



ANNUAL REPORT 2022





True Fin, formerly Gulf of Maine Sashimi, provides fully traceable seafood to restaurants, retailers, and home chefs. Their ocean-to-plate business has stitched together the traditional fragmented seafood supply chain and the result is good for customers, the ocean, and coastal communities.

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A MESSAGE FROM MTI'S PRESIDENT

I am deeply honored to lead the Maine Technology Institute (MTI), Maine's unique public-private partnership that helps catalyze innovation in the State of Maine. This past fiscal year, ending June 30, 2022, was another busy one for the organization. In addition to allocating our core annual appropriation to help Maine's entrepreneurial-minded dreamers and doers create new and innovative products, we were given the responsibility of helping to stabilize and grow several Maine industrial sectors that had been adversely impacted by the global pandemic. We also created a new MTI support program called the Maine Entrepreneurial Resource Corps, and added some new and impressive talent to our staff as well as to our volunteer force of subject matter experts.

Each year, MTI is required to report on its annual activity and impact. After reviewing the organization's data and achievements from the past year, I am extraordinarily pleased to present this year's annual report. The data revealed the following:

MTI made 120 awards from its core funding program. Those awards totaled \$6.89 million and leveraged \$45.8 million in private sector matching funds. For some context, in FY21 MTI made 123 awards for \$7.4 million, and in FY20 it made 113 awards for \$9.6 million. So, it was another busy year for MTI's small but mighty staff, its contractors and subject matter experts, as well as its Board of Directors.

In addition to managing our core funds, MTI was also asked to assist the State of Maine as it worked to distribute approximately \$1 billion in federal discretionary American Rescue Plan Act funding as part of the Maine Jobs & Recovery Plan (MJRP). The MJRP made substantial investments in economic development, worker attraction and training, affordable housing, health and human services, and higher education, to name just a few.

MTI was specifically involved in three sector related MJRP buckets of funding in FY22. First, MTI managed \$20 million for "one-time grant

funding for economic recovery and development opportunities in the forest products industry.”

Working collaboratively with the Maine Department of Agriculture, Conservation and Forestry and the Maine Department of Economic & Community Development, we



developed programming to help achieve the objectives of the legislation. In the fall of 2021, we launched Phase 1 of the Forestry Recovery Initiative and made

224 awards totaling \$6.2 million to provide financial relief to forest products industry businesses that have experienced negative impacts from the COVID-19 pandemic to help them sustain the viability of their business.

A second phase of the Forestry Recovery Initiative launched in the fall of 2022 with a goal to improve market opportunities for Maine timber, as well as promote forward-looking forestry projects that will help advance the long-term stability of the forestry industry.

In FY22, MTI also collaborated with the Maine Department of Marine Resources to make



107 awards through the Seafood Dealers and Processors Program (SDPP) totaling \$15.3 million. The awards will help enterprises engaged in Maine’s iconic seafood industry weather the pandemic-related challenges associated with supply chain issues and other adverse market conditions.

And, finally, the MJRP included meaningful allocations to support innovation, including \$39.6 million to help address revenue losses in Maine small businesses and high growth enterprises. To deploy that funding, MTI created the Pandemic Recovery for an Innovative Maine Economy (PRIME) Fund.

The PRIME Fund will award grants in three phases. Phase 1, which was completed in August 2022, focused on direct support to businesses who suffered negative impacts

from the pandemic. More than \$23 million in awards were associated with PRIME Phase 1 and, while they were technically made in FY23 given that our new fiscal year commenced on July 1, most all of the project work occurred in FY22.

The PRIME Ecosystem Program, of which approximately \$5 million will be available, will target public-private partnerships that support and bolster Maine’s innovation economy, launched in the fall of 2022. Future phases of PRIME are still under development and likely won’t launch until early 2023. There will be approximately \$11 million available for future phases.



So, again, FY22 was a busy one for the MTI team. Between our core innovation fund, the Forestry Recovery Initiative, and the Seafood Dealers & Processors Program, we deployed over \$28.5 million across nearly 450 Maine entities. Almost an equivalent amount of funding was deployed in early FY23 in PRIME funding.

MTI is proud to help play a role in helping to diversify and grow Maine’s economy by supporting, sustaining, and growing innovative organizations in the State of Maine. We look forward to another busy and productive year in FY23.

I hope you enjoy reading and reviewing the annual report of the Maine Technology Institute.

Best,

A handwritten signature in black ink, appearing to read "Brian", on a yellow background.

Brian

Nyle Systems

INNOVATIVE MANUFACTURING
COMPANY HELPS CUSTOMERS TRANSITION
TOWARDS A MORE SUSTAINABLE ENERGY SYSTEM

Multiple Awards | \$568,000

Nyle Systems is on a mission to help the world shift from fossil fuel to cleaner energy by electrifying commercial and industrial processes. Nyle focuses on three core markets: lumber drying, food dehydration, and heat pump water heating. Based in Brewer, Maine, Nyle designs, develops, manufactures, and sells energy-efficient products that reduce energy costs for drying by 40% to 60%.

