



BOSTON LIFE SCIENCES 2020

CBRE

New Frontiers; a Prescription for Change

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INTRODUCTION

Boston's first nickname dates to the early 19th century when the city was referred to as 'The Athens of America.' This moniker aptly expressed the young city's spirit of intellectualism and eager pursuit of knowledge. Today, Boston continues to demonstrate the prescience of this title as the region's universities, hospitals, and private enterprises play a leading role in the rapidly expanding field of life sciences.

The Kendall Square neighborhood of Cambridge has become internationally renowned for its density of life sciences companies whose growth is fueled by adjacent universities and venture capital firms. As this field has grown exponentially over the past decade, the Boston region has adapted by making room for life sciences occupiers outside of East Cambridge where over 7 million sq. ft. of lab space has been leased since 2015. Over the same time period, 1 million sq. ft. of lab space has been leased in other parts of Cambridge. Nearly 1.3 million sq. ft. has been leased in Boston's rapidly developing Seaport District, and approximately 1.5 million sq. ft. has been leased in the city's western suburbs along the Route 128 corridor. With Kendall Square running short on available space after a decade of unstoppable growth, leasing velocity is accelerating in adjacent and peripheral markets.

Future developments are underway in rezoned stretches of West Cambridge, across the City of Boston, in the dense near-in suburbs of Somerville and Watertown, and in the office parks of Waltham and Lexington. Funding levels from the National Institutes of Health (NIH) and private investors continue to grow, and the area's universities provide a steady pipeline of qualified degree holders. With so much intellectual and monetary capital in the region supported by an unmatched labor force and academic pipeline, the Boston region is likely to be the country's life sciences leader for the foreseeable future. The region's ability to find room for growth demonstrates the versatility and sustainability of the life sciences presence in The Athens of America.

Life Sciences in Cambridge: A History

In 1976, the nascent life sciences industry was put on trial at Cambridge City Hall when professors from Harvard University and the Massachusetts Institute of Technology (MIT) debated a proposed ban on DNA experimentation—the origin of modern life sciences research—with the city council at a public hearing. The council ultimately allowed life sciences research to proceed under a regulatory framework. Regulation was a form of acknowledgment for an industry then considered an unknown quantity and established Cambridge as a place where the life sciences could root themselves with a degree of certainty.

The life sciences industry flourished in Cambridge, benefitting from the presence of professional researchers at nearby universities and teaching hospitals. NIH grants, and later, venture capital, began to flood the region in ever-greater quantities and accelerated Cambridge's climb to life sciences dominance. Today, there are over 500 life sciences and biotechnology companies in Boston and Cambridge with over 100 more in the suburbs. The early days of suspicion have been replaced by robust government and institutional support for Massachusetts' global leadership in the life sciences.

Life Sciences Looks For A Place In The Suburbs

The epicenter of the greater Boston life sciences industry is Kendall Square in East Cambridge. This neighborhood, approximately one square mile in size, contains dozens of biotechnology companies and research institutions and countless other technology, information, and venture capital firms. MIT is next door and Harvard University is two MBTA stops away. The network effect of so many interconnected actors in an area of this size cannot be understated. Since 2010, approximately 33% of all life sciences company acquisitions and mergers in Massachusetts involved companies based in Cambridge.

With so much interest in one area, Kendall Square has struggled to keep pace with the demand. As of Q4 2019, vacancy in Cambridge was hovering at 1.5%, with 1.4 million sq. ft. of new product expected to come online in East Cambridge in the next three years. The squeeze has impacted companies at all stages ranging from startups looking for incubation space to major players looking to expand into modern, Class A buildings. With available space in Kendall Square at a premium, new life sciences clusters are emerging in Boston's Seaport and in the suburbs that fringe Cambridge to the west and north. Suburban leasing has proven to be a critical relief valve for the region with higher rates of availability and over 1.6 million sq. ft. of new and converted product expected to come online over the next two years – exceeding the pace of development in East Cambridge. Furthermore, much of this suburban inventory is concentrated in the bedroom communities where life sciences' qualified talent resides, allowing for a greater variety of work-life balance options for this talent pool.

