

LIFE SCIENCES IN 495/METROWEST: EXISTING IMPORTANCE & FUTURE POSSIBILITY



February 15, 2018

Special thanks to our event host:



Definition of Life Science

Any one of the branches of science concerned with the structure and behavior of living organisms, such as biology, botany, zoology, physiology, or biochemistry.

Definition of Life Science for Massachusetts Economic Development

1993 - Governor Weld's *Choosing to Compete: A Statewide Strategy for Job Creation and Economic Growth*

2002 – Governor Swift's *Toward a New Prosperity: Building Regional Competitiveness Across the Commonwealth*

2011 – Governor Patrick's *Choosing to Compete in the 21st Century: An Economic Development Policy and Strategic Plan for the Commonwealth of Massachusetts*

2015 – Governor Baker's *Opportunities for All: The Baker-Polito Strategy & Plan for Making Massachusetts Great Everywhere*

Perceptions of Massachusetts in Life Sciences

- “The Commonwealth is now arguably the biotech capital of the world.” – Rafael Reif, President of M.I.T.
- “Conscious of its role as the world’s life sciences epicenter, the Greater Boston area leads by example. The Massachusetts Life Sciences Center ... offers the nation’s most comprehensive set of incentives and programs, and it helps to create jobs and support industry advancement.”
- “Human capital is what keeps the wheels turning at life sciences companies, both big and small, and it is vital to growth”

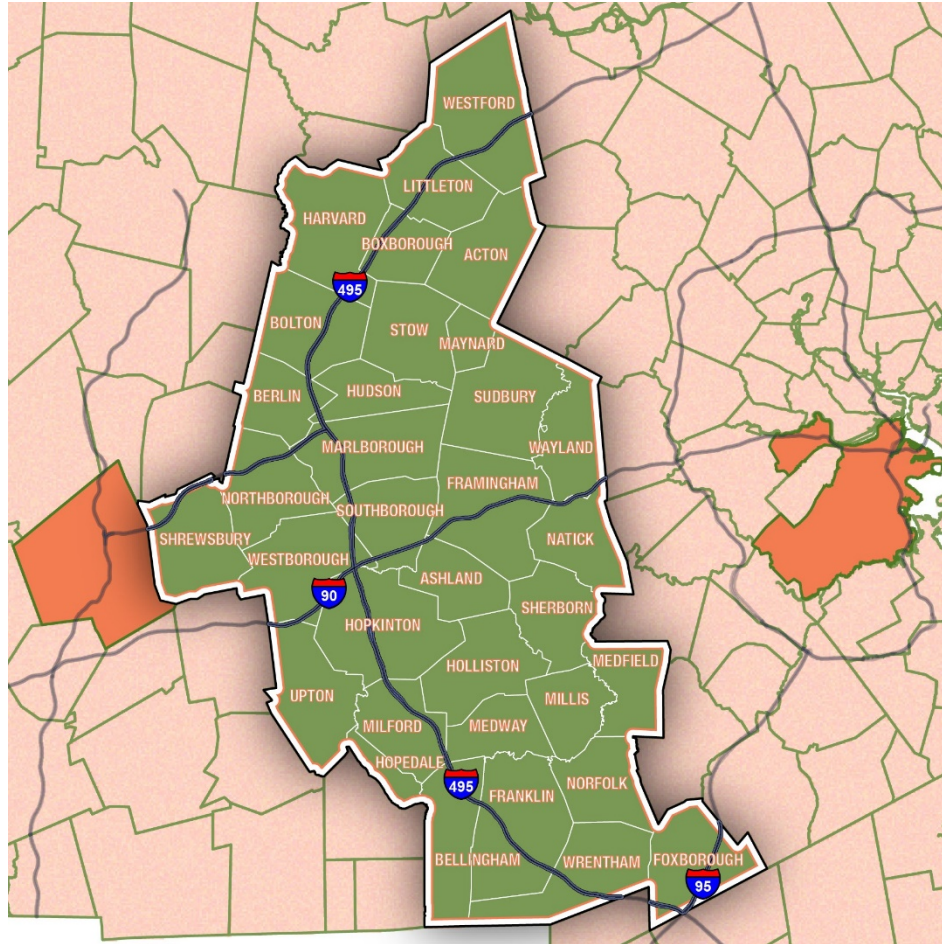
U.S. cluster rankings

Rank	Cluster	Weighted score
1	Greater Boston	82.3



Life Sciences

495/MetroWest: Affordability & Access



- Commercial real estate average a 37% discount when compared to Boston
- Availability of skilled talent
- Proximity to Boston, Cambridge, and Worcester's life science clusters
- Net importer of labor
- Access to major highways for north-south and east-west travel of staff, customers, and resources
- Served by commuter rail lines, Regional Transit Authorities, and other shuttles

