

# **MAINE TECHNOLOGY INSTITUTE**

July 1999-June 2000

**FIRST ANNUAL REPORT**

**TO**

**THE MAINE LEGISLATURE**

Prepared for the Joint Select Committee on  
Research and Development

## Table of Contents

## **I. INTRODUCTION**

The Maine State Legislature created the Maine Technology Institute (MTI) in 1999 as part of the State's economic development strategy. MTI's purpose, as stated in MRSA 5, chapter 407 (Appendix A), is to "encourage, stimulate and support research and development activity leading to the commercialization of new products and services in the State's technology-intensive industrial sectors." The industrial sectors targeted by the State are: advanced technologies for forestry and agriculture, aquaculture and marine technology, biotechnology, composites materials technology, environmental technology, information technology and precision manufacturing technology. New, sustainable jobs for Maine people will be created by enhancing the competitive position of Maine's technology-based businesses and by supporting the development of clusters of industrial activity related to one or more of the targeted sectors.

MTI will accomplish its purpose by investing in Maine-based companies for projects that help advance new products or services toward the market and develop Maine's product deployment infrastructure. While many businesses start in Maine, many fail to grow to economic success. Maine has consistently ranked low compared to other states for the amount of research and development dollars obtained and invested. By supporting these early development efforts, MTI will increase the likelihood that businesses with innovative technologies and sound business plans expand and grow, and the economic potential for new and retained sustainable jobs will be realized.

While MTI cannot address every area for improvement in Maine's economy, there is a very specific void that MTI seeks to fill. MTI's primary objective is to make direct investments in promising technologies at a time when capital is very difficult to obtain. The investments are for very early stage development that traditional sources of capital are unlikely to fund. All new product development passes through several phases. MTI supports those stages after an idea is conceived, but before the product or service is on the market (Appendix B). Commercialization may be only months or several years away. Success depends on having a sound, unique technology, meeting a critical market need and having quality management. MTI will develop several programs to address specific business and industry needs within this applied research and development phase.

## **II. ORGANIZATION**

MTI is a private, non-profit (501(c)3) organization. It receives a direct appropriation from the Legislature through the Department of Economic and Community Development. \$9,600,000 were appropriated to MTI for the 1999-2000 and 2000-2001 biennium. MTI is limited to using up to 7% of the appropriation for administrative costs. MTI is governed by its By-Laws (Appendix C), consistent with the word and intent of the legislation.

A volunteer Board of Directors, appointed by the Governor for staggered three-year terms, governs MTI. In keeping with its industry focus, a majority of voting Board members represent private industry, with one representative from each targeted technology sector and two directors with financial expertise. The remaining two voting members include the Commissioner of the Department of Economic and Community Development and the Chancellor of the University of

Maine. The State perspective is also represented by the President of the Maine Science and Technology Foundation, and the State Planning Office, who serve as non-voting ex officio members. The Director is also a non-voting member. (Please see Appendix C for a complete list of original MTI Board members.)

In addition, MTI consists of seven targeted technology boards, subsidiary to the Board of Directors (see Appendix D for a list of current members). Consistent with the MTI model, service on these boards is purely voluntary and each board must have a private-industry majority. The technology boards advise the MTI on program development and issues related to their sectors. Importantly, the technology boards play key roles in the evaluation of proposals submitted to MTI and in outreach to the businesses their sector represents.

Janet Yancey-Wrona, Ph.D., was appointed Director of MTI in October, 1999. This followed a national search and interview process by the MTI Board of Directors. The Board unanimously recommended Janet for the position. The Director is a State employee who reports to the Commissioner of the DECD. The Director's primary responsibility is to implement the procedures and processes specified by the Board of Directors. In December, an executive assistant and office manager, Agnes Pavone, was hired. She was immediately responsible for setting up the office in Gardiner, and continues her invaluable support and management of the office. Two technology specialists, Robert Chiozzi, M.B.A., and Joseph Migliaccio, joined the MTI team in March. Their primary responsibility has been supporting the seven technology boards. Once awards are made, their responsibilities will include one on one monitoring of the project progress of MTI award recipients. The MTI staff members are not state employees, but are employed by the nonprofit MTI (Appendix E).