CAMBRIDGE



SUBURBS WEST



BOSTON SEAPORT



SUBURBS NORTH



Boston Market Data: Lab Space Statistics

TOTAL INVENTORY (SF)

Boston	8,007,373
Cambridge	14,690,908
Western Suburbs	5,112,549
Northern Suburbs	1,899,372
TOTAL	29,710,202

TOTAL VACANCY RATE

Boston	2.0%
Cambridge	1.5%
Western Suburbs	8.6%
Northern Suburbs	7.8%
TOTAL	3.3%

AVERAGE ASKING RENT 2019 (NNN)

Boston	\$79.74
Cambridge	\$98.28
Western Suburbs	\$50.67
Northern Suburbs	\$38.00
TOTAL	\$66.67

2019 LEASING ACTIVITY (SF)

Boston	842,206
East Cambridge	1,452,572
Mid & West Cambridge	479,159
Western Suburbs	366,318
TOTAL	3,140,255

LAB SPACE UNDER CONSTRUCTION (SF)

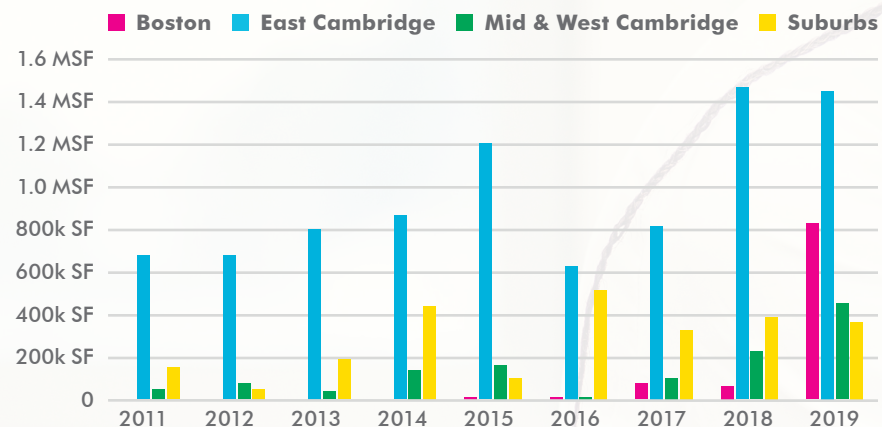
Boston	831,000
East Cambridge	1,362,420
Mid & West Cambridge	283,000
Western Suburbs	1,129,795
Northern Suburbs	289,000
TOTAL	3,895,215

Sources: CBRE Research, Data as of Q4 2019

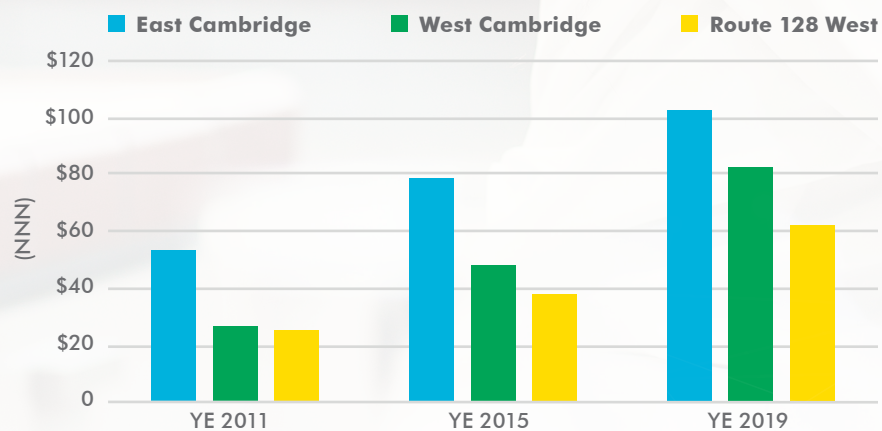
SUBURBAN LEASING SURGES

Years of aggressive leasing in Kendall Square flattened leasing across Boston's submarkets in 2019. Many startup life sciences companies that struggled to muscle in on Kendall Square's competitive leasing environment have been lured to peripheral submarkets by new-construction or newly renovated space and by the life sciences ecosystems created by early adopters. The responsiveness of suburban markets to create new lab space as Kendall Square has struggled to keep up has allowed life sciences tenants to expand this industry's footprint further from the region's core.

BOSTON LIFE SCIENCES LEASING ACTIVITY



EFFECTIVE RENT GROWTH SPREADING FROM KENDALL SQUARE



Historical Growth

Leasing velocity outside of Boston and Cambridge has accelerated from a three-year average of 129,532 sq. ft. between 2011 and 2013 to 362,184 sq. ft. between 2017 and 2019 with nearly all of this activity occurring within the western and northern suburbs of Watertown, Waltham, Lexington, Bedford, Burlington, and Woburn. The westward expansion of life sciences leasing has been accompanied by the premiums that they command for space. While triple net (NNN) effective rents in East Cambridge have nearly doubled since 2011 to over \$100 per sq. ft., West Cambridge effective rents have tripled to over \$80 per sq. ft. and effective rents in the Route 128 West corridor have more than doubled to over \$60 per sq. ft. These rent trends are the clearest sign yet of demand rippling west from Kendall Square. NNN effective rents in northern suburbs like Bedford and Woburn have averaged \$41.90 per sq. ft. since 2016.

