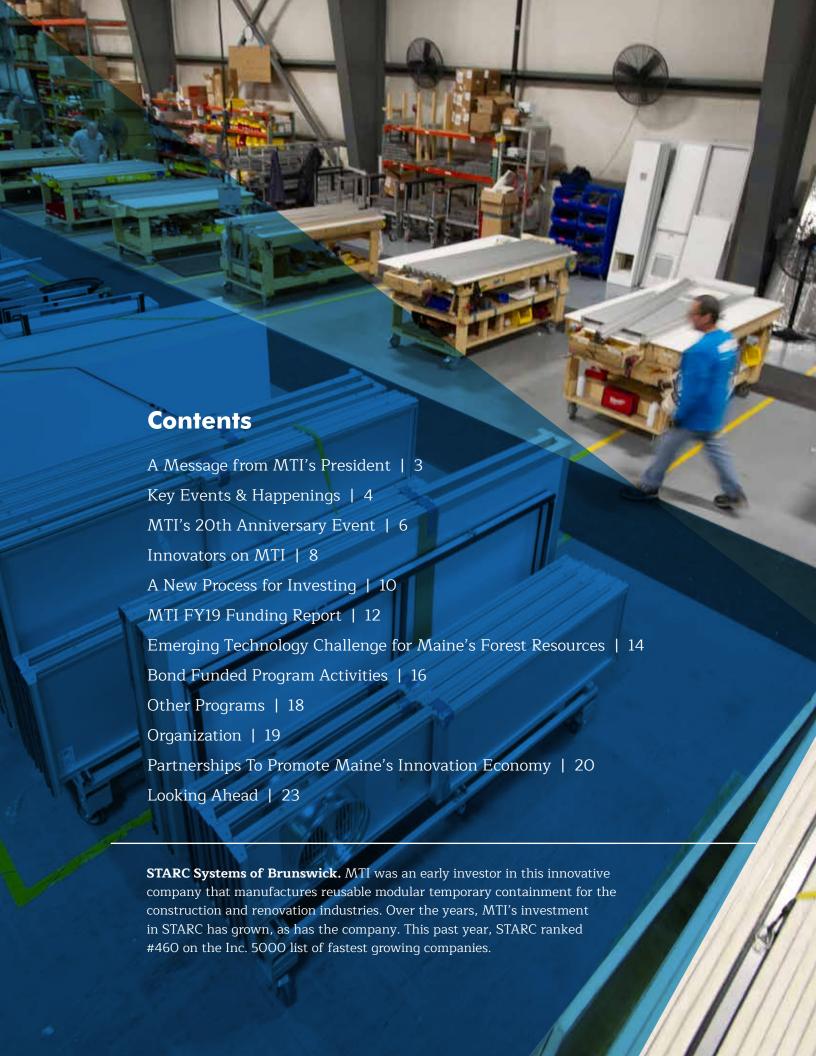


ANNUAL REPORT 2019







A Message from MTI's President

DEAR FRIENDS:

Thank you for taking the time to review the annual report of the Maine Technology Institute, Maine's industry-led, publicly funded, nonprofit corporation whose core mission is to diversify and grow Maine's economy by encouraging, promoting, stimulating, and supporting innovation and its transformation into new products, services and companies, leading to the creation and retention of quality jobs in Maine.

It's hard to fathom that MTI has been providing early stage capital and commercialization assistance, as well as entrepreneurial quidance and mentorship, for 20 years now.

Created by the Legislature and Governor in 1999, MTI has now disbursed over \$270 million across 2,800 distinct projects throughout the State of Maine, and that funding has leveraged well over \$1 billion in private sector matching investment.

As you'll discover in the following pages, the work we accomplished this past year has built on that legacy of supporting and growing innovation here in Maine. In this most recent fiscal year (ending June 30), MTI disbursed over \$9.3 million across 191 different projects, and that funding leveraged almost \$33 million in private sector matching investment.

