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ADVANCED MANUFACTURING

SECTOR SNAPSHOT NOVEMBER 2023

ADVANCECT
CONNECTICUT

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All data current as of November 2023.



ABOUT ADVANCECT



OUR MISSION

AdvanceCT is a nonprofit economic development organization that drives job creation and new capital investment in Connecticut through business attraction, retention and expansion.

WHAT WE DO

Part of Team Connecticut, Connecticut's economic development partnership, **AdvanceCT** is the leading business attraction entity for the state.

AdvanceCT, in close collaboration with the Connecticut Department of Economic and Community Development (DECD) and partners statewide, provides business support services to companies looking to locate and grow in Connecticut.

LEARN MORE AT [ADVANCECT.ORG](https://www.advancect.org) ➤



INDUSTRY OVERVIEW



74,300+

**ADVANCED MANUFACTURING
EMPLOYEES**



~1,100

ADVANCED MANUFACTURERS



\$20+ Billion

STATE GDP

SOURCE: LIGHTCAST, 2022; ADVANCECT CALCULATIONS

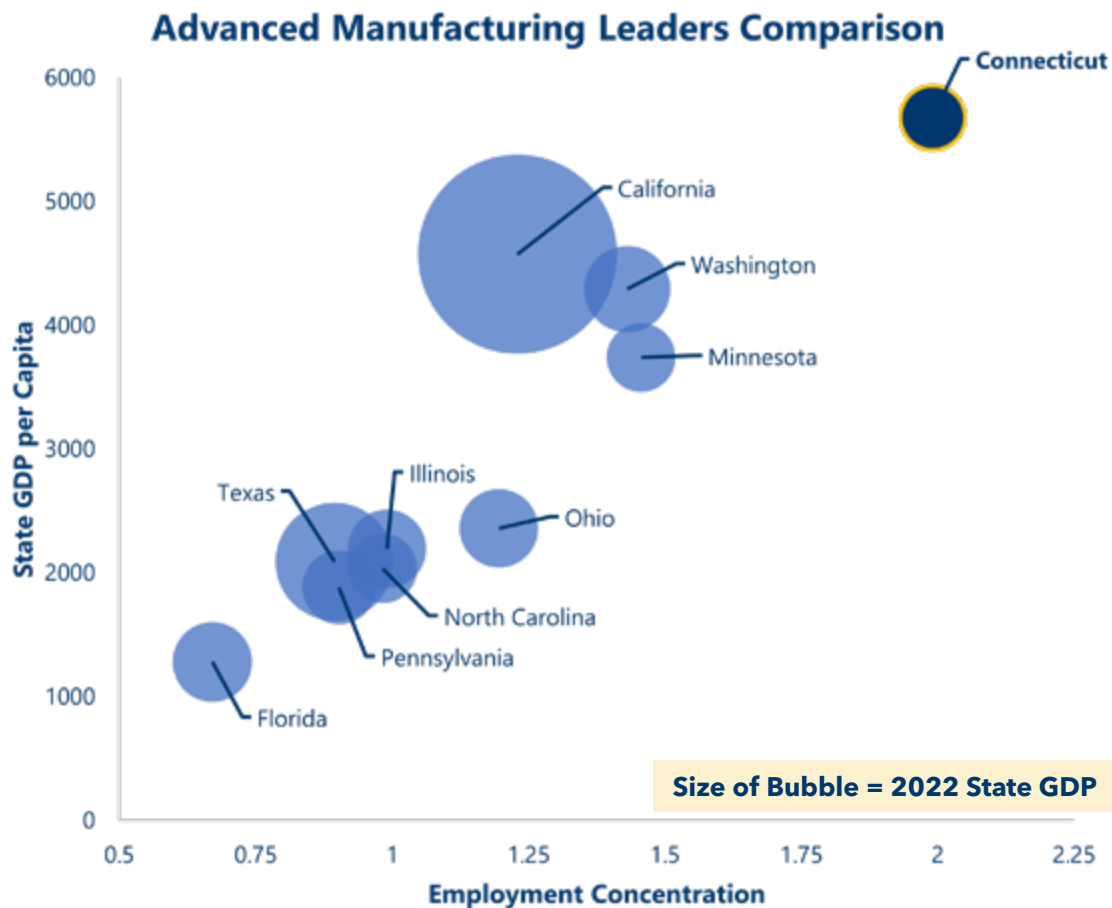
ADVANCED MANUFACTURING IN CONNECTICUT

Connecticut is known for **advanced technologies for extreme precision** and **multi-generations of skill and know-how.**





Connecticut Outpaces Advanced Manufacturing Leaders



SOURCE: LIGHTCAST, 2022; ADVANCECT CALCULATIONS.

