Maine Technology Institute Sector Assessment

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PREPARED FOR:

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EXECUTIVE SUMMARY

Camoin Associates conducted an industry analysis for Maine Technology Institute's (MTI) seven cluster industries: Biotechnology; Composites and Advanced Materials; Environmental Technology; Forest Products and Agriculture; Information Technology; Marine Technology and Aquaculture; and Precision Manufacturing. We analyzed past, present, and projected trends focused on market challenges and opportunities specifically tied to domestic trade by studying industry trends, supply chain flows, innovation metrics, and workforce data.

Biotechnology

- Biotechnology (Biotech) has seen **rapid growth** across the United States and in Maine in recent years. In Maine, **biotech employment has grown 38% in the last five years** and is **projected to grow** by another 17% through 2027, representing overall growth of **almost 3,600 jobs from 2017-2027**.
- In addition to job growth, Maine has had **67 patents issued** in the Biotech-related categories between 2016-2020. **Biotech patents make up the largest share of patents** issued in MTI sectors, at 47%. Within this cluster, there are concentrations of innovative biotech companies throughout Maine. For example, of out the 67 patents, **Cumberland County had the most patents awarded (39), followed by Hancock County (11) and Penobscot County (10)**.
- Venture capital (VC) funding for Biotech in Maine fluctuated over the past several years. From 2018-2023 YTD, there have been a **total of 12 deals totaling $51.8 million raised**. Companies with biotech VC have cross-cutting technology with health care, software development, renewable chemicals, and more, indicating an active innovation cluster that cuts across multiple MTI target sectors.
- **Biotech jobs are in high demand and can be difficult to fill** because biotech faces stiff competition with other industries that need similarly skilled employees. While there are some positions that have low barriers to entry with a high school diploma, the majority of positions need a bachelor's degree, a doctoral degree, or other professional degrees.

Composites & Advanced Materials

- Composites and Advanced Materials is highly concentrated in the State of Maine and saw **51% employment growth** with a **projected growth of another 21% through 2027**. Including the projected growth, from 2017-2027, this industry will see **an overall growth of 1,750 jobs**.
- From 2016-2020, **Maine had 15 patents issued** related to Advanced Manufacturing and Composites equaling **approximately 5.5% of all patents that have been awarded to MTI sectors**. Industry innovation is clustered within Maine in **Cumberland County and Penobscot County** which had the most patents awarded (4 each), followed by **York County** (3).
- From 2018-2023, there was **one (1) venture capital (VC) funding deal** in 2021, totaling **$1.1 million.** The $1.1 million was raised for Amplify Additives, based in Scarborough. This company has cross-cutting activity with the Bio sector, as it engages in advanced 3D printing of orthopedic implants. While this data looks at reported

VC, it is possible that other unreported investment deals have taken place for business growth as indicated by the increase in jobs.

- Composites and Advanced Materials jobs tend to have **low barriers to entry** with **on-the-job training and apprenticeships**. The benefit of having low barriers to entry is the ability to engage more of the workforce and retain employees with job training opportunities. However, it can be challenging to recruit employees due to competition in similar labor pools.

Environmental Technology

- Environmental Technology saw lower to moderate growth within the State of Maine. Employment has **grown 11%** in the last five years and is **projected growth by another 4%** through 2027, representing approximately **542 jobs from 2017-2027**.
- From 2016-2020, Maine had 0 patents issued in the Environmental Technology category however, from 2017-2022, **over $9.5 million in Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) funding** has been issued to Maine businesses by the Department of Health and Human Services and the National Science Foundation. While Maine has not seen new environmental tech patents since 2005, SBIR/STTR is an indicator of innovation and growing research within this industry.
- Venture capital (VC) funding for Environmental Technology in Maine fluctuated over the past several years, peaking in 2021 with $20.0 million raised through a single deal. From 2018-2023 YTD, there have been a **total of 6 deals totaling $39.8 million raised.** Environmental Tech companies with VC have cross-cutting technology with marine technology, farming, and semiconductors/precision manufacturing
- Environmental Tech jobs are **fairly specialized occupations** and **need workers with a variety of educational backgrounds** and skills. While some job opportunities require no formal educational credential, some positions require a bachelor's degree or a specialty certification. **Environmental Tech jobs are in-demand and can be difficult to fill depending on the position.** The hardest positions to fill and the most needed are Building Service Workers, Protection and Control Engineers, and CDL-A Truck Drivers.

Forest Products & Agriculture

- Forest Products and Agriculture are legacy natural resource industries with moderate levels of growth. Employment **grew by 8% in the last five years** and is projected to grow by another **4% through 2027**, representing an overall growth of **3,258 jobs from 2017-2027.** Crop Production makes up the bulk of this growth.
- From 2016-2020, Maine had **1 patent issued** related to Food Chemistry in **Cumberland County**. The majority of patents are awarded in surrounding New England States like Middlesex County and Essex County in Massachusetts. However, from 2017-2022, **almost $3.5 million in SBIR/STTR funding** has been issued to Maine businesses through the Department of Agriculture and Environmental Protection Agency.
- From 2018-2023 YTD, there have been a total of **9 VC deals totaling $23.9 million raised**. VC was awarded to companies primarily in AgTech, Aquaculture, and Food and Beverage. Forest Products and Agriculture Companies with VC have cross-cutting technology with marine technology, energy, manufacturing, and retail.
- **Forest Products and Agriculture jobs are in demand** with varying levels of difficulty to fill positions. **This sector has relatively low barriers to entry in terms of educational requirements.** Only one of the top 10 most common occupations requires education beyond a high school degree.

Information Technology

- While not very concentrated in Maine compared to other states, Information Technology (IT) saw large employment growth in the last five years. IT employment **grew 53%** and is projected to grow by another **21% through 2027**, representing overall growth of almost **5,900 jobs from 2017-2027.**
- From 2016-2020, Maine has had **33 patents issued** in the IT-related categories. The most recent five years represents the **strongest 5-year period** in the last two decades for patent awards, **driven by 22 patents awarded in Computer Technology.** IT is a strong sector for patent awards in Maine and IT categories account for about 24% of all patents awarded to MTI sectors from 2016-2022. Within Maine, **Cumberland County had the most patents awarded** (16), followed by Penobscot Count (6) and Kennebec County (4).
- From 2018-2023 YTD, there have been a **total of 19 venture capital deals, totaling $63.7 million** raised. IT companies with VC have cross-cutting technology with healthcare, geospatial sciences, data analytics, finance, education, and aerospace, among others
- IT jobs in Maine are in **high demand** and can be difficult to fill due to **specialized skills and education** requirements. **Seven of the top 10** most common occupations in the sector require at least a **bachelor's degree.** However, salaries in IT are approximately double the state's average wage, which creates a talent recruitment opportunity as employment grows in Maine.

Marine Technology and Aquaculture

- Marine Technology and Aquaculture saw **employment double** in the last five years from 279 jobs to 562 jobs. While aquaculture jobs projections are not available for 2027, Navigational and other related instruments manufacturing is **projected to grow by 18%** through 2027.
- From 2017-2022, Maine had over **$8.8 million in SBIR/STTR funding**. Funded projects include a range of new technology, including those relating to tidal power generation, feed for farm-raised shellfish, seaweed farming systems, and more.
- From 2018-2023 YTD, there have been a **total of 8 venture capital deals totaling $37.6 million** raised. Companies with VC have cross-cutting technology with environmental technology, IT, and the overall food sector.
- The Marine Technology and Aquaculture **workforce is projected to grow by 9% over the next 10 years**. While workforce demands are growing in this sector, it is hard to fill jobs, especially positions that are more specialized such as Fishing and Hunting Workers.

Precision Manufacturing

- Precision Manufacturing is not heavily concentrated in Maine and saw lower to moderate growth over the past five years. Precision Manufacturing employment **grew by 136 jobs** from 2017-2022. Employment growth is projected to **grow by another 368 jobs through 2027**, representing overall **growth of about 3.9% from 2017-2027**.
- In the most recent five years of data, from 2016-2020, Maine had **21 patents issued** in the Precision Manufacturing-related categories. Precision Manufacturing patents account for about 15% of total patents issued in MTI sector patent categories. Within Maine, **Cumberland County had the most patents awarded (13), followed by York County (3).**
- From 2018-2023 YTD, there have been a **total of 6 venture capital deals totaling $15.1 million** raised. VC funding is currently the highest in 2023 YTD at $6.0 million raised through 2 transactions. This recent investment indicates an increase in innovation interest as an additional **$1.2 million in SBIR/STTR funding was awarded** to Maine businesses in 2022. Companies with Precision

Manufacturing VC have cross-cutting technology with environmental technology and manufacturing.

- Precision Manufacturing jobs are in high demand and are difficult to fill. However, the workforce needed to sustain this sector's growth have relatively low barriers to entry. **Nine of the top 10 occupations in the sector require a high school diploma or equivalent**, while one (General and Operations Managers) require a bachelor's degree. This sector faces **recruitment challenges** due to labor pool competition across multiple industries even though this sector averages higher wages than the state.

MTI Sector Assessment

	Biotechnology	Composites & Advanced Materials	Environmental Technology	Forest Products & Agriculture	Information Technology	Marine Technology & Aquaculture	Precision Manufacturing
Employment Growth (2017-2022)	38%	51%	11%	8%	53%	100%	1.40%
Projected Overall Growth (2017-2027)	17%	21%	4%	4%	21%	18%	3.90%
SBIR/STTR Funding (2017-2022)	$9,500,000	$1,200,000	$9,500,000	$3,500,000	$0	$8,800,000	$3,400,000
Total Venture Capital Deals (2017-2022)	12	1	6	9	19	8	6
Total Venture Capital Raised (2017-2022)	$51,800,000	$1,100,000	$39,800,000	$23,900,000	$63,700,000	$37,600,000	$15,100,000
Patents Issued (2016-2020)	67	15	0	1	33	0	21
Counties with Highest Number of Patents Awarded	**Cumberland County (39); Hancock County (11); Penobscot (10)**	**Cumberland County (4); Penobscot County (4); York County (3)**	**N/A**	**Cumberland County**	**Cumberland County (16); Penobscot (6); Kennebec (4)**	**N/A**	**Cumberland County (13); York (3)**

Data Note: Venture capital data includes only the deals that have been reported. Not all venture capital funding is reported.

Common Trends

- MTI sectors have similar supply chain inputs and outputs, providing an opportunity to build the supply chain network and infrastructure to grow similar industries. For example, there is a lot of synergy and similarities between Environmental Technology and Marine Technology and Aquaculture. By investing in supply chain networks that support multiple sectors, this can lead to an increase in return on investment (ROI) because multiple industries benefit from the investment.
- Every MTI sector saw a range of employment growth over the past five years and expects growth through 2027. While this growth is positive for investment in the economy and job creation, workforce trends indicate that employment in MTI sectors tend to be more specialized, are harder to fill, and are competing within the same labor pool. However, an opportunity to address workforce shortages is capitalizing on the low barrier to entry positions to invest, upskill, and build long term industry pipelines.
- While there is innovation investment occurring in Maine, particularly in Cumberland County, there is a lot of innovation investment happening in Massachusetts and surrounding areas. This is beneficial for tapping into the Massachusetts market and building connections for talent attraction, business expansion and start-ups in Maine.

MTI'S TECHNOLOGY SECTORS

BIOTECHNOLOGY | The biotechnology sector encompasses a variety of subsectors including pharmaceutical and medical manufacturing, manufacturing of equipment, supplies, and devices for the medical sector, diagnostics, and research and development in biotechnology and the life sciences.

COMPOSITES AND ADVANCED MATERIALS | The composites and advanced materials sector encompasses a variety of subsectors relating to ship and boat building as well as artificial and synthetic materials and fibers. This can include traditional materials such as plastics and resin or rubber, or new types of materials and fibers deriving from plant-based and forest-based products and beyond.

ENVIRONMENTAL TECHNOLOGY | The Environmental Technology sector encompasses a variety of subsectors including electric power generation and distribution, environmental consulting services, testing laboratories, and other water, sewage, waste treatment, and waste management services.

FOREST PRODUCTS & AGRICULTURE | The Forest Products and Agriculture sector in Maine represents Maine's legacy natural resource industries. This sector includes various subsectors, including crop and animal production and support activities for agriculture as well as food manufacturing industries for agriculture; within forest products, subsectors include timber and logging operations as well as manufacturing subsectors such as sawmills, pulp and paper, and wood product manufacturing.

INFORMATION TECHNOLOGY | The information technology (IT) sector encompasses several subsectors relating to IT services, including computer systems design services, software, media streaming and distribution, wireless telecommunications, web search portals, and data processing and hosting.

MARINE TECHNOLOGY AND AQUACULTURE | The Marine Technology sector encompasses both aquaculture as well as manufacturing related to navigational, nautical, and control process instruments and tools.

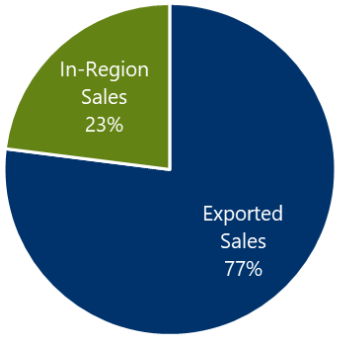
PRECISION MANUFACTURING | The precision manufacturing sector encompasses a variety of subsectors including metal products, machinery manufacturing, and computer and electronic product manufacturing. Products included in these categories range from metal parts and tools, hardware, heavy machinery, semiconductors, telecom equipment, navigation, and control instruments, and beyond.

The following section provides detailed information about each of the technology sectors' past, present, and projected trends as well as market challenges and opportunities as they relate to domestic trade.

BIOTECHNOLOGY

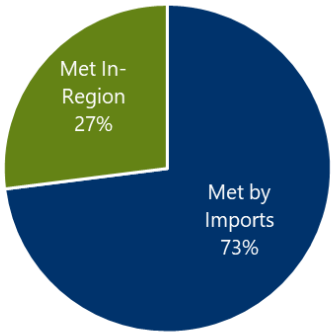
The biotechnology sector encompasses a variety of subsectors including pharmaceutical and medical manufacturing, manufacturing of equipment, supplies, and devices for the medical sector, diagnostics, and research and development in biotechnology and the life sciences.

Maine's Biotechnology Sales Distribution (2022)
Total Sales: $2.9 Billion



Source: Lightcast

Maine's Biotechnology Demand Distribution (2022)
Total Demand: $2.4 Billion



Source: Lightcast

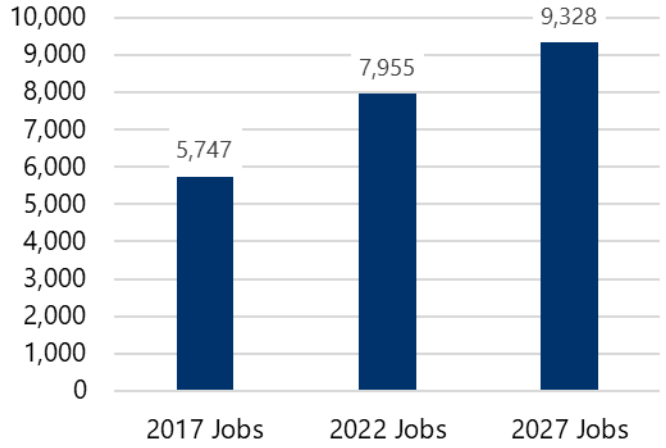
Employment Concentration:

1.26x Higher than the national average

Gross Regional Product:

$1.9 Billion
2.5% of the State's Total

Jobs in Maine's Biotechnology Sector



Source: Lightcast

- Biotechnology employment has **grown 38% in the last five years** and is projected to grow by another **17% through 2027**, representing overall growth of almost **3,600 jobs from 2017-2027**
- Biotechnology jobs pay about **$107,301 per year** on average, much higher than the state's overall average annual wage ($67,942)
- The sector is dominated by three primary subsectors: Pharmaceutical and Medicine Manufacturing (3,457 jobs), R&D in Biotechnology (1,727 jobs), and Medical Equipment and Supplies Manufacturing (1,321 jobs)

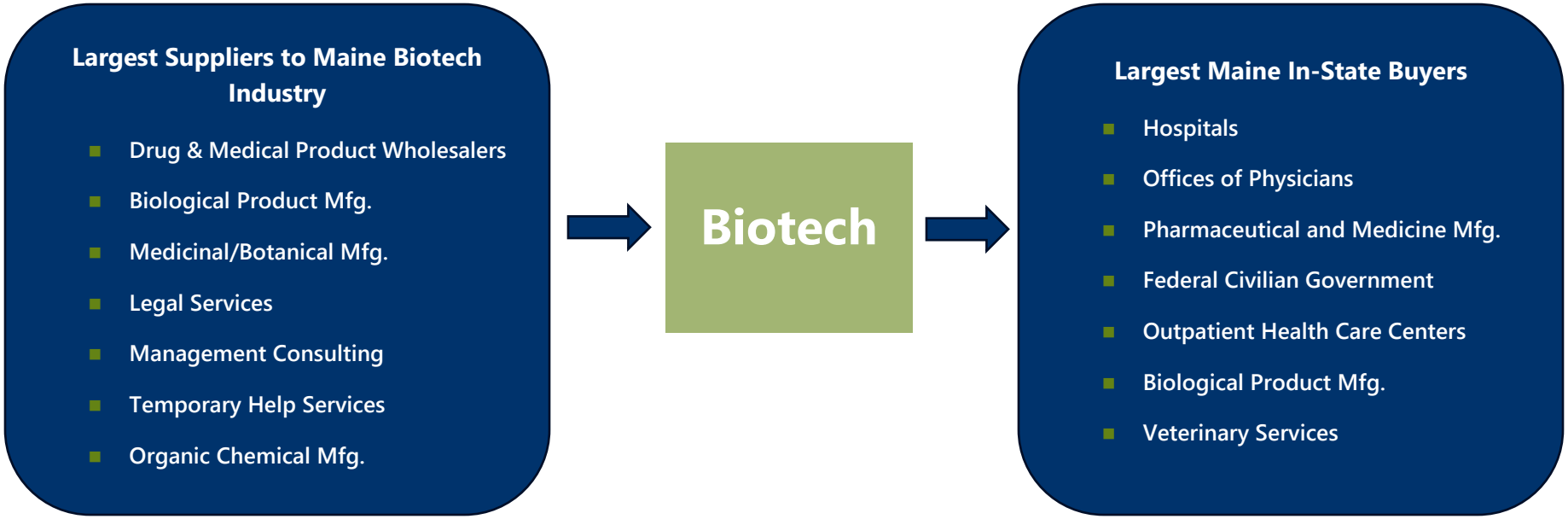
Typical Largest Suppliers

Supply Chain

Direct and indirect supplier and buyer industries related to this industry

Source: IBISWorld

Supply Chain Insights

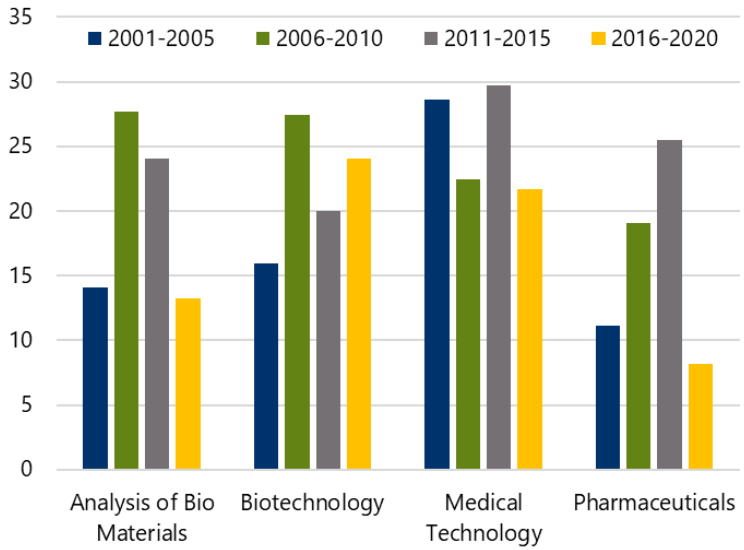


- Businesses in Maine's Biotech sector purchased $843.8 million of goods and services from other companies in 2022, from both in-state sources as well as imports from out of state
  - The largest inputs to the Biotech sector range from services such as consulting, temporary help, and legal services to intermediate goods such as chemicals, biological products, and other parts of the pharmaceutical and biotech sector
- Maine's Biotech sector sold over $548 million of products to buyers within Maine in 2022
  - The largest buyers of Maine's Biotech products include a range of institutions, including health care facilities, the federal government, and other biotech manufacturing industries
- There are strong intra-industry links within the Biotech sector. Biotech businesses supply and sell to other biotech businesses within the state and beyond

Data Note: Suppliers provide inputs to Maine's Biotechnology businesses and can be located both in Maine and in other states. On the other hand, the industries listed as largest buyers only include businesses located in Maine due to data limitations.