After Nyle patented the XDH Dehumidification system in 1978, their product line expanded to include gas-fired kilns, conventional kilns, heat treaters, and industry-leading controls. Nyle's food drying systems originally started with equipment to dry pet food and ready-to-eat meal ingredients. The company has since developed a line of energy-efficient dehumidification dryers for different needs in the food market. As an industry leader in heat pumps, Nyle's water heating systems are not only environmentally friendly but also cost-efficient.

With financial help from MTI, Nyle completed several key projects that aligned with their mission. In 2011, they received a \$25,000 seed grant from MTI that enabled the development of a commercial heat pump water heater. Funding from MTI was essential to help the company build larger capacity heat pumps for larger buildings such as hotels, apartment buildings, and dorm rooms. In 2019, an additional \$25,000 seed grant helped update controls for the residential water heaters.

Additionally, Nyle saw an increased demand for lumber drying kilns during the pandemic. Although it was good for business, it also meant the company needed to expand its operations. In 2020, a \$142,981 grant from MTAF 2.5 enabled this much-needed expansion.

In 2010, they only had 12 full-time employees but have since grown to 104. By 2027, they expect to hire 200 additional full-time employees.

Ton Mathissen, Founder and CEO of Nyle, credits part of the company's success as being a Maine-based organization. With support from the Maine community and financial funding from partners like MTI, Nyle continues to make products that help customers transition to more energy efficient systems.



Nyle is just getting started. The company has been doubling every three to four years and is accelerating."

Ton Mathissen
Founder and CEO

12
full-time employees
in 2010

104
full-time employees
in 2022

200
additional employees
expected to hire by 2027

In July 2021, the Maine Legislature enacted the Maine Jobs & Recovery Plan, Governor Mills' proposal for allocating the more than \$1 billion in federal discretionary funding associated with the American Rescue Plan Act of 2021. The new law took effect on October 18, 2021.

The Maine Jobs & Recovery Plan included meaningful allocations to support innovation. It included consequential investments that help address revenue losses in Maine small businesses and high growth enterprises and will position those entities to retain and create jobs, grow revenues, and gain market share. Specifically, the Maine Jobs & Recovery Plan included the following funding related to innovation:

MTI will administer \$20 million (\$10M in each of the next two years) for "one-time grant funding for economic recovery and development opportunities in the forest products industry to address reduced demand from economic disruption of the COVID-19 pandemic and other industry effects." We will work collaboratively with the Maine Department of Agriculture, Conservation and Forestry and Maine Department of Economic & Community Development to develop programming that will help achieve the objectives of the legislation.

In March 2022, MTI announced over \$6 million in grant awards to 224 recipients of Forestry Recovery Initiative Phase 1 funding. Of those companies being awarded grants, 83% have ten employees or fewer, and 80% are in Aroostook, Penobscot, Somerset, Oxford, or Piscataquis counties. The average award is approximately \$27,000. Phase 2 of the Forestry Recovery Initiative, with \$14 million in funds available, launched in fall of 2022.

MTI will administer \$39.6M (\$25M in year one, and \$14.6M in year two) for "one-time funding to support and leverage private investments in research, development, and innovation in the state's technology sectors. These funds, which must be matched by the recipient, will be awarded to Maine organizations through a competitive process to help them increase revenue, create and preserve jobs, and grow market share." This funding will be deployed in several phases to provide both direct aid to businesses as well as strategic investments to support economic resiliency.

MTI created the Pandemic Recovery for an Innovative Maine Economy (PRIME) Fund, to allocate the \$39.6 million in innovation funding from the Maine Jobs & Recovery Plan. PRIME will meet the state's mandate of supporting and leveraging private investments in research, development and innovation in the state's technology sectors. Phase 1 of the PRIME Fund opened in April 2022 and awards were announced in July 2022 (FY23). The PRIME Ecosystem program launched in the fall of 2022, and will disburse approximately \$5 million to support new entrepreneurial support programs developed by public-private partnerships in the state. Future phases of the PRIME fund will be deployed in early 2023.



The Maine Jobs & Recovery Plan also provides \$10 million in “one-time funding for competitive grants for seafood processors and dealers to upgrade or replace aging or failing infrastructure, or reengineer and retool facilities, in response to product changes or safety protocols necessary as a result of the COVID-19 pandemic.” MTI collaborated with the Maine Department of Marine Resources (DMR) to deploy this funding in a manner consistent with the legislative mandate.

In April 2022, MTI began accepting applications for the Seafood Dealer and Processing Program (SDPP) on behalf of DMR. This program will deploy approximately \$16M in federal funding, including \$10M from the Maine Jobs & Recovery Plan. SDPP is designed to bolster Maine’s wholesale seafood dealer and processor businesses which sustained negative impacts from the COVID-19 pandemic. Funds are intended to be used to address issues such as payroll costs, rent or mortgage payments for business facilities, purchasing personal protective equipment, market disruptions, and other business-related expenses. Ultimately, in June 2022, MTI and DMR made 107 awards totaling approximately \$15.3 million.