DEAN COLLEGE



Framingham
State University



Cummings School
of Veterinary Medicine

495/MetroWest: An Education Crossroads

- Strongly skilled workforce with 54.82% of the residents having a bachelor's degree or higher
- In fall of 2018 Framingham State University is launching an MBA program with a concentration in biotechnology operation
- MassBay Community college is proposing a new \$33.5 million facility collaboration with Framingham State University to support Health Science Programs
- Tufts University's Cummings School of Veterinary Medicine has over 40 companies annually as research, development and testing clients, and is developing the Grafton Science Park, a pre-permitted 84 acre park of up to 702,000 square feet.

The MassBio rates municipalities based on their friendliness and ability to accommodate the life science industry

Higher ratings indicate greater services available and greater willingness from the community to work with life science firms

Ratings include factors such as life science-adapted zoning regulations, adequate utility services, available real estate, established life science facilities, and relevant municipal regulations

For more information, and to apply for a rating for your community, please visit the Massachusetts Biotechnology Council at <https://www.massbio.org/why-massachusetts/supercluster/bioready-communities>

495/ MetroWest Communities Are BioReady!

495/MetroWest: BioReady Communities

Key:



= Platinum Ranking: Framingham, Franklin Grafton, Marlborough, Westborough



= Gold Ranking: Hopkinton, Shrewsbury

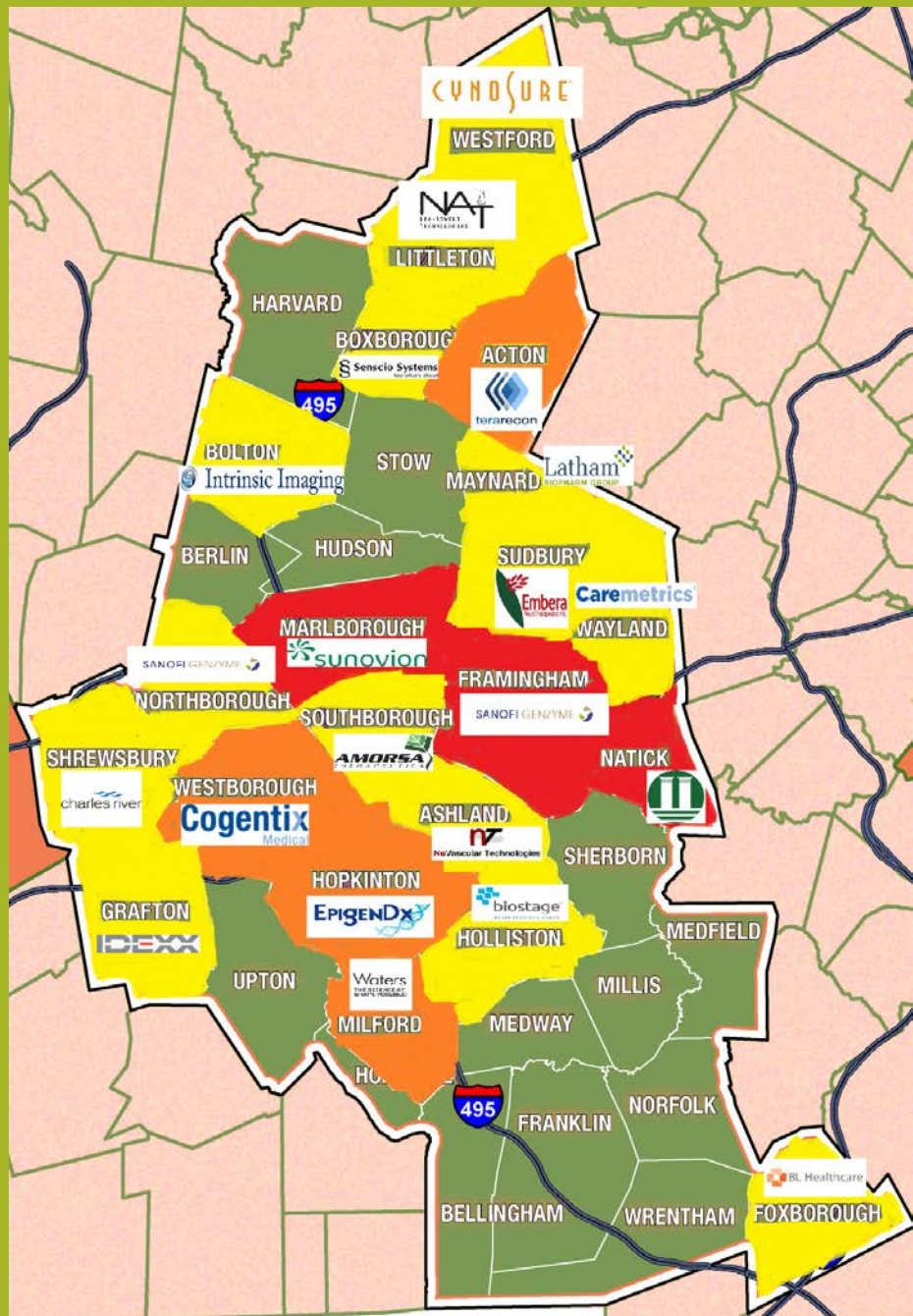


= Silver Ranking: Millis, Norfolk



= Bronze Ranking: Ashland, Holliston





495/MetroWest: Life Science Firms

- More than 90 life science firms
- 21 communities host life science firms
- Hotspots include:
 - Framingham (12)
 - Natick (12)
 - Marlborough (16)

Key:

