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ADVANCED MANUFACTURING

SECTOR SNAPSHOT 2022

ADVANCECT
CONNECTICUT

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ABOUT ADVANCECT

OUR MISSION

AdvanceCT strives to build a place where business, government, higher education and nonprofits come together to implement high impact and inclusive economic development solutions to advance the overall competitiveness of Connecticut.

ECONOMIC DEVELOPMENT

AdvanceCT is a private nonprofit corporation that drives job creation and new capital investment in Connecticut through high-impact economic development including business attraction, retention, and expansion.

WHAT WE DO

AdvanceCT works in close cooperation with the Connecticut Department of Economic and Community Development (DECD), the private sector, and various state, regional, and local partners to promote Connecticut as a place to do business. Our team is dedicated to ensuring that industries expand, residents thrive, and businesses feel at home in our state.

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INDUSTRY OVERVIEW

75,000
ADVANCED MANUFACTURING EMPLOYEES

1,057
ADVANCED MANUFACTURERS

$18+ Billion
YEARLY STATE GROSS DOMESTIC PRODUCT

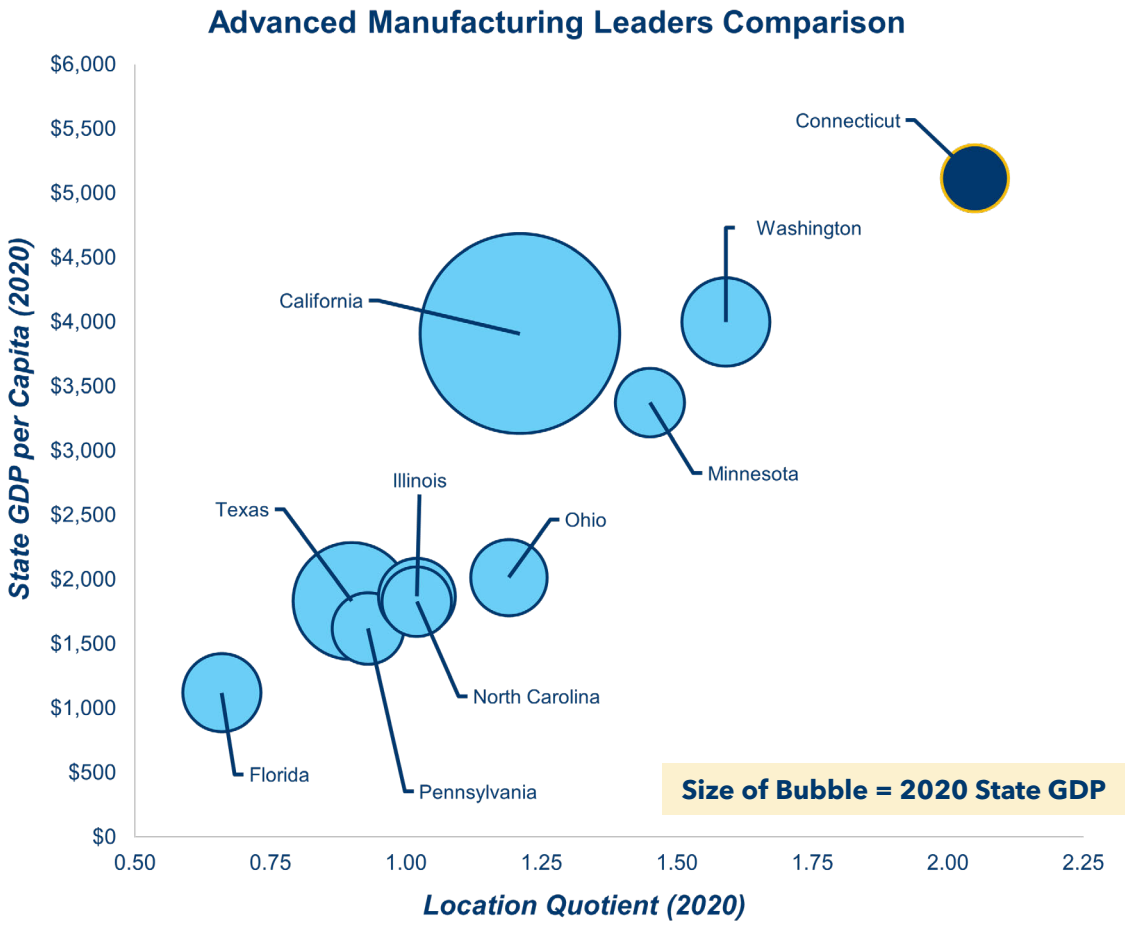
SOURCE: LIGHTCAST, 2020; ADVANCECT CALCULATIONS

ADVANCED MANUFACTURING IN CONNECTICUT

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

SIKORSKY A LOCKHEED MARTIN COMPANY · StanleyBlack&Decker · OTIS · ASML · Amphenol · LEE THE LEE COMPANY

Connecticut Outpaces Advanced Manufacturing Leaders



SOURCE: LIGHTCAST, 2020; ADVANCECT CALCULATIONS.