MTI Adopts DEIB & Quality Jobs Commitments

When MTI was asked to develop a competitive innovation funding program as part of the Maine Jobs & Recovery Plan, we were tasked with doing so while also making sure the program embodied the core concepts and priorities outlined in the Maine Economic Development Strategy 2020 – 2029 as well as the subsequent Economic Recovery Committee Recommendations. Both the Economic Development Strategy and the Economic Recovery Committee (ERC) recommendations prioritized a greater focus on diversity, equity, and inclusion. Specifically, the Economic Development Strategy stressed that “we work deliberately with all minority groups to ensure equitability in access and engagement” and further noted that “diversity is critical to growth.” The ERC recommendations specifically emphasized “making Maine more welcoming of immigrants, supportive of the success of entrepreneurs who are people of color, Native Americans, and women, and attractive to remote workers.”

Over the past year, MTI has undertaken a deliberate effort to better understand how to implement diversity, equity, inclusion and belonging (DEIB) practices into its own operations and foster greater DEIB practices within the Maine entrepreneurial ecosystem and, more specifically, in the companies that it funds. MTI is also committed to helping companies create high-quality positions. It is in that vein that the MTI Board recently adopted commitments to diversity, equity, inclusion, and belonging (DEIB) and quality jobs. Both guidelines have been incorporated into the scoring rubric for MTI’s Pandemic Recovery for an Innovative Maine Economy (PRIME) Fund. They will make-up approximately 20% of the total score.

Key Events & Happenings

Twelve Maine Companies Named to Inc. 5000 Fastest-Growing List

Almost Half of Them Are MTI Portfolio Companies



In August 2022, Mainebiz featured a story highlighting the twelve Maine companies that made Inc. Magazine's 2022 annual list of the 5,000 fastest-growing private companies in the United States. To make the list, businesses must have had revenue of at least \$2 million in the most recent year, and be privately held, independent companies.

Twelve Maine organizations made the prestigious list. Almost half of them—Origin in Farmington; SaviLinx and STARC Systems of Brunswick; and Tilson Technology and Sea Bags of Portland—are MTI portfolio companies. Being a portfolio company signifies that the entity has received some level of funding or assistance from MTI over the course of their business journey.

After Two-Year Pause, Maine Science Festival Returns

Sponsored in part by MTI, the Maine Science Festival brings Maine science to the public by showcasing national and world leading science by the Mainers who do it. Each March, the Bangor festival features more than 70 events for all ages.



Biome Student Showcase: Promoting Visionaries

The Bioscience Association of Maine (BioME) offers Maine high school and college students an opportunity to share their life science research. Sponsored in part by MTI, this event is designed to "support innovation and commercialization of student ideas in Maine, as well as connect current students with potential future employers and entrepreneurial resources in the state." The competition features two categories—one for students in grades 9–12, as well as one for undergraduate and graduate college students.



Maine Start Summit: Lowering Barriers for Aspiring Founders

The Roux Institute in partnership with Thomas College presents the Maine Start Summit designed to help startup-curious individuals learn how to build and pitch a successful business. The periodic event consists of four, three-day-long hackathons and kicks-off with a keynote speaker. Participants attend workshops focused on the process of formulating ideas, as well as building and pitching successful businesses. Teams have an opportunity to build out their ideas, develop prototypes and pitch for cash prizes at the conclusion of the summit.



Roux Institute Offers Founder Residency Program

The Roux Institute's Founder Residency is designed to support early-stage and underrepresented founders in high-growth technology fields. The program aims to help early-stage founders develop their ideas, find product-market fit and harness outside resources.



More specifically, the year-long program includes “access to curated programming, mentorship, joint research opportunities, a network of expert advisors, and a peer community” in conjunction with a living stipend provided by the Roux Institute. Participants in the residency program will also have opportunities to connect with experts in Artificial Intelligence, Computational Medicine, Data Visualization, and Advanced Manufacturing.



Bioscience Business Accelerator Program

The Maine Center for Entrepreneurs (MCE) has a new, 4-month accelerator program called *BioStartup*. The program was developed for Maine biotech, digital health, life sciences or medical device entrepreneurs who have confirmed technology feasibility or viability, received or applied for Intellectual Property, have a prototype, and are ready to start or grow their business. *BioStartup* offers participants an opportunity to gain industry expertise, network with specialists, access professional resources, and collaborate with partners. As part of the growth and visibility process, participants will be given a platform with which to showcase their products to potential investors, business leaders and journalists.

MxG: Supporting Maine Innovators

Maine Accelerates Growth (MxG) was founded in 2015 to advance Maine’s entrepreneurial ecosystem through funding, collaboration and networking. It helped fund a number of projects such as the Innovate for Maine Fellows Program, the Top Gun Pitch Competition, and other innovation challenges. Sponsored by MTI and the Department of Economic and Community Development (DECD), MxG was re-established in 2020 to work in conjunction

with the state’s Economic Recovery and 10-Year Development plans. This dynamic network of



organizations meets monthly to focus on strategic initiatives. By sharing expertise, amplifying successes, and seeking best practices, MxG aims to address issues, support innovators, and create an inclusive entrepreneurial ecosystem statewide.

Greenlight Maine Season 7: Promoting Maine Innovators

Greenlight Maine is “a series that highlights innovative small business owners in a competitive format.” The show provides a platform for Maine entrepreneurs to pitch their businesses to a panel of judges throughout each season, compete for cash prizes, and take their products and services to the next level. Greenlight Maine shines a light on Maine’s diverse business community, championing the visionaries who are influencing the state’s economic future.