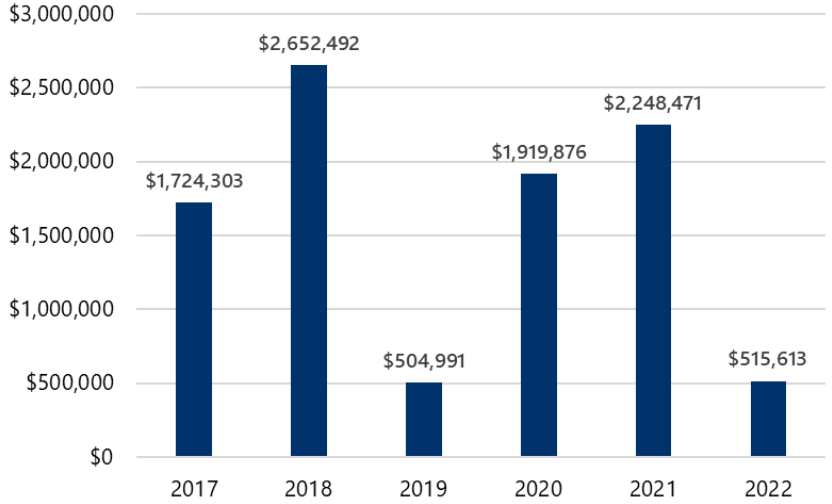
Innovation

Maine Patents in Biotech Categories, 5-Year Totals



Source: National Science Foundation Science and Engineering Indicators

Maine SBIR/STTR Awards in Biotechnology

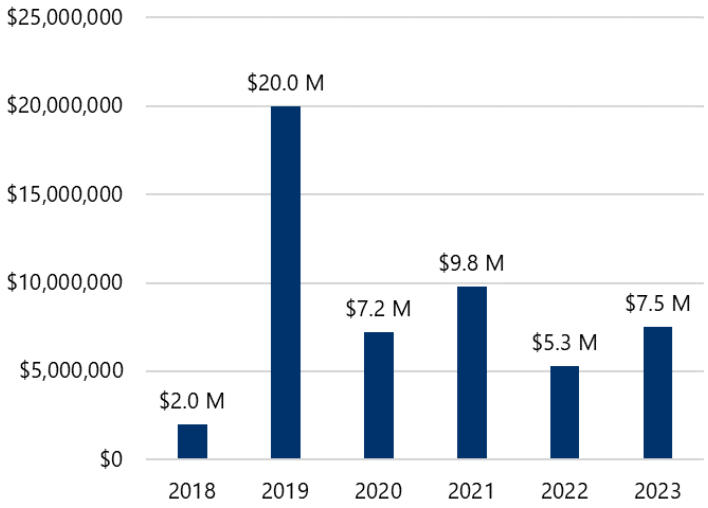


Source: SBA - SBIR/STTR Awards Data
Note: Includes all Phase I/Phase II awards issued to Maine businesses by DHHS and NSF

- In the most recent five years of data, from 2016-2020, Maine has had 67 patents issued in the Biotech-related categories of Analysis of Biomaterials, Biotechnology, Medical Technology, and Pharmaceuticals
- Biotechnology patents make up the largest share of patents issued in MTI sectors. 47% of all patents issued within MTI sector categories are in one of the four Biotech categories
- From 2017-2022, over $9.5 million in SBIR/STTR funding has been issued to Maine businesses by the Department of Health and Human Services and the National Science Foundation

Venture Capital Funding

Venture Capital Funding for Biotech in Maine, 2018-2023



Source: Crunchbase
Note: Includes only reported VC Deals. Not all VC funding is reported.

Companies with reported Venture Capital Deals, 2018-2023 YTD

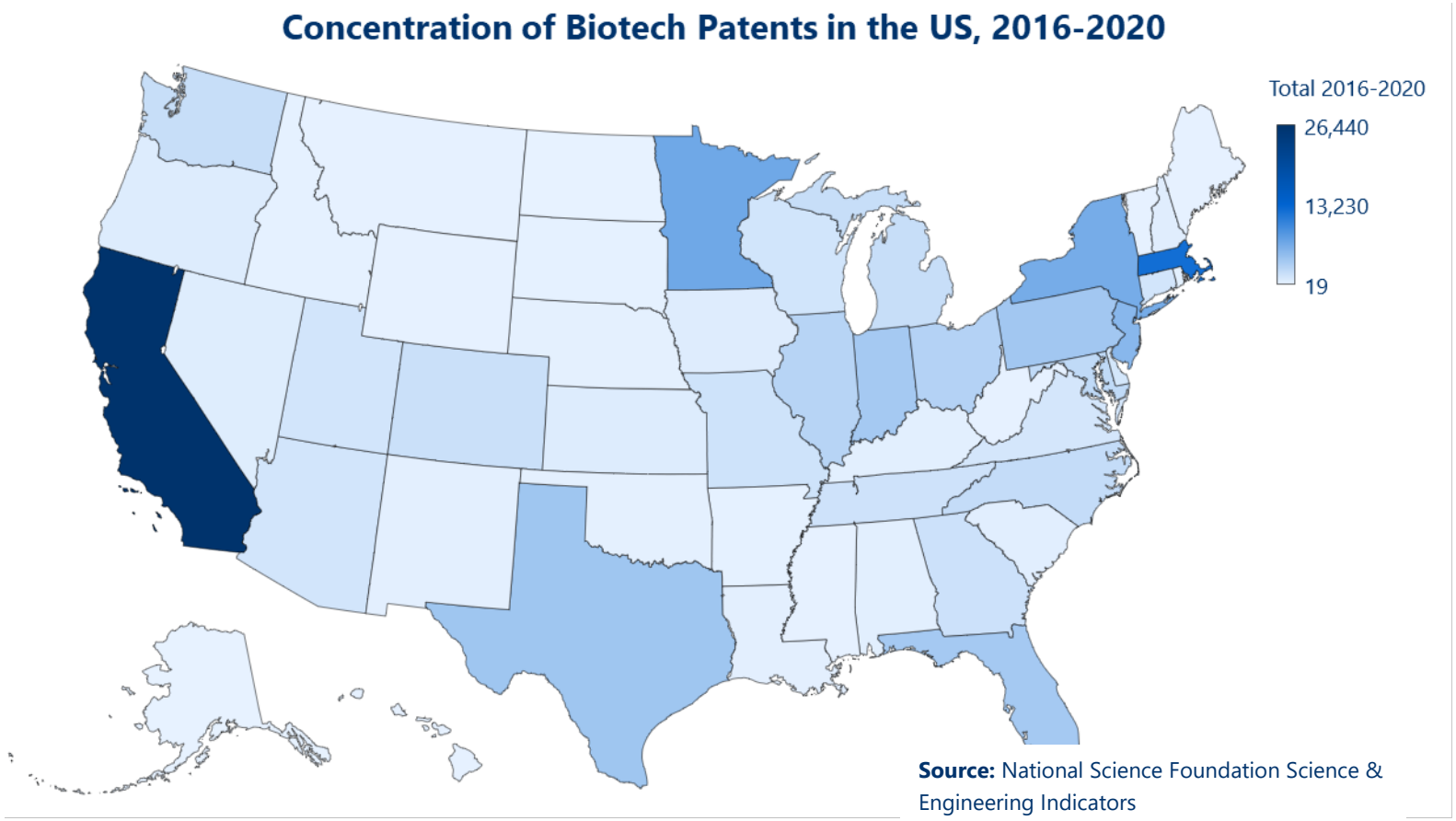
Company	Related Industries	Deals
Kira Biotech	Biotechnology	1
Hawkin Dynamics, Inc.	Life Science, Software, Sports	2
RockStep Solutions	Analytics, Health Care, Information Technology, Life Science, Software	4
Novo Biosciences	Biotechnology, Health Care, Medical, Wellness	1
Cerahelix	Biotechnology, Manufacturing, Nanotechnology, Water Purification	3
Biofine Developments Northeast	Biofuel, Biotechnology, Chemical	1

Source: Crunchbase

- Venture capital (VC) funding for Biotechnology in Maine has fluctuated over the past several years, and was highest in 2019 at $20.0 million raised
- From 2018-2023 YTD, there have been a total of 12 deals totaling $51.8 million raised
- So far in 2023, 1 biotech deal totaling $7.5 million has occurred
- Companies with VC have cross-cutting technology with health care, software development, renewable chemicals, and more, indicating an active innovation cluster that cuts across multiple MTI target sectors

Note: The venture capital data highlighted on this page includes only the deals that have been reported. Not all venture capital funding is reported.

Patents

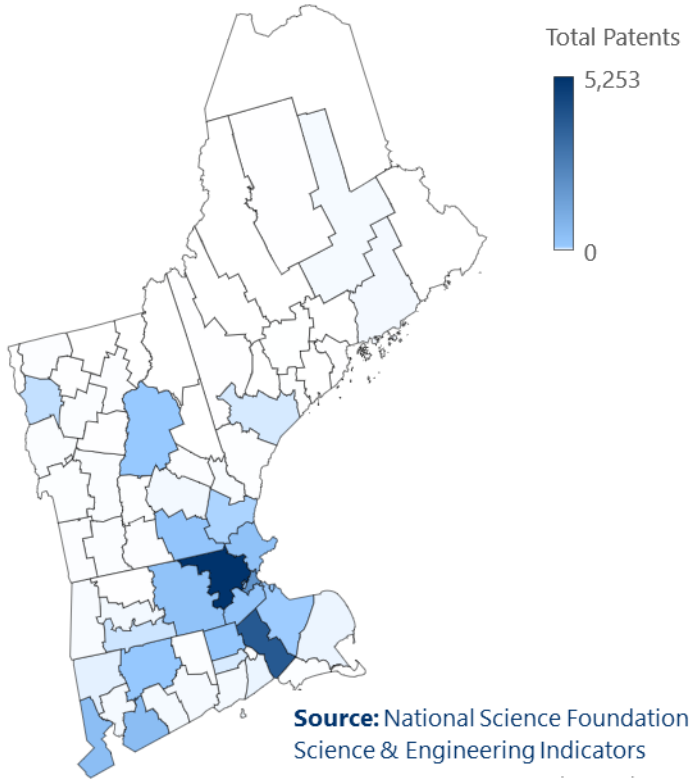


Source: National Science Foundation Science & Engineering Indicators

- In the five years from 2016-2020, almost 107,800 patents were awarded in Biotech categories in the United States
- The top 5 states for Biotech patents were California (26,440), Massachusetts (12,224), Minnesota (6,874), New York (6,497), and New Jersey (5,425)

- Within New England, Middlesex County, MA had the highest 5-year total for Biotech patents, with 5,253 awarded between 2016-2020
- Counties surrounding Boston, MA have the highest concentrations of Biotech patents. These include counties in Connecticut, New Hampshire, and Rhode Island
- Within Maine, Cumberland County had the most patents awarded (39), followed by Hancock County (11) and Penobscot County (10)

Concentration of Biotech Patents in New England, 2016-2020



Source: National Science Foundation Science & Engineering Indicators

Top 10 Counties for Biotech Patents in New England, 2016-2020

County	State	Patents
Middlesex County	Massachusetts	5,253
Bristol County	Massachusetts	3,962
Suffolk County	Massachusetts	1,934
New Haven County	Connecticut	526
Fairfield County	Connecticut	483
Essex County	Massachusetts	344
Worcester County	Massachusetts	312
Norfolk County	Massachusetts	238
Hillsborough County	New Hampshire	221
Providence County	Rhode Island	155

Source: National Science Foundation Science and Engineering Indicators

Workforce Demands

Top Occupations in Maine's Biotech Sector

Occupation	Employed in Biotech	Median Hourly Earnings	Typical Entry Level Education
Packaging and Filling Machine Operators and Tenders	438	$18.15	High school diploma or equivalent
Biochemists and Biophysicists	274	$37.79	Doctoral or professional degree
Clinical Laboratory Technologists and Technicians	246	$29.42	Bachelor's degree
Phlebotomists	244	$17.44	Postsecondary nondegree award
Miscellaneous Assemblers and Fabricators	223	$18.57	High school diploma or equivalent
First-Line Supervisors of Production and Operating Workers	216	$33.45	High school diploma or equivalent
General and Operations Managers	200	$41.29	Bachelor's degree
Inspectors, Testers, Sorters, Samplers, and Weighers	197	$22.13	High school diploma or equivalent
Biological Technicians	177	$23.89	Bachelor's degree
Chemists	147	$30.31	Bachelor's degree

Source: Lightcast 2023.3

Top In-Demand Job Titles for the Biotech Industry, 12 months ending July 2023

Job Title	Median Duration	Unique Postings	Posting Intensity
Clinical Research Associates	28	93	3 : 1
Customer Engagement Managers	29	79	1 : 1
Phlebotomists	30	58	4 : 1
Medical Technologists	24	43	4 : 1
Communications Representatives	16	42	1 : 1
Clinical Trial Managers	47	24	2 : 1
Medical Science Liaisons	44	23	1 : 1
Lead Phlebotomists	23	20	4 : 1
Clinical Operations Managers	41	19	2 : 1
Territory Business Managers	27	17	1 : 1
Neuromuscular Therapists	41	17	2 : 1
MRI Technologists	56	16	2 : 1
Hospital Business Managers	53	16	4 : 1

Source: Lightcast 2023.3

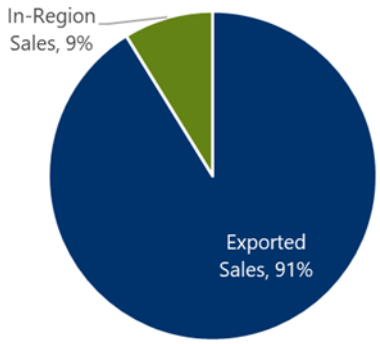
Biotech jobs in Maine are in high demand and can be difficult to fill.

- **The top occupations by employment in the sector run across the education spectrum.** Jobs like machine operators, assemblers, and supervisors of production workers are in the top occupations employed by the sector and require a High School Diploma. Meanwhile, occupations like biochemists, technicians, engineers, and managers require bachelor's and doctoral degrees. Some, like phlebotomists, require a certificate.
- **Biotech jobs can be difficult to fill.** Job postings for Clinical Trial Managers, for example, took a median of 47 days to fill in the last 12 months. Hospital Business Managers, for which there were 16 postings in the last 12 months, took a median of 53 days to fill and had a high posting intensity, with an average of 4 job postings for each open job.
- **Biotech faces stiff competition with other industries.** Some of the sector's top occupations are primarily employed in the Biotech Sector, such as Biochemists and Biophysicists (70%), Chemists (48%), and Biological Technicians (37%). However, other top occupations are employed primarily in other sectors. Only 11% of Inspectors/Sorters/Weighers, 7% of Supervisors of Production Workers, and 5% of Assemblers/Fabricators are employed in the Biotech sector, which means the sector will have to compete fiercely to recruit for these jobs.

COMPOSITES AND ADVANCED MATERIALS

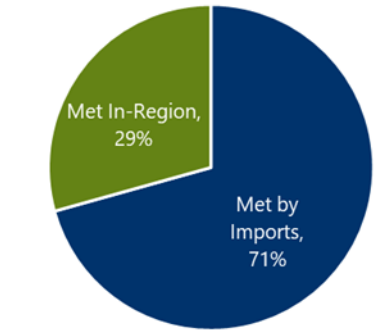
The composites and advanced materials sector encompasses a variety of subsectors relating to ship and boat building as well as artificial and synthetic materials and fibers. This can include traditional materials such as plastics and resin or rubber, or new types of materials and fibers deriving from plant-based and forest-based products and beyond.

Maine's Composites & Advanced Materials Sales Distribution (2022)
Total Sales: $875.4 Million



Source: Lightcast

Maine's Biotechnology Demand Distribution (2022)
Total Demand: $260.3 Million



Source: Lightcast

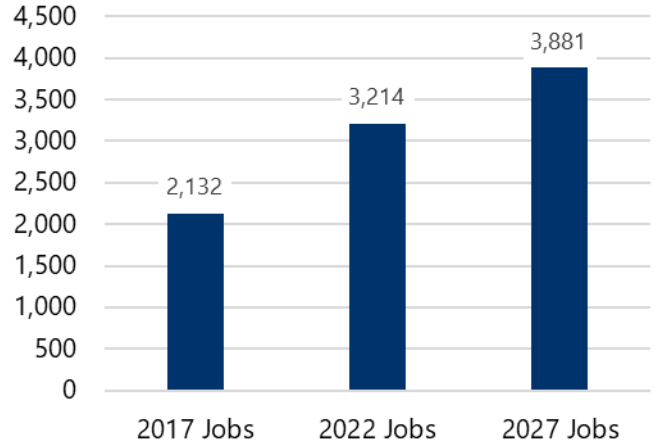
Employment Concentration:

5.06x Higher than the national average

Gross Regional Product:

$317.5 Million
0.4% of the State's Total

Jobs in Maine's Composites & Advanced Materials Sector



Source: Lightcast

- Composites employment has **grown 51% in the last five years** and is projected to grow by another **21% through 2027**, representing overall growth of about **1,750 jobs from 2017-2027**
- The sector's jobs pay about **$67,325 per year** on average, on par with the state's overall average annual wage ($67,942)
- The sector is dominated by Boat Building in Maine, which has 3,099 jobs in 2022

Typical Largest Suppliers

Supply Chain

Direct and indirect supplier and buyer industries related to this industry

Suppliers

2nd tier

- Petrochemical Manufacturing in the US
- Petroleum Refining in the US
- Oil Drilling & Gas Extraction in the US
- Plastics & Rubber Machinery Manufacturing in the US
- Mineral & Phosphate Mining in the US

1st tier

- Plastic & Resin Manufacturing in the US
- Organic Chemical Manufacturing in the US
- Wood Pulp Mills in the US
- Inorganic Chemical Manufacturing in the US
- Industrial Machinery & Equipment Wholesaling in the US

Composites & Advanced Materials in the US

Buyers

1st tier

- Carpet Mills in the US
- Textile Mills in the US
- Hosiery Mills in the US
- Coated & Laminated Paper Manufacturing in the US

2nd tier

- Cut & Sew Apparel Contractors in the US
- Men's & Boys' Apparel Manufacturing in the US
- Women's, Girls' and Infants' Apparel Manufacturing in the US
- Costume & Team Uniform Manufacturing in the US

Source: IBISWorld

Supply Chain Insights

Largest Suppliers to Maine Composites & Adv. Materials Industry

- Engine Equipment & Parts Mfg.
- Plastics Material & Resin Mfg.
- Petrochemical Mfg.
- Aluminum Sheet, Plate, and Foil Mfg.
- Organic Chemical Mfg.
- Professional Services (Insurance, Lessors of Intangible Assets, etc.)

Composites & Adv. Materials

Largest Maine In-State Buyers

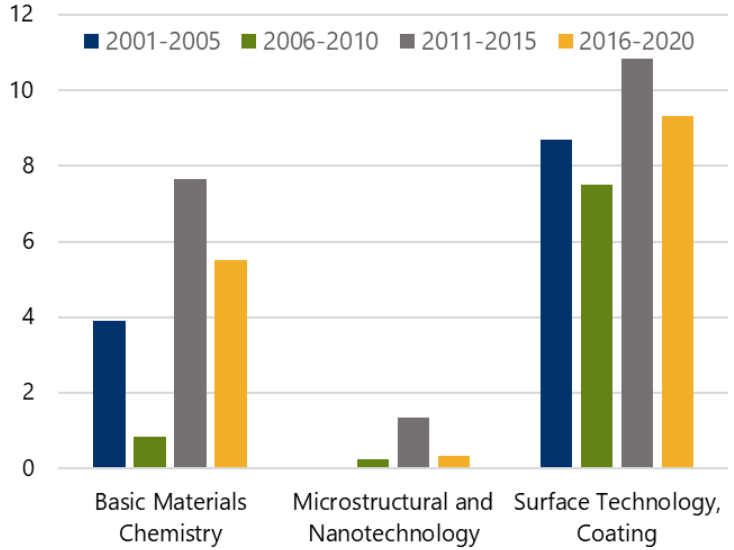
- Ship & Boat Building
- Plastic Products Mfg.
- Fabric Mills & Other Textile Products
- Converted Paper Product Mfg.
- Resin, Synthetic Rubber, and Artificial and Synthetic Filaments Mfg.
- Federal Civilian Government

- Businesses in Maine's Composites and Advanced Materials sector purchased $843.8 million of inputs from other companies in 2022, from both in-state sources as well as imports from out of state
  - The largest inputs to the sector are highly varied and include industries such as engine equipment, chemicals, plastics, aluminum, and various professional services
- Maine's Composites and Advanced Materials sector sold over $53.6 million of products to buyers within Maine in 2022
  - The largest industrial buyers of Maine's products include sectors such as ship and boat building, textiles, pulp and paper, and government, among others
- There are strong intra-industry links within the sector. Composites and Advanced Materials businesses supply and sell to other businesses in the sector both within the state and beyond

Data Note: Suppliers provide inputs to Maine's Composites and Advanced Materials businesses and can be located both in Maine and in other states. On the other hand, the industries listed as largest buyers only include businesses located in Maine due to data limitations.

