in venture capital and obtained over \$400,000 in SBIR funding from National Oceanographic and Atmospheric Administration. OFT currently employs seven and is expanding its manufacturing facility in Morrill, Maine. OFT exports Maine-built AquaPod™ net pens to Panama and South Korea, and expects steady growth in markets worldwide.



Assistance Securing Federal Funding

In addition to its Phase 0 program, MTI helps Maine companies to learn about and navigate the complex federal SBIR/STTR program. This program represents more than a \$2 billion potential market for Maine's technology intensive companies. During the last several years, MTI's efforts have helped increase the amount of federal funding received by Maine companies for research and development under this program, which has contributed to the competitiveness and growth of these companies.

MTI's outreach and SBIR *pro bono* consulting support, along with the Phase 0 program, are paying off:

- Maine companies continue to secure SBIR/STTR funding. For information available for federal FY08 ending in September 2008, Maine small businesses received nine SBIR awards and invested this additional \$1.3 million in R&D.
- Training/Promotion: MTI sponsored its biennial SBIR Summer Session workshop with the program managers of nine federal agencies and 100 business owners, entrepreneurs and partner service providers, who learned about SBIR/STTR and specific agency requirements and met one-on-one with the program managers.
- Financial Assistance: MTI's Phase 0 program continued to fill the SBIR/STTR proposal pipeline. Since early 2005, MTI awarded \$337,000 to 14 companies and realized a return of \$5.6 million in SBIR/STTR awards.
- Since MTI's inception in 1999 through FY08, Maine small businesses have won 205 awards totaling almost \$50 million, an average of \$5.55 million in SBIR/STTR funding coming into Maine each year.

Cluster Enhancement Awards

Recognizing that dynamic technology clusters require more than a group of individually successful companies, MTI offers this financing program on a rolling basis to support activities that will strengthen industrial activity within and among the seven targeted industry sectors. The Cluster Enhancement program has been important to MTI's purpose because it supports the collection and dissemination among several or many companies of the knowledge, skills and innovation that in turn stimulate entrepreneurship and lead to new products and services in Maine's technology-intensive clusters.

In FY08, MTI approved funding for six new cluster enhancement awards, totaling over \$842,000 and matched by over \$2 million. All together MTI has provided almost \$5 million in cluster awards, matched by more than \$12.6 million for 48 projects that support Maine's technology-driven businesses by improving the infrastructure, resources, connections and linkages necessary for the innovation economy to thrive (Appendix G). New Cluster Enhancement Awards made in FY08 included projects in composite materials, aquaculture and marine technology, advanced technologies for forestry and agriculture and environmental technology.

In April, MTI and the Office of Innovation released the report "Maine's Technology Sectors and Clusters: Status and Strategy" authored by Dr. Charles Colgan of the University of Southern Maine, written together with Battelle, PolicyOne Research and Planning Decisions. The report found that Maine's effort to grow a more technology intensive economy is well underway and identified sixteen technology clusters that are sustained or in development. While there are weaknesses and challenges, the foundations are strong and can be further supported, particularly through nurturing these clusters, as proposed in a series of recommendations. In the previous session, the Legislature had appropriated additional funds for MTI's cluster development program with \$2.5 million in funding (later reduced to \$2.28 million) that would bolster an expanded program early in FY09 and support the study's recommendation.

Cluster Enhancement Award Feature: Potatoes to Plastics

Over a period of 18 months, nine companies, nonprofit groups and university researchers will work together to demonstrate the feasibility and marketability of producing an environmentally friendly organic plastic from one of the state's traditional crops. In addition, they will evaluate establishing a trade association to exchange information, influence related policies, educate consumers and other companies, and build market awareness for Maine-made potato plastic products.