HIGH PRODUCTIVITY, GREATER VALUE

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

MOST PRODUCTIVE

MOST GEOGRAPHICALLY CONCENTRATED

ON PAR IN SIZE EVEN WITH LARGER STATES

Connecticut Leads the Way

#1 state for
Aircraft Engine and Engine Parts Manufacturing

#2 state for
Ship Building and Repairing

IN BOTH JOBS AND STATE GDP

SOURCE: LIGHTCAST, 2020; ADVANCECT CALCULATIONS. 6-DIGIT NAICS LEVEL INDUSTRIES.

Aircraft Engine & Engine Parts Manufacturing

Nearly **17,000 jobs** and **over $6 billion State GDP** (2020)

Over 18x more jobs than the national average (2020)

29% jobs growth and **52% State GDP growth** (2014-2019)

Ship Building & Repairing

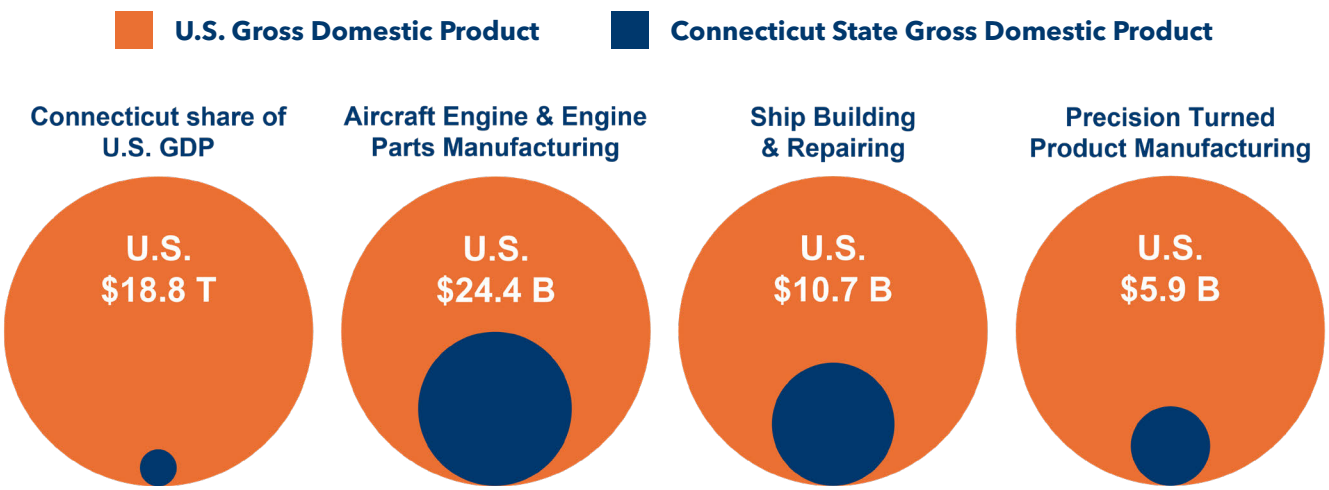
Nearly **12,000 jobs** and **over $1.6 billion State GDP** (2020)

Over 10x more jobs than the national average (2020)

35% jobs growth and **31% State GDP growth** (2014-2019)

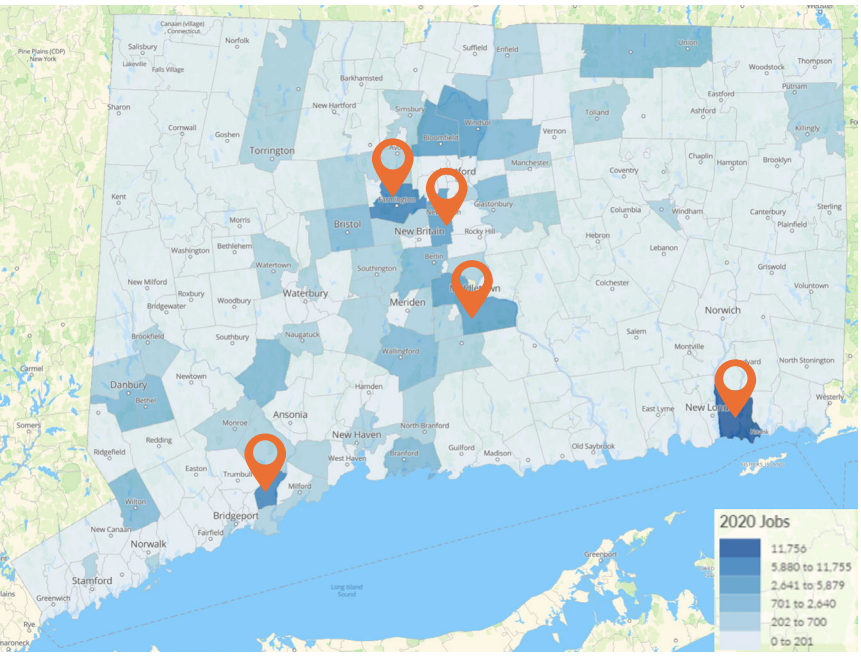
Advanced Manufacturing National Contribution

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



SOURCE: LIGHTCAST, 2020; ADVANCECT CALCULATIONS.