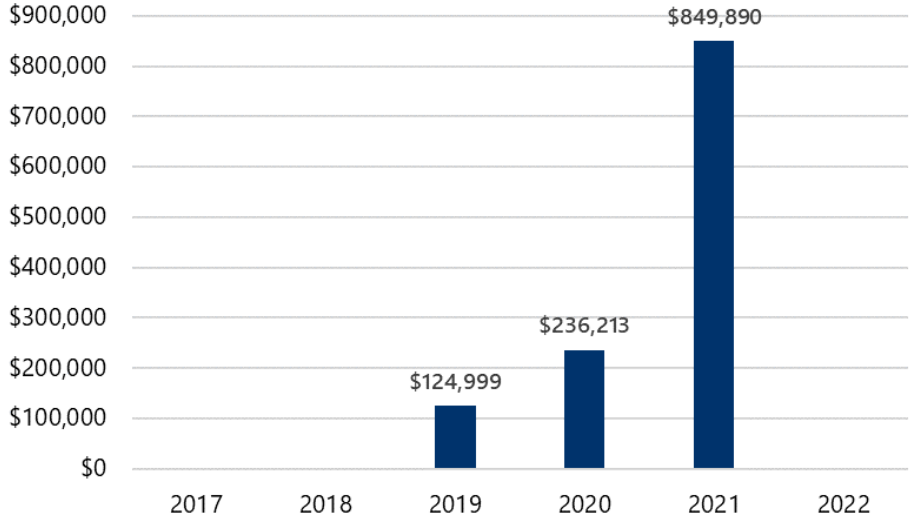
Innovation

Maine Patents in Composites & Advanced Materials Categories, 5-Year Totals



Source: National Science Foundation Science and Engineering Indicators

Maine SBIR/STTR Awards in Composites & Advanced Materials

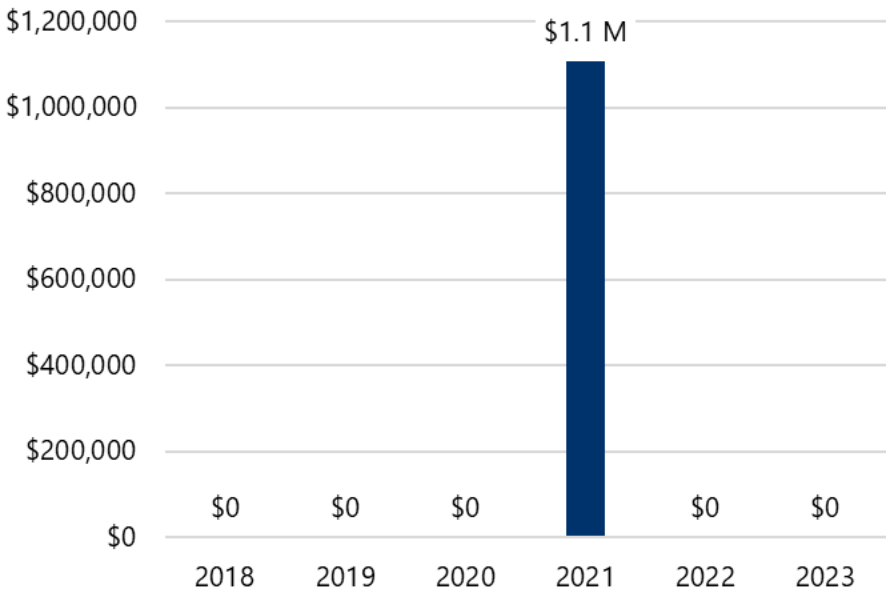


Source: SBA - SBIR/STTR Awards Data
Note: Includes all Phase I/Phase II awards issued to Maine businesses, flitered by award titles pertaining to Composites and Advanced Materials, including Aerospace

- In the most recent five years of data, from 2016-2020, Maine has had 15 patents issued related to Advanced Manufacturing and Composites in the categories of Basic Materials Chemistry, Microstructural and Nanotechnology, and Surface Technology/Coating
- Approximately 5.5% of all patents awarded to MTI sectors in the last five years are awarded within Composites and Advanced Materials categories. 2011-2015 was the time period during which the most patents were awarded within Maine, totaling 20 total during the time period. Conversely, only 9 were awarded during the period from 2006-2010
- From 2017-2022, over $1.2 million in SBIR/STTR funding has been issued to Maine businesses focusing on Composites and Advanced Materials projects. A strong majority of this was issued in 2021, with nearly $850,000 of funding

Venture Capital Funding

Venture Capital Funding for Composites and Advanced Materials in Maine, 2018-2023



Source: Crunchbase
Note: Includes only reported VC Deals. Not all VC funding is reported.

Companies with reported Venture Capital Deals, 2018-2023

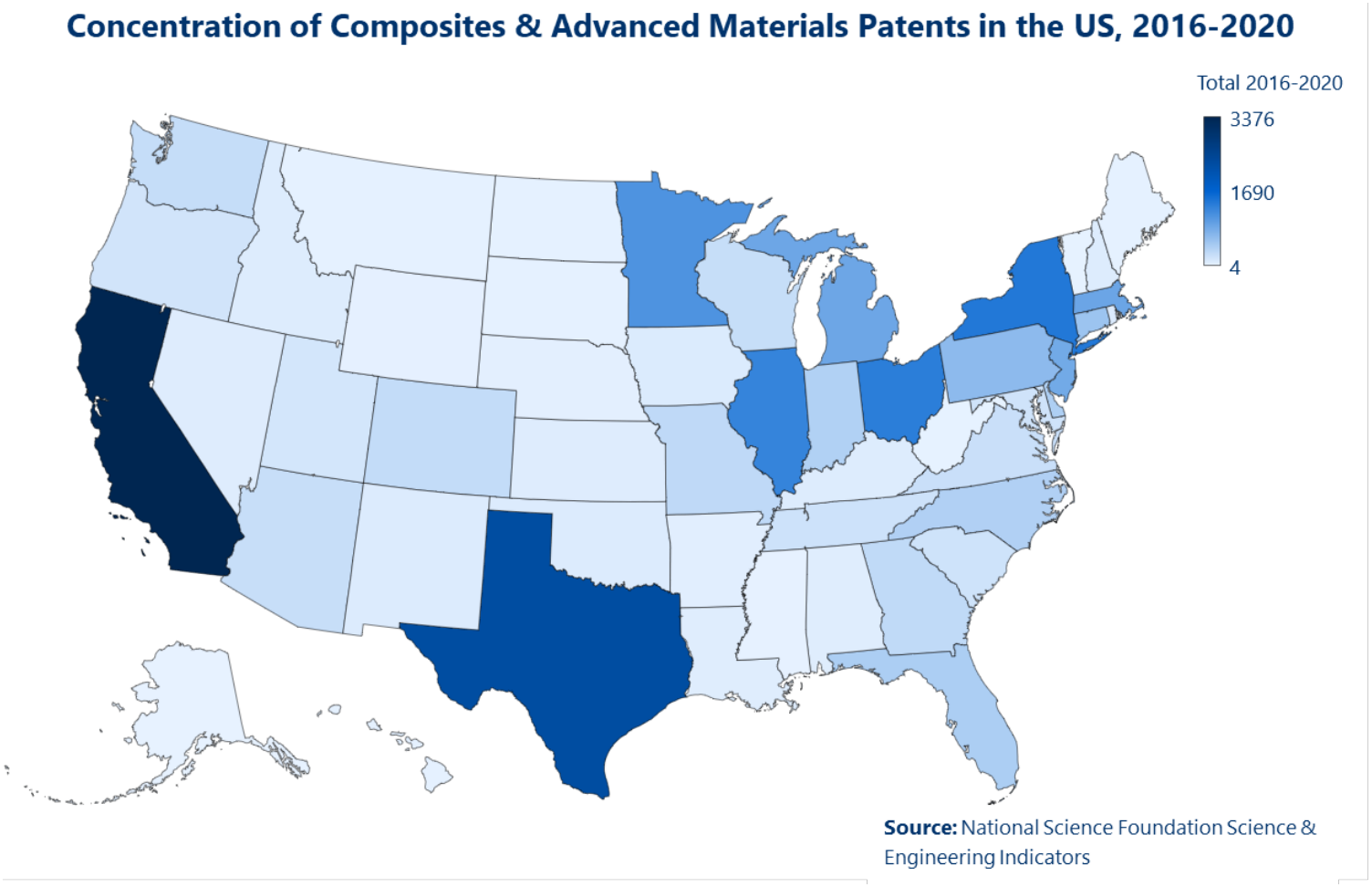
Company	Related Industries	Deals
Amplify Additives	3D Printing, Industrial, Manufacturing	1

Source: Crunchbase

- Venture capital (VC) funding for the sector includes 1 deal in 2021, totaling $1.1 million. This includes reported VC deals; however, it is possible that other unreported deals have taken place
- The $1.1 million in 2021 was raised for Amplify Additives, based in Scarborough. This company has cross-cutting activity with the Bio sector, as it engages in advanced 3D printing of orthopedic implants

Note: The venture capital data highlighted on this page includes only the deals that have been reported. Not all venture capital funding is reported.

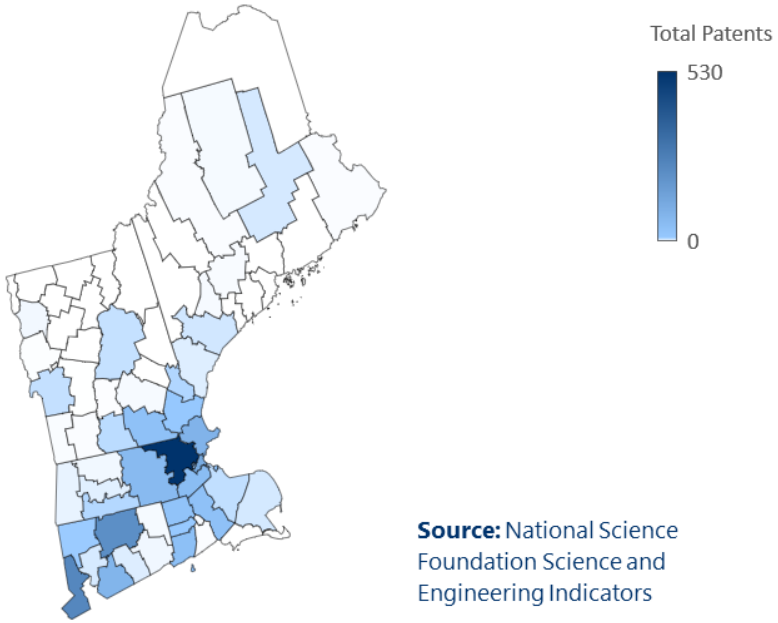
Patents



- In the five years from 2016-2020, over 20,600 patents were awarded in Composites and Advanced Materials categories in the United States
- The top 5 states for these patents were California (3,376), Texas (2,307), New York (1,442), Ohio (1,377), and Illinois (1,305)

- Within New England, Middlesex County, MA had the highest 5-year total for patents, with 530 awarded between 2016-2020
- Counties surrounding Boston, MA and those in Western Connecticut have the highest concentrations of patents. Outside of Middlesex County, Fairfield and Hartford counties in Connecticut have the highest 5-year totals for patents in this sector
- Within Maine, Cumberland County and Penobscot County had the most patents awarded (4 each), followed by York County (3), and Androscoggin, Piscataquis, Kennebec, Somerset, and Washington Counties (1 each)

Concenration of Composites and Advanced Materials Patents in New England, 2016-2020



Source: National Science Foundation Science and Engineering Indicators

Top 10 Counties for Composties and Advanced Materials Patents in New England, 2016-2020

County	State	Patents
Middlesex County	Massachusetts	530
Fairfield County	Connecticut	238
Hartford County	Connecticut	212
Suffolk County	Massachusetts	116
Essex County	Massachusetts	85
New Haven County	Connecticut	81
Worcester County	Massachusetts	63
Norfolk County	Massachusetts	53
Washington County	Rhode Island	43
Hillsborough County	New Hampshire	39

Source: National Science Foundation Science and Engineering Indicators

Workforce Demands

Top Occupations in Maine's Composites & Advanced Materials Sector

Occupation	Employed in Composites	Median Hourly Earnings	Typical Entry Level Education
Welders, Cutters, Solderers, and Brazers	283	$24.73	High school or equivalent
Miscellaneous Assemblers and Fabricators	199	$18.57	High school or equivalent
Structural Metal Fabricators and Fitters	196	$24.08	High school or equivalent
Electricians	126	$28.02	High school or equivalent
First-Line Supervisors of Production and Operating Workers	124	$33.45	High school or equivalent
Carpenters	123	$23.21	High school or equivalent
Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	107	$22.17	High school or equivalent
Fiberglass Laminators and Fabricators	100	$19.18	High school or equivalent
Riggers	97	$27.93	High school or equivalent
Plumbers, Pipefitters, and Steamfitters	96	$28.55	High school or equivalent

Source: Lightcast 2023.3

Top In-Demand Job Titles for the Composites and Advanced Materials Industry, 60 months ending July 2023

Job Title	Median Duration	Unique Postings	Posting Intensity
Finishers	37	6	1 : 1
Sales Interns	37	6	2 : 1
Inside Sales Representatives	0	6	1 : 1
Distribution Supervisors	19	6	1 : 1
Support Engineers	4	5	1 : 1
Key Account Managers	4	5	1 : 1
Sales Associates	34	5	2 : 1
Operator Trainers	22	5	2 : 1
Quality Control Technicians	13	4	2 : 1
Boat Builders	42	3	1 : 1

Source: Lightcast 2023.3

Note: Due to view observations of job postings, this table contains 60 months of data ending July 2023

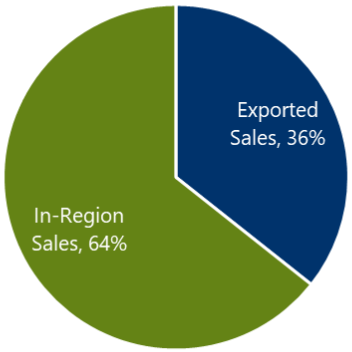
Composites & Advanced Materials jobs in Maine can be difficult to fill.

- **The top occupations by employment in the sector tend to have low barriers to entry.** All of the top occupations within the sector typically require a high school diploma or equivalent to enter the field, though apprenticeships and on-the-job training are commonly needed.
- **The sector's jobs can be difficult to fill.** Job postings for Boat Builders, for example, took a median of 42 days to fill over the last five years. However, most of the top in-demand jobs have average posting intensity, with 1-2 postings for each open job. However, while job postings data is a valuable tool for understanding real-time employer demand, the way the data is collected – via online job postings – means that the types of jobs that are typically not posted online are likely to be undercounted.
- **The sector faces stiff competition with other industries.** Most of the top occupations in Composites and Advanced Materials are spread throughout other industries. Less than 5% of Assemblers/Fabricators, Electricians, Carpenters, and Plumbers are employed in the sector. This means that Composites and Advanced Materials employers may have to compete with many employers in a range of industries for the same labor pool.

ENVIRONMENTAL TECHNOLOGY

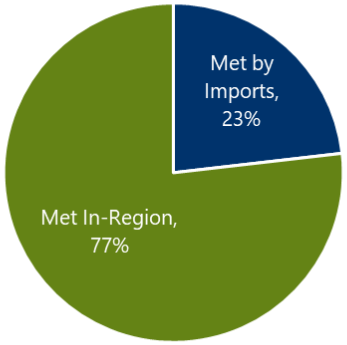
The Environmental Technology sector encompasses a variety of subsectors including electric power generation and distribution, environmental consulting services, testing laboratories, and other water, sewage, waste treatment, and waste management services.

Maine's Environmental Technology Sales Distribution (2022)
Total Sales: $2.1 Billion



Source: Lightcast

Maine's Environmental Technology Demand Distribution (2022)
Total Demand: $1.8 Billion



Source: Lightcast

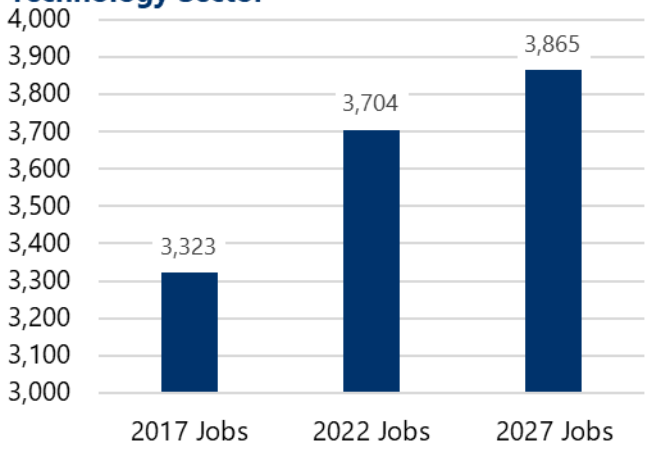
Employment Concentration:

0.98x as much the national average

Gross Regional Product:

$1.2 billion
1.6% of the State's Total

Jobs in Maine's Environmental Technology Sector



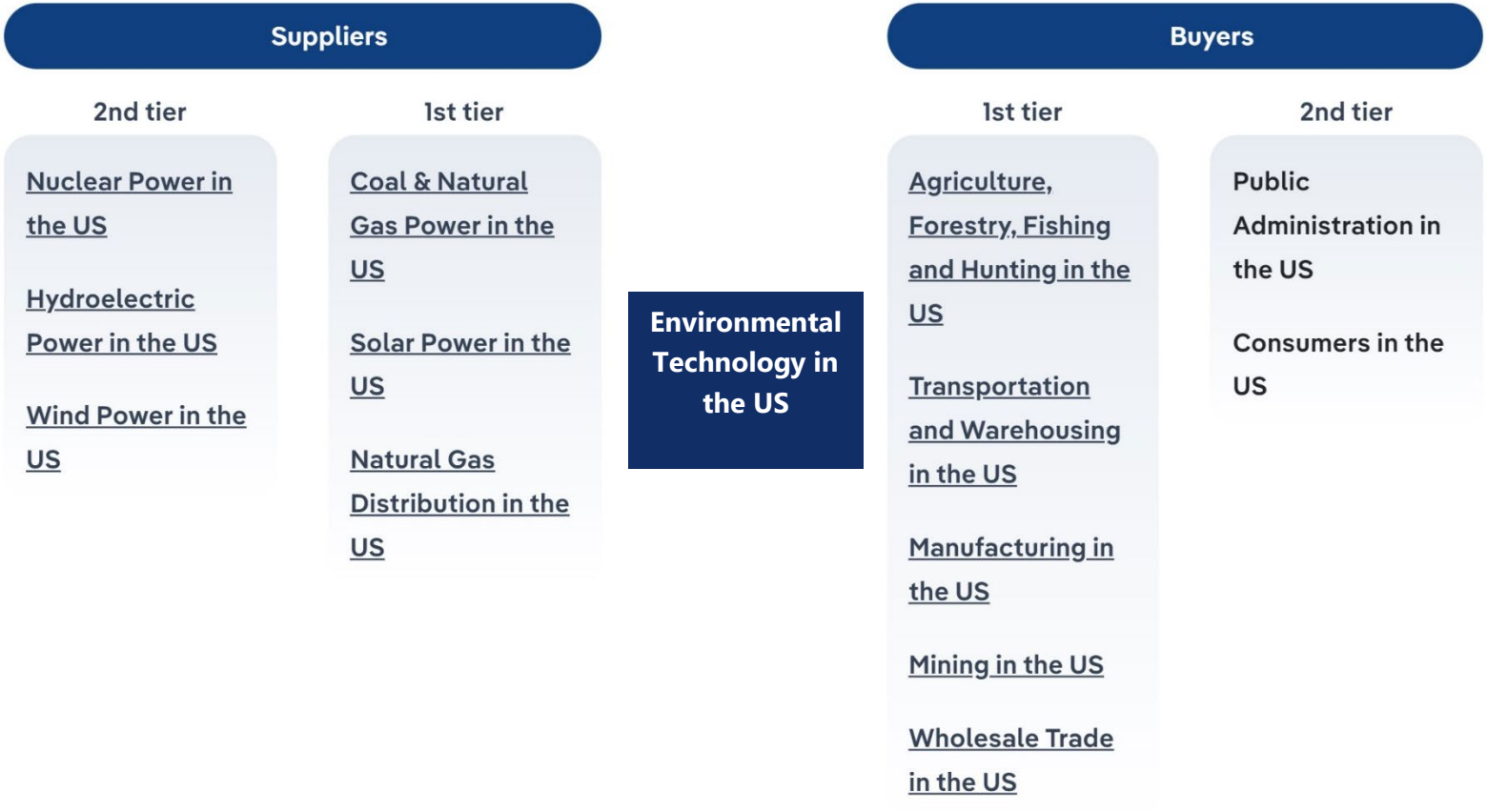
Source: Lightcast

- Environmental Technology employment has **grown 11% in the last five years** and is projected to grow by another **4% through 2027**, representing overall growth of **542 jobs from 2017-2027**
- The sector's jobs pay about **$106,339 per year** on average, higher than the state's overall average annual wage ($67,942)
- The sector's largest industries include Electric Power Distribution (1,062 jobs) and Environmental Consulting Services (680 jobs)

Typical Largest Suppliers

Supply Chain

Direct and indirect supplier and buyer industries related to this industry



Source: IBISWorld

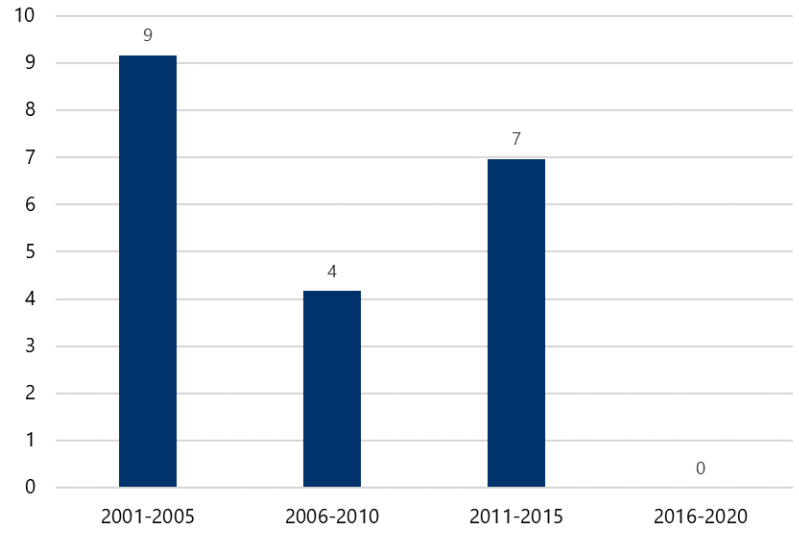
Supply Chain Insights

- Businesses in Maine's Environmental Technology sector purchased $772.4 million of inputs from other companies in 2022, from both in-state sources as well as imports from out of state
  - The largest inputs to the sector include services (temporary help, legal), directly energy-related inputs (petroleum, electric power generation), and distribution (electric power distribution; freight, pipeline, and rail), among others
- Maine's Environmental Technology sector sold over $1.6 billion of products to industrial buyers within Maine in 2022
  - The largest industrial buyers of Maine's products include a wide range of sectors and institutions, such as hospitals, government, office buildings, restaurants, and more

Data Note: Suppliers provide inputs to Maine's Environmental Technology businesses and can be located both in Maine and in other states. On the other hand, the industries listed as largest buyers only include businesses located in Maine due to data limitations.