But behind the immense and impactful numbers is a broader story of how we approach innovation. After years of planning and strategizing, FY19 was the first full year with our new operational system in place. This fluid approach to investing allows us to tailor services to the innovation, and allows us to better meet the needs of our clients, our ecosystem partners and the people of Maine who benefit from a diversified economy.

We hope this shift in perspective shows the same extraordinary foresight and vision lawmakers demonstrated in 1999 when they created MTI. Twenty years later, it's clear that the organization has exceeded all expectations and has truly become a beacon for economic optimism in the State of Maine. Similarly, our hope is that our efforts today echo into the future and set our State up for the next 20 years of innovation.

Thank you again for all your support. Please enjoy this year's MTI Annual Report.

Sincerely,

Brian Whitney, President

Key Events & Happenings

In addition to investing \$9.3 million across 191 different projects in FY19, MTI was actively involved in Maine's talented and thriving community of thinkers, doers, and creators. Here are some of the major experiences MTI was proud to be part of this past year.



Startup Maine

For the 6th year in a row, MTI had the pleasure of sponsoring and supporting Maine's

marquee entrepreneurial event. Top innovators from across the state, country and even the world gathered at the Maine College of Art from June 19-21 to share stories of innovation, exchange ideas and network. Joe Migliaccio, MTI's Director of Business Development, spoke about MTI's Venture Investment Readiness Assessment Levels (VIRAL), joining many other MTI partners and portfolio clients who presented to Maine's growing startup community.

Small Business Administration award

In March, MTI was honored by the Small Business Administration as the 2019 Maine



Financial Services Champion of the Year. In its presentation, the SBA lauded MTI for "the amount and quality of assistance given to small

businesses to obtain financing, advocacy for changes to assist small companies, encouragement of the flow of investment capital to small ventures, and measurable accomplishments to advance small business interests."



Greenlight Maine Collegiate Challenge

As the oldest state in the country, Maine needs to work at retaining and attracting young talent to help diversify and grow our economy. It's a reason why MTI sponsored this televised competition where

college students pitched their innovative business plans. Eventual winner KinoTek would go on to secure MTI funding this year, as they've shown amazing growth potential (read their story on the next page).

Top Gun

MTI once again partnered with the Maine Center for Entrepreneurs to sponsor their impactful and intensive business



accelerator. The program selects the state's most promising businesses and provides them with mentorships, workshops, pitch development classes, an opportunity to showcase their idea to top investors and a chance of winning \$25,000 to grow their innovative business.



SBIR Road Tour

SEEDING AMERICA'S FUTURE INNOVATIONS™

SBIR Road Tour

MTI hosted Maine's stop on the nationwide SBIR Road Tour. The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs offer \$2.5 billion in annual early stage funding, and this coveted opportunity allowed local innovators to hear directly from federal agency program managers and meet one-on-one with decision makers.



Grant | \$60k

MTI always encourages young startups to engage with as many organizations and resources as they can. Doing so not only increases their knowledge, experience and network, it significantly increases their likelihood of success, which is a great sign for Portland-based KinoTek.

Barely a year old, this athletic training and fitness software company has already connected with (and impressed) MTI and several of our partners. In March, they won the \$25,000 grand prize at the MTI-sponsored Greenlight Maine Collegiate Challenge. A few months later, they were named a finalist for Launchpad's Emerging Ideas award. They followed that up by joining Startup Maine's select group of Maine technology companies to attend TechCrunch's Disrupt conference in San Francisco. Then, in October, they were one of four companies named to Scratchpad Accelerator's 2019 cohort.

Now, MTI is investing in the company that began as a research project at the University of Maine. With further development of their augmented reality, virtual reality and motion capture technology, KinoTek will bring to market an increased understanding of how the human body moves to help reduce the chance of sports related injuries.