The Heart of Advanced Manufacturing in Connecticut

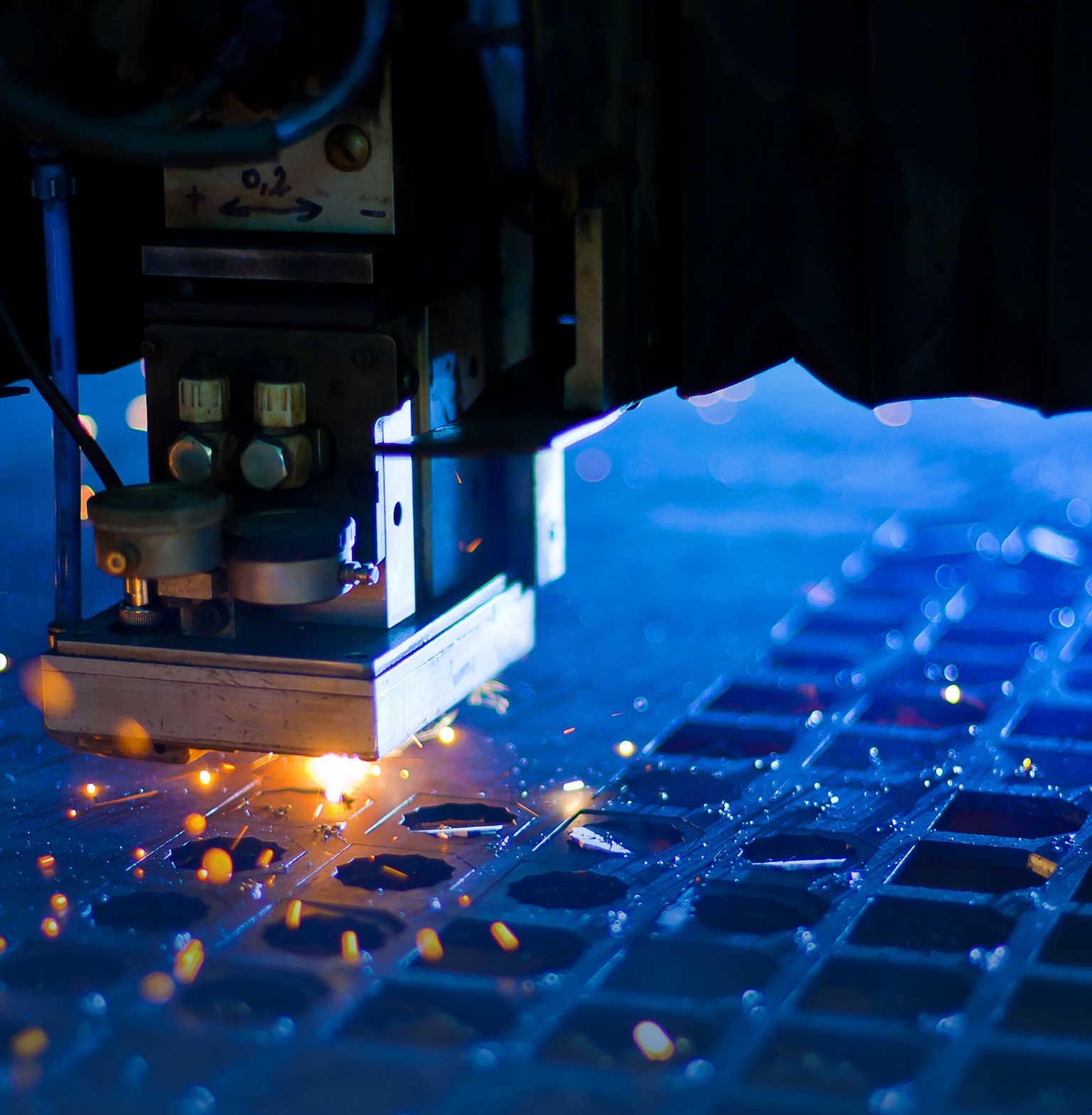


SOURCE: LIGHTCAST, 2020; ADVANCECT CALCULATIONS.

Top 5 ZIP Codes = 32,480 Jobs (2020)

ZIP Code - Town	2020 Jobs	2020 LQ*
06340 – Groton	11,756	20.75
06614 – Stratford	7,574	20.29
06032 – Farmington	5,880	8.97
06111 – Newington	3,301	8.53
06457 – Middletown	3,051	5.56

*Location quotient (LQ) is a way of quantifying how concentrated a particular industry, cluster, occupation, or demographic group is in a region as compared to the nation. Ex: An LQ of 1.5 indicates a 50% higher concentration relative to the nation.