HIGH PRODUCTIVITY, GREATER VALUE

Compared to other manufacturing hubs, Connecticut's advanced manufacturing sector is:



MOST PRODUCTIVE



**MOST GEOGRAPHICALLY
CONCENTRATED**



**ON PAR EVEN WITH
LARGER STATES**



Connecticut Leads the Way



#1 STATE

Aircraft Engine and Engine
Parts Manufacturing
IN BOTH JOBS AND STATE GDP



#2 STATE

Ship Building and
Repairing GDP



#3 STATE

Ship Building and
Repairing Jobs



Aircraft Engine & Engine Parts Manufacturing

~15,500 jobs and **over \$6.6 billion State GDP**

17.7x higher concentration of jobs than U.S. average



Ship Building & Repairing

Nearly **12,000 jobs** and **over \$1.8 billion State GDP**

11x higher concentration of jobs than U.S. average

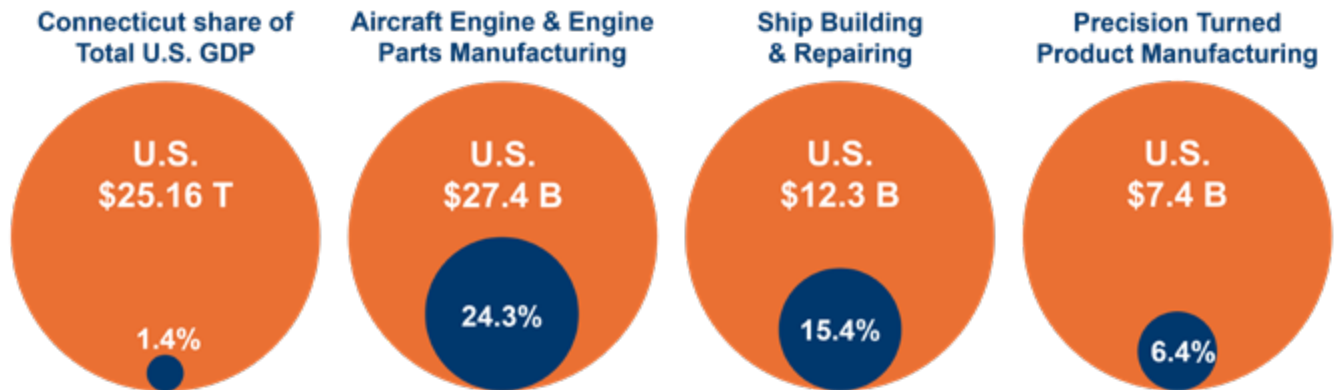
SOURCE: LIGHTCAST, 2022; ADVANCECT CALCULATIONS.



Advanced Manufacturing National Contribution

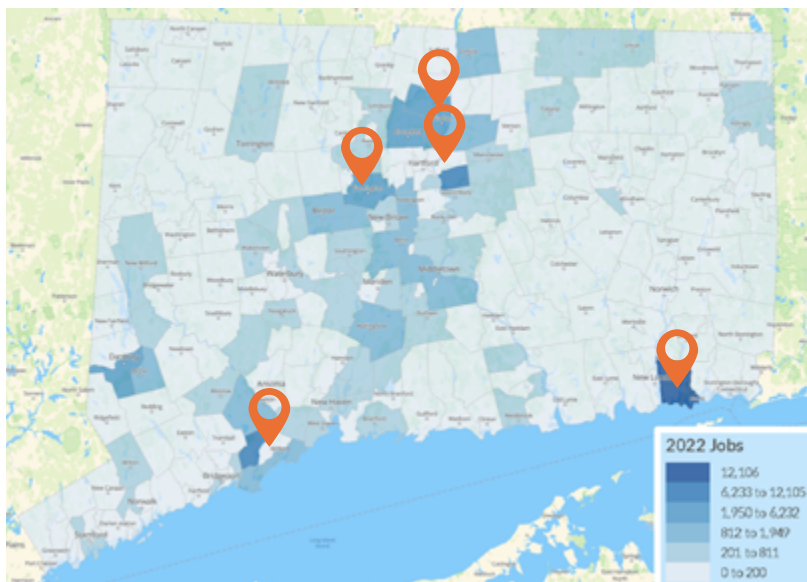
Connecticut represents an outsized portion of key U.S. advanced manufacturing production.