- = 1-4 Life Science Firms
- = 5-9 Life Science Firms
- = 10+ Life Science Firms



Pictured above: Boston Scientific's headquarters in Marlborough



Pictured above: Sanofi Genzyme's facility in Framingham

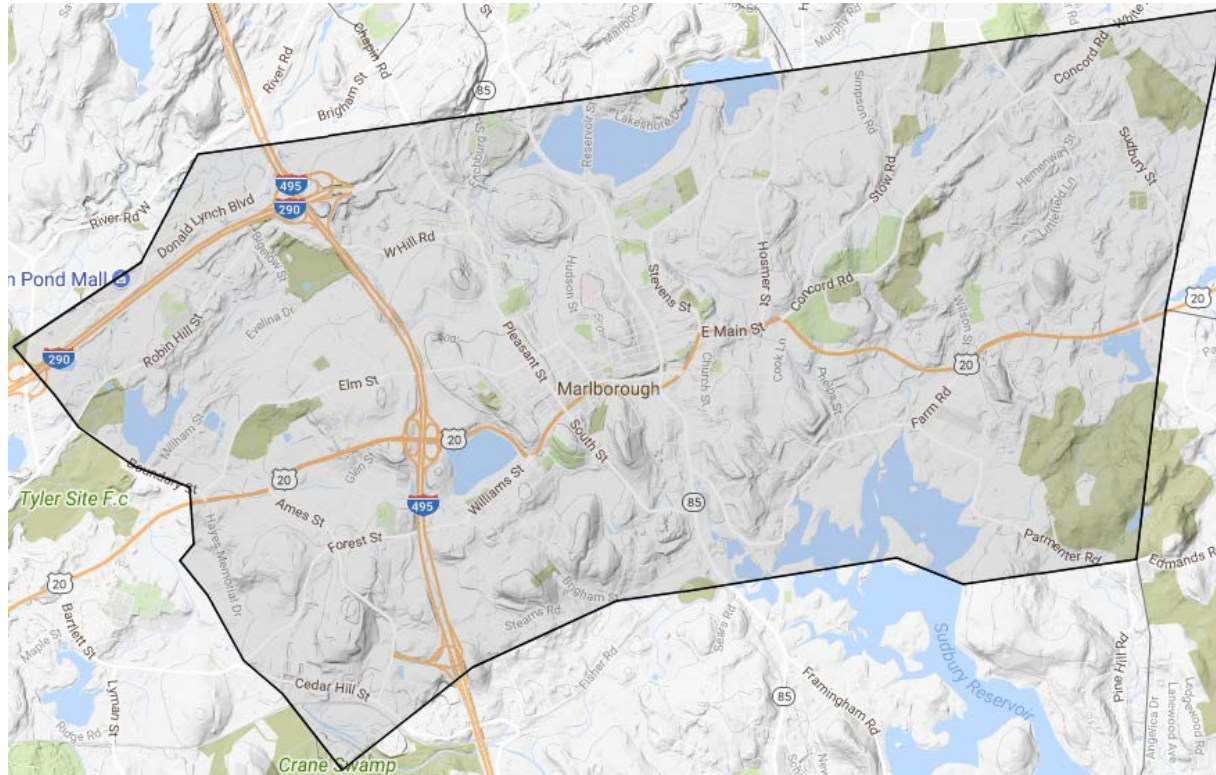
495/MetroWest Hot Spots: Marlborough

AMERICA