One of MTI’s Investment Officers,

Bianca Kowal served on the panel of judges. MTI is pleased to be an ongoing Greenlight Maine sponsor.

Greenlight Maine College Series: A Path to Possibilities

Student entrepreneurs from Maine’s colleges and universities compete for cash prizes in the Greenlight Maine’s College Series. The episodes air on Maine Public. The College Series provides aspiring students a platform to present fresh ideas, start businesses and create jobs in Maine, thereby boosting the state’s innovation economy. Greenlight Maine is a “collaboration of entrepreneurs and corporate leaders, designed to promote and mentor the development and growth of business in our great state.” In addition to the College Series, it also features



a Head-to-Head Series with cutting-edge entrepreneurs as well as the Elevating Voices Series which spotlights racially diverse businesses and the significant role they play in Maine's business community. MTI is pleased to be an ongoing Greenlight Maine sponsor.

Big Gig Pitch-Off Finale: Boosting Maine Economic Growth

Maine entrepreneurs pitch their innovative, early-stage businesses or business ideas to an audience and a panel of judges for the opportunity to win \$5,000 in the Big Gig Finale. Following each of the four pitches, the audience and judges will cast votes to determine which participant will carry off the win and take home the \$5,000 prize. Big Gig is a partnership between municipalities, universities, and organizations in Maine who strive to "create a supportive network and to bring positive change and economic growth to our communities" by collaborating with innovators and entrepreneurs across the state. MTI is proud to be an ongoing Big Gig sponsor.



Top Gun Showcase 2022: Advancing Maine's Entrepreneurs

Administered by the Maine Center for Entrepreneurs (MCE), the Top Gun accelerator program is "designed specifically for the entrepreneur with a desire to grow his/her business and achieve long-term success through the use of the right tools, resources, and related mentorship." MTI has been an ongoing Top Gun supporter since its inception in 2009 and applauds the program for the positive impact it has had on Maine's innovation economy.

In May 2022, the 2022 Top Gun finalists pitched their businesses to a panel of experts. This event presents an opportunity for all attendees to learn about innovative technologies and unique products developed in the state,

as the five Maine-based entrepreneurs compete for a chance to win the \$25,000 grand prize, courtesy of MTI.

Maine Innovation Economy Advisory Board Reconstituted

In late April, Governor Mills made 20+ appointments to the Maine Innovation Economy Advisory Board (MIEAB). This board, and its reconstitution and reinvigoration, was one of the priority recommendations contained in Maine's 10-year Economic Development Strategy and the subsequent Economic Recovery Committee recommendations. MIEAB is an impressive list of Maine leaders from the private sector, non-profit research institutions, UMaine System, our private colleges and universities, biomedical and marine research labs, and individuals with finance and venture capital experience. MIEAB's primary responsibilities include, developing the State's five-year innovation action plan, as well as monitoring and reporting annually on the state's progress against the goals and tactics in the plan. MIEAB also serves as the State's EPSCoR Steering Committee and generally provides advisory to policy makers on all things related to our innovation economy. The first meeting of the new board was convened on May 26.

MTI Becomes Member of Immigrant Welcome Center Coworking Space

To continue to maximize its outreach into traditionally underserved communities, MTI recently became a member of the Immigrant Welcome Center coworking space. MTI will have access to a floating desk and conference space throughout the year and expects to hold regular office hours to assist new Mainers with information about MTI, its funding, and services.



Singing Pastures

PRACTICING REGENERATIVE AGRICULTURE
AND LAUNCHING A CONSUMER BRAND

Grant | \$20,800

John Arbuckle, a 9th-generation farmer originally from Illinois, along with his wife Holly moved to Maine in 2018 to lay down roots and expand their farm business. After farming in Missouri for 8 years they relocated their pasture-raised pork farm to a former dairy farm that they named Singing Pastures.

When John and Holly began farming, they discovered that most farming in the US was now large, industrial confinement operations. These factory farms create problems for human health, animal welfare, and the environment.

John and Holly chose to go back to raising animals like our ancestors, on green grass without growth stimulants, antibiotics, and GMOs. They learned about and began practicing regenerative agriculture, finding it ideal to promote healthy soil and restore and revitalize ecosystems that improve the planet. Their pork is certified pasture-raised and free from antibiotics, hormones, and Ractopamine (a pharmaceutical often given to pigs to increase weight gain).

In addition to selling their pork to wholesalers and white-label customers, the Arbuckles have developed their own branded product line. Their first product, Roam Sticks, is like artisanal Slim Jims. These are convenient, healthy, 100% pasture-raised pork sticks that are naturally fermented and then slow-smoked with real hickory wood.

During the pandemic, they lost their largest white-label customer, this pushed them to move their attention back to the consumer packaged goods market. Through a grant from MTI in 2019, they completed important market research on market size, a competitive review, and customer insights.

After winning a Value-Added Producer Grant through the USDA their customer research guided them to a more successful marketing campaign that fueled their growth. They saw 10x growth in their revenues from 2020 to 2021.