■ U.S. Gross Domestic Product
 ■ Connecticut State Gross Domestic Product



SOURCE: LIGHTCAST, 2022; ADVANCECT CALCULATIONS

The Heart of Advanced Manufacturing in Connecticut



Top 5 ZIP Codes = 30,800+ Jobs

ZIP Code - Town	Jobs*	Concentration
06340 - Groton	12,100	20.48
06614 - Stratford	6,900	17.59
06118 - East Hartford	6,200	27.18
06095 - Windsor	3,200	6.03
06032 - Farmington	2,330	3.84

*Jobs rounded to the nearest hundred.

Concentration compares percentage of relevant jobs in zip code region to U.S. average. 1 = average, 5 = 5 times national concentration etc.

SOURCE: LIGHTCAST, 2022; ADVANCECT CALCULATIONS



TALENT & WORKFORCE

ADVANCED MANUFACTURING SECTOR SNAPSHOT



MANUFACTURING TALENT



#3 most educated workforce in the U.S.
(WALLETHUB, 2023)

CONNECTICUT HAS QUALITY TALENT...



35% more engineers than the national average
INCLUDING 5.1X MORE NUCLEAR & 1.7X MORE AEROSPACE ENGINEERS



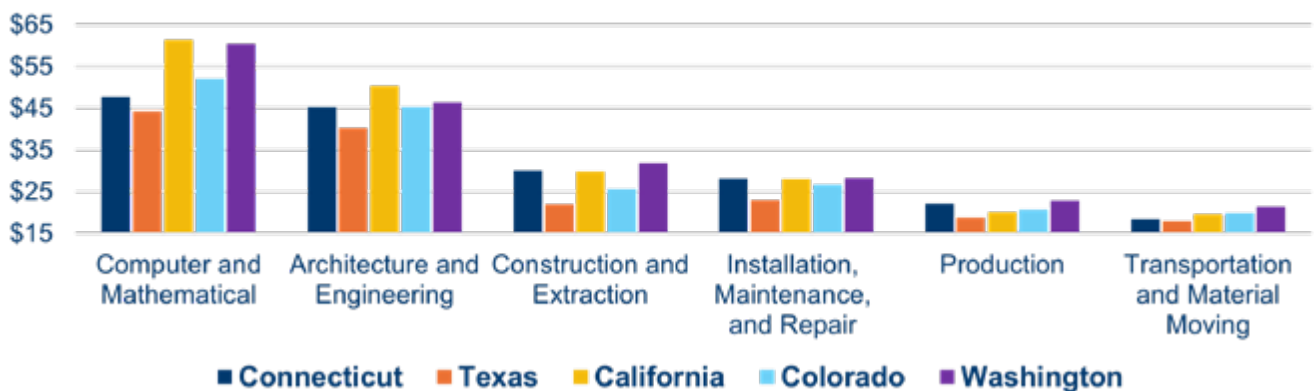
1.95X the national average for **computer numerically controlled tool operators and programmers.**