Boston
Scientific

CeQur®

CURADEL



BioReady Ranking: Platinum

DIGILAB®

GE Healthcare
Life Sciences

Oxford
Immunotec

VERAX
BIOMEDICAL

Theracos, Inc.

SUNOVION
Innovation today, healthier tomorrows

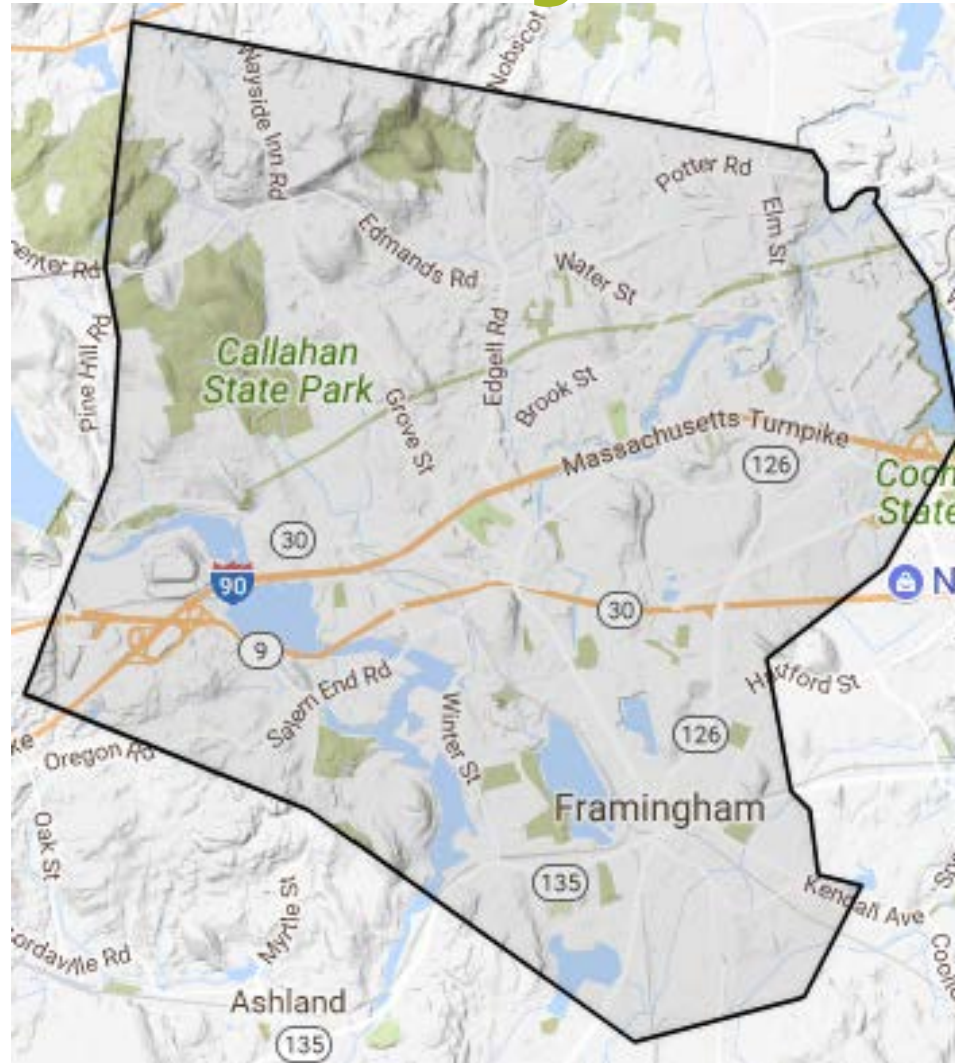
RXi Pharmaceuticals
Next Generation in RNAi®