TALENT & WORKFORCE

ADVANCED MANUFACTURING SECTOR SNAPSHOT

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MANUFACTURING TALENT

#3 most educated workforce in the U.S.
(WALLETHUB, 2022)

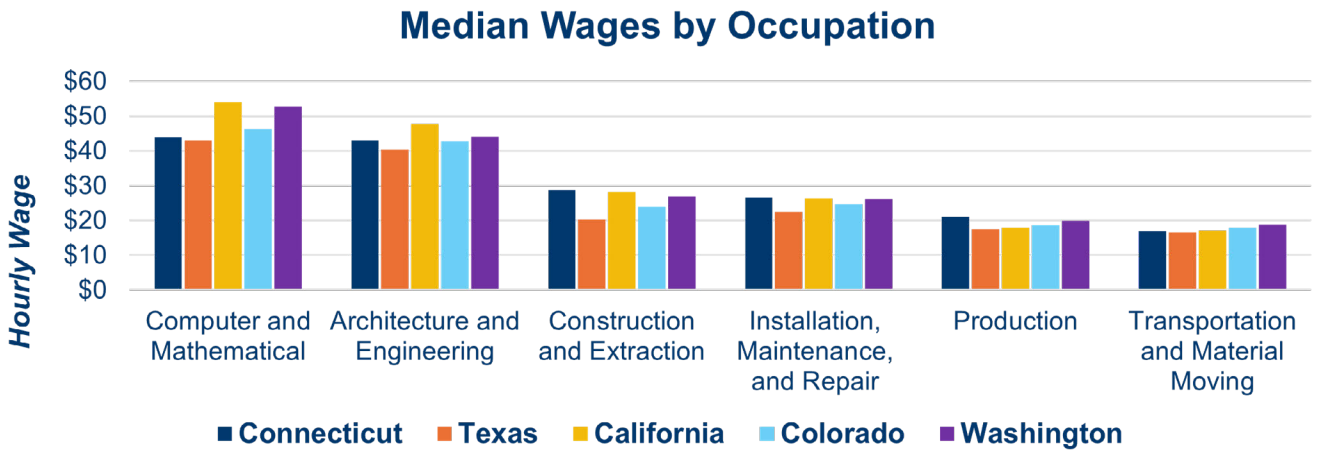
CONNECTICUT HAS QUALITY TALENT...

40% more engineers than the national average
INCLUDING 4.6X MORE NUCLEAR & 2.2X MORE AEROSPACE ENGINEERS

1.3x the national average for data and math scientists.

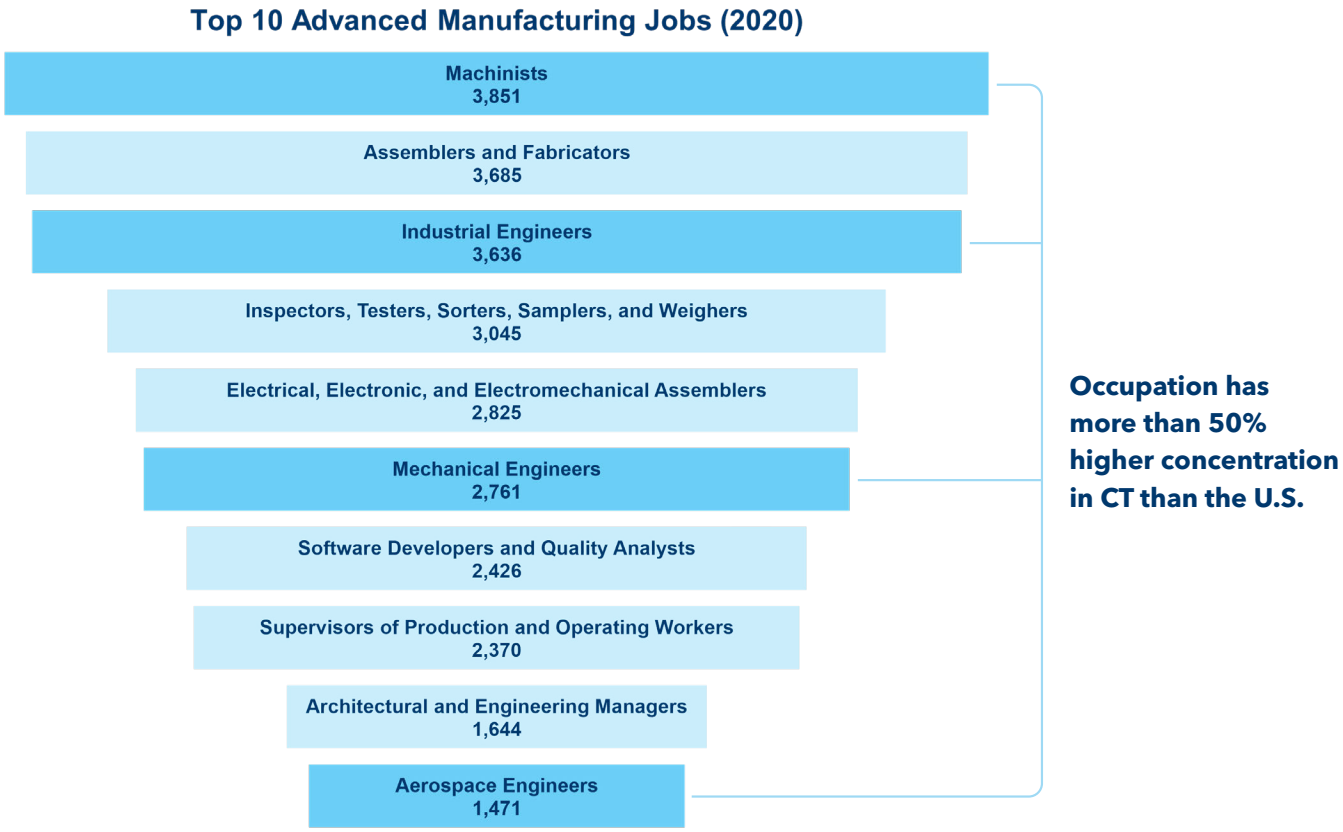
2.3x the national average for machinists and tool and die makers.