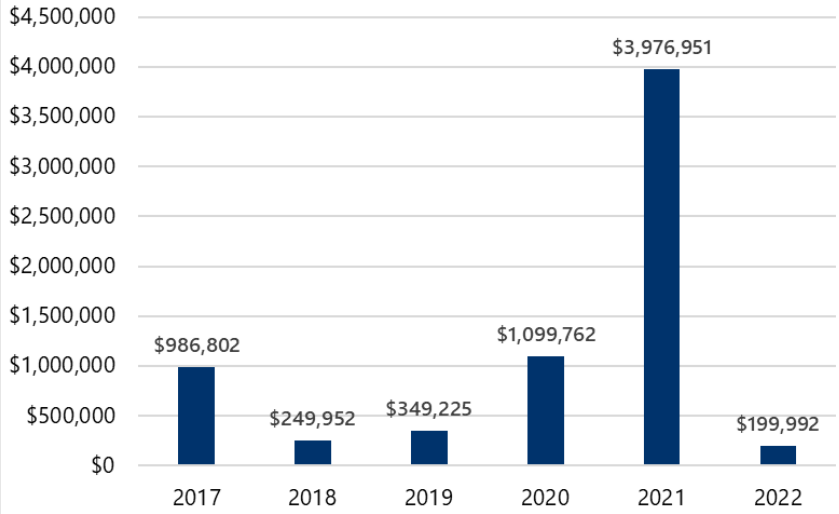
Innovation

Maine Patents in Environmental Technology, 5-Year Totals



Source: National Science Foundation Science and Engineering Indicators

Maine SBIR/STTR Awards in Enivronmental Technology

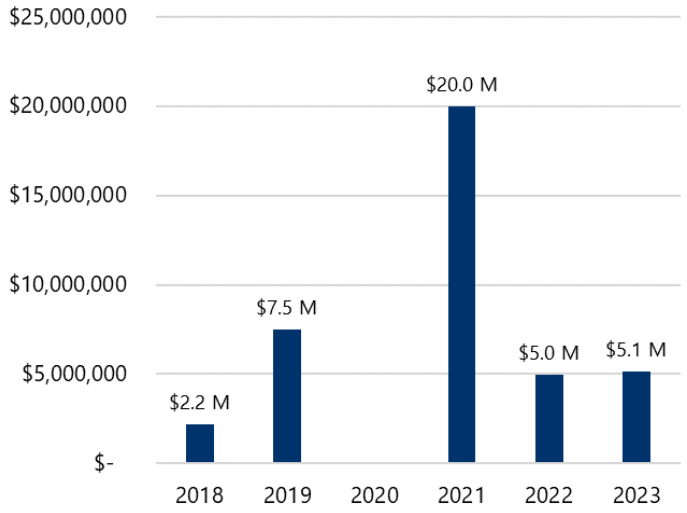


Source: SBA - SBIR/STTR Awards Data
Note: Includes all Phase I/Phase II awards issued to Maine businesses by The Department of Energy and Environmental Protection Agency

- In the most recent five years of data, from 2016-2020, Maine has had 0 patents issued in the Environmental Technology category. However, Maine has seen patents awarded in this category in previous years, peaking at 9 issued in the five years from 2001-2005
- From 2017-2022, over $9.5 million in SBIR/STTR funding has been issued to Maine businesses by the Department of Health and Human Services and the National Science Foundation
- SBIR funding peaked in 2021, with almost $4.0 million in awards. Over $3.3 million of this funding was awarded in Hydrokinetic technology, expanding the technology used for capturing power generated by tidal, river, and ocean currents

Venture Capital Funding

Venture Capital Funding for Environmental Technology in Maine, 2018-2023



Source: Crunchbase
Note: Includes only reported VC deals. Not all VC funding is reported.

Companies with reported Venture Capital Deals, 2018-2023 YTD

Company	Related Industries	Deals
ORPC, Inc.	CleanTech, Energy, Marine Technology, Renewable Energy	2
Standard Biocarbon	Biomass Energy, Commercial, Farming	1
Peregrine Turbine Technologies	Industrial Automation, Machinery Manufacturing, Manufacturing, Mechanical Engineering, Environmental Technology	2
ReNewSnow	B2B, Renewable Energy, Semiconductor	1

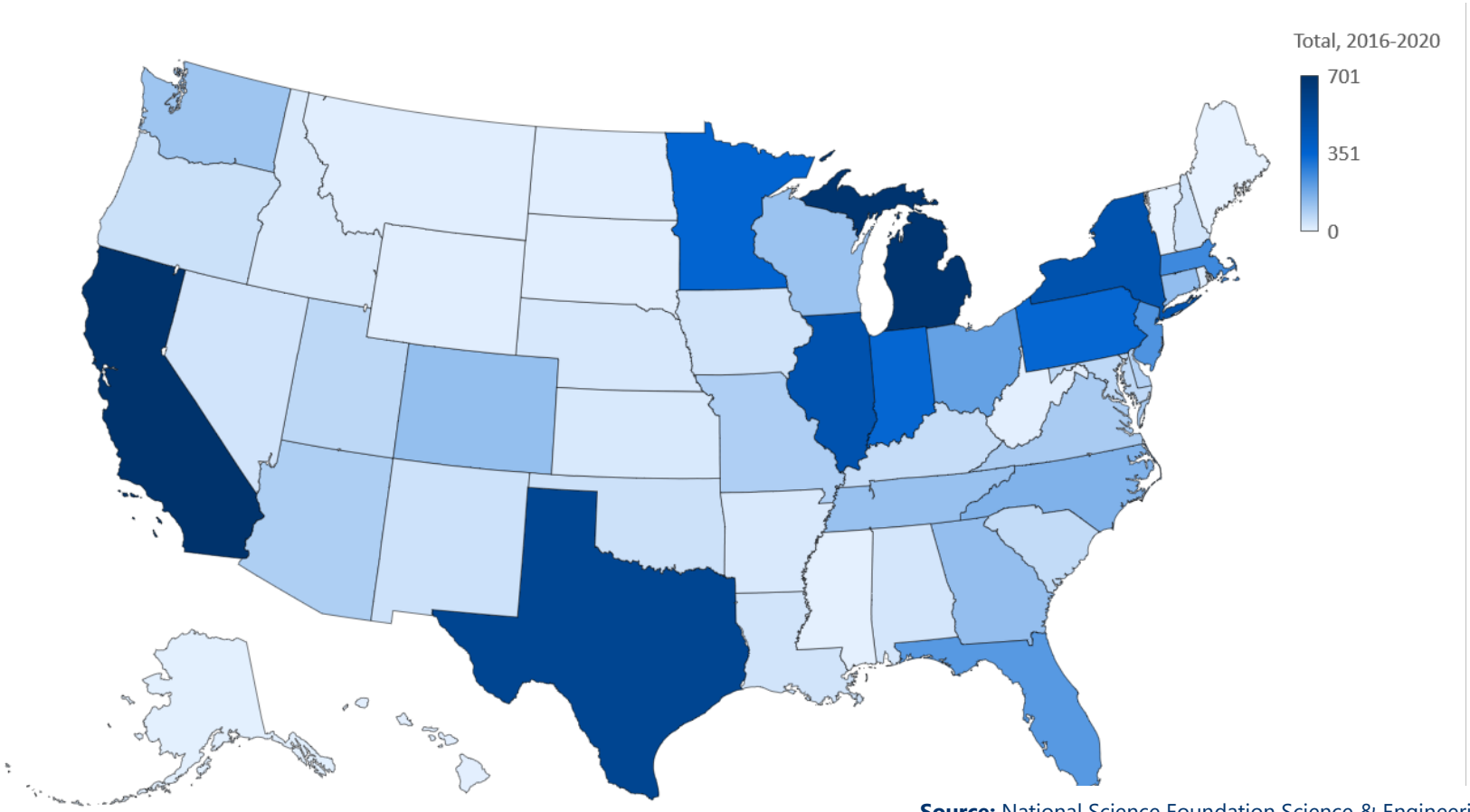
Source: Crunchbase

- Venture capital (VC) funding for Environmental Technology in Maine has fluctuated over the past several years, peaking in 2021 with $20.0 million raised through a single deal
- From 2018-2023 YTD, there have been a total of 6 deals totaling $39.8 million raised
- So far in 2023, 1 biotech deal totaling $5.1 million has occurred
- Companies with VC have cross-cutting technology with marine technology, farming, and semiconductors/precision manufacturing

Note: The venture capital data highlighted on this page includes only the deals that have been reported. Not all venture capital funding is reported.

Patents

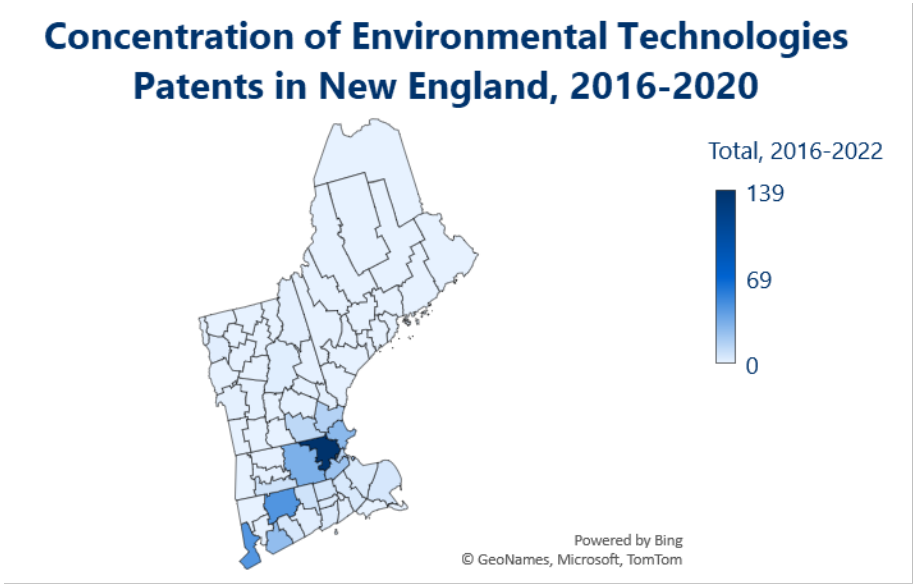
Concentration of Environmental Technology Patents in the US, 2016-2020



Source: National Science Foundation Science & Engineering Indicators

- In the five years from 2016-2020, over 6,800 patents were awarded in Environmental Technology categories in the United States
- The top 5 states for these patents were California (701), Michigan (692), Texas (570), New York (474), and Illinois (471)
- Maine is the only state to have 0 patents in Environmental Technologies during this time period

- Within New England, Middlesex County, MA had the highest 5-year total for patents, with 139 awarded between 2016-2020
- Counties surrounding Boston, MA and those in Western Connecticut have the highest concentrations of patents. Outside of Middlesex County, Fairfield and Hartford counties in Connecticut have the highest 5-year totals for patents in this sector
- No patents were awarded in Maine from 2016-2020



Top 10 Counties for Environmental Technologies Patents in New England, 2016-2020

County	State	Patents
Middlesex County	Massachusetts	139
Hartford County	Connecticut	45
Fairfield County	Connecticut	44
Worcester County	Massachusetts	32
Essex County	Massachusetts	28
New Haven County	Connecticut	26
Norfolk County	Massachusetts	23
Rockingham County	New Hampshire	15
Suffolk County	Massachusetts	14
Hillsborough County	New Hampshire	13

Source: National Science Foundation Science and Engineering Indicators

Workforce Demands

Top Occupations in Maine's Environmental Technology Sector

Occupation	Employed in EnviroTech	Median Hourly Earnings	Typical Entry Level Education
Electrical Power-Line Installers and Repairers	370	$40.31	High school or equivalent
Hazardous Materials Removal Workers	189	$19.26	High school or equivalent
Management Analysts	170	$34.38	Bachelor's degree
Power Plant Operators	127	$33.39	High school or equivalent
General and Operations Managers	127	$41.29	Bachelor's degree
Refuse and Recyclable Material Collectors	123	$17.41	No formal educational credential
Heavy and Tractor-Trailer Truck Drivers	115	$22.92	Postsecondary nondegree award
Septic Tank Servicers and Sewer Pipe Cleaners	104	$19.59	High school or equivalent
Office Clerks, General	81	$18.65	High school or equivalent
Electrical Engineers	80	$48.33	Bachelor's degree

Source: Lightcast 2023.3

Top In-Demand Job Titles for the Environmental Technology Sector, 12 months ending July 2023

Job Title	Median Duration	Unique Postings	Posting Intensity
Building Service Workers	39	35	4 : 1
Project Management Officers	19	32	3 : 1
Environmental Technicians	16	29	2 : 1
CDL-A Truck Drivers	34	26	2 : 1
CDL-B Truck Drivers	18	25	2 : 1
Protection and Control Engineers	37	25	3 : 1
Troubleshooters	32	24	3 : 1
Line Workers	32	23	1 : 1
Laboratory Pack Chemists	18	21	1 : 1
Equipment Operators	21	20	2 : 1

Source: Lightcast 2023.3

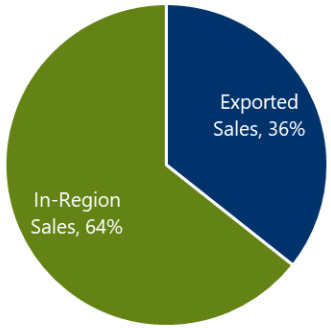
Environmental Technology jobs in Maine are in-demand and can be difficult to fill.

- **The sector needs workers with a variety of educational backgrounds.** Occupations such as Management Analysts, General Managers, and Electrical Engineers typically require bachelor's degrees, while others such as Electrical Power Line Installers/Repairers require a high school diploma.
- **Environmental Tech jobs are in high demand.** In the last 12 months, there have been over 2,000 job postings for jobs in the sector. The most in-demand jobs have varying levels of difficulty to fill. Environmental Technicians jobs took a median of only 16 days to fill, while other roles such as Building Service Workers, Protection and Control Engineers, and CDL-A Truck Drivers took over 30 days to fill, and some required as many as 4 job postings for each unique job available.
- **The sector requires fairly specialized occupations.** In 2022, 81% of Hazardous Materials Removal Workers in Maine worked in the Environmental Technology sector. Additionally, over 40% of Electrical Power-Line Installers/Repairers, Power Plant Operators, and Septic Tank Servicers and Sewer Pipe Cleaners worked within the sector. Conversely, other occupations such as Management Analysts, General Managers, Heavy and Tractor-Trailer Truck Drivers, Office Clerks, and Electrical Engineers are employed by a wide range of industries, meaning that Environmental Technology firms may have to compete more fiercely for these workers.

FOREST PRODUCTS AND AGRICULTURE

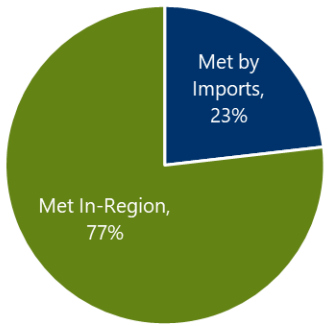
The Forest Products and Agriculture sector in Maine represents Maine's legacy natural resource industries. This sector includes various subsectors, including crop and animal production and support activities for agriculture as well as food manufacturing industries for agriculture; within forest products, subsectors include timber and logging operations as well as manufacturing subsectors such as sawmills, pulp and paper, and wood product manufacturing.

Maine's Environmental Technology Sales Distribution (2022)
Total Sales: $875.4 Million



Source: Lightcast

Maine's Environmental Technology Demand Distribution (2022)
Total Demand: $260.3 Million



Source: Lightcast

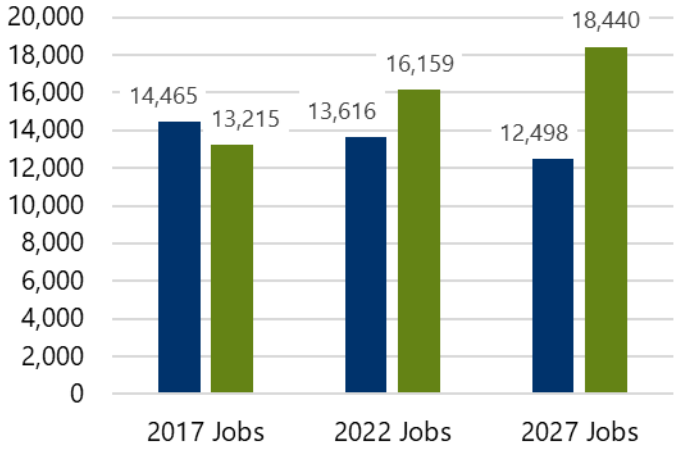
Employment Concentration:

1.52x as much the national average

Gross Regional Product:

$4.1 billion
5.3% of the State's Total

Jobs in Maine's Forestry and Agriculture Sector

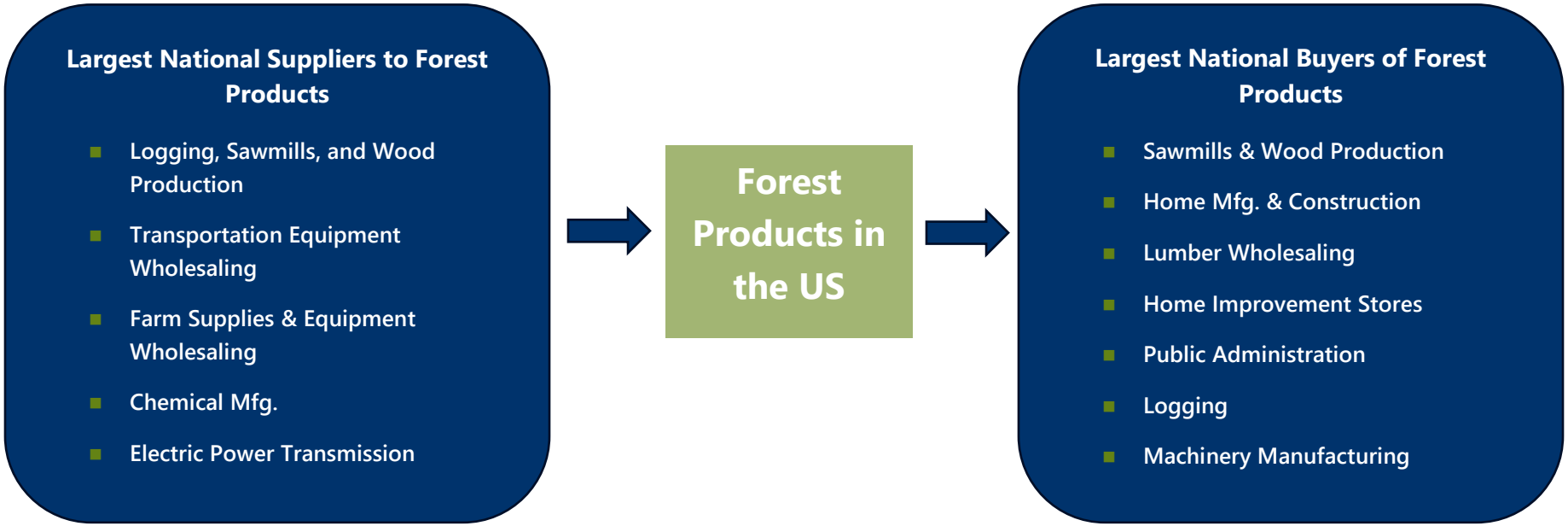


Source: Lightcast

- Forest Products and Agriculture employment has **grown 8% in the last five years** and is projected to grow by another **4% through 2027**, representing overall growth of **3,258 jobs from 2017-2027.** Crop Production makes up the bulk of this growth
- The sector's jobs pay about **$64,199 per year** on average, similar to the state's overall average annual wage ($67,942)
- The sector's largest industries include Crop Production (6,077 jobs), Pulp, Paper, and Paperboard Mills (2,825 jobs), Logging (2,579 jobs), and Beverage Manufacturing (2,500 jobs)

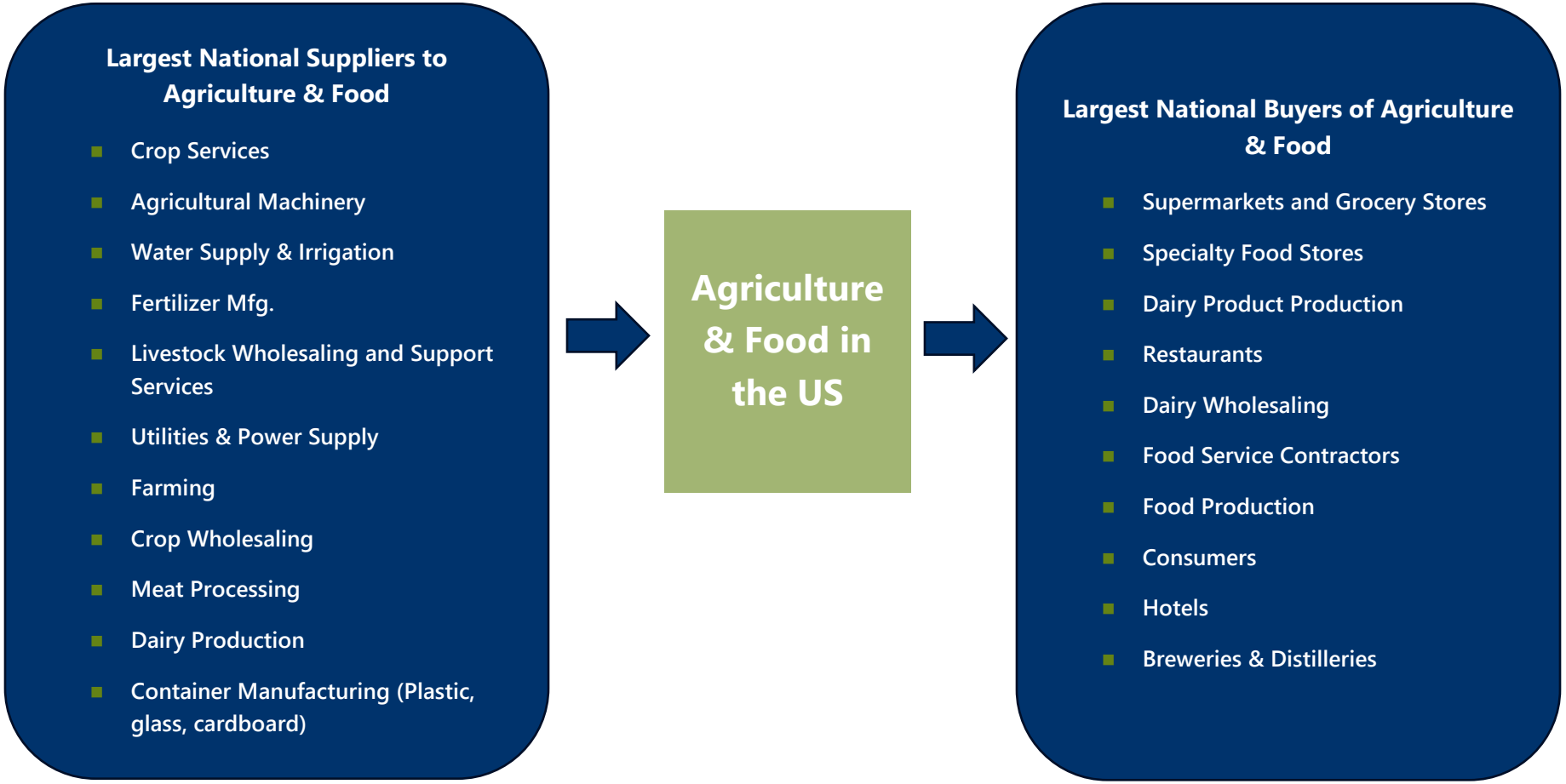
Typical Largest Suppliers

Forest Products



Data note: 1st and 2nd tier suppliers and buyers are not available for this sector. Suppliers and buyers detailed on this page represent the aggregate of both 1st and 2nd tier supply chain industries.