"Having watched the company emerge as the winner of Greenlight Maine's first collegiate series and engage in various business accelerators to help scale the company, it's clear that KinoTek's impressive multidisciplinary team is well-positioned to make an impact in the market."

Brian Whitney, MTI President

- unique sensors
- degree range of motion tracking



MTI's 20th Anniversary Event

To mark our 20th year of supporting innovation and economic diversification in Maine, MTI hosted a celebration in Freeport on October 7. We invited past and present clients, organizational partners, lawmakers and brilliant innovators from around Maine to thank them for their invaluable contributions in our shared successes. It was an amazing night that reminded us how unique, collaborative and talented our entrepreneurial community is.









\$169 million in total investments

Nearly \$50 million in total investments



1500+ total projects funded



awards totaling \$3 million

First 37



1999 Creation of

MTI

2000 Makes first awards

500

awards

total

2007 Creation of \$50 million Maine Technology Asset Fund (MTAF)

employment MTI-assisted companies employment increases 2.6%.

2010 2008 Overall Maine Completes distribution of \$52.85 million increases 0.8%. in MTAF funds 2011 **Begins** administering \$3 million Blackstone Accelerates Growth initiative to foster entrepreneurship

2014 Battelle study identifies technology clusters in Maine well-positioned for growth













Hits \$270 million in aggregate funding across 2,800 projects

\$195 million in total investments Over \$200 million in total investments



Administers \$10 million Maine Cancer and Aging Research Bond & \$3 million Maine Biomedical research bond

2016

Blackstone Accelerates Growth initiative ends successfully and inspires the creation of Maine Accelerates Growth to support Maine's innovation, startup and creative technology community

2017

MTI launches a new strategic plan that lists priorities to catalyze growth

MTI and the Maine Innovation Economy Advisory Board partner to develop Maine's five-year Science & Technology Action Plan

2018

Awards \$45 million in MTAF 2.0 funds to 18 projects, matched by \$192 million in private investment

2019

Maine Office of the U.S. Small Business Administration recognizes MTI as Financial Services Champion



With MTI, we've been able to make more informed decisions on lending to new companies and propelling technology forward in Maine.

JOHN EGAN
Chief Investment Officer
CEI

8 | Maine Tecl







MTI's dedication to innovation is particularly important now as it helps to transform our State's heritage industries—food, seafood, forest products, and boat building—into competitive 21st century global industry leaders.

WADE MERRITT
President
Maine International
Trade Center

Without their dedication and commitment, we would not be able to achieve our goals, attain top notch speakers, or reach the audiences who benefit from our programming.



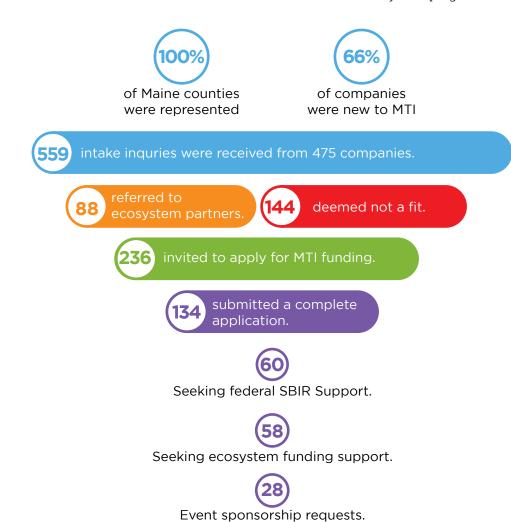


A New Process for Investing

FY19 was the first full year in which MTI implemented its new operational approach to funding innovation. This more customizable & adaptable process improved the pool of applicants and better met their needs.

Interacting with various innovators

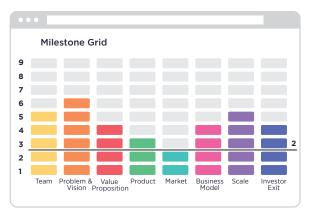
With more time dedicated to client support, MTI staff fielded 559 intake requests from potential clients. While not everyone was invited to apply, all of these meetings provided valuable opportunities to educate innovators and connect them with other ecosystem programs and partners.