...AT COMPETITIVE WAGES



SOURCE: LIGHTCAST, 2020.

More Talent, More Output

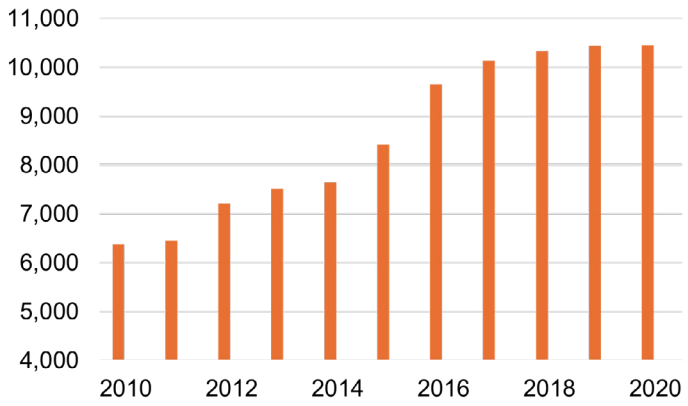


75,000 advanced manufacturing workers producing over **$18 billion in state GDP**

Output per worker is **nearly $250,000**

SOURCE: LIGHTCAST, 2020; ADVANCECT CALCULATIONS.

The Talent You Need to Succeed



STEM completions in Connecticut up 64% since 2010

(LIGHTCAST, IPEDS, 2020; U.S. DHS)

7

state for STEM Location Quotient (LQ)

(LIGHTCAST, BLS/O*NET, 2020)

264,000 STEM Jobs in Connecticut

(LIGHTCAST, BLS/O*NET, 2020)

Connecticut's Workforce

#1 state for college readiness

(U.S. NEWS & WORLD REPORT, 2021)

#3 state for employees with advanced degrees

(U.S. CENSUS BUREAU, ACS 5Y, 2020)

#4 state for knowledge jobs

(INFORMATION TECHNOLOGY & INNOVATION FOUNDATION, 2020)

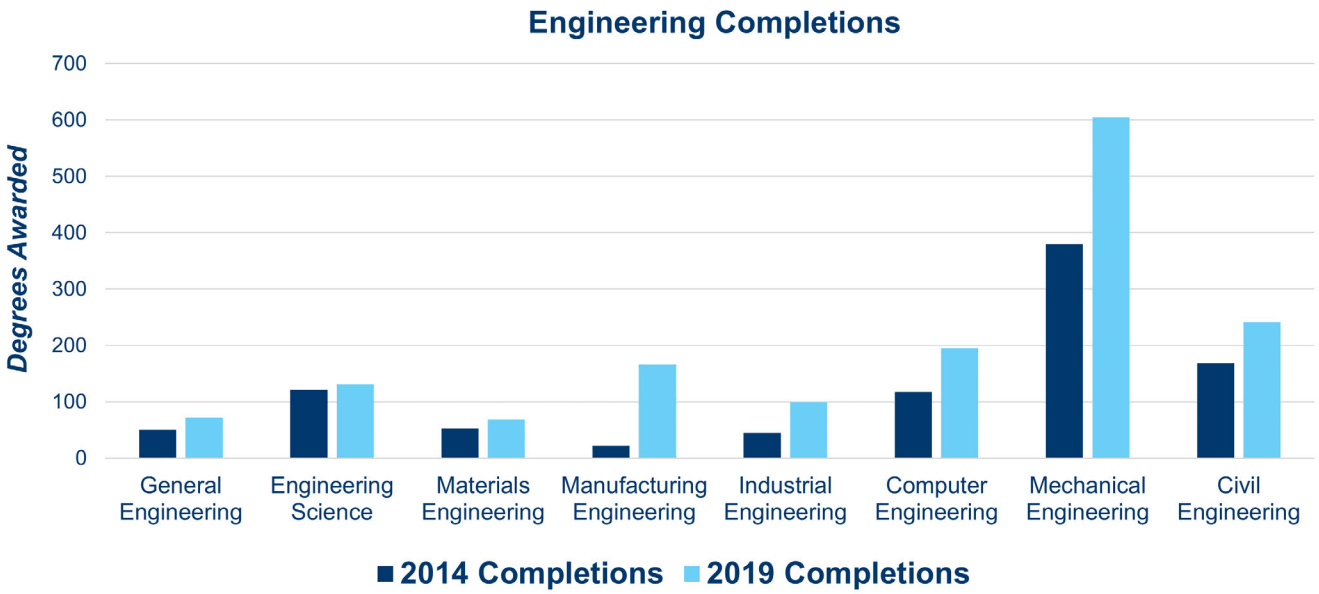
#5 most patents issued per capita

(U.S. PATENT AND TRADEMARK OFFICE, U.S. CENSUS BUREAU, 2020)