Agriculture & Food



Data note: 1st and 2nd tier suppliers and buyers are not available for this sector. Suppliers and buyers detailed on this page represent the aggregate of both 1st and 2nd tier supply chain industries.

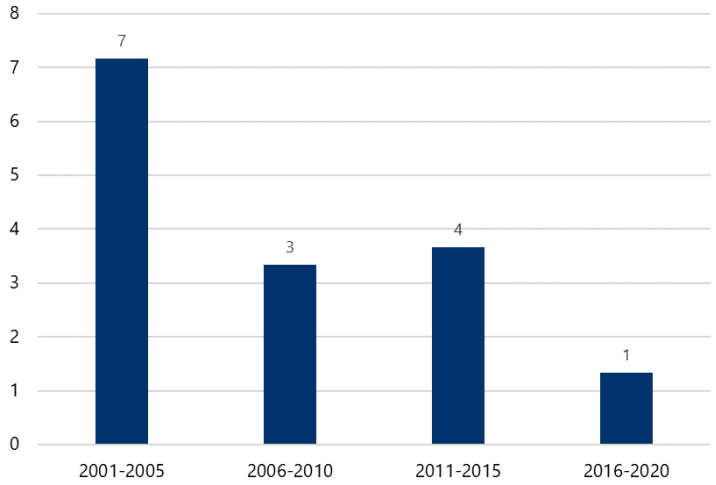
Supply Chain Insights

- Businesses in Maine's Forest Products and Agriculture sector purchased $5.1 billion of goods and services from other companies in 2022, from both in-state sources as well as imports from out of state
  - The largest inputs to the sector primarily feature raw inputs such as crops and lumber, though transportation services like freight trucking are another key component
- Maine's Forest Products and Agriculture sector sold over $846 million of products to buyers within Maine in 2022
  - The largest buyers of Maine's products include a range of commercial buyers including other forest products industries (pulp and paper, sawmills and wood preservation, engineered wood product manufacturing), as well as other food sectors such as crop production, beverage manufacturing, and restaurants
- There are strong intra-industry links within the sector. Forest Products and Agriculture businesses supply and sell to other businesses within the sector, both in-state and to other domestic markets

Data Note: Suppliers provide inputs to Maine's Forest Products and Agriculture businesses and can be located both in Maine and in other states. On the other hand, the industries listed as largest buyers only include businesses located in Maine due to data limitations.

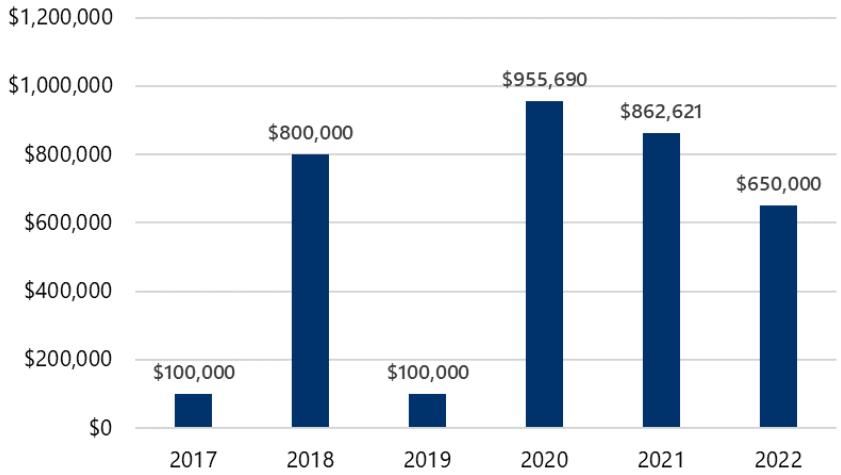
Innovation

Maine Patents in Food Chemistry, 5-Year Totals



Source: National Science Foundation Science and Engineering Indicators

Maine SBIR/STTR Awards in Forestry & Agriculture

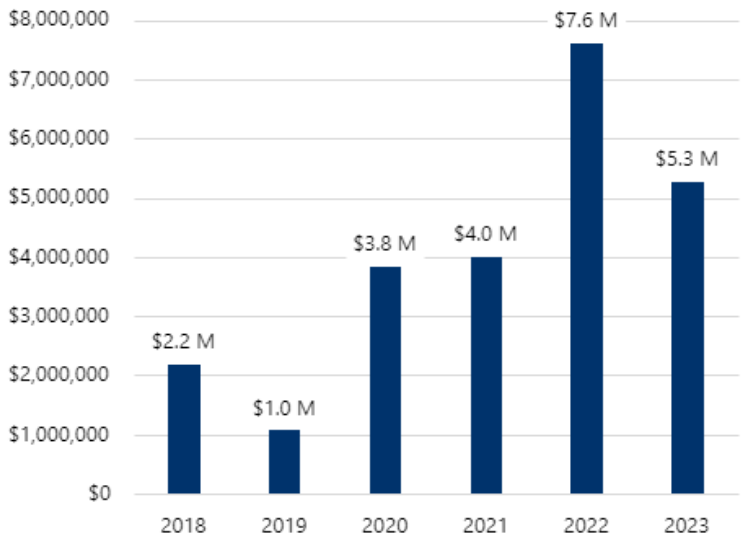


Source: SBA - SBIR/STTR Awards Data
Note: Includes all Phase I/Phase II awards issued to Maine businesses by the Department of Agriculture & Environmental Protection Agency

- In the most recent five years of data, from 2016-2020, Maine has had 1 patent issued related to Food Chemistry
- From 2017-2022, almost $3.5 million in SBIR/STTR funding has been issued to Maine businesses through the Department of Agriculture and Environmental Protection Agency. This peaked in 2020, with over $955,000 of funding issued

Venture Capital Funding

Venture Capital Funding for Forestry & Agriculture in Maine, 2018-2023



Companies with reported Venture Capital Deals, 2018-2023 YTD

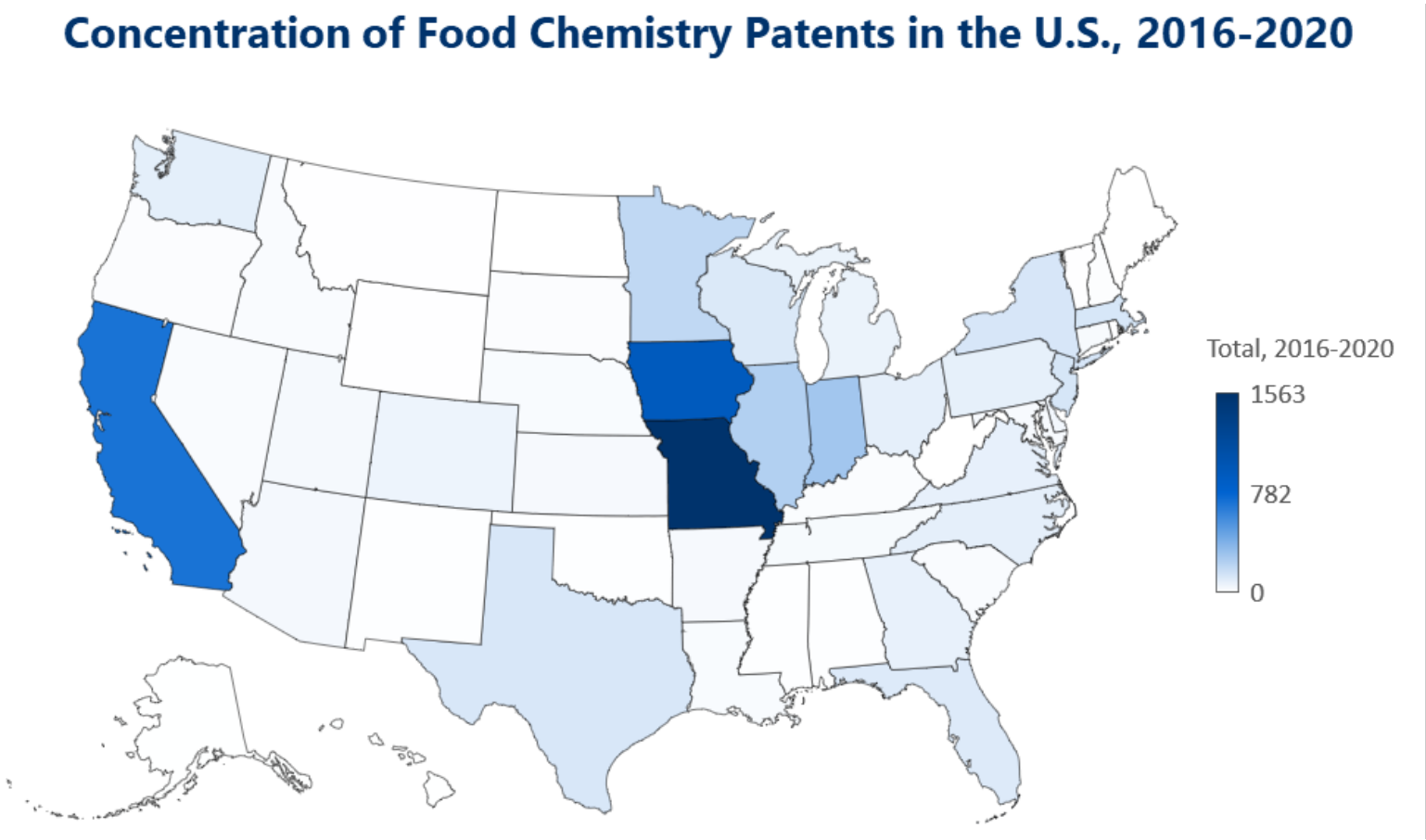
Company	Related Industries	Deals
Standard Biocarbon	Biomass Energy, Commercial, Farming	1
BlueTrace	AgTech, Aquaculture, Computer, Food and Beverage, Seafood	2
Forager	Agriculture, Local, Procurement	2
Demers Food Group	Food and Beverage, Manufacturing, Retail	2
Novel Beverage	Cannabis, Food and Beverage, Manufacturing, Retail	1
Katahdin Salmon	Aquaculture, Food and Beverage, Seafood	1

Source: Crunchbase

- Venture capital (VC) funding for Forestry and Agriculture in Maine has fluctuated over the past several years, peaking in 2022 with $7.6 million raised over two deals
- From 2018-2023 YTD, there have been a total of 9 deals totaling $23.9 million raised
- So far in 2023, 2 deals totaling $5.3 million have occurred
- Companies with VC have cross-cutting technology with marine technology, energy, manufacturing, and retail

Note: The venture capital data highlighted on this page includes only the deals that have been reported. Not all venture capital funding is reported.

Patents

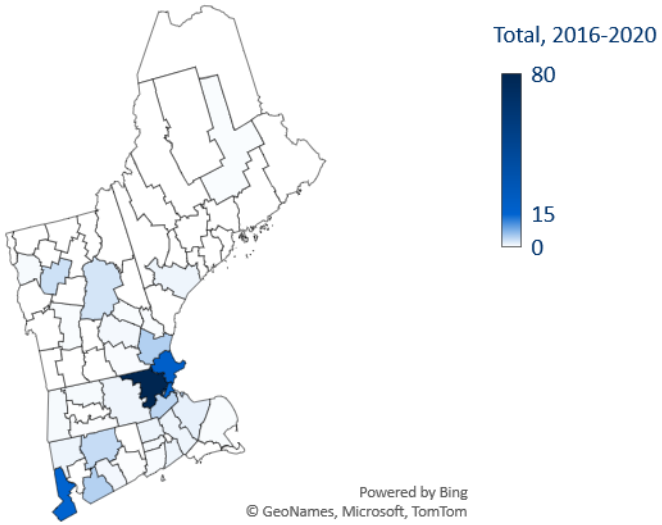


Source: National Science Foundation Science & Engineering Indicators

- In the five years from 2016-2020, over 6,187 patents were awarded in Food Chemistry in the United States
- The top 5 states for these patents were Missouri (1,563), Iowa (933), California (704), Indiana (285), and Illinois (235)
- 1 patent was issued to Maine during the period from 2016-2020

- Within New England, Middlesex County, MA had the highest 5-year total for patents, with 80 awarded between 2016-2020
- While counties surrounding Boston make the list of top 10 counties, other regions such as Western Connecticut, Western New Hampshire, and Northern Vermont also top the list
- Maine's sole patent was awarded in Cumberland County

Concentration of Food Chemistry Patents in New England, 2016-2020



Top 10 Counties for Food Chemistry patents in New England, 2016-2020

County	State	Patents
Middlesex County	Massachusetts	80
Essex County	Massachusetts	19
Fairfield County	Connecticut	15
Suffolk County	Massachusetts	15
Rockingham County	New Hampshire	5
New Haven County	Connecticut	4
Norfolk County	Massachusetts	4
Hartford County	Connecticut	3
Washington County	Vermont	3
Grafton County	New Hampshire	3

Source: National Science Foundation Science and Engineering Indicators

Workforce Demands

Top Occupations in Maine's Forestry and Agriculture Sector

Occupation	Employed in Forestry & Ag	Median Hourly Earnings	Typical Entry Level Education
Farmers, Ranchers, and Other Agricultural Managers	3,115	$14.23	High school diploma or equivalent
Farmworkers and Laborers, Crop, Nursery,	2,410	$15.57	No formal educational credential
Logging Equipment Operators	1,146	$22.10	High school diploma or equivalent
Heavy and Tractor-Trailer Truck Drivers	940	$22.92	Postsecondary nondegree award
Packaging and Filling Machine Operators and Tenders	936	$18.15	High school diploma or equivalent
Farmworkers, Farm, Ranch, and Aquacultural Animals	864	$14.04	No formal educational credential
Miscellaneous Assemblers and Fabricators	754	$18.57	High school diploma or equivalent
First-Line Supervisors of Production and Operating Workers	740	$33.45	High school diploma or equivalent
Industrial Truck and Tractor Operators	702	$20.36	No formal educational credential
Laborers and Freight, Stock, and Material Movers, Hand	576	$16.82	No formal educational credential

Source: Lightcast 2023.3

Top In-Demand Job Titles for the Forestry and Agriculture Sector, 12 months ending July 2023

Job Title	Median Duration	Unique Postings	Posting Intensity
Route Sales Trainees	43	77	1 : 1
Route Sales Representatives	31	76	2 : 1
Nurse Practitioners	29	66	2 : 1
Merchandisers	41	59	3 : 1
Route Sales Specialists	35	48	2 : 1
Production Helpers	49	22	3 : 1
Repair Technicians	0	22	2 : 1
CDL-A Truck Drivers	18	18	3 : 1
CDL-B Truck Drivers	40	17	2 : 1
Sales Service Representatives/Merchandisers/Order Writers	0	17	1 : 1

Source: Lightcast 2023.3

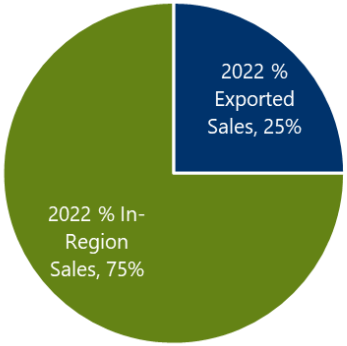
Forest Products & Agriculture jobs in Maine are in demand.

- **The sector has relatively low barriers to entry in terms of educational requirements.** Only one of the top 10 most common occupations require education beyond a high school degree
- **Forestry & Agriculture jobs are in high demand.** In the last 12 months, there have been over 1,700 job postings for jobs in the sector. The most in-demand jobs have varying levels of difficulty to fill. Production Helpers jobs took a median of 49 days to fill and required 3 postings for every job available, while other roles such CDL-A Truck Drivers, Repair Technicians, and Sales Service Representatives took much less time and effort to fill.
- **The sector requires fairly specialized occupations.** In 2022, over 80% of Farmers, Ranchers, and Agricultural Workers, Farm workers and Laborers; Logging Equipment Operators worked within the sector. Conversely, other occupations such as Heavy and Tractor-Trailer Truck Drivers and Laborers and Freight, Stock, and Material Movers are employed by a wide range of industries with less than 10% in the Forestry and Agriculture sector, meaning that firms within this sector may have to compete more fiercely for these workers.

INFORMATION TECHNOLOGY

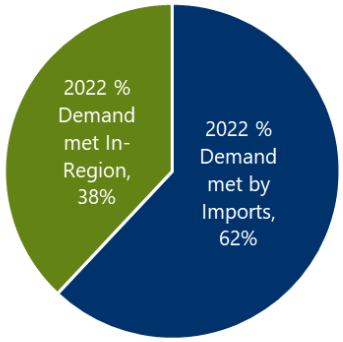
The information technology (IT) sector encompasses several subsectors relating to IT services, including computer systems design services, software, media streaming and distribution, wireless telecommunications, web search portals, and data processing and hosting.