2X the national average for **machinists** and **3X tool and die makers.**

...AT COMPETITIVE WAGES

Median Hourly Earnings by Occupation

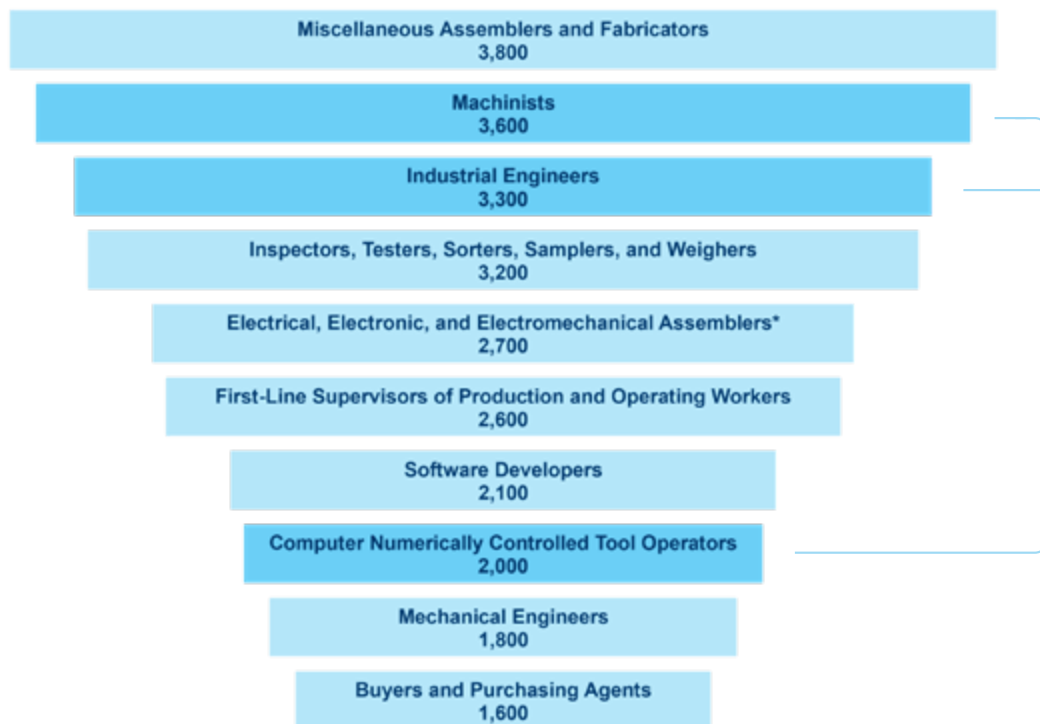


SOURCE: LIGHTCAST, 2022.



More Talent, More Output

Top 10 Advanced Manufacturing Jobs



At least 50% higher
concentration in CT
than the U.S. average



74,000+ advanced manufacturing workers
producing over **\$20 billion in state GDP**

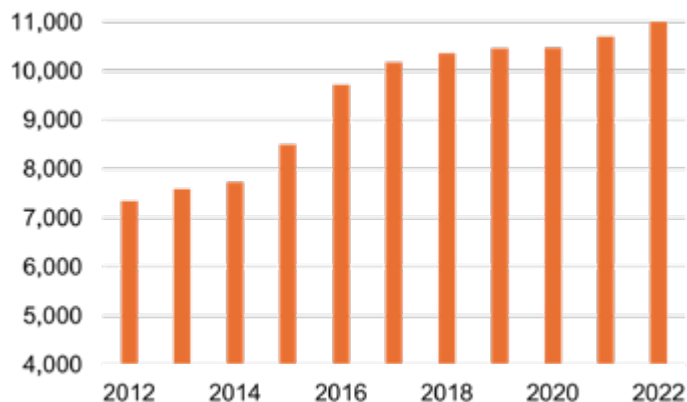
Output per worker is **nearly \$277,000**

SOURCE: LIGHTCAST, 2022; ADVANCECT CALCULATIONS.
JOBS ROUNDED TO NEAREST HUNDRED. *EXCEPT COIL WINDERS, TAPERS, AND FINISHERS



The Talent You Need to Succeed

Connecticut STEM Graduates



STEM completions in Connecticut up 50% since 2012

(LIGHTCAST, IPEDS, 2022; U.S. DHS)



state for STEM Location Quotient (LQ)

(LIGHTCAST, BLS/O*NET, 2022)



242,000+ STEM Jobs in Connecticut

(LIGHTCAST, BLS/O*NET, 2022)
NO LONGER INCLUDES POSTSECONDARY TEACHERS

Connecticut's Workforce



#1 state for college readiness

(U.S. NEWS & WORLD REPORT, 2023)