Initiative Members:

- Maine Initiatives (fiscal agent)
Environmental Health Strategy Center
- True Textiles, Inc.
- Rynel, Inc.
- Tom's of Maine
- The Margaret Chase Smith Policy Center
- UMaine's Process Development Center
- The Maine Potato Board
- Maine Organic Farmers and Growers Association
- Green Harvest Technology

Bond Programs: Building the Research-to-Market Pipeline in Maine

MTI administers three bond-funded programs: the Maine Biomedical Research Fund and the Maine Marine Research Fund to expand Maine's research capacity in biomedical and marine research, and the Maine Technology Asset fund aimed at bringing innovative Maine technologies to the market by supporting capital investments. Developing requests for proposals, coordinating competitive review and managing recipient reporting have given MTI a breadth of experience with the biomedical and marine research sectors, as well as with diverse nonprofit, academic and research stakeholders. MTI was therefore well positioned to undertake the Maine Technology Asset Fund, particularly in framework of fostering collaborative efforts among the for-profit, non-profit and academic communities to support innovative technology R & D and bring their products, services and systems to the marketplace, creating quality jobs across Maine.

Maine Biomedical Research Fund

MTI administers this fund, which supports biomedical research in Maine and is financed by State bonds (as well as General Funds in its early years) and governed by the Maine Biomedical Research Board. Since its inception, the State has approved \$42.5 million for the Fund and these funds have been awarded by the Maine Biomedical Research Board for biomedical research projects that typically extend over several years.

During the fiscal year, no new funds were appropriated by the State for this program in this fiscal year and no new awards were made by the program. MTI continued to make payments and monitor awards made in several rounds from the fund to six organizations from Biddeford to Bar Harbor that are carrying out biomedical research. These organizations include the Foundation for Blood Research, Jackson Laboratory, Maine Institute for Human Genetics and Health, Maine Medical Center, Mt. Desert Island Biological Laboratory and the University of New England.

During FY08, MTI disbursed \$3.69 million to this Fund's awardees for projects that had been approved in previous fiscal years. These funds continued projects, such as expansion of a year-round research program at Mount Desert Island Biological Laboratory, the purchase of equipment and renovation of lab space for cell culture functions at the Maine Institute for Human Genetics and Health and expansion of the Maine Medical Center Research Institute with support for recruitment of investigators and the construction of facilities.

Maine Marine Research Fund

This fund was created to support marine research and create jobs in Maine through investment in eligible Maine non-profit institutions, state government and quasi-governmental agencies and academic institutions. The fund is governed and administered by the MTI Board of Directors. Similar to the Maine Biomedical Research Fund, there were no new funds appropriated by the State for this program in the fiscal year and no new awards were made by the program. In FY08, MTI disbursed over \$1.79 million to this Fund's awardees as they achieved their project milestones. These funds continued

projects, such as oceanographic equipment for the Gulf of Maine Research Institute in support of ecosystem-based fisheries management, enhancement of aquaculture research and incubator facilities of the Maine Aquaculture Innovation Center and support for the integration of research into training and outreach programs at the University of Maine at Machias, particularly for a five-year study of the effects of humans on commercially important shellfish in Downeast Maine.

Maine Technology Asset Fund

In 2007, the Maine State Legislature authorized and the voters of the State of Maine approved \$50 million in bond funds for research, development and commercialization projects that boost economic development and create jobs across the State. The Legislature directed MTI to develop and administer this venture, based on its track record of administering high-impact innovation funding programs in the for-profit, nonprofit and university sectors. MTI established the Maine Technology Asset Fund (MTAF) in response.

The Fund is a two-year, competitive award program. The awards must be used to fund capital and related expenditures supporting research, development and commercialization projects that will lead to significant economic benefits for Maine. The expenses may include facilities construction and renovation, machinery and equipment (including computers, software and licenses required for their use, as well as related technician training for operation of equipment and machinery purchased) and land purchase. This may also include expenses directly associated with the acquisition and installation of such assets. The awards may not be used to fund ordinary annual operating expenses.

To assist with the rigorous review and competitive ranking of applications, MTI contracted with the American Association for the Advancement of Science (AAAS), a respected scientific organization that has worked with over 30 states to implement research and technology commercialization programs.

MTI released the first Request for Applications in January 2008. At the April deadline, MTI received 66 applications requesting nearly \$112 million. Applicants from all seven technology sectors included most of the public university and non-profit research community in Maine, as well as a large number of private firms, many of whom would work together for the first time in response to this funding opportunity. The reviewers from Maine and AAAS were uniformly impressed by the quality of the applicant pool. In August after a written review and, for the highest ranked 21 applicants, in-person interviews, the MTI Board approved the first round of 14 awards for a total of \$29,919,446 and MTI has set the application deadline for second round and balance of the funds in January 2009.