VIRAL

The introduction of the Venture Investment Readiness Assessment Levels (VIRAL) as an evaluation tool enabled MTI to better screen and evaluate potential investments. VIRAL measures the maturity of an organization or business across eight different areas of development. MTI uses an applicant's VIRAL level to guide investment decisions. Enabling innovators to take a VIRAL assessment online freed MTI staff to focus more on client support, data collection and portfolio maintenance.

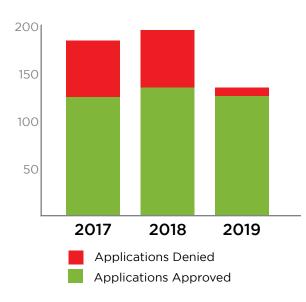
An example of a VIRAL assessment



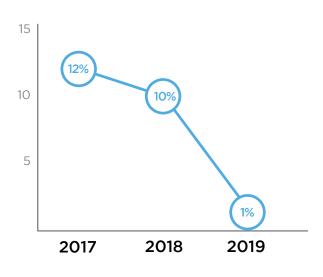
Attracting more qualified applicants

This approach resulted in a lower applicant denial rate and helped to drastically reduce award forfeiture compared to previous years.

Applications approved vs. denied



Forfeiture rate



MTI FY19 Funding Report







Increasing the impact of our investments

In FY19, MTI successfully deployed \$9.3 million across 191 different projects. And because our new process helped us identify and engage with a higher quality pool of applicants, innovators who received that funding were able to match those investments with \$33 million **in private sector funds** — a significant increase from years' past.

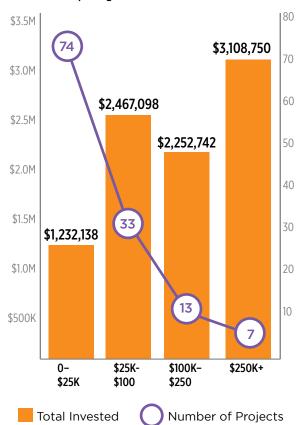
More flexible, fluid financial support

Every innovative journey is unique, and our new customizable and adaptable approach allows us to support entrepreneurs and ecosystem partners at all stages of growth. Generally, MTI invests across four ranges — funding more, lower level projects and then dedicating larger investments to fewer, more impactful projects.

Total dollars awarded / matches 2017-19



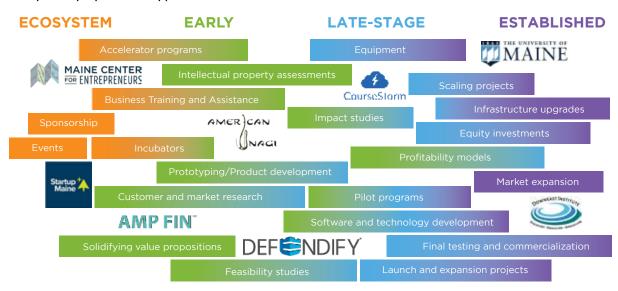
Investment by range



Investing across the ecosystem

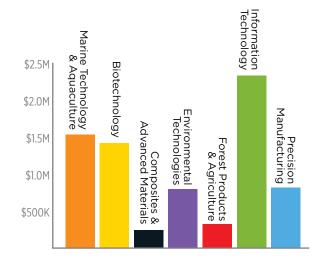
Small, early-stage innovators differ from larger, well-established businesses, so our new approach ensures the support we provide fits the needs of the individual clients. This increases the efficiency and impact of our investments.

Examples of projects MTI supports



Investing across all technology sectors

The State of Maine targets seven technology sectors that are uniquely positioned for growth and to benefit from the investment from organizations such as MTI. Our new approach allowed us to better identify opportunities and deploy investments within this mixture of mature and emerging industries.