#5 for science & engineering doctorates in the workforce

(NATIONAL SCIENCE FOUNDATION, 2021)

Strong Educational Pipeline for Manufacturing Skills



Over 6,000 yearly completions in advanced manufacturing fields

SIGNIFICANTLY OUTPACES U.S. IN TRANSPORTATION AND MATERIALS MOVING (CT +155%; US -24% SINCE 2014)

Over 3,000 yearly completions in engineering related fields

COMPLETIONS GROWING SINCE 2014

SOURCE: LIGHTCAST, 2020; ADVANCECT CALCULATIONS.

LOGISTICS & INFRASTRUCTURE

ADVANCED MANUFACTURING SECTOR SNAPSHOT

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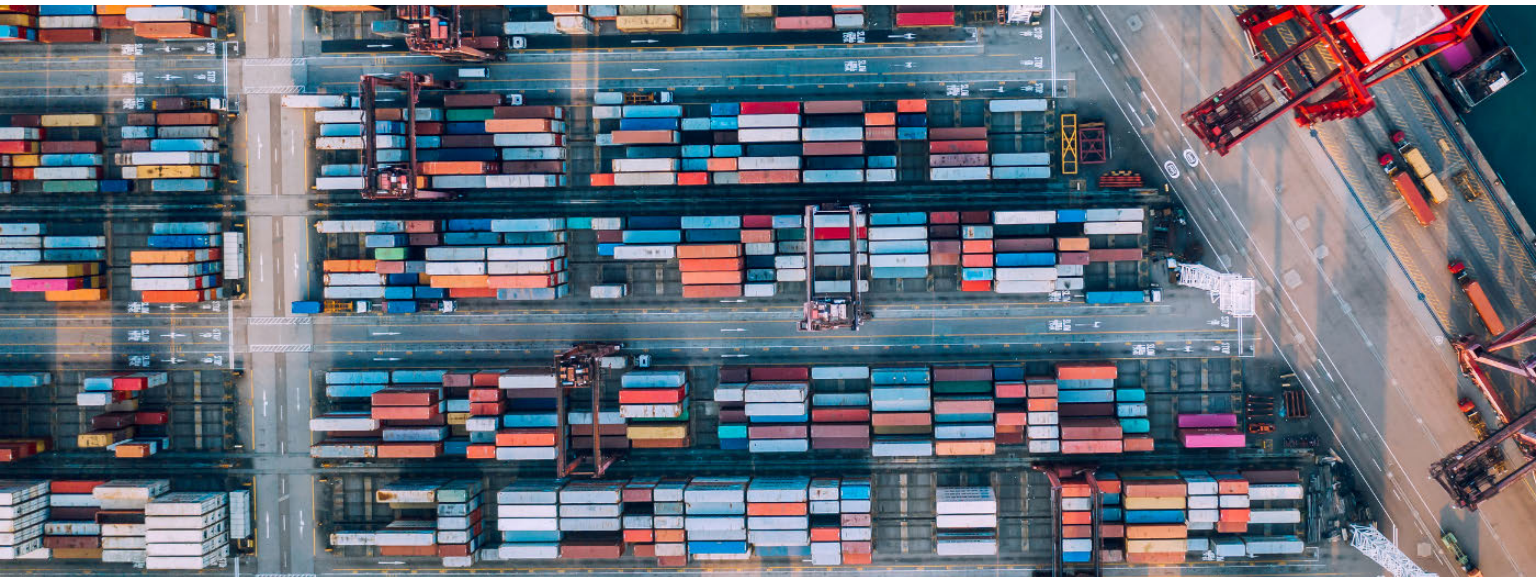
FOREIGN TRADE ZONES



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 County
Litchfield County
Middlesex County
Tolland County
Windham County

#13 for production activity of FTZ's
(FOREIGN TRADE ZONE BOARD, 2020)

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 **3rd Best Airport in the U.S.**

(CONDE NAST, 2021)