Sector-Specific Assistance: The North Star Alliance Initiative

From time to time, MTI has the opportunity to focus additional support on a particular sector. During the 2008 fiscal year, MTI continued to administer funds to companies in the composites and boatbuilding sectors as part of the North Star Alliance initiative.

MTI is one of the partners of the North Star Alliance, an initiative funded by a \$15 million United States Department of Labor (US DOL) Workforce Innovation and Economic Development (WIRED) grant to the State of Maine. The North Star Alliance aims to grow Maine's boatbuilding, composite manufacturing and related marine-trade industries, emphasizing job creation in high-growth, high-skill occupations.

As part of this program, the Maine Department of Community and Economic Development contracted with MTI to administer approximately \$1,400,000 over the three years of the Initiative's program. During this fiscal year, funds were awarded to U.S. Windblade, Time Temperature and the Kenway Corporation for training and to the Maine Composites Alliance for development of quality employment in the composites sector in Maine. The goal of the MTI support is to enable Maine's innovative companies in these industries to provide training that upgrades and expands their workforce, thus boosting the competitiveness and growth of Maine companies in these sectors and creating quality jobs for Maine people. Fifteen percent of the funding goes to MTI to cover administration and outreach by MTI staff.

Effective Partnerships

Small Business Development Center (SBDC)

MTI and the Maine SBDC completed the sixth year of a contractual relationship to share the cost of a business counselor assisting technology-intensive businesses in Maine and to develop a competency in technology-based business counseling at the Maine SBDC. The SBDC's technology focus has included a business counselor dedicated to the Composite Technology sector and two additional counselors with technology expertise who work with MTI award recipients on their technology commercialization, IP protection, licensing and partnerships, as well as business and marketing planning. In addition, Maine SBDC counselors promote MTI's programs statewide. This agreement has included the conduct of a technology-focused training session each year that addresses MTI client needs.

The Maine SBDC's technology center director was hosted at MTI and worked with 72 MTI award recipients during the fiscal year. According to Maine SBDC data, MTI clients received 445 hours of counseling from Maine SBDC counselors, and Maine SBTDC clients have received 347 hours of direct counseling; both groups worked on issues of business development and commercialization of innovative technologies.

Maine Manufacturing Extension Partnership (Maine MEP)

In calendar year 2007, through an independent economic impact survey conducted by the National Institute of Standards and Technology for all MEP related projects, 13 MTI awardees reported that they:

- Increased or Retained Sales by: \$11.6M
- Invested: \$ 1.4M
- Created or Retained Jobs by: 70

According to Maine MEP records, Maine MEP contributed over 475 staff hours during this period to promote MTI services to Maine manufacturers and introduce MEP services to MTI awardees.

To achieve the above reported impacts and return on investment rate by Maine manufacturers, Maine MEP engages with MTI clients for follow-on technical assistance. Approximately 25 MEP projects with MTI recipients concentrated on quality management systems, lean manufacturing, facility layout, and workforce development, accounting for hundreds of hours of focused training and consulting services.

In the late spring, Maine MEP requested that MTI help support the costs of Maine companies to use its new products growth service called Eureka! Winning Ways. MTI's board approved the project in July 2008 and Maine MEP will promote this product and process commercialization training to small and medium-sized manufacturers in Maine in the coming year.

Maine Procurement Technical Assistance Center (PTAC)

Maine PTAC helps Maine companies secure contracts with government agencies at the federal, state and local levels. Maine PTAC fulfills its federal mandate to support the federal SBIR program by partnering with MTI. MTI's SBIR program expenses provided approximately \$98,174 of in-kind match funding for Maine PTAC's federal procurement assistance program in FY08.

University of Maine System

Active collaboration between the University system and MTI continued in FY08. The University of Maine in Orono received seven MTI awards for technology development during the fiscal year. Moreover, the University of Maine System has provided assistance to numerous MTI-funded companies, including direct technical assistance, informal advising, proposal writing and feedback, commercialization of University-developed technologies and graduate student support.