Emerging Technology Challenge for Maine's Forest Resources

IMPROVING THE LONG-TERM VIABILITY OF MAINE'S RURAL, FOREST-BASED ECONOMY.

In December 2018, in collaboration with the Forest Opportunities Roadmap and Biobased Maine, MTI launched a challenge to actively attract emerging technology companies in the forest resource sector. The goal of this effort was to diversify and build more resilience into Maine's forest industry, and, in turn, bring economic security to the rural Maine communities who rely on it.

MTI awarded \$750,000 to each GO Lab, Inc and Biofine Developments Northeast. These two innovative enterprises represent different natural resource-based technologies that make use of Maine's abundant forest resources, infrastructure, workforce and supply chain.

While this past year's challenge was limited to forestry technology, the model served as a pilot program that MTI hopes to replicate across other sectors in hopes of solving some of Maine's most daunting economic challenges.

Not only is GO Lab tackling big picture problems like cutting down on greenhouse gas emissions, but it's also a story about new life for an industry in Maine that has been so critical.

Jay Field, Go Lab

GO Lab, Inc.

Go Lab's mission is innovative: to transform the building insulation market with a wood fiber alternative that is renewable, recyclable, nontoxic and outperforms less eco-friendly competitors. But their mission is also deeply personal. The Belfast-based company understands the importance of bringing quality jobs back to rural Maine. By opening in the former UPM paper mill in Madison, they look forward to restoring a source of civic pride and providing Maine people with an increased sense of ownership in their natural resources and economic future.

Biofine Developments Northeast

One way to create quality jobs in Maine is to attract out-ofstate businesses to relocate here. That's MTI's strategy with its investment in Biofine Developments Northeast, which is expanding here from Massachusetts. For Biofine, Maine is an ideal location for commercializing their process that converts woody biomass to heating fuel. With the highest use of heating oil per capita, Maine provides market demand. And, with abundant forestry resources, a talented workforce, underutilized industrial infrastructure and goals to reduce greenhouse emissions, Maine has the elements to meet it.

99

MTI is very well respected in the state and beyond. Having their support makes what we're doing more attractive to other people.

Mike Cassata, Biofine

Bond Funded Program Activities

On occasion, the Maine Legislature passes research and development bond initiatives that are presented to Maine voters. Once approved by voters, MTI typically administers the funds on behalf of the State. The following bond initiatives are currently under active management by MTI.

Maine Technology Asset Fund 2.0 (MTAF 2.0)



In June 2017, voters approved the second Maine Technology Asset Fund 2.0 (MTAF 2.0) program. The initiative specified that "forty-five million dollars (\$45,000,000) would be distributed by the Maine Technology Institute in the form of grants to support infrastructure, equipment and technology upgrades in the following targeted

technology sectors: biotechnology, aquaculture and marine technology, composite materials technology, environmental technology, advanced technology for forestry and agriculture, information technology, and precision manufacturing technology. Funds were awarded to public and private entities in Maine through a competitive process, and recipients were required to match these State dollars with an equivalent amount of federal or private funds."

MTI solicited proposals in the fall of 2017 and received 183 applications seeking, in aggregate, nearly \$400 million. These proposals flowed in from all 16 Maine counties and represented businesses of all levels of maturity from startups to publicly traded companies. MTI conducted extensive due diligence and ultimately made 18 funding awards in early 2018. MTI augmented the \$45 million in bond funds with an additional \$1,063,836 to further maximize the impact of the awards. In total, MTI awarded \$46,063,836 (matched by \$192,536,123). According to an independent economic impact analysis, the awards will directly result in 5,350 jobs and \$1.4 billion in economic impact over the next 3 years.