AIR

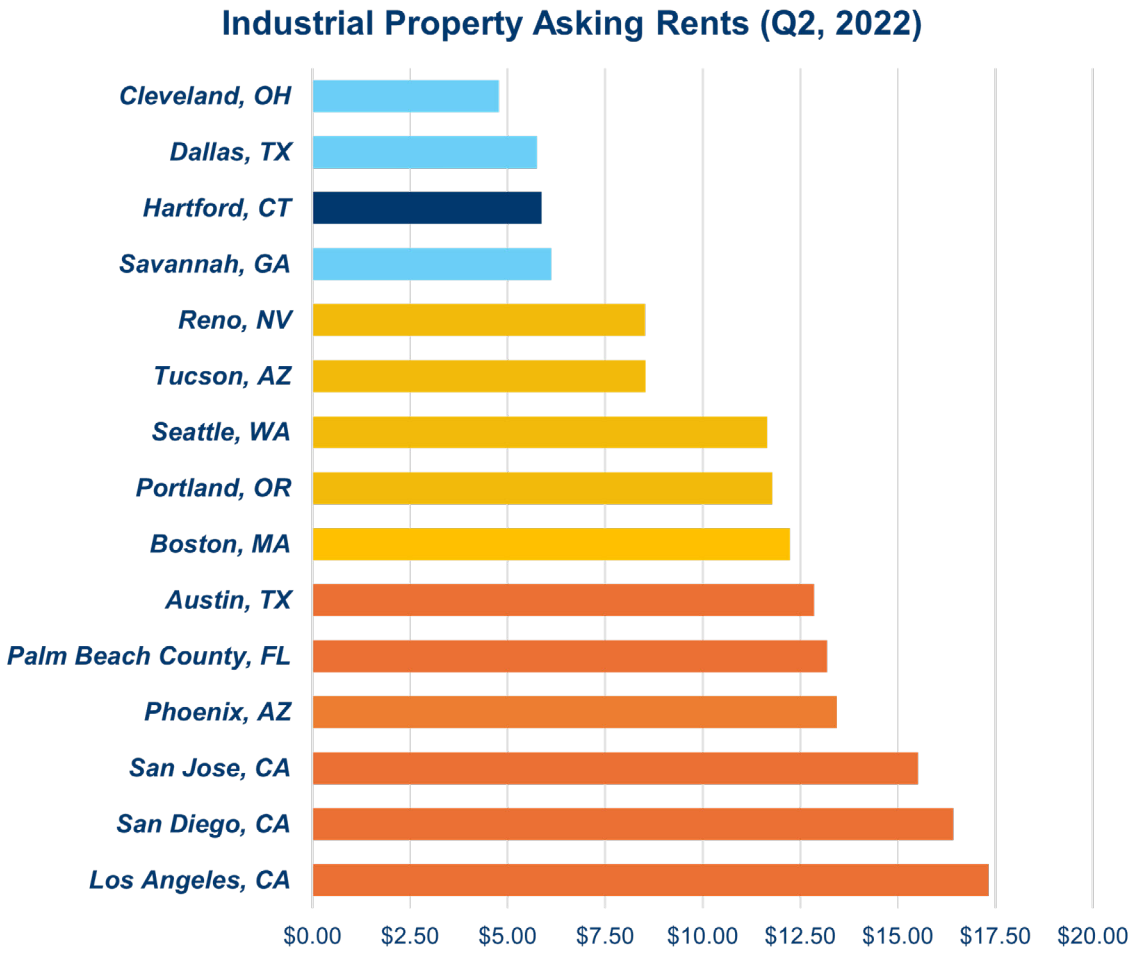
Commercial flights available from Bradley International and Tweed New Haven Regional Airport

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



SOURCE: CUSHMAN & WAKEFIELD, 2021; ADVANCECT CALCULATIONS.

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

THE CONNECTICUT MANUFACTURING ECOSYSTEM

ADVANCED MANUFACTURING SECTOR SNAPSHOT

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Connecticut: A Manufacturing Powerhouse

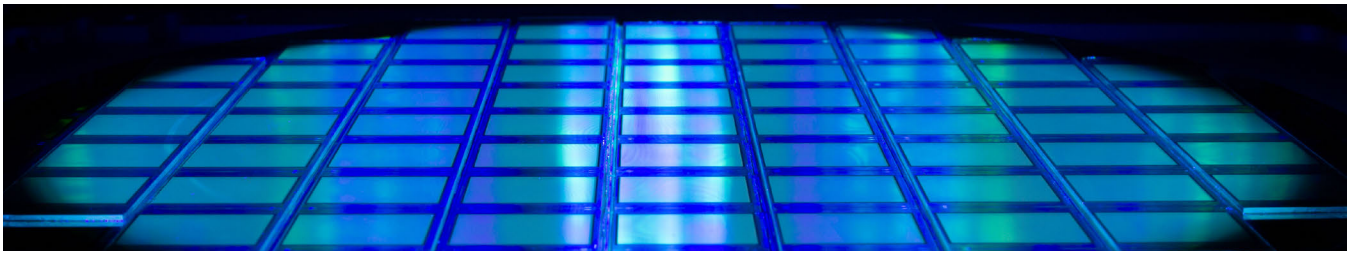
Driven by key employers in high-tech industries, and supported by thousands of companies in the supply chain.