Maine's Technology Development Centers

MTI continued its relationships with Maine's Technology Centers. Five of the seven Center directors served on MTI technology boards and thereby participated in MTI award review processes. In addition, the Centers provided facilities for MTI's workshops and seminars and promoted MTI programs to their clients. Moreover, the MTI president sat

on the Technology Center coordinating board to maximize the impact of both MTI and the Centers. The partnership is paying off: Half of companies affiliated with the Maine Center for Enterprise Development in Portland and the Target Technology Center in Orono have obtained MTI funding.

Maine Patent Program

MTI continued to fund intellectual property-related activities as part of its awards to Maine companies. However, this work is only funded after companies have received assistance from the Maine Patent Program. In FY08, 11% of MPP clients received funding from MTI. In addition, MTI staff presented at MPP events and MPP participated in the MTI Mixer as part of its outreach to technology companies in Maine.

Small Enterprise Growth Fund

MTI continued a close and mutually supportive relationship with the State-sponsored venture capital fund, the Small Enterprise Growth Fund (SEGF). The director of the Office of Innovation sits on both the MTI and SEGF boards, providing an important link between MTI funding assistance and the equity investments made by SEGF. Eight out of the 35 SEGF portfolio companies previously secured financing and other assistance from MTI. This confirms that MTI is helping to build a pipeline of companies ready for equity financing here in Maine.

Maine International Trade Center

Export markets are an increasingly important source of customers for Maine technology companies. MTI and the Maine International Trade Center have partnered for a second year to offer MTI development award companies one year of free membership to the Trade Center so that they can access the Center's export assistance services.

Private Capital Sources

To help boost access of MTI-funded companies to follow-on funding from private venture capital sources as well, MTI maintained close relationships with many of the venture capital funds and investors in the state and region. The MTI president serves as a member of the Maine Investment Exchange (MIX) Advisory Committee, and in that role helps introduce Maine technology-intensive companies to early stage equity investors. MTI strengthened its partnership with the Maine Angel Network this year, organizing a joint event to introduce MTI-funded development award companies to Maine angel investors at a breakfast meeting in Freeport in the spring. In FY08, two MIX Forums were held; five of the nine Maine companies that presented at the MIX Forum events were MTI awardee companies. Finally, two of MTI's Board of Directors represent the finance sector and include a venture capitalist and a banker. They are also able to advise the MTI president and staff on how MTI can best help Maine companies secure private capital to fund the commercialization of new technologies.

The MTI president and staff network informally on a regular basis with organizations and groups that are potential capital sources, such as the Small Enterprise Growth Fund, the

Finance Authority of Maine, Coastal Enterprises, Inc., other early-stage venture funds in the State, as well as the Maine Angel Network and individual investors. These relationships have led to co-funding of companies with the Finance Authority of Maine and angel investors.

Impact and Accountability

All MTI-funded companies are required to submit information to a third party annually for five years following a project's completion. The compiled data are independently evaluated to determine the impact on Maine's economy, with a report to the Legislature prepared every odd-numbered year.

Data from the 2005 and 2006 surveys were analyzed by the Center for Business and Economic Research at the University of Southern Maine led by Dr. Charles Colgan. These results were then presented to the Joint Standing Committee on Business, Research and Economic Development in January of 2007.

In the key findings, the evaluators noted that:

- Over its first five years, MTI has largely succeeded in fulfilling the mission of the agency to assist in the development of new technical products for markets in Maine and elsewhere.
- Research is an inherently risky activity, but MTI-funded projects have had a high rate of success, with 60% of research projects resulting in marketable products, and of those, 60% were available for sale at the time of reporting. The number of successful projects has increased steadily over the five years of funding activity.

Other findings included:

- Employment in MTI-funded companies grew at a rate of 6%, compared with the average Maine company, which grew by less than 1%;
- MTI companies pay higher wages by 20% than the average Maine company;
- They buy one third of their materials and almost one half of services from other Maine companies; and
- MTI clients leverage more than \$12 in private and other government funds for every \$1 of MTI funding.