100%

pasture-raised meat
certified by the American
Grassfed Association

0

synthetic nitrates, corn syrup,
trans fats, MSG, artificial
flavors, colors or preservatives
included in Roam Sticks

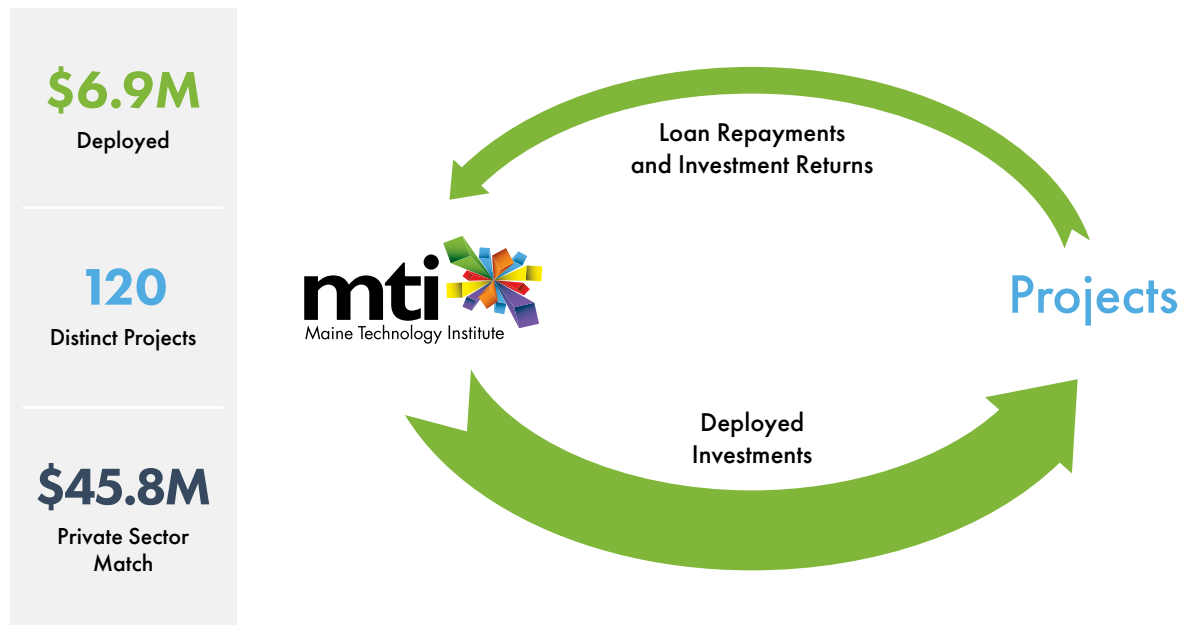


We are very grateful for the support we have received through MTI, and other organizations in Maine, that have been instrumental to the growth of our farm and brand.

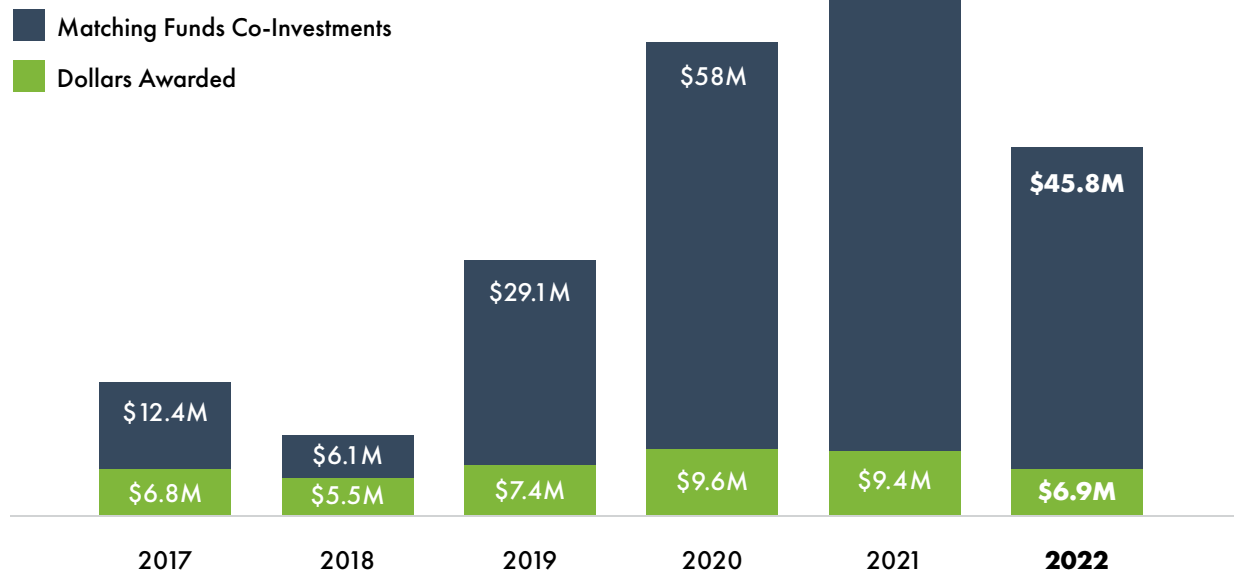
John and Holly Arbuckle
Founders

MTI FY22 Funding Report

MTI receives an annual appropriation from the Maine Legislature. For the fourth consecutive year we were able to put additional money to work as a result of loan repayments and sound investment returns.