### **III. STRATEGY & PROGRESS**

The Board of Directors developed a strategy of operation for MTI with specific major action areas. Within each area, specific objectives were delineated, and progress is measured against these goals. This section summarizes the activities undertaken to date, and the direction in which MTI is heading.

*A. Direct Investments:* It is the primary objective of MTI to invest in promising new technologies by supporting research and development leading to commercialization of new products or services. MTI will continue to develop and evolve award programs to meet the specific needs of Maine's technology-based businesses. To date, three award programs targeting the research and development efforts of technology-based businesses have been developed. One program was completed.

- i. **Performance Grants:** A request for proposals for grants of up to \$100,000 per project was released in January (Appendix F). Awards were made on a competitive basis, using outside expert peer review from across the globe to assess the technical merit and commercial viability. The technology boards evaluated the potential for each project to have a positive impact on Maine's economy, ranked the proposals, and recommended the top-ranked proposals for funding. 117 full proposals were received and reviewed, 66 were recommended for funding. The MTI Board approved funding for 37 projects,

committing approximately \$3,000,000 for this program (See appendix G for a complete list of projects approved for funding). The awards were announced at a press conference attended by Governor King, and nearly all of the award recipients. Funding for each project is contingent on the successful completion of milestones agreed to by the applicant and MTI in the final contract. The MTI technology specialists will monitor milestone progression throughout the project.

- ii. **Seed Grants:** Beginning in September, 2000, MTI Seed Grants of up to \$10,000 per project will be available for specific, small projects related to new product or service development such as early stage research and development, related activities important for advancing new products or services toward the market, such as business plan development, market analysis, or intellectual property filing, or for technical assistance for preparation of proposals to obtain additional capital from State, federal or private sources. Seed grants will be offered four times per year, and reviewed by an MTI committee composed of representatives from each technology board and the MTI Board of Directors.
- iii. **Development Awards:** A request for proposals for awards of up to \$500,000 per project will be announced in September, 2000. Award decisions will be made in March, 2001. Similar to the Performance Grant Program offered in the spring, awards will be for research and development projects leading to commercialization. Outside, expert peer review will evaluate the technical merit, the technology boards will review the potential for positive economic benefit to Maine, and an MTI committee composed of representatives from each board will carefully evaluate the commercialization plan, business and management team. Successful commercialization of a new product or service funded by MTI under this program will require up to two times the award be repaid, based on a minimum royalty payment.

*B. Jobs Creation/Retention:* Evaluation of all proposals includes a heavy emphasis on economic impact, and specifically on the number and types of jobs that will be created or retained if the proposed project is successful. MTI investments will continue to consider the potential for sustainable jobs as new programs are developed.

*C. Business Development: Increasing Deal Flow and the Pace of Innovation:* MTI will continue to develop a portfolio of programs to address specific business needs. As part of the evaluation of project progress and milestone completion, MTI staff will serve as “brokers” to recommend necessary business support and advice, such as business planning with the Small Business Development Centers (SBDC), or commercialization planning with Maine Manufacturing Extension Partnership (MEP). In addition, MTI has a cooperative agreement with Maine MEP to provide free counseling to potential MTI applicants and MTI award recipients.

*D. Cluster Development:* MTI awards support businesses that contribute to the formation of industry-based technology clusters, such as businesses residing in incubators. The importance to the targeted industrial cluster is heavily weighted during the evaluation of

proposals. In addition, MTI has developed a specific **Cluster Enhancement Award** program that targets collaborative, comprehensive projects that aim to improve the business climate and infrastructure and create or support one or more technology clusters. Cluster Enhancement Awards will be available starting in August, and will be reviewed by the MTI Board of Directors.