Marine Jobs Fund

In 2014, the Legislature authorized, and the voters of the State of Maine approved, (Public Law 2014, Chapter 592) a \$7,000,000 bond issue to facilitate the growth of marine businesses and commercial enterprises that create jobs and improve the sustainability of the State's marine economy and related industries through capital investments. In May 2016, the newly formed Alliance for Maine's Marine Economy, a consortium of Maine-based marine businesses.

research institutions and educational organizations, was selected by the State of Maine as the recipient of the \$7 million in funding and pledged to provide \$9.3 million in matching funds. The Alliance's plan, spearheaded by



the University of Maine, called for immediate infrastructure investments in public and private institutions throughout Maine. The \$7 million award also included \$1.92 million to fund a competitive Marine Jobs Fund Small Capital Grants Program. MTI was asked to administer this competitive process and issued a request for proposals in July 2017. MTI received 39 letters of intent. The Alliance for Maine's Marine Economy conducted the review and evaluations of the proposals and made recommendations to the MTI Board of Directors. Ultimately, in FY19, the MTI Board of Directors made 10 awards from the Marine Jobs Fund Small Capital Grants program totaling \$1,924,303 (matched by \$6,507,200).

Maine Cancer and Aging Resource **Bond**

In 2014, the Legislature authorized (Public Law 2014, Chapter 574), and the voters of the State of Maine approved, \$10 million in bond funds to

build a research center, to discover genetic solutions for cancer and the diseases of aging, and to promote job growth and private sector investment in Maine. The funds were awarded through a competitive state process to expand



Biological Laboratory was announced as the highest scoring bidder and matched its \$3 million award with more than \$5.7 million in matching funds. The project remains under active management by MTI.

the state's research capabilities in the areas of mammalian genetics and murine biometric analytics, make the state a global resource for precision medicine, improve the state's capacity to attract and retain young professionals, and bring additional grant funding, private sector investment, job growth, and economic activity to the state. In July of 2015 (FY16), the Jackson Laboratory in Bar Harbor was announced as the highest scoring bidder and matched its \$10 million award with more than \$11 million in matching funds. The project remains under active management by MTI.

Maine Biomedical Research Bond

Also in 2014, the Legislature authorized (Public Law 2014, Chapter 568), and the voters of the State of Maine approved, a \$3,000,000 bond issue to modernize and expand infrastructure in a biological laboratory specializing in tissue repair and regeneration located in the state. The funds were awarded through a competitive process to modernize and expand infrastructure in a biological laboratory specializing in tissue repair and regeneration located in the state, in order to increase biotechnology workforce training, retain and recruit to the state multiple biomedical

Maine Technology Asset Fund (MTAF)

research and development groups and create

that will improve human health and stimulate

biotechnology job growth and economic activity.

In July of 2015 (FY16), the Mount Desert Island

a drug discovery and development facility

MTI also administers the Maine Technology Asset Fund (MTAF), a competitive bond-funded program providing investments for facilities construction, renovation, and equipment, which advance emerging technologies on the research, development and commercialization path to help Maine companies, university centers and non-profit research institutions secure further investment. MTAF was first approved by the Maine Legislature and the state's voters in 2007 and capitalized with \$50 million in bond funding focused on increasing research and development (R&D) facilities and resources in our state's seven targeted technology sectors. These monies were mostly disbursed in funding rounds in 2008, 2009 and 2010. The Legislature and voters approved an additional MTAF funding bill in the amount of \$3 million in 2009. MTI received the \$3M in MTAF funds in FY15. Those funds, including approximately \$900,000 not awarded from earlier rounds and augmented by another \$921,871 in MTI funding, were used to issue 8 new MTAF awards totaling approximately \$4.9 million and matched by \$12 million. While the funding awards were made in FY15, the projects are still under active MTI management.