Total Dollars Awarded/Matched by Year











Awards by Technology Sector

The State of Maine has targeted seven technology sectors best suited for investment and other forms of support. These include both mature industries (like forestry and agriculture) as well as emerging ones (such as composite

materials and biotechnology). In FY22, MTI invested in businesses within all seven of these targeted sectors, helping to create a more vibrant and diversified economy.

Sector	No. Awards	Amount	
Aquaculture & Marine	25	\$ 794,624.00	
Biotechnology	12	\$ 1,230,925.00	
Composite Materials	4	\$ 76,000.00	
Environmental Technology	10	\$ 824,800.00	
Forestry & Agricultural	8	\$ 983,645.00	
Information Technology	47	\$ 2,363,629.00	
Precision Manufacturing	10	\$ 393,921.50	
Economic Development	4	\$ 218,500.00	
Total	120	\$ 6,886,044.50	

Awards by Range

Range	No. Awards	Amount	
Range 1	39	\$ 797,589.50	
Range 2	20	\$ 660,026.00	
Range 3	25	\$ 2,502,555.00	
Range 4	2	\$ 433,749.00	
SBIR	3	\$ 13,925.00	
Special Opportunities	6	\$ 1,740,000.00	
Sponsorships	23	\$ 238,200.00	
Clean Energy Challenge	2	\$ 500,000.00	
Total	120	\$ 6,886,044.50	

Because MTI invests in businesses of varying maturity, and because we individualize our approach and investment to the clients needs, we distribute our levels of funding across four

ranges. Generally, we fund a greater number of projects at a lower level, then dedicate larger levels of investment to a smaller number of projects that will have a greater impact.

Other 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 2019. 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 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 FY20, 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 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 research and development groups and create a drug discovery and development

facility that will improve human health and stimulate biotechnology job growth and economic activity. In July of 2015 (FY16), the Mount Desert Island 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.



Maine Technology Asset Fund (MTAF)

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.

Bourgeois Guitars

AUTOMATED TECHNOLOGY SOLVES
OPERATIONAL ISSUES FOR MAINE WORKSHOP

Multiple Awards | \$354,000

50%

faster operational performance
using automated technology



MTI has been a key player in helping Dana Bourgeois turn his dream from a single guitar built by hand in his Bowdoin College dorm room, into the internationally celebrated authority in high-end acoustic guitar innovation and construction it is today.”

Christopher Fleming
President and C.O.O.

For over 45 years, Bourgeois Guitars, LLC has handcrafted high-end, steel-string acoustic guitars. Combining impeccable craftsmanship with a system of hand voicing, founder Dana Bourgeois and his team create guitars for some of the most renowned artists around the world. Bourgeois has operated in Maine for over 20 years and currently builds about 400 guitars annually.

It can take even the most experienced worker several hours to perform certain complicated operations, such as correctly profiling a fretboard surface and analyzing fret heights at various points, Bourgeois has been searching for automated solutions to a few of the more complex operations in their guitar-building process.

For manufacturers like Bourgeois who were looking to meet increased demand, the Plek machine was the ideal solution. Plek can perform operations in half the amount of time and to a higher degree of accuracy. Previously, there were only 26 Plek machines in the United States, one in the New England region, and 54 in the world.

With the help of MTI’s Core Grant, Bourgeois successfully procured this innovative machine that can help optimize every element contributing to a guitar’s playability. With this automated manufacturing system, Bourgeois can move forward with its growth plans to triple production. Recently, they expanded their manufacturing footprint from 9,000 square feet to 12,500 square feet. They plan to build a new production facility in the Lewiston-Auburn area and expect it to be operational in 2024. By 2029, Bourgeois plans to double its workforce from 32 to 60 full-time, benefited workers.

Bourgeois is more than just a company, it is a state treasure. With MTI’s continued support, Bourgeois now shares the spotlight with some of the world’s most well-known acoustic guitar brands and Maine rightfully gains international recognition as the center of America’s maker economy.



Other Programs

\$1.9M

in federal awards made
to companies receiving
TAP 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 startups or to less experienced teams is access to network contacts and mentorship support from seasoned 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.

SBIR/STTR Technical Assistance Program

The federal Small Business Innovation Research and Small Business Technology Transfer (SBIR/STTR) programs provide over \$4 billion in annual funding for small businesses to conduct research and development of innovative technology leading to the commercialization of new products, processes and services. In accordance with MTI's statutory mandate, the Technical Assistance Program (TAP) helps Maine small businesses develop competitive SBIR/STTR proposals. The TAP Team offers guidance and strategies for writing proposals, critical technical editing services, government accounting assistance, as well as access to experienced commercialization expertise, market researchers, a biotech consultant, and a technology management professional.