Professor Colgan will be analyzing data from the 2007 and 2008 surveys and presenting an updated evaluation of MTI to the Business, Research and Economic Development committee of the Legislature in January 2009.

The data from the MTI survey are included as part of the State's comprehensive R&D evaluation report.

Outreach

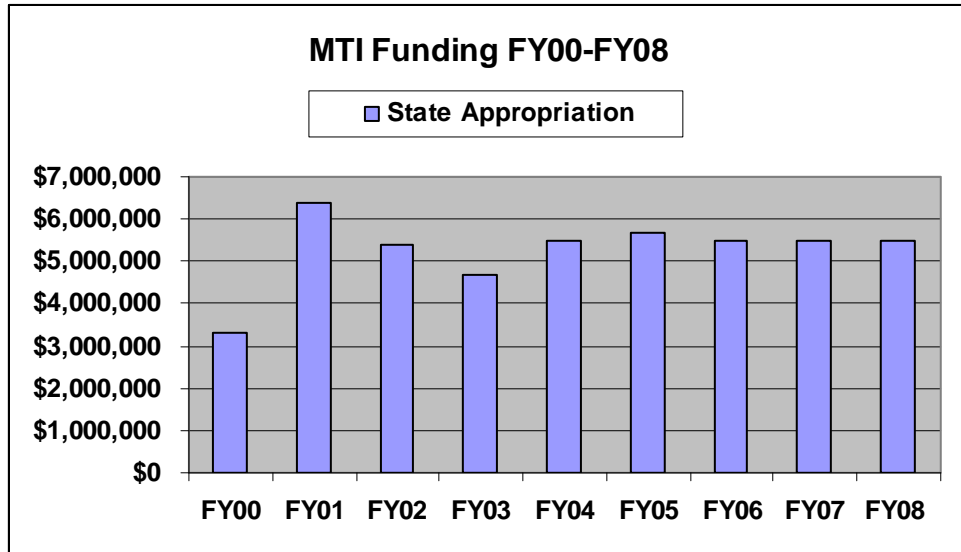
It is important that all MTI programs be available and accessible to all eligible entrepreneurs and businesses throughout the State of Maine. In the past year, MTI promoted its programs in a variety of ways, including:

- MTI prepared **statewide press releases** and **worked closely with media outlets** in an effort to promote its programs, program milestones, and to highlight companies who received MTI funding. MTI sent statewide press releases after each round of awards and at the announcement of new programs.
- MTI sent its **bi-monthly e-NEWS** to nearly 1,800 individuals, companies and organizations with award deadlines, workshops and seminars, announcements of relevance to the targeted industry sectors and notices of MTI award recipients in the news.
- MTI continues to highlight the technologies brought to market by MTI funded companies and the employment impact that these companies are having in their communities through its **newsletter, The Innovator**. In addition to MTI award recipients, the newsletter is sent to Maine's legislators, small businesses, economic service providers, state and federal officials, and various trade associations around the state.
- **MTI presents workshops and overviews** around Maine on its core programs year-round and in advance of deadlines for new high-impact awards, such as the new Maine Technology Asset Fund. Publicized in the press and through the economic development community, these educate the public and help entrepreneurs develop competitive applications and proposals for MTI funding. MTI also posts its workshops on www.mainebusinessworks.com.
- MTI's **website, www.mainetechnology.org**, is updated daily with all of the information and documents necessary to apply for funding, the latest MTI news and deadlines, MTI recipients in the news, a calendar of events, and business resources with lists of partners and a directory of professionals; where businesses can post at no charge their services for the business community, for example, grant writers, consultants, marketers and technical writers, among others.
- MTI attendance, sponsorship or presentations at sector-related events continued to increase. In the past year MTI participated in events of or provided support to the following:
 - Biotech Association of Maine
 - Camden Conference, Energy Symposium
 - Central Maine Community College
 - New England Clean Energy Council
 - Coastal Enterprises, Inc.
 - E2Tech Council
 - Eastern Maine Development Corporation
 - Economic Development Council of Maine
 - Environmental and Energy Council of Maine