#4 state for population with advanced degrees

(U.S. CENSUS BUREAU, ACS 1Y, 2022, % OF 25+ POPULATION)

#4 state for knowledge jobs

(INFORMATION TECHNOLOGY & INNOVATION FOUNDATION, 2020)

#6 most patents issued per capita

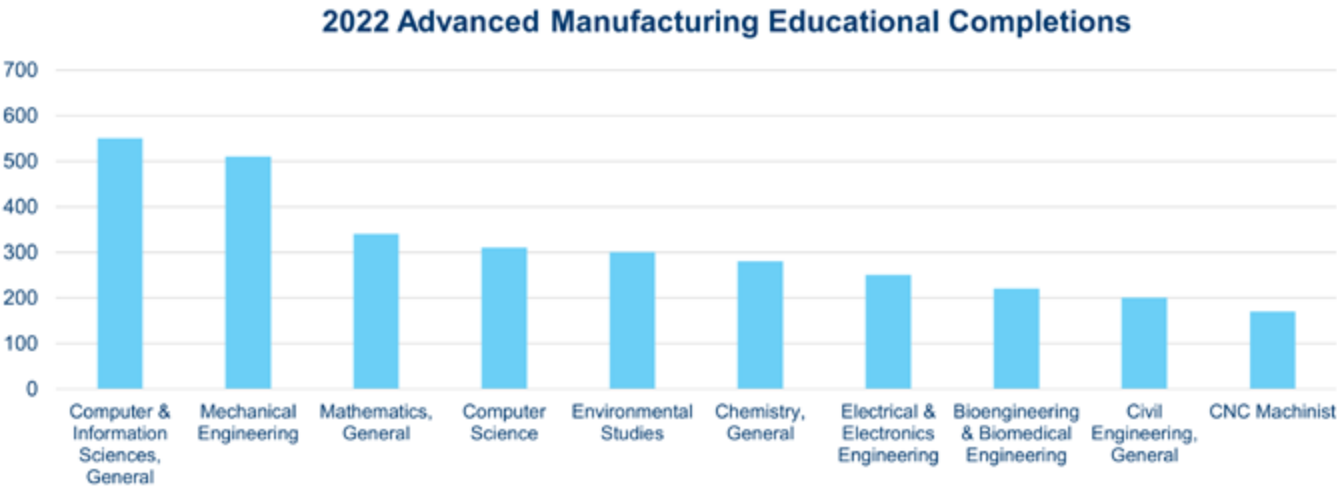
(U.S. PATENT AND TRADEMARK OFFICE, U.S. CENSUS BUREAU, 2022; ADVANCECT CALCULATIONS)

#9 for science, engineering & health doctorates in the workforce

(NATIONAL SCIENCE FOUNDATION, 2021)



Strong Educational Pipeline for Manufacturing Skills



11,800 Advanced Manufacturing Educational Completions in 2022
UP 11% OVER 10 YEARS

Including 3,600 engineering educational completions in 2022
UP 40% OVER 10 YEARS

SOURCE: LIGHTCAST, 2022; ADVANCECT CALCULATIONS.
 *EDUCATIONAL COMPLETIONS ARE IN PROGRAMS RELEVANT TO SIGNIFICANT
 ENGINEERING OR ADVANCED MANUFACTURING OCCUPATIONS



LOGISTICS & INFRASTRUCTURE

ADVANCED MANUFACTURING SECTOR SNAPSHOT



Transportation



BY WATER

Three deep water ports in Connecticut: Bridgeport, New Haven, and New London.