*E. Collaborations and Partnerships:* To maximize the effect of MTI's investments, increase the likelihood of individual success and long term economic benefit, MTI must work cooperatively with many other agencies and organizations whose missions are complementary. Only through strategic partnerships, alliances and collaboration will the infrastructure be developed to support and sustain technology-based industries in Maine. Collaboration and partnerships on the part of individual companies are an important part of cluster development, and are part of the evaluative criteria for the potential for economic impact of the individual proposals. Additionally, MTI seeks to leverage its resources through strategic alliances. Maine MEP was awarded an MTI grant to develop a pilot program to increase the research and development capacity of Maine companies by actively partnering them with facilities and expertise in the federal laboratories (Appendix H). This grant also provided for a best practices symposium sponsored by the National Institute of Standards and Technology, Maine MEP and MTI where representatives from several state technology investment programs presented their stories and lessons learned as models for MTI. The MTI Board of Directors, several representatives from each technology board, and other key stakeholders interested in technology businesses and economic development in Maine attended the seminar. The presentations have served as models for MTI program development, and the representatives from other state's programs have continued to provide advice and opinion throughout the year.

MTI has entered a cooperative agreement with Maine MEP, at no cost to MTI, whereby Maine MEP serves as the fiscal agent to disburse MTI grant monies in a timely manner, as directed by MTI, and to assist Maine companies with commercialization needs, including advice on applying to MTI's programs (Appendix I). Through this mutually beneficial agreement, MEP increases its own deal flow and company interactions while improving the interest in and quality of proposals submitted for MTI funding. In the coming year, MTI will actively seek additional partnerships and alliances that offer such mutual benefit.

*F. Outreach and Publicity:* It is important the MTI programs be available and accessible to all companies throughout Maine. Efforts to publicize MTI's efforts have included: several newspapers articles describing the MTI and its programs (Appendix J), establishing a mailing list for MTI award news and announcements that currently reaches over 400 individuals, companies and organizations. The MTI Director has also given free seminars, publicized through the press and the economic development district organizations, describing the MTI mission and programs. In January-February, informational seminars in Machias, Presque Isle, Bangor, Farmington, Augusta, Auburn, Scarboro and Sanford reached more 125 attendees. In addition, the Maine Science and

Technology Foundation (MSTF) sponsored 3 grant writing workshops focusing on the MTI Performance Grant program. 114 people attended the workshops.

Information regarding the MTI is available at its website, [www.mainetechnology.org](http://www.mainetechnology.org). Written material and brochures are also available, and are distributed at various trade shows and conferences related to the industries that MTI supports. In 2000, MTI attended and/or presented at the MeSDA Annual Conference, Blaine House Conference on Small Business, Portland Chamber of Commerce TechPort, CapitalVenue, and others.

As the MTI continues to evolve, free public seminars and workshops will continue to be offered. In addition, the Director and other MTI staff will continue to actively seek speaking engagements at trade shows, chambers, rotaries and other business-related organizations throughout the state.

#### **IV. FINANCES**

Attached are the audited financial statements for MTI (Appendix K). Since no grant money was disbursed prior to June 30, 2000, all expenses are for start-up, operating, educational and outreach costs.

#### **V. FUTURE DIRECTION**

Changes in the MTI legislation in 2000 added administration of a Small Business Innovation Research (SBIR) Award outreach and assistance program to the goals of MTI. The federal SBIR program offers competitive grants for research development, with objectives similar to those of MTI. MTI will invest significant resources into the active promotion, outreach, education and technical assistance for the SBIR program throughout the State. Based on similar efforts in the past, and in other states, this program will increase the number and quality of proposals submitted for SBIR awards. In addition to the resulting additional federal research and development money entering the state, a successful SBIR program is expected to contribute to, and complement, the amount of quality proposals submitted to MTI because the SBIR awards are good match for MTI awards.

The MTI will continue to focus on its primary objective of making direct investments in businesses for research and development leading to commercialization. A portfolio of programs that addresses specific issues involved with advancing new products and services toward the market is the ultimate goal of MTI. It is expected that MTI's programs will be modified over time as Maine's business needs change, and as MTI learns from experience.

It is important to note that future product development awards will include payback provisions. While MTI will continue to make early stage investments, successful development will trigger a return of funds to MTI for use in subsequent granting programs. Due to the high-risk nature of early stage investing, it is not expected that significant returns to MTI will be realized for several years. The MTI Board continues to learn from other state's successful programs, and apply their lessons in Maine when appropriate. The structure of MTI's future investment programs is an

area of active consideration by the Board. MTI will continue to strive for the most effective, responsible use of Maine State taxpayer's dollars for the creation of new, sustainable jobs for Maine people, by making sound investments at a time when other sources of capital are limited or nonexistent.