Maine's IT Sales Distribution (2022)
Total Sales: $3.5 Billion



Source: Lightcast

Maine's IT Demand Distribution (2022)
Total Demand: $5.8 Billion



Source: Lightcast

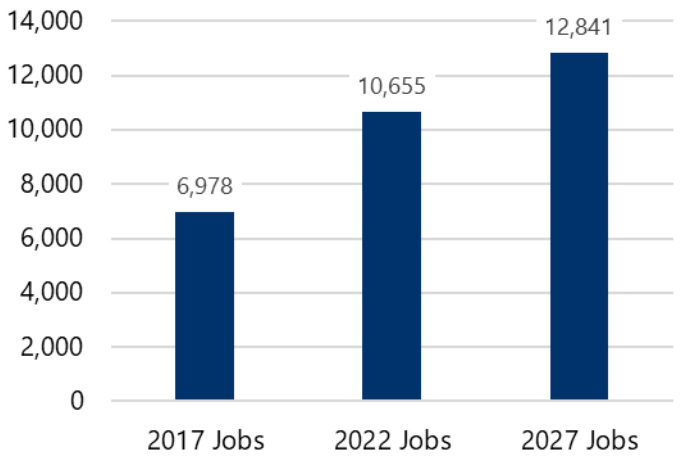
Employment Concentration:

0.58x as much as the national average

Gross Regional Product:

$2.3 Billion
2.9% of the State's Total

Jobs in Maine's IT Sector



Source: Lightcast

- IT employment has **grown 53% in the last five years** and is projected to grow by another **21% through 2027**, representing overall growth of almost **5,900 jobs from 2017-2027**
- IT jobs pay about **$125,435 per year** on average, much higher than the state's overall average annual wage ($67,942)
- The sector is dominated by two primary subsectors: Computer Systems Design Services (4,229 jobs) and Custom Computer Programming Services (2,849 jobs)

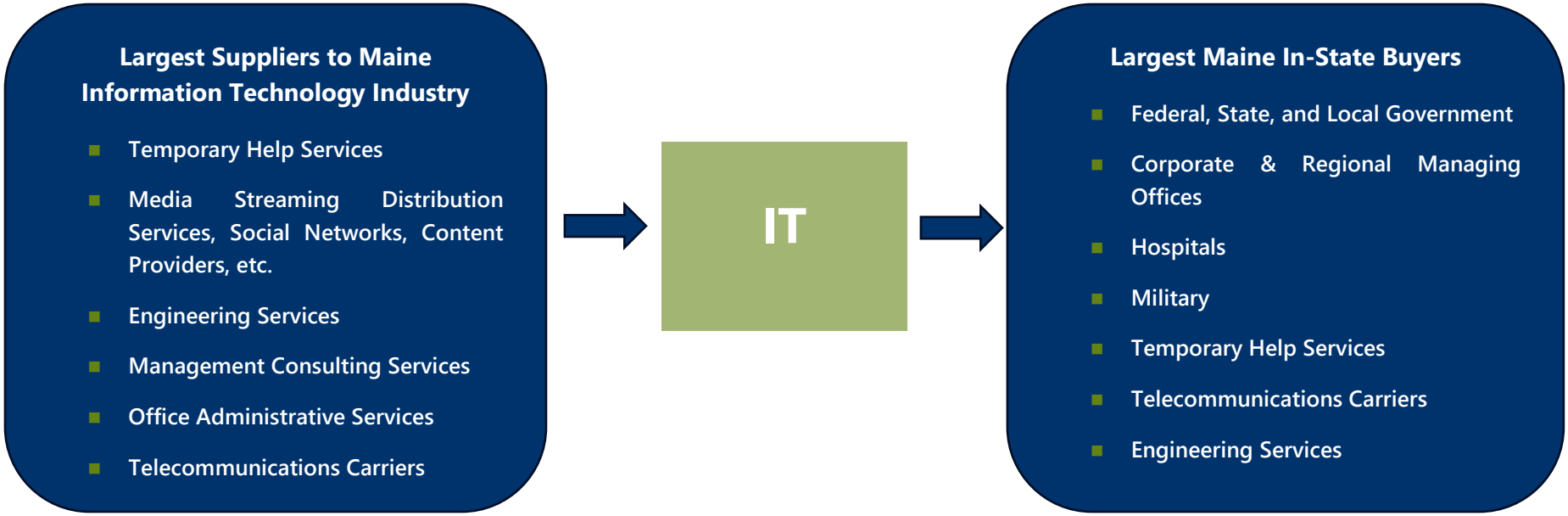
Typical Largest Suppliers

Supply Chain

Direct and indirect supplier and buyer industries related to this industry

Source: IBISWorld

Supply Chain Insights

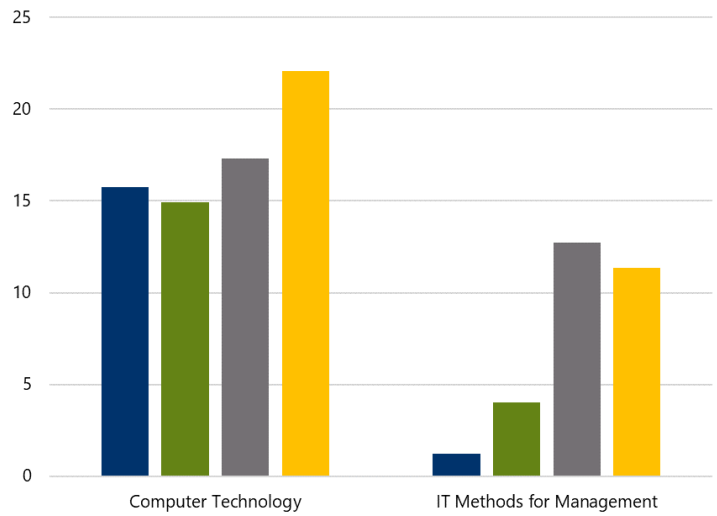


- Businesses in Maine's IT sector purchased $1.1 billion of goods and services from other companies in 2022, from both in-state sources as well as imports from out of state
  - The largest inputs to the IT sector contain primarily services such as temporary help, engineering, and management consulting, as well as other services such as media streaming and content providers and telecommunications carriers
- Maine's IT sector sold over $1.1 billion of products to buyers within Maine in 2022
  - The largest buyers of Maine's IT products include a range of institutions, including government, corporate offices, hospitals, and various service industries
- There are strong intra-industry links within the IT sector. IT businesses supply and sell to other IT businesses within the state and beyond; meanwhile, IT is an important supplier to institutions such as the government and hospitals, as well as other service-providing industries

Data Note: Suppliers provide inputs to Maine's IT businesses and can be located both in Maine and in other states. On the other hand, the industries listed as largest buyers only include businesses located in Maine due to data limitations.

Innovation

Maine Patents in IT, 5-Year Totals

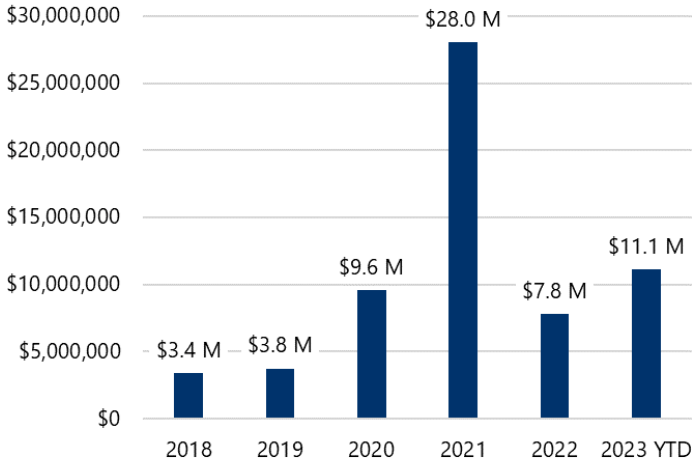


Source: National Science Foundation Science and Engineering Indicators

- In the most recent five years of data, from 2016-2020, Maine has had 33 patents issued in the IT-related categories of Computer Technology and IT Methods for Management. The most recent five years represents the strongest 5-year period in the last two decades for patent awards, driven by 22 awarded in Computer Technology
- IT is a strong sector for patent awards in Maine. IT categories account for about 24% of all patents awarded to MTI sectors from 2016-2022
- From 2017-2022, no SBIR/STTR awards were identified as relating specifically to IT

Venture Capital Funding

Venture Capital Funding for Information Technology in Maine, 2018-2023



Source: Crunchbase
Note: Includes only reported VC Deals. Not all VC funding is reported.

Companies with reported Venture Capital Deals, 2018-2023 YTD

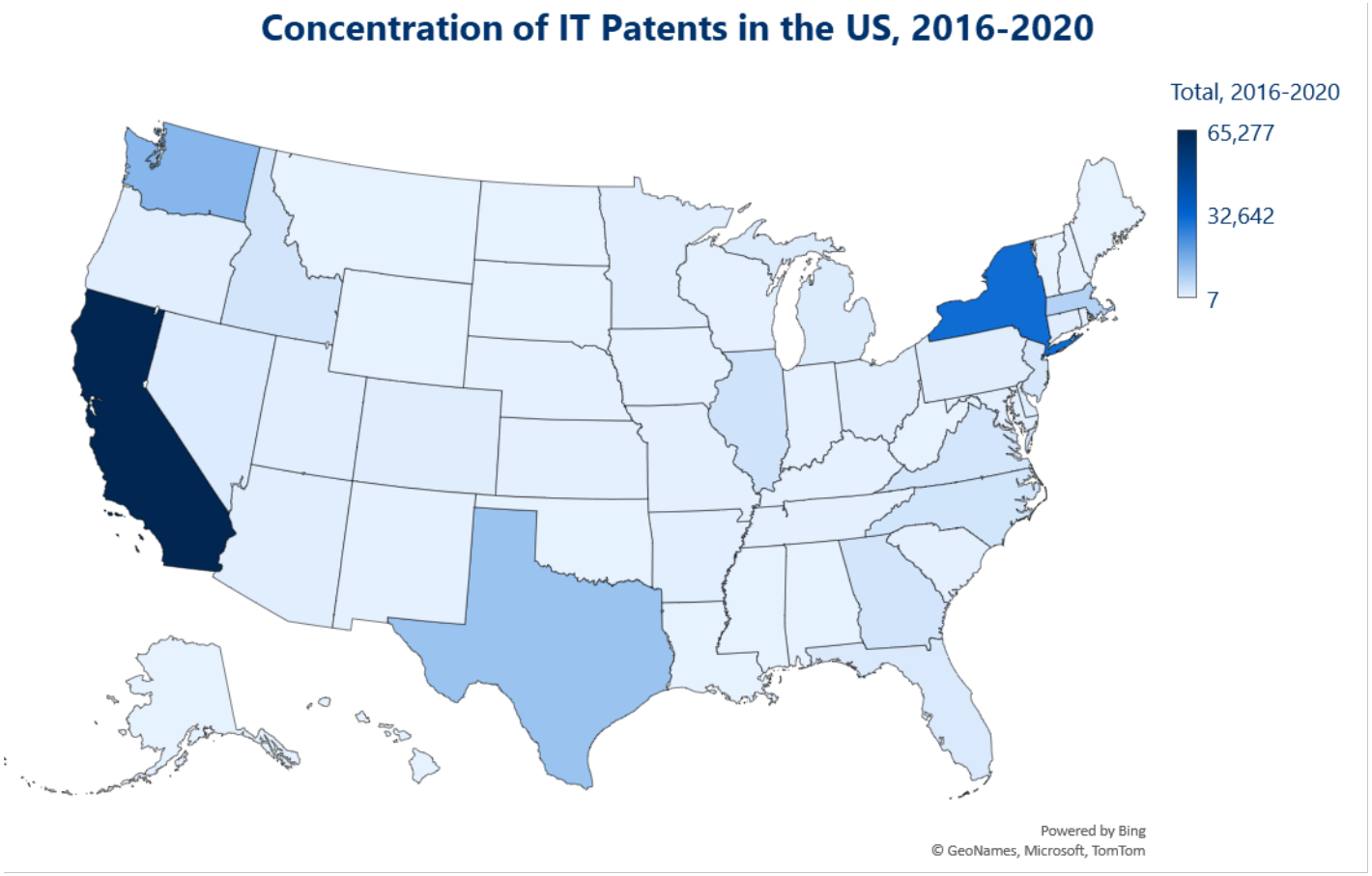
Company	Related Industries	Deals
VETRO FiberMap	Data Visualization, Enterprise Software, Geospatial, Information Technology, Mapping Services, Software	3
RockStep Solutions	Analytics, Health Care, Information Technology, Life Science, Software	4
Reconnect	Information Technology, Public Safety, Software	3
MyHealthMath	Information Technology	1
HighByte	Data Integration, Information Technology, Software	1
Ourly	Finance, Financial Services, FinTech, Information Technology, Mobile Apps, Service Industry	2
Arkatechture	Analytics, Banking, Consulting, Information Technology, SaaS, Software	1
Kinotek	Education, Fitness, Health Care, Information Technology	2
Friday.app	Apps, Developer Tools, Information Technology, Software	2
CourseStorm	E-Learning, EdTech, Education, Information Technology, Software	3
VALT Enterprizes	Aerospace, Industrial, Information Technology	1

Source: Crunchbase

- Venture capital (VC) funding for IT in Maine has fluctuated over the past several years, and was highest in 2021 at $28.0 million raised
- From 2018-2023 YTD, there have been a total of 19 deals totaling $63.7 million raised
- So far in 2023, 4 IT deals totaling $11.1 million have occurred
- Companies with VC have cross-cutting technology with healthcare, geospatial sciences, data analytics, finance, education, and aerospace, among others

Note: The venture capital data highlighted on this page includes only the deals that have been reported. Not all venture capital funding is reported.

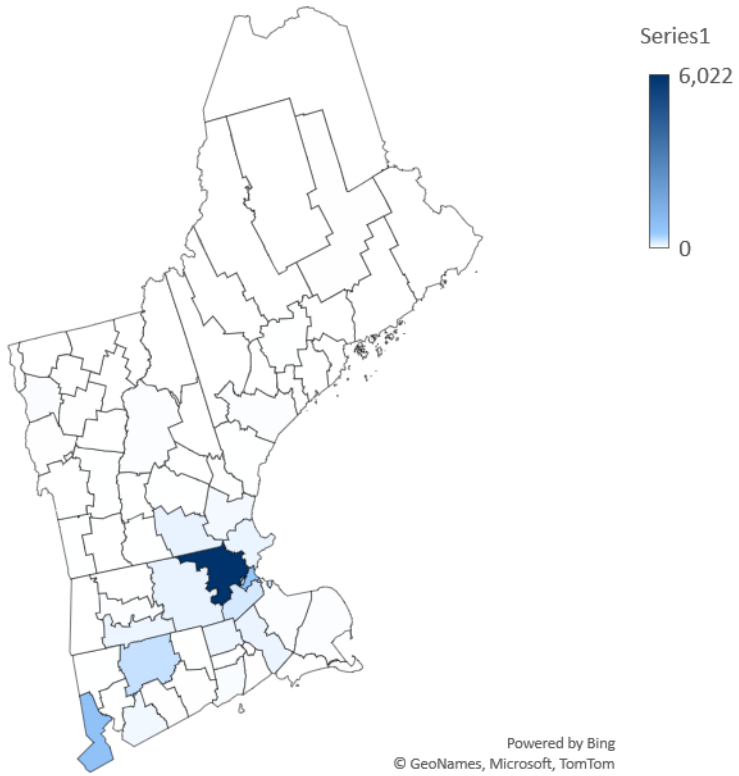
Patents



- In the five years from 2016-2020, over 165,000 patents were awarded in IT categories in the United States
- The top 5 states for Biotech patents were California (65,277), New York (30,618), Washington (13,775), Texas (10,841), and Massachusetts (7,209)

- Within New England, Middlesex County, MA had the highest 5-year total for IT patents, with 6,022 awarded between 2016-2020
- Counties surrounding Boston, MA have the highest concentrations of patents. These include counties in Connecticut and New Hampshire
- Within Maine, Cumberland County had the most patents awarded (16), followed by Penobscot Count (6) and Kennebec County (4). Hancock, Knox, Lincoln, Aroostook, and Androscoggin each had 1 patent awarded over this time frame

Concentration of IT Patents in New England, 2016-2020



Top 10 Counties for IT patents in New England, 2016-2020

County	State	Patents
Middlesex County	Massachusetts	6,022
Fairfield County	Connecticut	767
Suffolk County	Massachusetts	559
Hartford County	Connecticut	274
Norfolk County	Massachusetts	196
Hillsborough County	New Hampshire	111
Worcester County	Massachusetts	109
Essex County	Massachusetts	96
Bristol County	Massachusetts	89
Hampden County	Massachusetts	87

Source: National Science Foundation Science and Engineering Indicators

Workforce Demands

Top Occupations in Maine's IT Sector

Occupation	Employed in IT	Med. Hourly Earnings	Typical Entry Level Education
Software Developers	1,272	$49.87	Bachelor's degree
Computer User Support Specialists	788	$25.04	Some college, no degree
Computer Systems Analysts	711	$38.83	Bachelor's degree
Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	451	$26.28	High school diploma or equivalent
Computer and Information Systems Managers	411	$63.39	Bachelor's degree
General and Operations Managers	394	$41.29	Bachelor's degree
Computer Programmers	320	$32.59	Bachelor's degree
Customer Service Representatives	318	$18.11	High school diploma or equivalent
Web Developers	263	$30.05	Bachelor's degree
Project Management Specialists	225	$38.95	Bachelor's degree

Source: Lightcast 2023.3

Top In-Demand Job Titles for the IT Sector, 12 months ending July 2023

Job Title	Median Duration	Unique Postings	Posting Intensity
Sales Representatives	29	99	3 : 1
Software Engineers	28	95	2 : 1
Field Installation Technicians	16	52	2 : 1
Retail Sales Associates	45	47	4 : 1
Principal Software Engineers	31	39	2 : 1
Product Managers	28	32	1 : 1
Mainframe Systems Programmers	43	31	1 : 1
Project Managers	32	29	1 : 1
Retail Sales Consultants	33	27	2 : 1
Installation Technicians	20	25	2 : 1

Source: Lightcast 2023.3

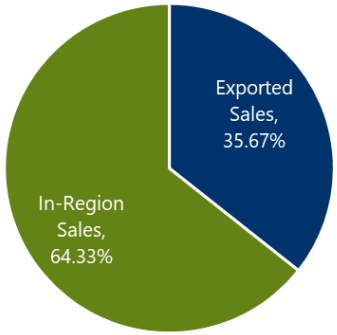
IT jobs in Maine are in high demand and can be difficult to fill.

- **The top occupations by employment tend to require highly educated workers.** Seven of the top 10 most common occupations in the sector require at least a bachelor's degree. Two occupations – sales representatives and customer service representatives – require a high school diploma or equivalent.
- **IT jobs can range in their level of difficulty to fill positions.** Postings for jobs such as Retail Sales Associates, Principal Software Engineers, Mainframe System Programmers, Project Managers, and Retail Sales Consultants lasted a median of 30 days or longer. Meanwhile, some jobs had relatively high posting intensity, meaning they required multiple job postings for each unique open position.
- **IT needs relatively specialized workers.** Many of the sector's top occupations work largely within IT, rather than across all sectors in the economy. For example, 44% of software developers, 63% of computer and information systems managers, and 49% of computer programmers work within the IT sector, with the remaining shares of those workers in other industries. Four of the top 10 occupations have shares lower than 20% working in IT, including sales representatives, general managers, customer service representatives, and project management specialists.

MARINE TECHNOLOGY AND AQUACULTURE

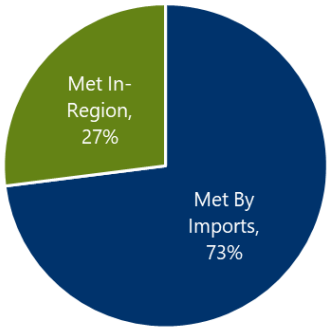
The Marine Technology sector encompasses both aquaculture as well as manufacturing related to navigational, nautical, and control process instruments and tools.

Maine's Marine Technology & Aquaculture Sales Distribution (2022)
Total Sales: $16.7 Million



Source: Lightcast

Maine's Marine Technology & Aquaculture Demand Distribution (2022)
Total Demand: $198.8 Million



Source: Lightcast

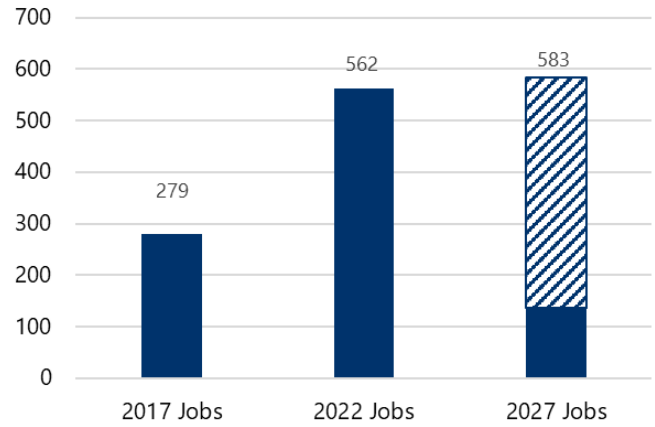
Employment Concentration:

0.68x as concentrated as the national average

Gross Regional Product:

$12.2 Million
0.2% of the State's Total

Jobs in Maine's Marine Technology & Aquaculture Sector

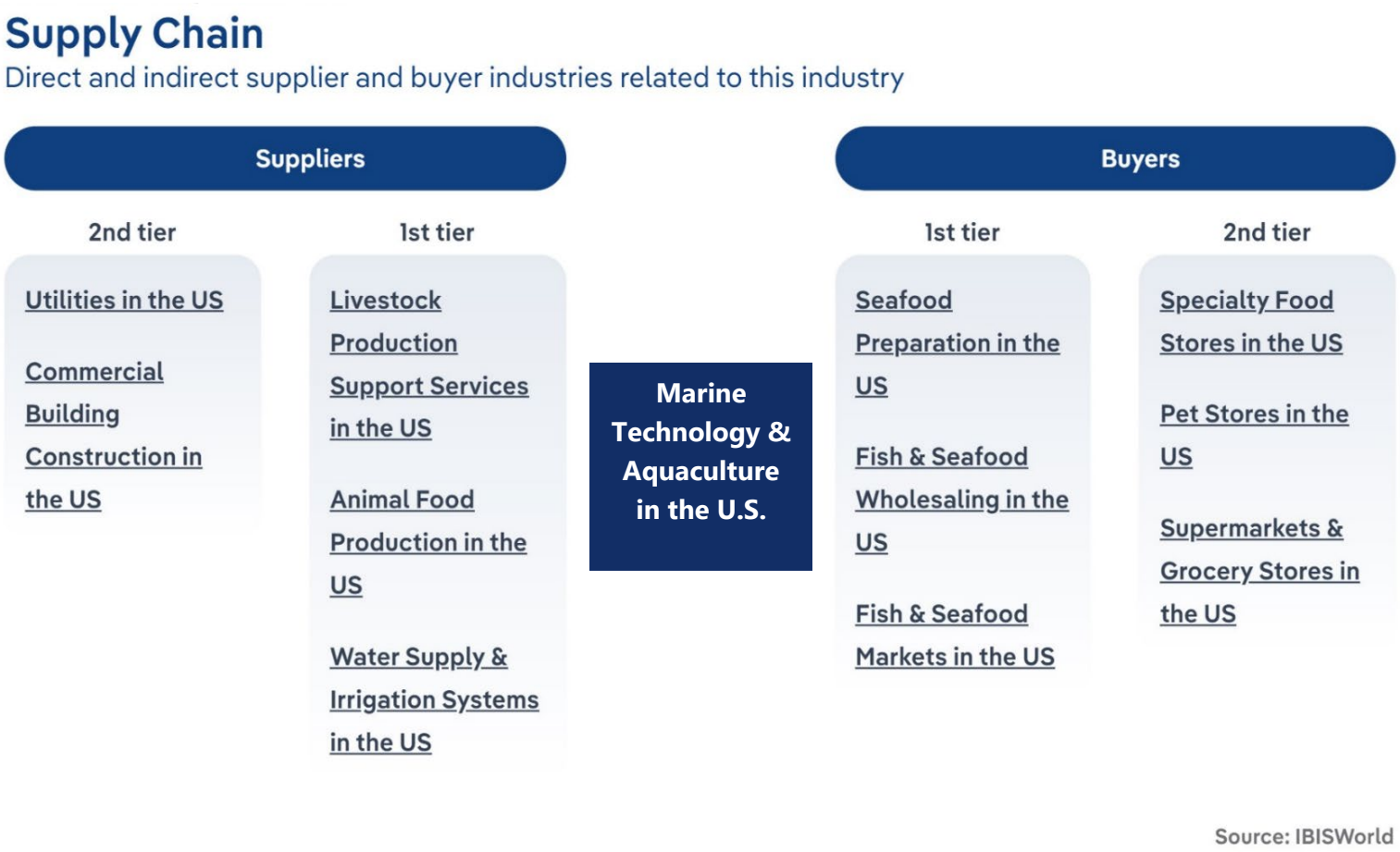


Source: Lightcast, Bureau of Labor Statistics
Note: Aquaculture jobs projections are not available. 2027 jobs figures based on static jobs numbers for Aquaculture. It is likely that the number of jobs in Aquaculture incrases from 2022-2027, meaning this figure is an underestimate.