BY ROAD

Highway I-95 & I-91 connect Canada to Florida
I-84 connects Connecticut to Massachusetts and to New York State

BY RAIL

Connecticut's freight is handled by CSX, Housatonic Railroad, Naugatuck Railroad, PanAm Southern Railway, and Providence & Worcester Railway, serving interstate and intrastate transportation

CONNECTICUT'S LARGEST AIRPORT



Bradley International
ranked **6th Best
Airport in the U.S.**

(CONDE NAST, 2023)

AIR

Commercial flights available from Bradley International and Tweed New Haven Regional Airport

Sikorsky Memorial Airport and Danbury Municipal Airport also serve the state

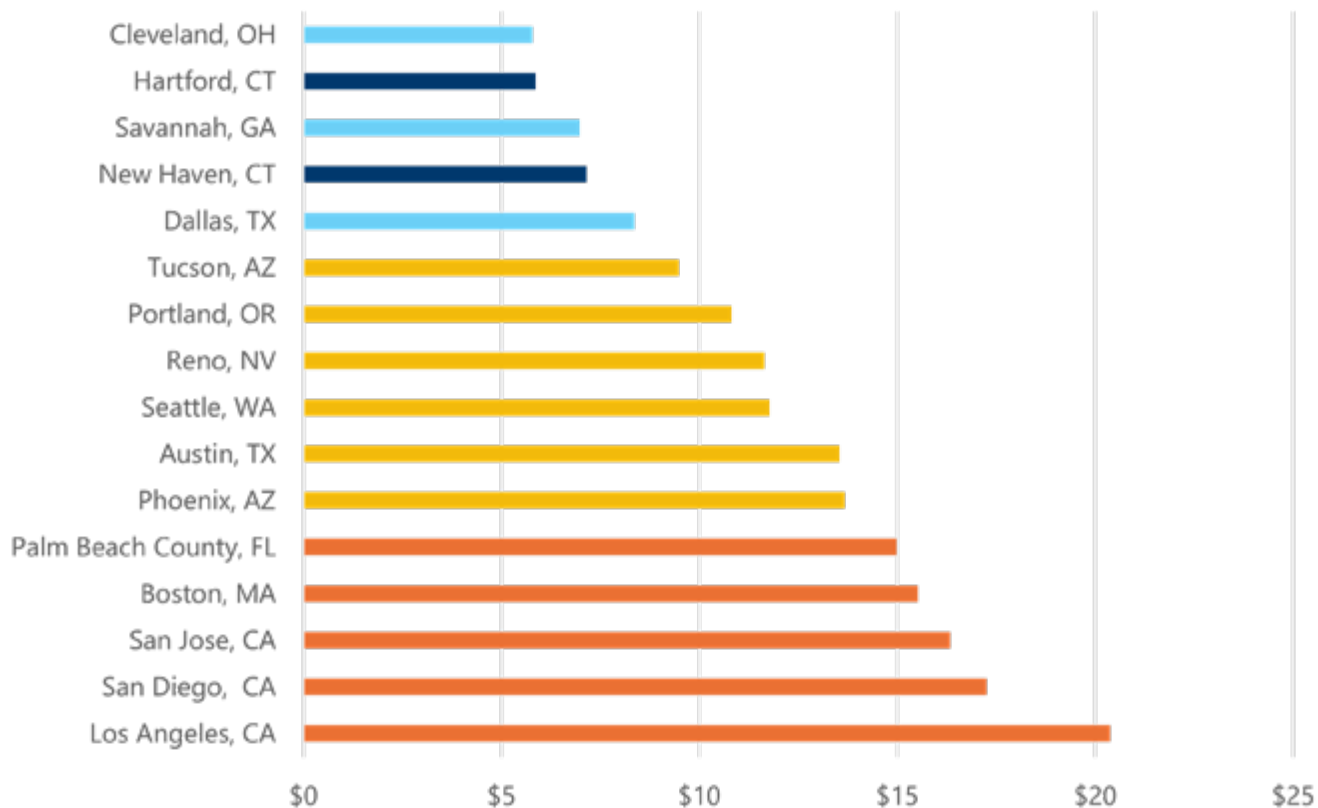
CT has five general aviation airports: Danielson, Groton-New London, Hartford-Brainard, Waterbury-Oxford, and Windham

Six out-of-state airports within easy access from Connecticut: John F. Kennedy International Airport, LaGuardia International Airport, White Plains Airport, Stewart International, Newark Liberty, Boston Logan



Competitive Prices in Connecticut

Industrial Asking Rents, Q3 2023



SOURCE: CUSHMAN & WAKEFIELD, Q3 2023



Not only is Connecticut an advanced manufacturing industry leader, it also has some of the lowest industrial property rents across the country.