Summary of awards to Maine companies receiving TAP assistance

Company	Agency/Phase	Amount	YEAR
Maine Shellfish Developers	NSF Ph I Resub	\$ 256,000	2021
Atlantic Corporation	USDA AFRI	\$ 625,000	2022
FPN, LLC	NOAA SBIR Ph I	\$ 150,000	2022
Johnny's Seeds	USDA SBIR Ph II	\$ 600,000	2022
Ocean's Balance	NOAA SBIR Ph I	\$ 150,000	2022
One Dot Solutions	ERDC CSO	\$ 0	2022
Compotech	DOD Army Ph I	\$ 250,000	2022
Compotech	DOD Army Ph I	\$ 125,000	2022

- MTI is actively working with five FY22 applicants to submit federal grant proposals with a potential award value of \$4.3M
- SBIR Discovery—we've also worked with 20 companies that did not advance to Active Management (submitting a proposal)



"MTI's investment in the market demand study in 2018 was instrumental in increasing awareness inside and outside of Maine that the state was interested in participating in the new space economy, and equally important, in doing so by creating a space complex. This investment changed the conversation from WHY MAINE?? to WHY NOT MAINE!! We greatly appreciate MTI's confidence in us and in taking the leap to continue its investment in the complex's strategic plan and the current effort to recruit businesses, address workforce development needs of the new space economy and conduct additional outreach."

Terry Shehata Ph.D. Director, NASA Maine Space Grant Consortium

"We are so incredibly lucky to have an organization like MTI supporting small business growth in Maine.



Our baby company would be nowhere near the scale that it is today without their support and guidance"

Jocelyn Olsen
Co-founder, Hüga Heat

"The support from MTI, together with investment and encouragement from the broader Maine community, has been instrumental in bringing this new business to Maine."

Fred Horton
President & CEO,
Standard Biocarbon

Growth



"As a first-time founder of an early-stage startup, I can say with all sincerity that MTI has been vital in our growth over these past years. Their funding and guidance has opened key doors that allowed us to not only build, sell, and expand but to also become a credible force in the state of Maine and beyond."

Amy VanHaren
CEO and Founder,
Pumpspotting

Innovation

"MTI has been foundational to DuraBike's success. MTI's support of MCE's Top Gun program, their 50/50 grant funding programs and network of resources have all been key to DuraBike's development."

Brenden Westin
Founder, DuraBike

"MTI has been critical to the development and evolution of True Fin. We are very fortunate in Maine to have MTI as a resource committed to developing and growing business in the state, and supporting nascent companies with financial support and expert business counsel."

Jen Levin
President & CEO,
Gulf of Maine Sashimi

Support

Peaks Renewables

CONVERTING COW MANURE
INTO RENEWABLE ENERGY

Grant | \$100,000

28,000

metric tons—the estimated amount of carbon dioxide the Peaks facility will avoid emitting

130,000

mmbtu—the estimated amount of renewable natural gas production expected per year



I am appreciative of the support our project has received from the Maine Technology Institute. MTI has been a critical partner in helping to deliver this innovative solution to our climate challenge, and we're lucky to have a resource like that here in Maine."

Angus King III
President

A Renewable Natural Gas facility located in Clinton, Maine has the potential to create home-grown renewable natural gas and help support the Maine dairy industry. Peaks, a subsidiary of Summit Inc., is building an anaerobic digester that will utilize dairy cow manure from local Maine farms and convert it to renewable natural gas.

RNG, also known as biomethane, is derived from the decomposition of naturally occurring organic waste at farms and landfills. If not captured and reused, it would be released into the atmosphere in the form of methane—one of the most potent greenhouse gases.

On July 6, 2022, Peaks broke ground on the digester, and soon they'll work with six Maine-based, family-owned dairy farms that will supply the manure. Once in the digester, the manure will be heated and decomposed, creating biogas. The gas will then be cleaned, making it pipeline quality. The gas itself will be purchased by Peaks' affiliate company, Summit Natural Gas (SNGME), and used to provide reliable gas service to its thousands of customers throughout the state. RNG is functionally identical to traditional natural gas and can be used for heating, cooking, and other processes.

After Peaks takes "the energy" from the manure, it will return the nutrient-rich, liquid effluent back to the farm for their fields as well as dry matter for compost and bedding.

MTI supported Peaks through the engineering, design, and construction of the dairy digester, the first of its kind in Maine. The project opened the door for Summit to be a leader in the development of zero-carbon fuels and drive innovation in the energy sector. The facility is expected to produce the equivalent of about 45 percent of SNGME's residential demand.



Active MTI Collaborations, Affiliations and Partnerships



Partnerships To Promote Maine's Innovation Economy

23
sponsorships
awarded worth
\$238K+

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:**

University of Maine
UpStart Maine
Maine Community Foundation
Maine Development Foundation
Maine Discovery Museum
Manufacturers Association Of Maine
Maine International Trade Center
Northeast Clean Energy
Council Institute
Bioscience Association of Maine
Mount Desert Island Biological
Laboratory

Looking Ahead to FY23

MTI Working to Offer New Business Accelerator for Underserved Entrepreneurs

In August of 2020, MTI engaged in a series of community discussions to get input into its proposed plan to distribute ARPA funding. Several of those sessions were focused on the needs of Black, Indigenous, and People of Color (BIPOC) communities and entrepreneurs. One of the clear takeaways from our conversations with the BIPOC communities was that MTI's 1-1 matching funds requirement presented an almost insurmountable barrier to accessing funding. Also, deep community connections were necessary to bridge the digital, language, and knowledge divide. To address the financial barrier, we discussed a potential collaboration with philanthropic organizations where they would help seed a fund to provide a matching grant for BIPOC, women, and rural entrepreneurs otherwise eligible to receive ARPA funding.