Company	Industry	Revenue ('21)[2]	CT Jobs[1]
Electric Boat	Ship Building	$10 billion	10,000
Collins Aerospace	Aerospace & Defense	$18.4 billion	4,000
Pratt & Whitney	Aerospace & Defense	$18.2 billion	8,300
ASML	Semiconductors	$22 billion	1,700
Stanley Black & Decker	Tools & Accessories	$15.6 billion	500
Amphenol	Electronic Connectors	$10.9 billion	300
Sikorsky	Aerospace & Defense	$5.4 billion[1]	7,000
Perkin Elmer	Diagnostics & Research	$5.1 billion	500
OTIS Worldwide	Elevator Systems	$3.6 billion	400
Kaman Aerospace	Aerospace & Defense	$709 million	1,000

SOURCES: 1) DATA AXEL, 2022. 2) 2021 FINANCIAL DISCLOSURES: ELECTRIC BOAT; STANLEY; KAMAN; AMPHENOL; PERKINELMER; OTIS; COLLINS AND P&W; ASML.

Highest Tech

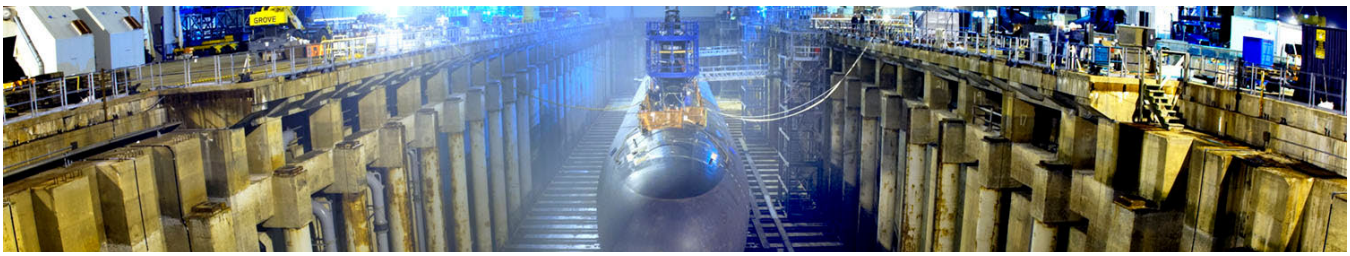
Connecticut companies remain at the cutting edge of technology, producing some of the world's most advanced equipment and materials.



TRUMPF ASML

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

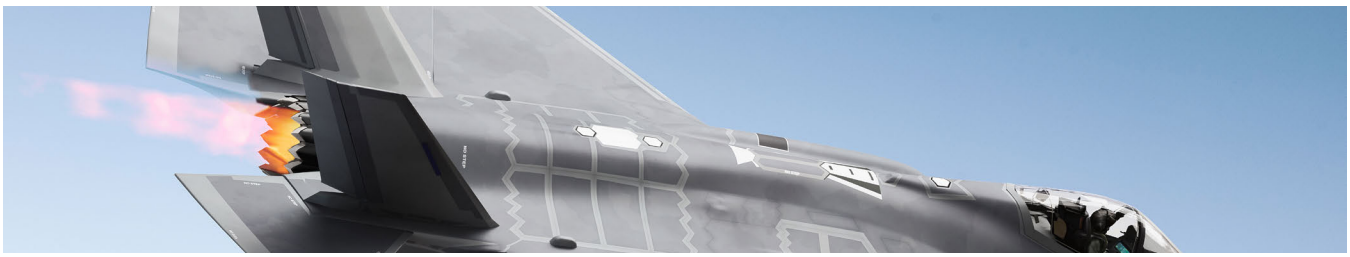
WWW.TRUMPF.COM/EN_US/SOLUTIONS/APPLICATIONS/EUV-LITHOGRAPHY/



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 DEPENDABLE ENGINES

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.

connecticut innovations	CONNSTEP a CBIA affiliate	CAT Connecticut Center for Advanced Technology, Inc.	Connecticut Department of Economic and Community Development
Venture Capital	Business Growth Consulting	Technological Advancement	State Support
MANUFACTURE	UCONN UNIVERSITY OF CONNECTICUT Yale	ADVANCECT CONNECTICUT	cbia
Collaboration and Convening of CT Manufacturers	World-Renowned Talent and R&D	Business Recruitment and Retention	Business Advocacy

CONNECTICUT IS INVESTING IN ADVANCED MANUFACTURING

In 2019, Connecticut created the **Chief Manufacturing Officer** position. This position actively collaborates with Connecticut manufacturers to develop policies that improve Connecticut's competitiveness.

In 2020, **the Governor's Workforce Council** was created to set strategy and policy recommendations to maintain a highly-trained and competent workforce. The **Office of Workforce Strategy** is working to implement the key components of the GWC strategic plan.

Connecticut Community Colleges continue to lead the way in workforce development, with 10 campuses across CT offering **Advanced Manufacturing certificates.**

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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Director, Business Development, Advanced Manufacturing
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LEARN ABOUT CONNECTICUT'S KEY INDUSTRIES AT **ADVANCECT.ORG**

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