CONNECTICUT FOREIGN TRADE ZONES

Foreign trade zones were created to encourage activity and value-add at U.S. facilities by allowing delayed or reduced duty payments.

Connecticut has four foreign trade zones and 72 opportunity zones.

Connecticut's FTZs cover almost the entire state:

Bridgeport #76

Fairfield County
Litchfield County
New Haven County (Milford, Orange, Ansonia, Derby, Seymour, Oxford, Beacon Falls, Southbury, Middlebury, Naugatuck, Waterbury, Wolcott)

New Haven #162

New Haven
North Haven

New London #208

New London County
Two tribal lands


Windsor Locks #71

Hartford
Litchfield
Middlesex
Tolland County
Windham County



#6 state for advanced manufacturing exports per capita

(U.S. CENSUS BUREAU, USA TRADE, POPULATION ESTIMATES, 2022; ADVANCE CALCULATIONS)



THE CONNECTICUT MANUFACTURING ECOSYSTEM

ADVANCED MANUFACTURING SECTOR SNAPSHOT

Connecticut: A Manufacturing Powerhouse

Driven by key employers in high-tech industries, and supported by thousands of companies in the supply chain.



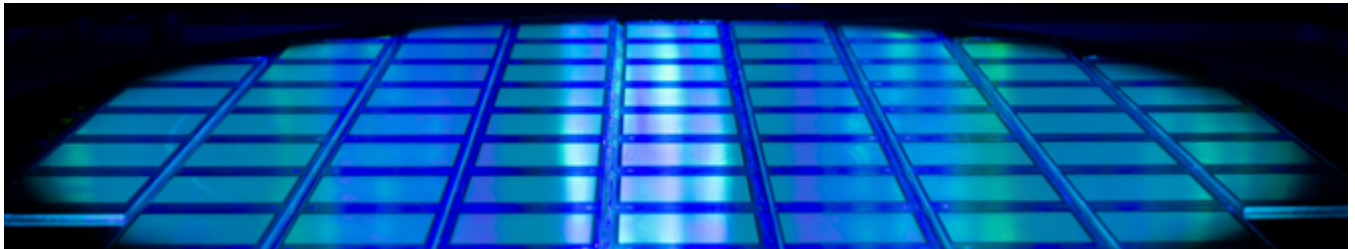
Company	Industry	Revenue ('22) ²	CT Jobs ¹
Electric Boat	Ship Building	\$39.4 billion	15,000
Collins Aerospace	Aerospace & Defense	\$20.6 billion	5,500
Pratt & Whitney	Aerospace & Defense	\$20.5 billion	10,780
ASML	Semiconductors	\$23.2 billion	1,600
Stanley Black & Decker	Tools & Accessories	\$16.9 billion	450
Amphenol	Electronic Connectors	\$12.6 billion	345
Sikorsky	Aerospace & Defense	\$5.4 billion ¹	7,300
Perkin Elmer	Diagnostics & Research	\$3.3 billion	600
OTIS Worldwide	Elevator Systems	\$13.6 billion	1,265
Kaman Aerospace	Aerospace & Defense	\$688 million	1,600
TRUMPF	Machine Manufacturing	\$4.6 billion	760
The Lee Company	Fluid Control Systems	\$781 million	1,000

SOURCES: 1) DATA AXEL, 2023. 2) ELECTRIC BOAT, COLLINS AEROSPACE AND PRATT & WHITNEY, ASML, STANLEY, AMPHENOL, ZOOMINFO - SIKORSKY, FINTEL - PERKINELMER, OTIS, KAMAN, TRUMPF, MACROTRENDS - LEE COMPANY



Highest Tech

Connecticut companies remain at the cutting edge of technology, producing some of the world's most advanced equipment and materials.



ASML

ASML is the world's only producer of EUV (Extreme Ultraviolet) lithography technology used to make semiconductors. This tech is enabled by lasers made at CT's Trumpf.