- Federal Department of Energy
 - Finance Authority of Maine
 - GrowSmart Maine
 - Hydrogen Energy Center
 - Juice: Powering the Creative Economy
 - Maine Angel Network
 - Maine Aquaculture Association
 - Maine Association of Nonprofits
 - Maine Association of Professional Consultants
 - Maine Center for Enterprise Development
 - Maine EPSCoR
 - Maine Specialty Food Alliance
 - Maine Innovation Economic Advisory Board
 - Maine International Trade Center
 - Maine Investment Exchange (MIX) Forum
 - Maine Marine Research Coalition
 - Maine Marine Trade Association
 - Maine Procurement Technical Assistance Center
 - Maine Patent Program
 - Maine SBDC
 - Manufacturers Association of Maine
 - Mid Coast Chamber of Commerce
 - MIT Club of Maine
 - National Association of Seed and Venture Funds
 - National Collegiate Inventors and Innovators Alliance
 - National Governors Association
 - North Star Alliance Symposium
 - Renewable Fuels Association
 - Science, Technology, Engineering and Mathematics Summit and Dialogue
 - SCORE
 - Small Enterprise Growth Fund
 - State Science and Technology Institute
 - Tech Maine, formerly known as MESDA
 - UMaine Center for Law and Innovation
 - UMaine Student Business Plan Competition
 - UMaine Target Technology Center
 - University of New England
 - Wood Products Association
- MTI's **annual MIXER** brings together Maine's technology entrepreneurs, investors, state and federal policy makers, economic development assistance providers, state and regional press, MTI partners and others interested in technology-based business development in Maine. In October, over 250 people were welcomed by MTI President Betsy Biemann and DECD Commissioner John Richardson, who introduced the speaker, Deputy Assistant Commissioner, U.S. Department of Commerce, Benjamin Erulkar.

FINANCES

MTI is funded through an appropriation to the Department of Economic and Community Development (DECD), and is limited by statute to using no more than 7% of the appropriated funds for its operations.



MTI received a state appropriation totaling \$5.5 million in FY08. Other sources of MTI's income during FY08 included \$154,713 from the Department of Energy for a Forest Bioproducts contract, \$270,126 as a contractor to DECD for the North Star Alliance Initiative and approximately \$126,775 in Development Award repayments. Finally, assets under MTI's management earned over \$508,547 in interest, a decrease over the previous year due to lower interest rates. Ninety-three percent of award repayments are used to fund additional awards. Interest and seven percent of award payments funded operations.

MTI approved funding of approximately \$7 million to 165 projects in FY08. MTI had just over \$3.8 million in outstanding commitments to awardees, not including approximately \$2.8 million in approved awards with unsigned contracts as of June 30, 2008. (These were to be signed early in the next fiscal year.) MTI disbursed over \$5.3 million according to agreed-upon and approved milestone schedules for each award. Administrative and operating costs were approximately \$1,188,000, an increase over the previous year related to administering the \$50 million Maine Technology Asset Fund and the \$2.8 million expansion of the Cluster Innovation Program, which incurred hiring several new staff. MTI's operating expenses were paid for by 7% of the state's appropriation and interest income and administrative funds provided to administer the Maine Technology Asset Fund.

For detailed audited financial information for FY08, see Appendix H.

LOOKING AHEAD

In FY08, Maine took several ambitious steps forward to boost its innovation economy. Maine voters approved investing \$50 million in bonds to move more of Maine's technologies to commercial success. Legislative and policy leaders highlighted clusters as an important driver of regional economic development and dedicated \$2.28 million in additional funds to develop Maine's innovation clusters. And an MTI/Office of Innovation commissioned report outlined Maine's sixteen existing and emerging technology-intensive clusters as well as a series of recommendations for how to grow them to the next level.

MTI was centrally involved in translating these aspirations into new strong and effective programs that began in the second half of FY08 and will continue in FY09. To do so, it designed and launched the Maine Technology Asset Fund program, designed its expanded Cluster Initiative program (to be launched in early FY09), consolidated its programs to finance Maine businesses under the designation of Business Innovation, and reorganized its staff so that it could take on the administration of 10 times its previous annual award budget with minimally more staff. As Maine enters more challenging financial times, these investments will help Maine's existing companies remain competitive and nurture a new generation of technology intensive companies across the State.