pharma
models

HOLOGIC®
The Science of Sure

495/METROWEST
PARTNERSHIP
Leaders for Regional Prosperity

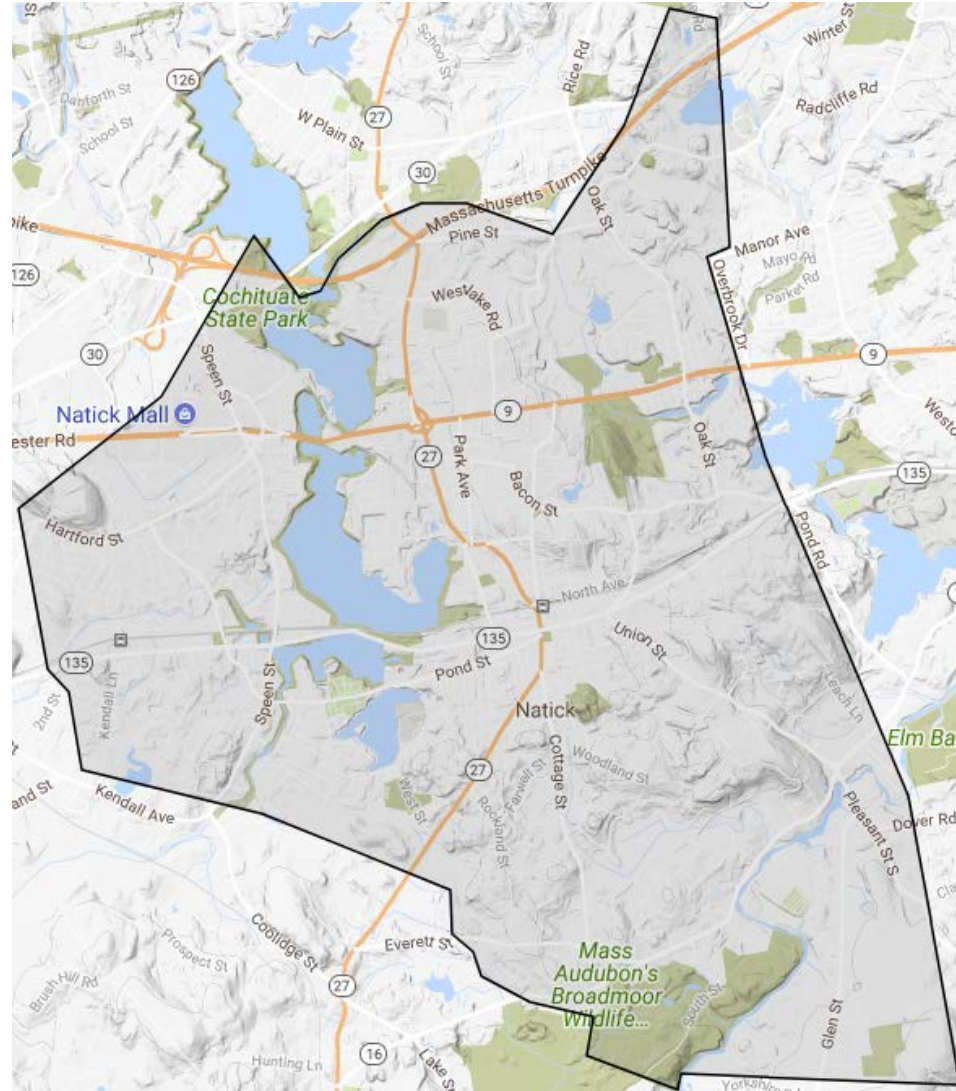
495/MetroWest Hot Spots: Framingham



BioReady Ranking: Platinum



495/MetroWest Hot Spots: Natick



495/MetroWest: Life Science Employment Numbers

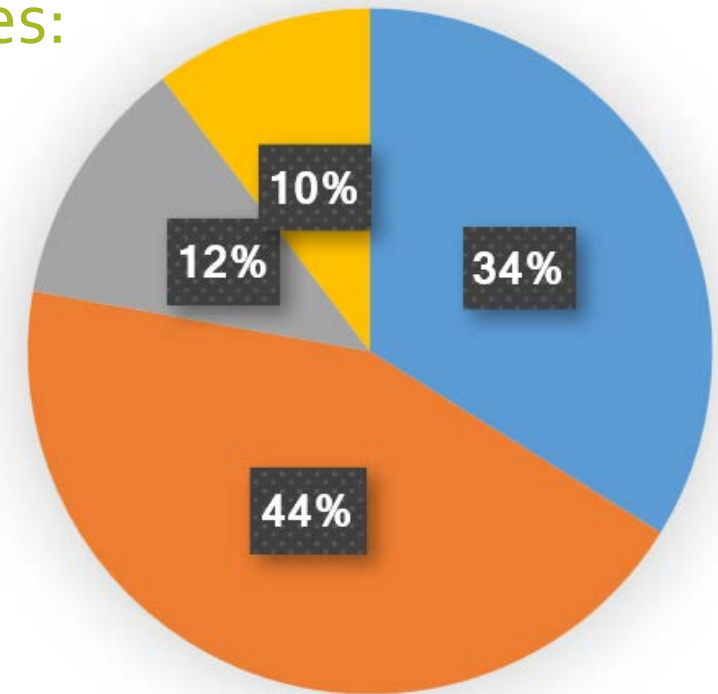
Life Science industries are a vital part of the 495/MetroWest region with a total of **11,624 jobs**, divided into four categories:

Electromedical Manufacturing (5,108)

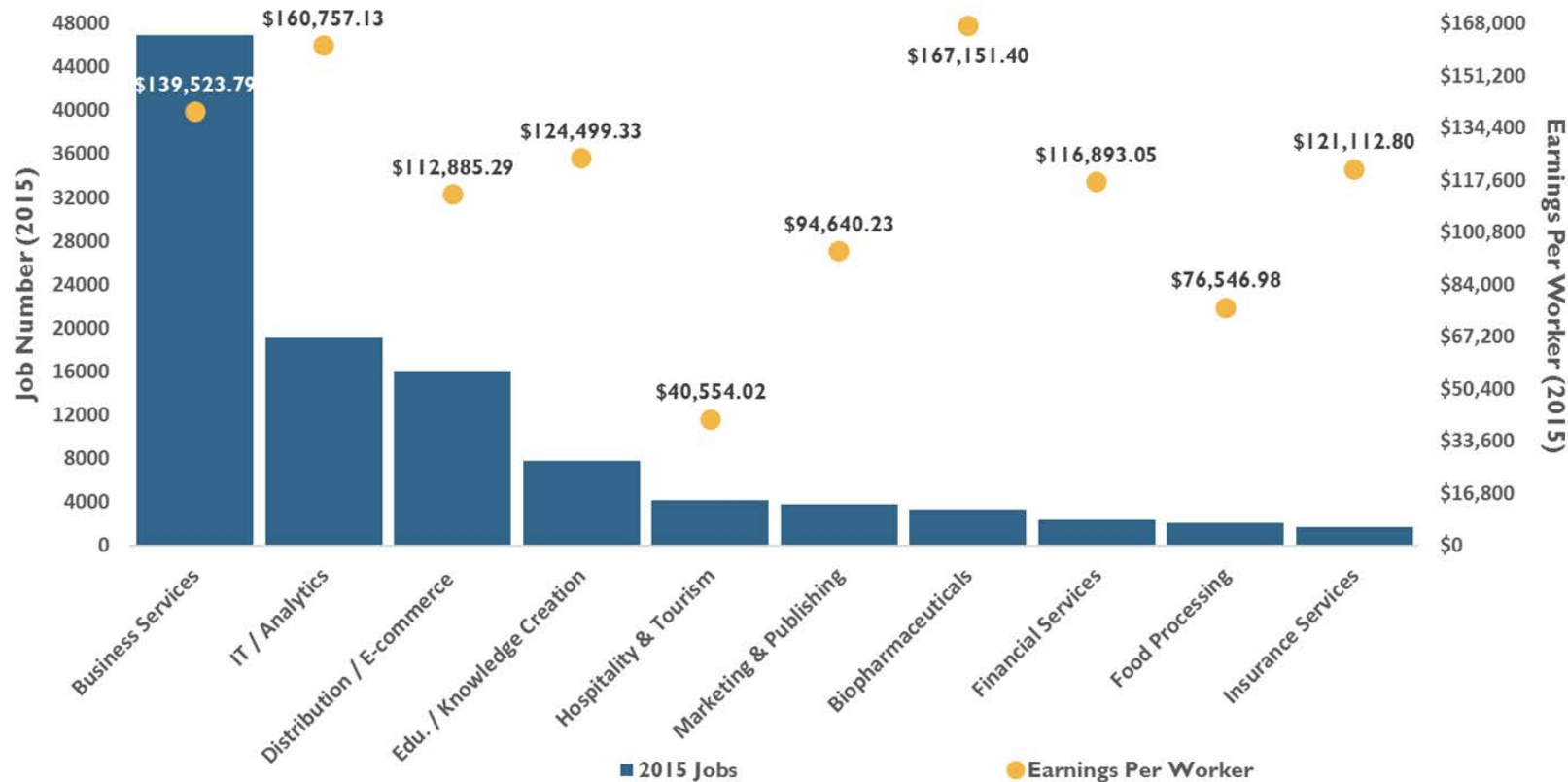
**Pharmaceutical & Medicine
Manufacturing (3,937)**