Other MTI Programs of Assistance



E-Resident Program

MTI employs an E-Resident program to provide portfolio firms with direct access to experienced entrepreneurs who have taken big risks, founded companies, raised capital, and created jobs. One of the most powerful tools one can provide to start-ups or less experienced teams is access to network contacts and mentors to offer advice and support from experienced entrepreneurs. MTI's E-Resident program is intended, like other MTI programs, to improve the competitive position of Maine's technology-intensive sectors and ultimately lead to business growth and jobs for Maine people.

The SBIR/STTR Technical Assistance Program

The SBIR/STTR Technical Assistance Program fulfills MTI's statutory mandate that it operate a program that provides technical assistance to Maine small businesses to help them develop competitive Small Business Innovation Research (SBIR) and Small Business Technical Transfer (STTR) proposals for submission to federal agencies participating in the SBIR/ STTR programs. MTI provides advice on how best to fashion



a competitive application for the estimated \$2.5 billion that is available each year from the eleven federal agencies that participate in the SBIR/STTR programs. The size of the individual federal grants can range from under \$100,000 to \$1 million. In FY19, with assistance from MTI. Maine businesses received over \$1.3 million in SBIR/STTR awards.

Of the 60 requests for federal SBIR Support, there are 11 currently working to submit a federal program application and 31 have already submitted proposals.



proposals in progress



have already submitted proposals





Organization

MTI leads the development of a strong culture of innovation in the State of Maine and is well-positioned for continued growth and effectiveness. It is organized as a nonprofit corporation, consistent with the provisions of the Federal Internal Revenue Code. By-laws were drafted and corporation documents filed in September of 1999. A Board of Directors consisting of thirteen voting members and two non-voting members governs MTI. The Governor appoints ten directors, eight representing the targeted technologies and two of whom have demonstrated finance, lending or venture capital experience. The Commissioner of the Maine Department of Economic and Community Development, the Chancellor of the University of Maine System, the President of the Maine Community College System and the

Director of the Office of Policy and Management, or their designees, are ex-officio members. The MTI President is a non-voting director. Seven subsidiary boards, each representing a targeted technology sector, were formed to support the MTI Board. Approximately 120 subject matter experts comprise the membership of these Tech Boards.

MTI operates from its office in Brunswick. The staff is composed of a director of investment operations, a director of innovation infrastructure, a director of business development, a director of finance and administration, three investment officers, two lending and grant associates, and a web communications manager. The MTI President is employed by the Maine Department of Economic and Community Development.

Partnerships To Promote Maine's Innovation Economy

In addition to direct support of innovators, MTI also supports programs and infrastructure that encourage innovation. Under its governing statute, MTI is instructed to cooperate with the Maine Department of Economic & Community Development (DECD), Manufacturing Extension Partnership (MEP), University of Maine (UMaine), and others to ensure a complementary system of support services is available to companies and research laboratories.

To foster this complementary system of support services, MTI works collaboratively with organizations across Maine to support programs and initiatives designed to assist entrepreneurs and small businesses and to promote and celebrate Maine's culture of ingenuity and its vibrant startup community.

Here are just some of the programs, events and organizations that have received MTI support:

Our Katahdin (Millinocket & Medway)

Engine Biddeford (Biddeford)

Biq Giq (Orono & Bangor)

StartUp Maine (Portland)

Top Gun (Lewiston-Auburn, Bangor, Midcoast and Portland)

Maine Wood Innovator's Conference (Hiram)

Greenlight Maine

Innovate for Maine Fellows Internship Program

TEDxDirigo

Active MTI Collaborations, Affiliations and Partnerships





































Mousam Valley Mushrooms

COMBINING MYCOLOGY AND TECHNOLOGY TO IMPROVE AGRICULTURAL GROWTH IN MAINE

Equity | \$150k

varieties of mushrooms



day to go from farm to shelf

By breaking down organic matter and returning nutrients to the soil, mushrooms play a vital role in nature's ecosystem. In southwestern Maine, they're also playing a major role in the economic ecosystem.