- The sector's employment has **doubled in the last five years.** Navigational and other related instruments manufacturing is projected to grow by a further 18% through 2027
- Marine Technology jobs pay about **$78,853 per year** on average, much higher than the state's overall average annual wage ($67,942)

Data Note: GRP, Average Earnings, Sales, and Demand data do not include Aquaculture, for which this data is not available. Additionally, jobs projections through 2027 are not available for Aquaculture. An estimate of jobs that assumes constant employment numbers for Aquaculture is provided above.

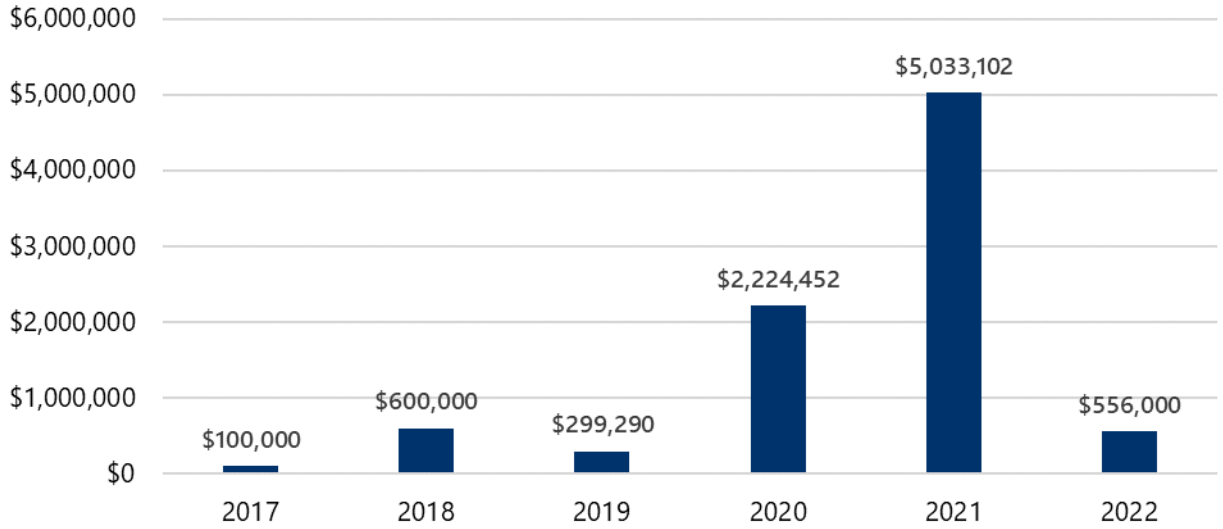
Typical Largest Suppliers



Data Note: Supply chain information specific to Maine is underreported and not available for this sector. Therefore, the supply chain overview for this sector is available at the national level only.

Innovation

Maine SBIR/STTR Awards in Marine Technology & Aquaculture



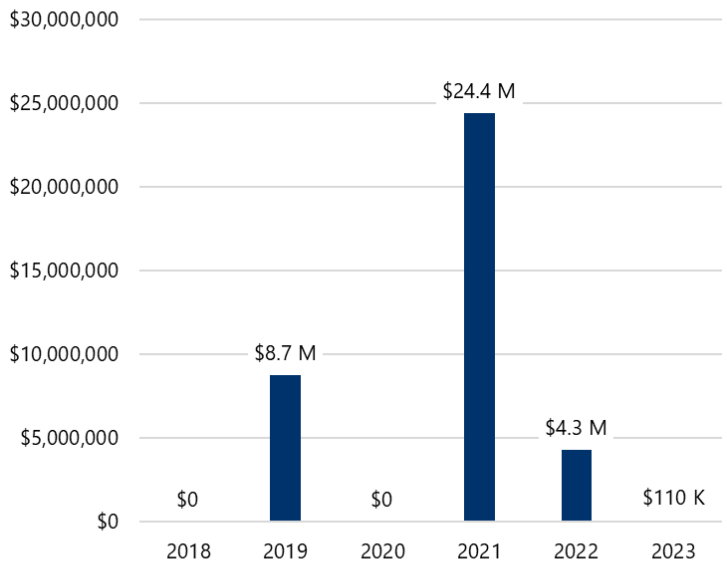
Source: SBA - SBIR/STTR Awards Data
Note: Includes all Phase I/Phase II awards issued to Maine businesses, filtered to reflect projects related to Marine Technology and Aquaculture

- From 2017-2022, over $8.8 million in SBIR/STTR funding has been issued to Maine businesses for Marine Technology and Aquaculture
- Funded projects include a range of new technology, including those relating to tidal power generation, feed for farm-raised shellfish, seaweed farming systems, and more
- SBIR/STTR funding for Marine Technology and Aquaculture was highest in 2021, with over $5.0 million in awards

Data Note: Data about patents for the Marine Technology & Aquaculture sector are not available

Venture Capital Funding

Venture Capital Funding for Marine Technology & Aquaculture in Maine, 2018-2023



Source: Crunchbase
Note: Includes only reported VC Deals. Not all VC funding is reported.

Companies with reported Venture Capital Deals, 2018-2023 YTD

Company	Related Industries	Deals
Ocean Renewable Power Company	CleanTech, Energy, Marine Technology, Renewable Energy	2
American Unagi	Aquaculture	2
BlueTrace	AgTech, Aquaculture, Computer, Food and Beverage, Seafood	2
Katahdin Salmon	Aquaculture, Food and Beverage, Seafood	1

Source: Crunchbase

- Venture capital (VC) funding for Marine Technology and Aquaculture in Maine has fluctuated over the past several years, and was highest in 2021 at $24.4 million raised through 2 deals
- From 2018-2023 YTD, there have been a total of 8 deals totaling $37.6 million raised
- So far in 2023, 1 Aquaculture deal totaling $110,000 has occurred
- Companies with VC have cross-cutting technology with environmental technology, IT, and the overall food sector

Note: The venture capital data highlighted on this page includes only the deals that have been reported. Not all venture capital funding is reported.

Workforce Demands

Top 15 Occupations in Marine Core Industry Cluster in Maine

SOC	Official Description	Cluster Description	2022 Jobs	2023 Projected Jobs	Change	% Change	Average Wages (2022)
45-3030	Fishing and Hunting Workers	Sternman/Deckhand AND Captain/Fisherman	4,768	5,826	1,058	22%	$42.6
53-7060	Laborers and Material Movers	Dock/Float Worker, Forklift Operators, Loaders/Unloaders (Transportation)	630	651	21	3%	$16.2
53-3030	Driver/Sales Workers and Truck Drivers	Delivery Drivers, Wholesale and Retail (Route)	559	577	18	3%	$22.1
11-9010	Farmers, Ranchers, and Other Agricultural Workers	Farm Managers, Hatchery Managers, RAS Production Managers	498	554	56	11%	$23.6
45-2090	Misc. Agricultural Workers	Farm Hand, Saltwater Marine Technician, Deckhand, Hatchery Technician, RAS Production Technician	326	355	29	9%	$15.5
51-4120	Welding, Soldering, and Brazing Workers	Shipyard/Boatyard Workers, Factory Workers, Drydock/Repair Workers	270	246	(24)	(9%)	$23.3
41-4010	Sales Representatives, Wholesale and Manufacturing	Sales Representatives, Wholesale Distribution	242	248	6	2%	$36.7
51-3020	Butchers and Other Meat, Poultry, and Fish Processing Workers	Seafood Production Workers, Retail Fish/Seafood Workers	241	225	(16)	(7%)	$16.6
51-2090	Misc. Assemblers and Fabricators	Shipyard/Boatyard Workers, Packers/Product Assembly Workers	178	145	(33)	(19%)	$18.7
51-1010	First-Line Supervisors of Production and Operating Workers	Processing Plant Managers or Boat Building/Repair Supervisors	156	149	(7)	(4%)	$32.8
11-9190	Misc. Managers	Commercial Fishing Sector	154	184	30	19%	$42.8
51-2050	Fiberglass Laminators and Fabricators	Shipbuilders	139	133	(6)	(4%)	$20.2
11-1020	General and Operations Managers	GMs, all Sectors	136	136	0	0%	$47.6
41-2010	Cashiers	Cashiers	126	107	(19)	(15%)	$14.1
39-7010	Tour and Travel Guides	Tour and Travel Guides (Commercial Fishing Sector)	118	153	35	30%	$22.6
		Top 15 Jobs	8,539	9,689	1,150	13%	N/A
		All Other Jobs (154 Occupations)	3,239	3,180	(59)	(2%)	N/A
		All Jobs, Core Cluster	11,778	12,869	1,091	9%	N/A

Source: SeaMaine Workforce Needs Assessment, Thomas P. Miller Associates

Demand for Marine Sector workforce is projected to grow by 9% over the next 10 years.

- According to research published by SeaMaine, the jobs that are projected to grow the most include several related to Aquaculture, including farm and hatchery managers, saltwater technicians, and biological scientists.
- Nationally, job postings data for marine-related manufacturing indicates high demand for systems and software engineers, electrical engineers, program managers, assemblers, and information security analysts. These jobs can be difficult to fill, with the median posting for top in-demand jobs lasting over 30 days, with intensity of 4:1[1]

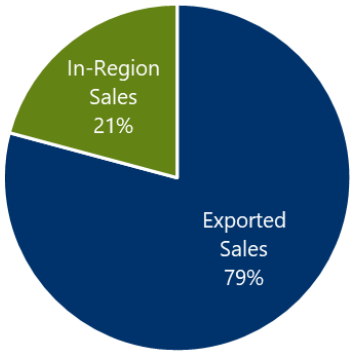
[1] This indicates that for each unique job available, 4 postings may be required in order to fill the position.

Source: SeaMaine; Lightcast

PRECISION MANUFACTURING

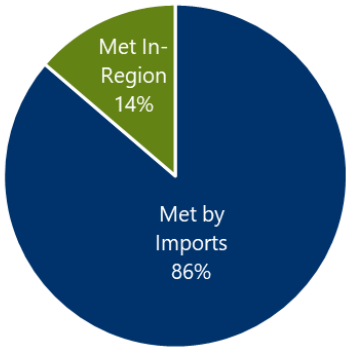
The precision manufacturing sector encompasses a variety of subsectors including metal products, machinery manufacturing, and computer and electronic product manufacturing. Products included in these categories range from metal parts and tools, hardware, heavy machinery, semiconductors, telecom equipment, navigation, and control instruments, and beyond.

Maine's Precision Manufacturing Sales Distribution (2022)
Total Sales: $2.5 Billion



Source: Lightcast

Maine's Precision Manufacturing Demand Distribution (2022)
Total Demand: $3.7 Billion



Source: Lightcast

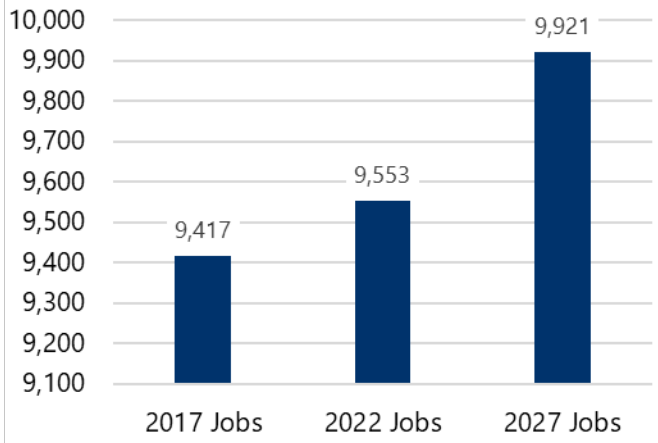
Employment Concentration:

0.6x as concentrated as the national average

Gross Regional Product:

$1.3 Billion
1.6% of the State's Total

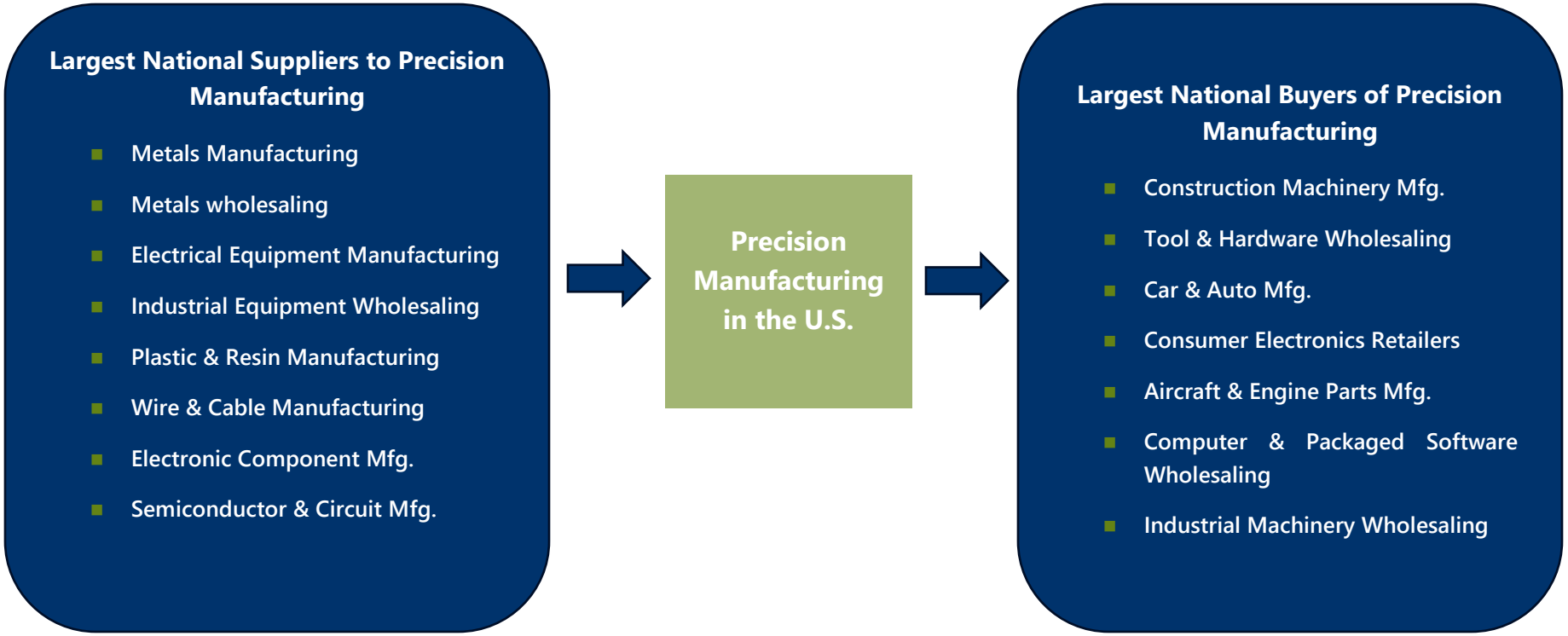
Jobs in Maine's Precision Manufacturing Sector



Source: Lightcast

- Precision Manufacturing employment has **grown by 136 jobs** in the last five years and is **projected to grow by another 368 jobs** through 2027, representing overall growth of about 3.9% from 2017-2027
- These jobs pay about **$83,500 per year** on average, much higher than the state's overall average annual wage ($67,942)
- There are three major industries that together account for nearly half of the sector in Maine: Machine Shops (1,964 jobs), Semiconductor and Other Electronic Component Manufacturing (1,560 jobs), and Plate Work and Fabricated Structural Product Manufacturing (907 jobs)

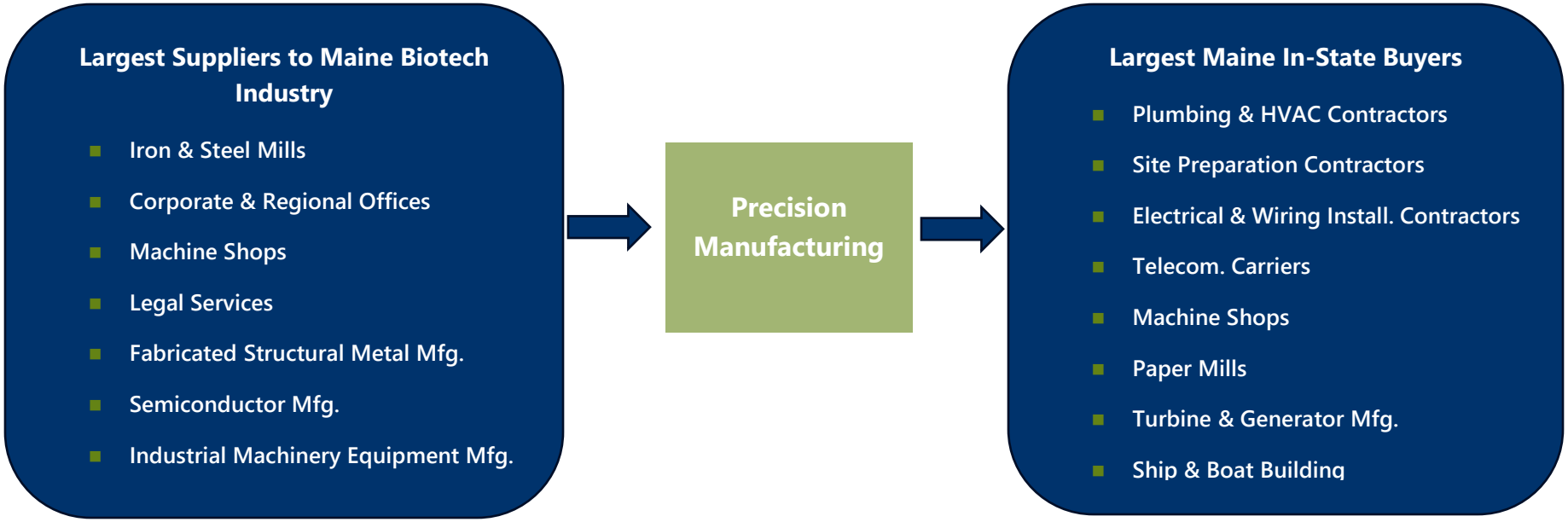
Typical Largest Suppliers



Source: IBISWorld

Data note: 1st and 2nd tier suppliers and buyers are not available for this sector. Suppliers and buyers detailed on this page represent the aggregate of both 1st and 2nd tier supply chain industries.

Supply Chain Insights

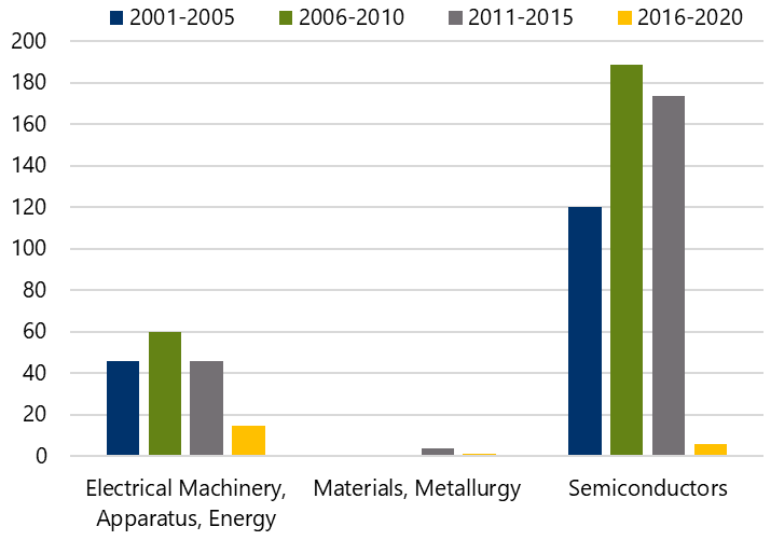


- Businesses in Maine's Precision Manufacturing sector purchased $921.7 million of goods and services from other companies in 2022, from both in-state sources as well as imports from out of state
  - The largest inputs to the sector range from raw inputs such as iron and steel, intermediate inputs such as machinery and semiconductors, and services such as legal and corporate offices/real estate
- Maine's Precision Manufacturing sector sold over $365.2 million of products to buyers within Maine in 2022
  - The largest buyers of Maine's Biotech products include a range of contractors, telecommunications, other manufacturing industries, and ship and boat building
- There are moderate intra-industry links within the Precision Manufacturing sector. Precision Manufacturing businesses supply and sell to other businesses within the sector, both in-state and to other domestic trade partners.