**Medical Equipment & Supplies
Manufacturing (1,375)**

Medical & Diagnostic Laboratories (1,204)



495/MetroWest: Economic Benefits of Life Science



Biopharmaceutical workers have average annual salaries over \$167,000

From 2010 – 2015

- 23% Growth in Biopharmaceutical jobs
- 37% Growth in Medical Device jobs

Thanks to UMass Dartmouth Public Policy Center for data and graphic

495/MetroWest: Importance of Life Science to the Economy

	495/MetroWest	Massachusetts
Biopharmaceuticals	11.16	3.18
Education and Knowledge Creation	2.27	5.97
Financial Services	1.07	2.81
Fishing and Fishing Products	0.18	5.81
Footwear	2.98	6.30
Information Technology and Analytics	15.14	5.59
Insurance Services	1.21	2.99
Jewelry and Precious Metals	0.31	3.99
Marketing, Design, and Publishing	2.18	2.59
Medical Devices	4.50	3.67
Recreational and Small Electric Goods	3.40	2.20

- Life Science is the second most important industry to the 495/MetroWest regional economy, second only to Information Technology
- 495/MetroWest relies on Life Science to a much greater degree than Massachusetts as a whole

Location Quotient shows the concentration of a particular industry cluster, so in the case of Biopharmaceuticals, MA has 3 times the concentration of Biopharma than the US and 495/MetroWest has 11 times the concentration compared with the US.

Thanks to UMass Dartmouth Public Policy Center for data and graphic

495/MetroWest: Ongoing Success



Photo from the MetroWest Daily News' Art Illman



Photo from the Boston Globe

Framingham:
SANOFI GENZYME 

Acton:
Insulet 

495/MetroWest: Ongoing Success



LakePharma Announces Expansion and New MicroBiomufacturing Center in Hopkinton, MA

Added On: 2018-02-12

- 69,000 SF of lab, office space and infrastructure for GMP biologics manufacturing for Phase 1 clinical trials and support growth in LakePharma's assay development, bioanalytical, process development and QC services with plans to add approximately 100 positions by 2020.