Mousam Valley Mushrooms was started in 2012 by John Sharood and his son Robert. With support from numerous entrepreneurial organizations in Maine, they've since grown to 17 employees and now supply mushrooms to Hannaford, Whole Foods and food service distributors like Native Maine and Sysco. Beyond their own farm, they've created millions of dollars in economic impact through employment and working with local vendors and suppliers.

But none of this would be possible without an innovative, Internet of Things (IoT) climate control system developed by John and funded by MTI. This system allows the farm to remotely manage all the precise growing conditions their dozen different mushroom varieties require. Much more affordable than other agricultural control systems, John's technology shows commercialization potential in its own right — opening the door for other farmers in Maine to expand beyond farmers markets and compete with largescale operations from out-of-state that currently dominate the market.



"We wouldn't have our business without that technology. You can't manually control conditions to a great enough degree of accuracy to produce the kind of yield you need to be commercially viable."

John Sharood, Owner

Kennebec River Biosciences

Multiple Awards | \$367k+



of the first MTI award recipients



year partnership

Back in 2000, then-Governor Angus King helped hand out the very first MTI awards to 37 innovative Maine businesses. One of those recipients was Kennebec River Biosciences, a young company that provided diagnostic and regulatory laboratory services for the aquaculture industry.

Since then, MTI and Kennebec River Biosciences have worked closely and — not coincidentally — grown together. A two person operation when it received its first MTI award, the lab now employs 15 highly-skilled specialists. Over the years, Kennebec River Biosciences has expanded beyond finfish diagnostic to testing new species, offering new services, developing vaccines and attracting global clients as far as Vietnam and Panama.

Recently, nearly two decades after first crossing paths, now-U.S. Senator Angus King and Kennebec River Biosciences shared a stage again, this time at MTI's 20th anniversary event. It was a fitting reunion — one of MTI first champions and one of our first portfolio companies and vivid reminder of how innovative thinking, paired with the right support and leadership, creates consistent, long lasting success.



Maine Technology Institute allowed us to develop new product lines and fund our research and development.

Bill Keleher Co-Founder

Looking Ahead

In addition to continuing our support, leadership and investment in innovation and research and development throughout Maine, MTI is excited to be part of several initiatives in Fiscal Year 2020.



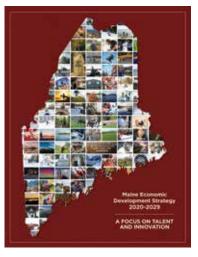
Maine's Bicentennial

As Maine celebrates 200 years of statehood, MTI is joining the effort to explore the people, places and events that have shaped our history. MTI is working hand-in-glove with the Bicentennial Commission to launch an Innovation Expo in October 2020. They're also working on a video project exploring Maine's entrepreneurial legacy and proud tradition of 'Yankee ingenuity' in an effort to inspire the next generation of Maine-based innovators.



Waterville Office

MTI is committed to supporting innovation throughout all of Maine's 16 counties. To further advance these efforts, we opened a remote office in Waterville early in FY20. This will provide even greater access to MTI's resources, increase MTI's profile in central Maine and help meet the needs of a growing entrepreneurial community in the region.



Strategic **Statewide Economic Development Plan**

Late in FY19, Governor Janet Mills released a ten-year strategic economic development plan for the State of Maine. The plan aims to enhance economic growth, particularly in rural Maine, and address Maine's workforce challenges — including attracting 75,000 people to Maine's labor pool. MTI will help the Maine Department of Economic Development to focus on encouraging innovation and creating quality jobs in the context of the plan's goals.

MTI is committed to serving the wide-ranging innovation needs of Maine businesses and entrepreneurs. MTI plans to continue as a leading-edge organization known throughout Maine as the driving force behind our state's thriving private-sector innovation economy. MTI is pleased to play a pivotal role in helping to bolster and support Maine's innovation economy and looks forward to building on past commitments and launching new initiatives to help build a more robust economic climate across the State of Maine.





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