Data Note: Suppliers provide inputs to Maine's Biotechnology businesses and can be located both in Maine and in other states. On the other hand, the industries listed as largest buyers only include businesses located in Maine due to data limitations.

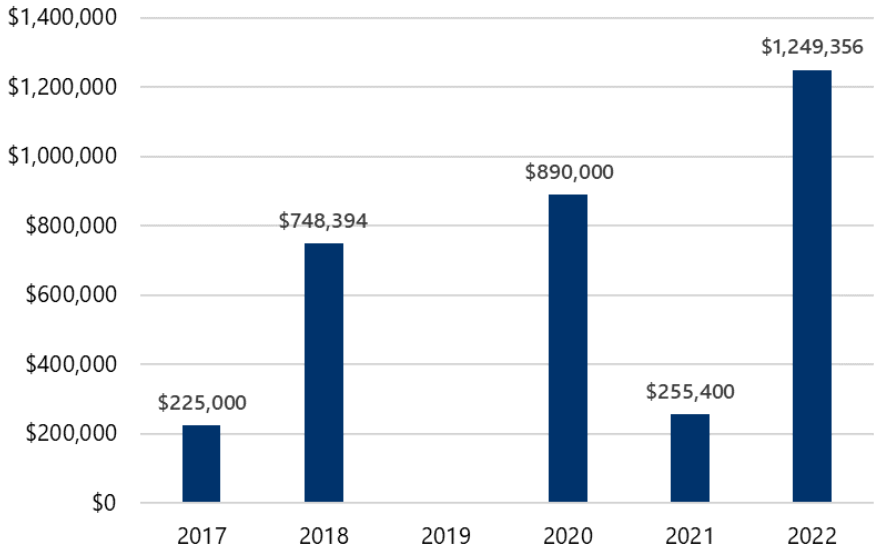
Innovation

Maine Patents in Precision Manufacturing Categories, 5-Year Totals



Source: National Science Foundation Science and Engineering Indicators

Maine SBIR/STTR Awards in Precision Manufacturing

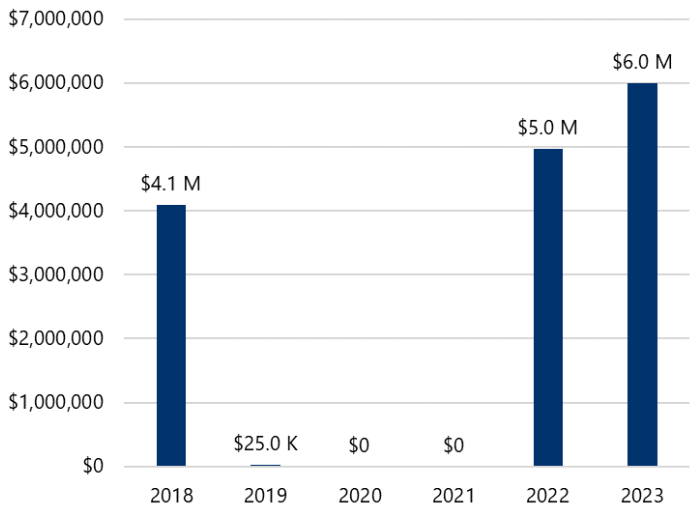


Source: SBA - SBIR/STTR Awards Data
Note: Includes all Phase I/Phase II awards issued to Maine businesses filtered by award titles pertaining to Precision Manufacturing

- In the most recent five years of data, from 2016-2020, Maine has had 21 patents issued in the Precision Manufacturing-related categories of Electrical Machinery Apparatus, Metallurgy Materials, and Semiconductors
- Precision Manufacturing patents account for about 15% of total patents issued in MTI sector patent categories
- From 2017-2022, almost $3.4 million in SBIR/STTR funding has been issued to Maine businesses for projects relating to Precision Manufacturing, including mechanical and hydraulics, defense projects, and more.

Venture Capital Funding

Venture Capital Funding for Precision Manufacturing in Maine, 2018-2023



Source: Crunchbase
Note: Includes only reported VC Deals. Not all VC funding is reported.

Companies with reported Venture Capital Deals, 2018-2023 YTD

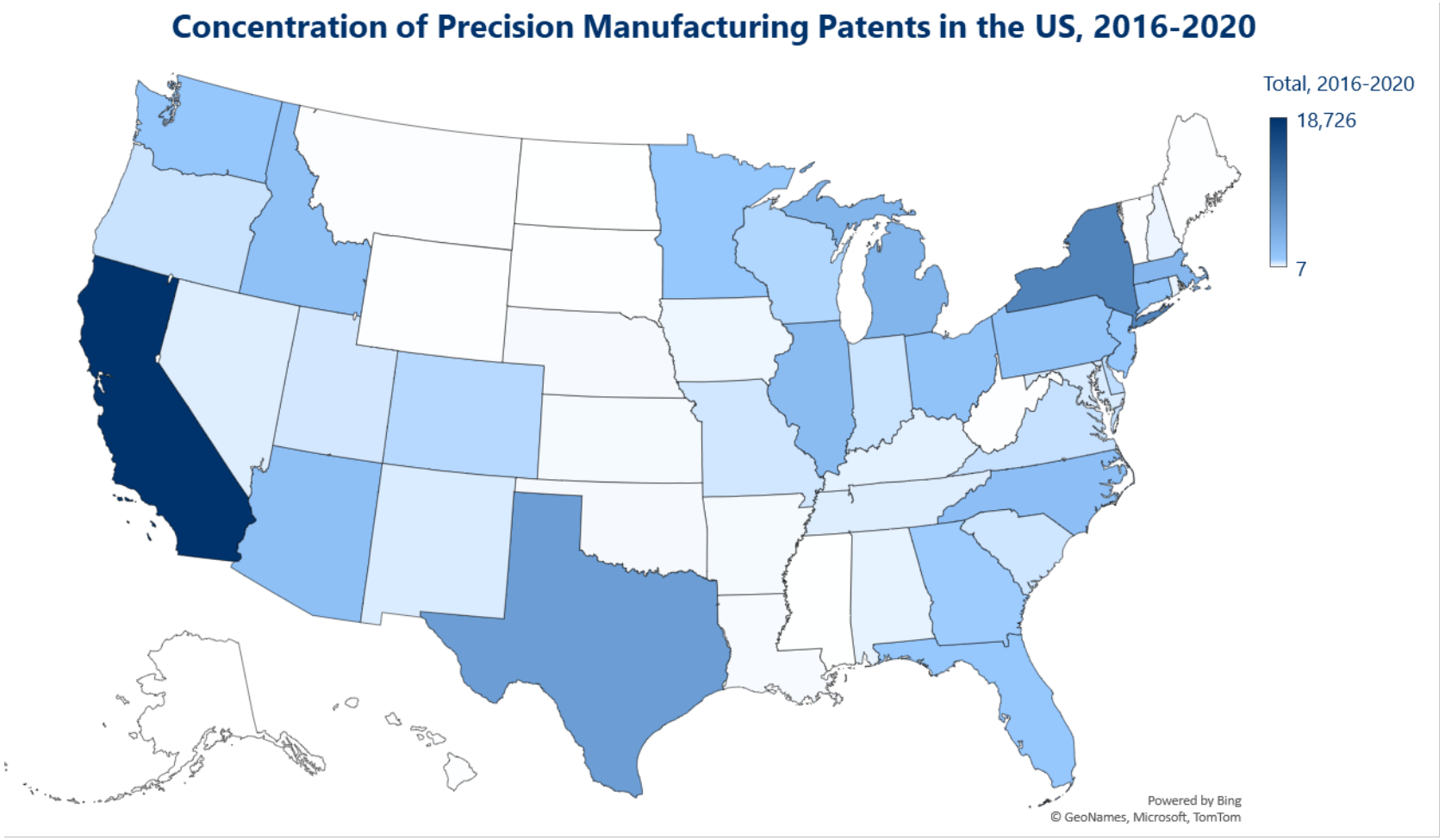
Company	Related Industries	Deals
Nyle Systems	Commercial, Industrial, Industrial Manufacturing, Machinery Manufacturing, Manufacturing	1
Peregrine Turbine Technologies	Industrial Automation, Machinery Manufacturing, Manufacturing, Mechanical Engineering, Environmental Technology	2
Pika Energy	Electronics, Manufacturing	2
ReNewSnow	B2B, Renewable Energy, Semiconductor	1

Source: Crunchbase

- Venture capital (VC) funding for Precision Manufacturing in Maine has fluctuated over the past several years, and is currently the highest in 2023 YTD at $6.0 million raised through 2 transactions
- From 2018-2023 YTD, there have been a total of 6 deals totaling $15.1 million raised
- Companies with VC have cross-cutting technology with environmental technology and manufacturing

Note: The venture capital data highlighted on this page includes only the deals that have been reported. Not all venture capital funding is reported.

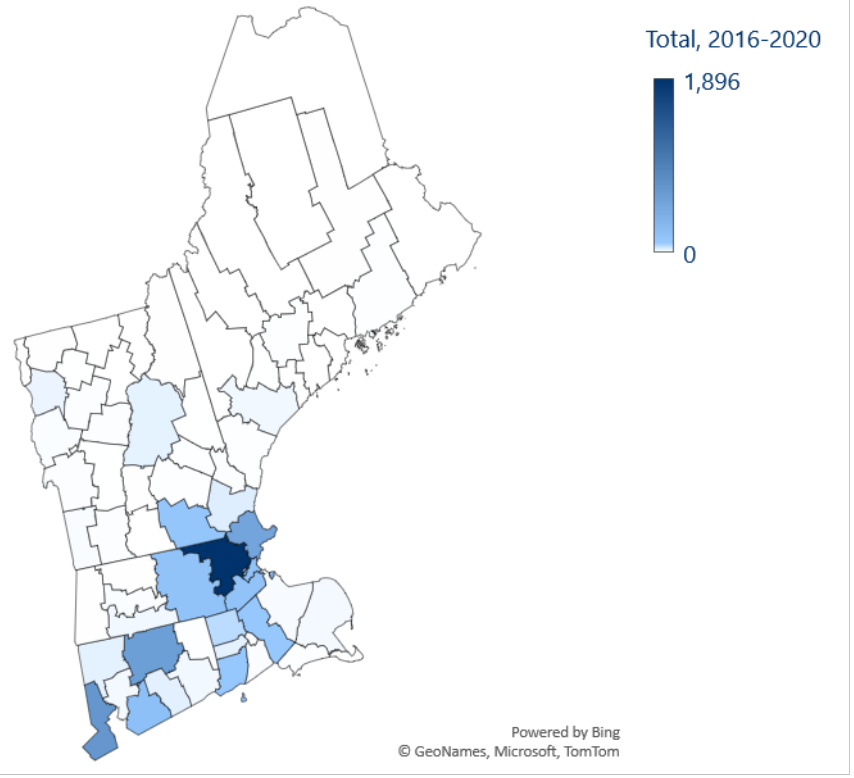
Patents



- In the five years from 2016-2020, almost 69,000 patents were awarded in Precision Manufacturing categories in the United States
- The top 5 states for Precision Manufacturing patents were California (18,726), New York (9,247), Texas (6,062), Michigan (3,414), and Massachusetts (3,070)

- Within New England, Middlesex County, MA had the highest 5-year total for Precision Manufacturing patents, with 1,896 awarded between 2016-2020
- Other top counties in New England are primarily in Connecticut and Massachusetts, though Hillsborough County, NH and Washington County, RI make this list, with over 100 each.
- Within Maine, Cumberland County had the most patents awarded (13), followed by York County (3) and Hancock County (2), and Kennebec County (2). Penobscot and Androscoggin County were awarded 1 patent each during this time frame.

Concentration of Precision Manufacturing Patents in New England, 2016-2020



Top 10 Counties for Precision Manufacturing Patents in New England, 2016-2020

County	State	Patents
Middlesex County	Massachusetts	1,896
Fairfield County	Connecticut	696
Hartford County	Connecticut	606
Essex County	Massachusetts	528
New Haven County	Connecticut	213
Norfolk County	Massachusetts	169
Worcester County	Massachusetts	168
Suffolk County	Massachusetts	159
Hillsborough County	New Hampshire	133
Washington County	Rhode Island	114

Source: National Science Foundation Science and Engineering Indicators

Workforce Demands

Top 10 Occupations in Maine's Precision Manufacturing Sector, by Total Jobs

Occupation	Employed in Sector	Median Hourly Earnings	Typical Entry Level Education
Machinists	878	$24.28	High school diploma or equivalent
Operators	680	$24.00	High school diploma or equivalent
Fabricators	671	$18.57	High school diploma or equivalent
Welders, Cutters, Solderers, and Brazers	527	$24.73	High school diploma or equivalent
Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	414	$18.71	High school diploma or equivalent
First-Line Supervisors of Production and Operating Workers	402	$33.45	High school diploma or equivalent
General and Operations Managers	232	$41.29	Bachelor's degree
Inspectors, Testers, Sorters, Samplers, and Weighers	232	$22.13	High school diploma or equivalent
Structural Metal Fabricators and Fitters	200	$24.08	High school diploma or equivalent
Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	181	$21.98	High school diploma or equivalent

Source: Lightcast 2023.3

Top In-Demand Job Titles for the Precision Manufacturing Industry, 12 months ending July 2023

Job Title	Median Duration	Unique Postings	Posting Intensity
Manufacturing Operators	43	47	2 : 1
Undergraduate Interns	31	42	1 : 1
Quality Inspectors	47	28	2 : 1
Field Service Technicians	17	27	2 : 1
Bench Mechanics	10	27	2 : 1
Project Managers	50	27	1 : 1
Cell Operators	49	24	2 : 1
Parts Inspectors	26	23	2 : 1
Retail Merchandisers	53	23	1 : 1
Application Engineers	30	20	1 : 1

Source: Lightcast 2023.3

Precision Manufacturing jobs in Maine are in high demand and can be difficult to fill.

- **The top occupations by employment in the sector typically require a high school diploma.** Nine of the top 10 occupations in the sector require a high school diploma or equivalent, while one (General and Operations Managers) require a bachelor's degree. Therefore, the workforce needed to sustain this sector's growth have a relatively low barrier to entry.
- **Precision Manufacturing jobs are difficult to fill.** Seven of the ten top in-demand occupations have median posting duration of 30 days or longer, meaning it takes a median of over month and up to 53 days for these advertised positions to be filled.
- **Precision Manufacturing faces competition with other industries.** Some of the sector's top occupations are primarily employed in the Precision Manufacturing Sector, such as CNC Tool Operators (59%), Electromechanical Assemblers (57%), and Machinists (54%). However, other top occupations are employed primarily in other sectors. Only 14% of Misc. Assemblers and Fabricators, 13% of supervisors of operating workers, and 2% of general and operations managers work in the Precision Manufacturing sector, which means the sector will have to compete fiercely to recruit for these jobs.

ATTACHMENT A: GLOSSARY

Unique Postings: When Lightcast identifies job postings, sometimes there are duplicates. For example, if a company posts the same job on multiple job boards. The unique posting count is the count of posting after deduplicating the data. In other words, it shows the total unique jobs being posted for hire.

Posting Intensity: Posting intensity is the ratio of total to unique job postings. A higher-than-average posting intensity can mean that employers are putting more effort than normal into hiring that position.

Gross Regional Product (GRP): Gross Regional Product is simply GDP for the region of study. More commonly, GRP is GDP for any region smaller than the United States, such as a state or metro. GRP measures the final market value of all goods and services produced in the region of study, and is the sum of total industry earnings, taxes on production and imports, and profits, less subsidies (GRP = earnings + TPI + profits – subsidies)

Employment Concentration: Formerly known as a Location Quotient, this is a way of quantifying how concentrated employment in a particular industry is in a given region compared to the nation. It compares an industry's share of total employment in the region compared to that industry's share of total employment in the nation. This calculation reveals what makes the particular region "unique" in comparison to the national average.

ATTACHMENT B: DATA SOURCES

Lightcast (formerly Emsi Burning Glass) is a global leader in labor market analytics, offering a data platform that gives a comprehensive, nuanced, and up-to-date picture of labor markets at all scales from national to local. Key components of the platform include traditional labor market information, job postings analytics, talent profile data, compensation data, and skills analytics. Lightcast integrates government data with information from online job postings, talent profiles, and resumes to produce timely intelligence on the state of the labor market. Job and compensation data is available by industry, occupation, educational program, and skill type. Click to learn more.

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Crunchbase offers a best-in-class live database on innovative companies across industries, powered by contributors, partners, and in-house data experts. With a focus on tech companies and startups, the platform aggregates information on investment and funding, founding members and leadership, mergers and acquisitions, news, and industry trends. Designed as both a market research and prospecting solution, Crunchbase offers the ability to narrow down companies matching criteria such as headquarter location, investment stage, or industry, while automatically offering recommendations based on these criteria. Click to learn more.

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Real Estate Development Services


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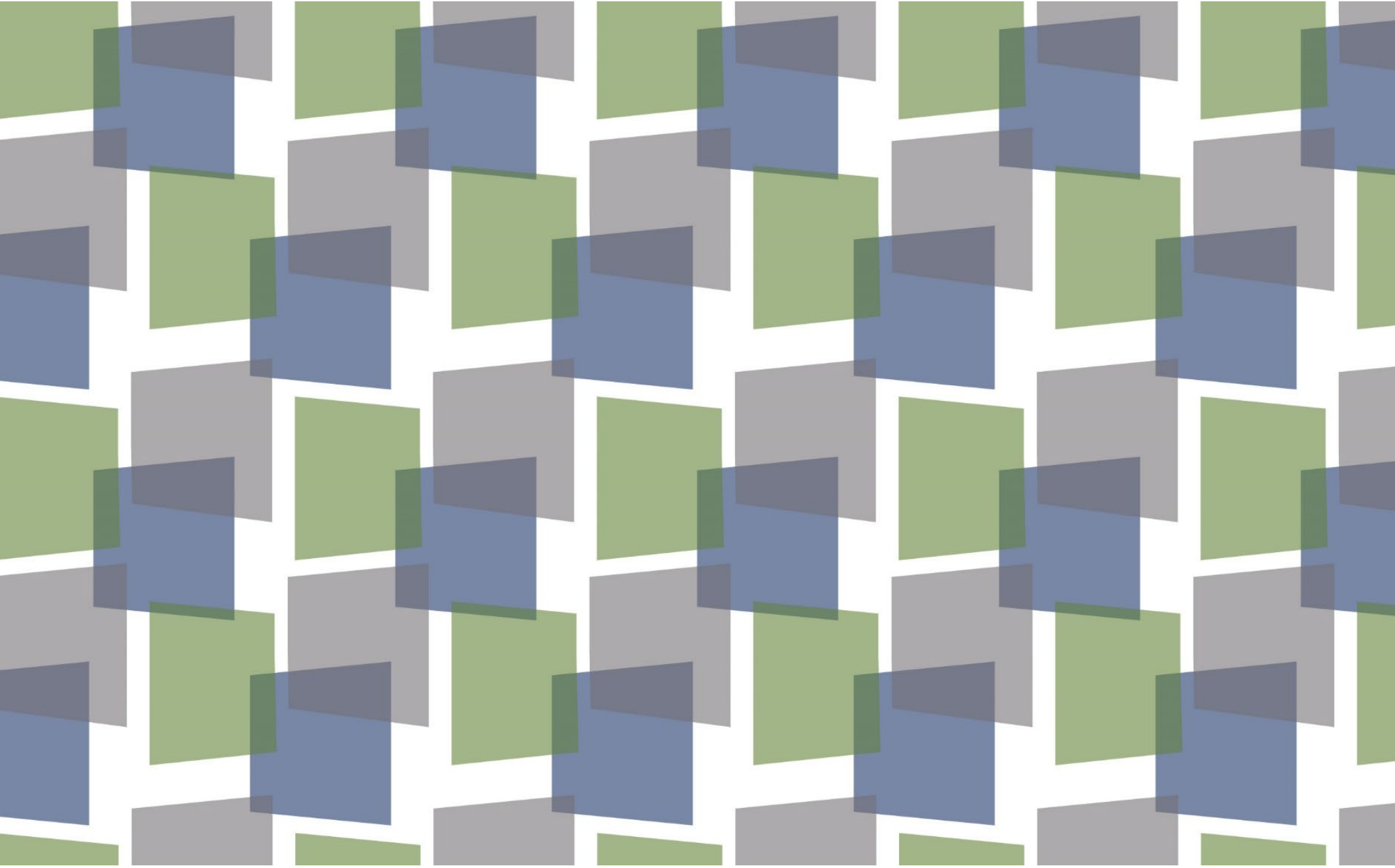
Business Attraction and Retention


Entrepreneurship and Innovation


Industry and Workforce Analytics


Impact Analysis



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