MTI also examined what other states were doing to help accelerate or restart the economic engines in underserved communities. Our search led us to the successful EforAll program, based in Massachusetts, whose mission is to accelerate economic and social impact in communities nationwide through inclusive entrepreneurship.

EforAll serves historically excluded and underserved communities and offers its programming for free to participants. EforAll has demonstrated success driven by deep community engagement and its model is part community economic development and part business accelerator.

MTI has made a three-year sponsorship commitment and will work to get the financing in place, flesh out the program parameters, and line up partners with a goal of launching the first Maine EforAll cohort in 2023.

Seagrass Conference

In September 2022, Maine hosted the international Seagrass Conference USA 2022, the leading conference for the Seaweed industry. The conference gathered top speakers, who shared their know-how within seaweed for feed, food, offshore cultivation, biorefinery of seaweed and more. The two-day program combined plenary sessions with interactive poster presentations, trade shows and debate sessions. The Maine edition—the first ever in the US—was an opportunity to highlight the great industry support, innovative businesses, research, and collaborations in Maine's seaweed sector. MTI was a leading sponsor, along with the Maine International Trade Center, the Maine Department of Economic & Community Development, and the Maine North Atlantic Development Office. Over 300 participants attended from around the globe.



Life Sciences RFP Released

In August 2022, MTI, in partnership with the Maine Department of Economic & Community Development (DECD), issued a request for proposals to attract applicants for at least \$750,000 in grant funding to help establish a private-sector-led life sciences laboratory and incubator, where nascent biotechnology and life sciences firms may access shared lab spaces and office infrastructure to help them start and scale their enterprises.

MTI sought a qualified organization with a successful track record of developing and implementing such a facility.

A final award decision was expected in fall 2022.

Grow Maine Program

Grow Maine will provide up to \$62 million of State Small Business Credit Initiative (SSBCI) funding to eligible Maine businesses. Funding will be available through FAME and its intermediary partners via loan guarantees, direct loans, and equity capital. SSBCI is a federal program administered by the U.S. Department of the Treasury that was created to strengthen state programs that support private financing to small businesses. MTI is an approved partner with FAME on the deployment of the SSBCI funds.

Maine Entrepreneurial Resource Corps Launched

In September 2022, MTI fully launched the Maine Entrepreneurial Resource Corps (MERC) program. After spending months designing the program, building the database, hiring a program coordinator, designing legal documents, and conducting beta tests, the program is now operational and accepting applications.

Forestry Recovery Initiative 2 to Open in September

Phase 2 of the Forestry Recovery Initiative (FRI-2) program is set to open in September 2022. During Phase 1 of the \$20 million



program, MTI awarded approximately \$6 million to more than 220 Maine entities. The remaining \$14 million will be available for Phase 2.

FRI-2 is specifically focused on supporting strategic projects within the state that address significant challenges and long-

term threats to the industry. These projects will tackle global market shifts in supply and demand, supply chain disruptions and new technologies that impact the growing, processing and use of natural resources. FRI-2 seeks applicants from companies developing new technologies, new markets, and other innovative solutions for the Forestry industry.

PRIME Ecosystem Program Update

In October 2022, MTI opened a \$5 million grant program through the Maine Jobs & Recovery Plan to strengthen Maine entrepreneurs, startups, and small businesses. This is the second round of grants from the Pandemic Recovery for an Innovative Maine Economy (PRIME) Fund, administered by MTI. In August 2022, MTI revealed the first round of PRIME Award recipients, which included nearly \$23.3 million in funding to 174 Maine technology companies to help them recover from the pandemic, invest in new products and business lines, attract new customers, and create long-term economic growth. In this PRIME Ecosystem round, MTI will provide grants to public-private partnerships to spur the development of programs that provide a catalyst for startup companies as they scale and grow in the state.

Organization



Brian Whitney
President



Abigail Naana Osei
Investment Officer



Greg Lee
Director of Finance and
Administration



Barb Ford
Lending and Grant
Associate



Joseph Migliaccio
Director of Portfolio
Advancement



Bianca Kowal
Senior Investment Officer



Scott Bursey
Senior Investment Officer



Wanda McNeil
Media Manager



Shane Beckim
Senior Investment Officer



Tom Kittredge
Senior Investment Officer



Emily Braley
Maine Entrepreneurial
Resource Corps Coordinator



Lou Simms
Senior Investment Officer

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 Innovation Policy & the Future, 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, as well as remotely. The staff is composed of a Director of Finance & Administration, five Senior Investment Officers, one Investment Officer, a Director of Portfolio Advancement, one Lending & Grant Associate, one Coordinator of the Maine Entrepreneurial Resource Corps, and one Media Manager. The MTI President is employed by the Maine Department of Economic & Community Development.



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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