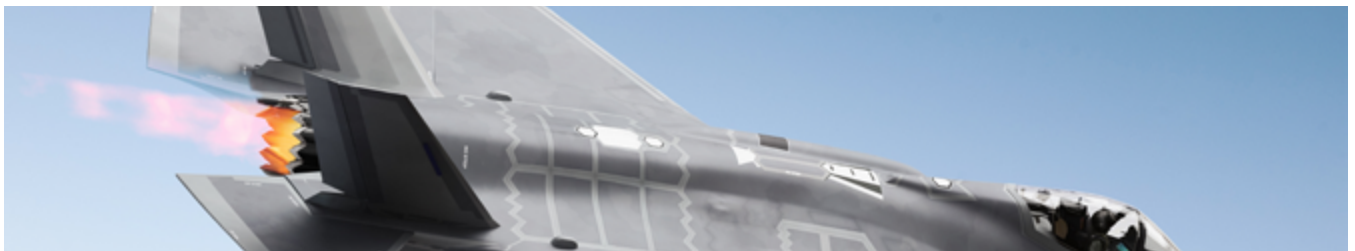
WWW.TRUMPF.COM/EN_US/SOLUTIONS/APPLICATIONS/EUV-LITHOGRAPHY/



GENERAL DYNAMICS
Electric Boat

Electric Boat is building the new, Columbia-class nuclear submarine, the most advanced submarine in the US Navy.

WWW.GDEB.COM/ABOUT/OURSUBMARINES/COLUMBIA/



Pratt & Whitney recently received ARPA-E money for the development of HySIITE, its experimental hydrogen jet engine.

NEWSROOM.PRATTWHITNEY.COM/2022-02-21-PRATT-WHITNEY-AWARDED-DEPARTMENT-OF-ENERGY-PROJECT-TO-DEVELOP-HYDROGEN-PROPULSION-TECHNOLOGY



Support for Manufacturing Statewide

Organizations across the state work together to promote manufacturing in Connecticut.



Venture Capital



Business Growth Consulting



Technological Advancement



State Support



Collaboration and Convening of
CT Manufacturers



World-Renowned Talent
and R&D



Business Recruitment and
Retention



Business Advocacy

CONNECTICUT IS INVESTING IN ADVANCED MANUFACTURING



Connecticut created the **Chief Manufacturing Officer** position to lead the **Office of Manufacturing mission**:¹

- 235,000 manufacturing jobs by 2033, 4% annual increase
- Increase manufacturing GDP 7% by 2029



Manufacturing Innovation Fund²

- 2,174 CT manufacturers assisted
- \$27M matching grants
- 21,929 jobs created/maintained
- 28,619 workers retrained
- 18,351 students in programs



CONNEX Connecticut

- Free and secure searchable database connecting all CT manufacturers and suppliers
- Post and respond to needs, visualize supply chain risk, find qualified manufacturers, discover new business opportunities

SOURCE: 1) CT MANUFACTURING STRATEGIC PLAN 2023 2) MIF ANNUAL REPORT, 2022 3) CT OFFICE OF MANUFACTURING, 2023



Higher Education in Connecticut



School of Engineering & Applied Sciences (Seas) Expansion

ANNOUNCED FEB 2022:

30 faculty slots to SEAS across six departments

New Physical Science and Engineering Building (PSEB)

Renovations of existing facilities

Separating from the Faculty of Arts and Sciences (FAS) into its own distinct organizational structure

\$5 Million Roberts Innovation Fund

ANNOUNCED APRIL 2022:

Focus on new technologies in AI, blockchain, computational modeling, and more

Working with Yale Ventures, the Fund will help faculty commercialize new ideas and bring them to market

Yale Investing in Engineering

"Recruiting and retaining a diverse community of world-class faculty is one of the university's top priorities. Because the quality of our faculty is so critical, we are devoting substantial resources to support its excellence across many different disciplines."

— President Peter Salovey and Provost Scott Strobel



UConn is the **largest producer of STEM graduates** in Connecticut

UConn is a Carnegie Foundation **R1 research university**, a distinction held by only 3% of U.S. institutions of higher education

UConn's Technology Incubation Program (TIP) has helped facilitate **over \$900M in funding for cutting edge start ups** since 2003

FOR MORE INFORMATION, CONTACT:

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LEARN ABOUT CONNECTICUT'S KEY INDUSTRIES AT **ADVANCECT.ORG**

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