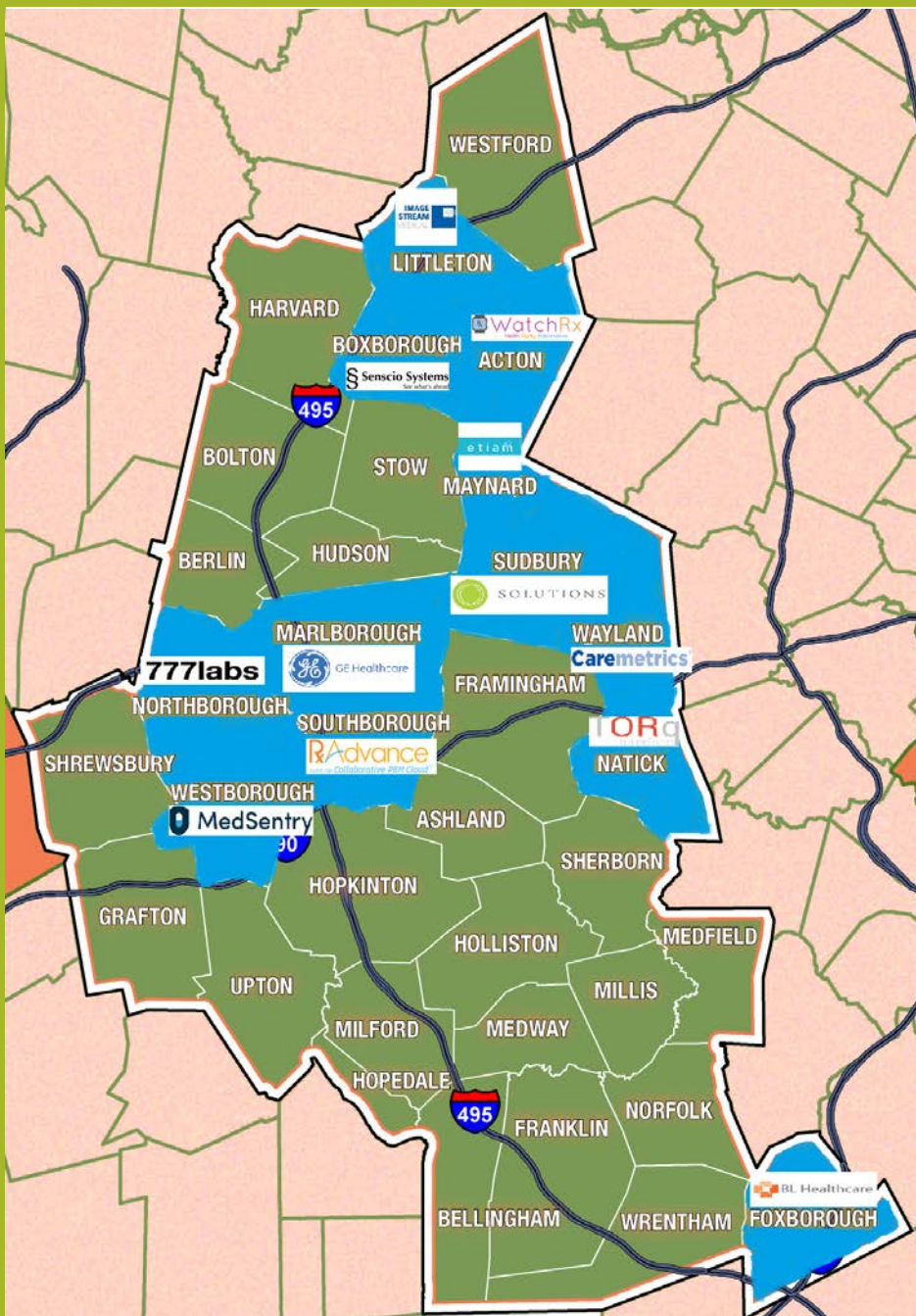
“The new facility is ideal for LakePharma as it provides the ability to offer fully integrated contract development and manufacturing organization (CDMO) capabilities,” said Hua Tu, LakePharma's CEO. **“Hopkinton is in close proximity to Cambridge/Boston, where we have a large cluster of clients, and we believe that this facility will increase our ability to serve their product development and manufacturing needs.**

The State of Digital Health: The Union of Life Science and Information Networks

- Digital Health utilizes information technology to improve healthcare delivery, quality, and efficiency.
- Massachusetts is home to 13 of the 100 largest health information technology firms in the country
- Prioritized as an emerging industry cluster in the state's economic development plan, *Opportunities for All*
- Massachusetts Digital Health Initiative is a public-private partnership establishing our state as a leading ecosystem for digital health innovation, driving economic impact and improving healthcare cost and quality

"The integration of data analytics into the life sciences industry reveals how these companies are beginning to act more like high-tech companies as well as the different types of employees they will seek out going forward." – JLL Life Sciences Report





495/MetroWest: Digital Health

- Home to at least 12 digital health firms
- Range in size from start-ups to headquarters for international firms
- Builds on regional strength in IT
- IT average salary over \$160,000

495/MetroWest Massachusetts		
Information Technology and Analytics	15.14	5.59



GE Healthcare

R&Advance
runs on Collaborative PBM Cloud

777labs



MedSentry

Senscio Systems
See what's ahead.

eClinicalWorks
Improving Healthcare Together

etiam

TORq
Interface

495/METROWEST
PARTNERSHIP
Leaders for Regional Prosperity

495/MetroWest: A Dynamic Region With Room for Expansion

495/MetroWest has the perfect combination of factors for Life Science & Digital Health, including:

- An growing industry base with nearly 100 firms
- A strategic location between Boston and Worcester
- Large tracts of affordable real estate, including existing labs
- A skilled workforce with many strong educational establishments
- A robust transportation network for moving goods and employees
- Numerous incubators and wet labs
- Committed municipal governments and cooperative state agencies

Thank You to our Panel of Experts for their Insights:



SECRETARY JAY ASH

Massachusetts Executive Office of Housing & Economic Development

ROBERT COUGHLIN, PRESIDENT & CEO
Massachusetts Biotechnology Council

MEREDITH HARRIS, EXECUTIVE DIRECTOR
Marlborough Economic Development Corporation

TRAVIS MCCREADY, PRESIDENT & CEO
Massachusetts Life Science Center