Current Asking Rents

While the suburbs offer a variety of leasing types and a range of environments from Watertown's walkable downtown to Waltham's office parks, the region's core remains singularly attractive to life sciences tenants of all sizes and stages. This centrality comes with a high premium. In Q4 2019, the NNN average asking rent in Cambridge was \$98.28 per sq. ft. compared to \$79.74 per sq. ft. in Boston and \$50.67 per sq. ft. in the Route 128 West submarket. Furthermore, Route 128 West property owners are asking 36% more on average for their lab space than for office space. This lab space premium widens to roughly 70% in the near-in northern suburbs.

Source: CBRE Research Data as of Q4 2019; Leasing Data excludes renewals

INCENTIVES AND INCUBATORS

Incentives: In 2008, the State of Massachusetts approved a 10-year, \$1.5 billion program called the Massachusetts Life Sciences Initiative (MLSI), which was administered by the Massachusetts Life Sciences Center (MLSC), a quasi-public agency. The program strengthened the state's physical life sciences infrastructure by building new academic buildings and incubators and by providing accelerator loans to early-stage companies for hiring and equipment acquisitions. By 2018, the results of the initial \$677 million investment on the economic and hiring landscape of Massachusetts were apparent:

- + 16 capital projects involving academic buildings or incubators dedicated to life sciences were completed
- + Nearly 9,000 new life sciences positions were created at 63 companies authorized for tax incentives
- + Over 115 businesses received financial assistance that resulted in new hiring, accelerated research loans, or equipment acquisition

With life sciences firmly rooted in the eastern Massachusetts economy, a \$473 million renewal of the program in 2018 is focusing on workforce development, public school education, and encouraging geographic dispersion of life sciences activity to regions in central and western Massachusetts. However, an additional \$150 million has been made available for tax credits tied to new hiring.

Incubators: Incubators provide small, flexible, and affordable leasing arrangements for nascent biotech companies. Between Boston, Cambridge, and the suburbs on all sides of the city, there are nearly 30 incubators in the region. While many of these properties are clustered in Boston and Cambridge, a growing number of incubators are popping up further from the region's center.

Suburban incubators are, like suburban lab space, a crucial relief valve for the torrent of budding life sciences companies seeking somewhere to establish themselves. Suburban incubators offer new companies a range of neighborhood options from dense and walkable to sedate office parks. This variety gives life sciences market entrants the ability to find the price point, footprint, and transportation access that suits their company's needs. The MLSC helpfully keeps tabs on all of Massachusetts' incubators in an online directory.

New Companies Seek Out Suburban Space

In 2019, companies emerging from lab space in the core submarkets of Cambridge and Boston took over 190,000 sq. ft. of "graduation" space ranging in size from 7,500 sq. ft. to over 47,000 sq. ft. Most of this space, nearly 130,000 sq. ft., was signed at properties in West Cambridge or Waltham in the western suburbs – indicating that the tightness in the graduation space market and the high costs of Cambridge are pushing start-ups into near-in suburbs where young companies can be adjacent to the Cambridge ecosystem for a lower price.

The Class of 2019:

Companies that Moved From Incubator Space to Graduation Space

Lab | Central

GLYMPSE BIO:
22,712 SF
IN WEST CAMBRIDGE

AFFINIVAX:
47,747 SF
IN KENDALL SQUARE

AKREVIA
THERAPEUTICS:
29,419 SF
IN WALTHAM

72,583 SF
WEST CAMBRIDGE

IPSEN
Innovation for patient care

CIVETTA THERAEUTICS:
29,871 SF
IN WEST CAMBRIDGE

Regus®

SIMCERE
PHARMACEUTICAL:
20,000 SF
IN WEST CAMBRIDGE

58,143 SF
KENDALL SQUARE

HARVARD
MEDICAL SCHOOL
4 BLACKFAN CIRCLE

TSCAN THERAPEUTICS:
25,472 SF
IN WALTHAM

ALEXANDRIA
LaunchLabs

TRIPLT
THERAPEUTICS:
10,396 SF
IN KENDALL SQUARE

54,891 SF
WALTHAM

Hi Harvard
innovation lab

CATALOG:
7,251 SF
IN CHARLESTOWN

7,251 SF
CHARLESTOWN

Source: CBRE Research

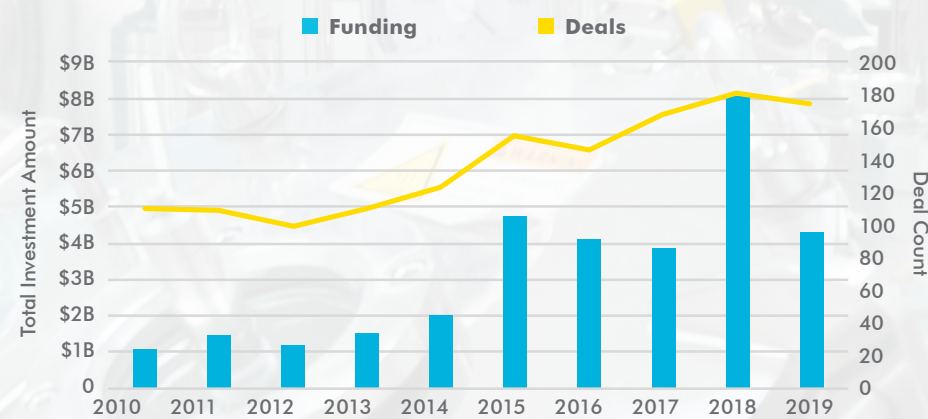
NIH & VC FUNDING

ALL 2019 NIH FUNDING TO SUFFOLK, MIDDLESEX, AND NORFOLK COUNTIES

TOTAL NIH FUNDING

Boston Institutional.....	\$2,102,661,941
Boston Private.....	\$38,978,666
Boston Total.....	\$2,141,640,607
Cambridge Institutional.....	\$225,985,308
Cambridge Private.....	\$175,277,340
Cambridge Total.....	\$401,262,648
Western Suburbs Institutional.....	\$110,673,168
Western Suburbs Private.....	\$53,693,607
Western Suburbs Total.....	\$164,366,775
Northern Suburbs Institutional.....	\$7,680,933
Northern Suburbs Private.....	\$17,821,948
Northern Suburbs Total.....	\$25,502,881
Southern Suburbs Institutional.....	\$0
Southern Suburbs Private.....	\$3,337,319
Southern Suburbs Total.....	\$3,337,319
TOTAL NIH FUNDING.....	\$2,736,110,230

GREATER BOSTON VENTURE CAPITAL FUNDING



The long runway to profitability for new biotechnology and life sciences companies requires significant investment and subsidization to fund years of research and development.

Between 2015 and 2019, NIH funding to Boston and its suburbs saw uninterrupted growth, rising 22% overall. Of the over \$2.7 billion invested in the Boston area in 2019, 10% or \$289.1 million went to private biotech enterprises. 30% of this funding went to firms located in the suburbs with a strong concentration in the Route 128 West submarket. This area, which includes Watertown, Waltham, and Belmont, saw a 33% overall increase in NIH funds to private firms since 2015 – outpacing the growth rate for overall NIH funds to the region.

Venture Capital Balloons in Cambridge and Boston...

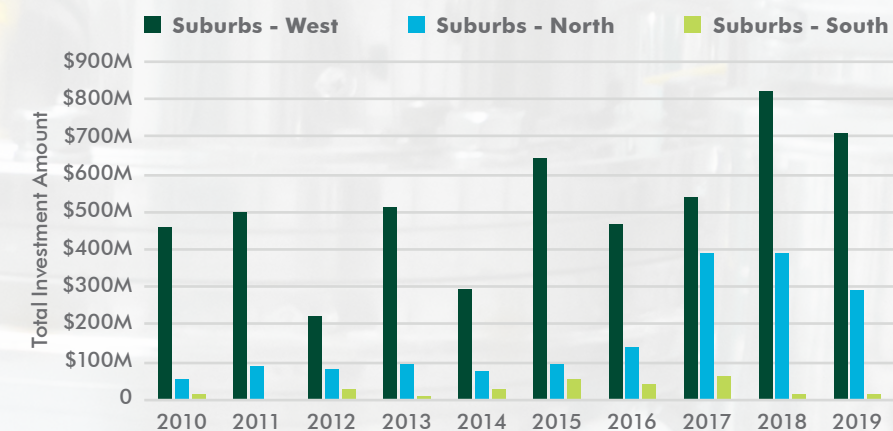
Since 2010-2012, Cambridge's venture capital funding stream has increased 471% from \$595.2 million to a 2017-2019 average of \$3.4 billion, assisted in part by the \$2.4 billion acquisition bid for Foundation Medicine by Roche Holding and breaking the billion-dollar threshold every year since 2014. Boston has improved on its 2010-2012 average of \$165.3 million by 458% to a 2017-2019 average of \$922.5 million, breaking the billion-dollar threshold twice – in 2015 and in 2019.

...but Sprawls to the Suburbs

Like NIH funding, venture capital outside of Cambridge is concentrated in the western suburbs that sprawl out towards Route 128. The average venture capital amount funneled into the western suburbs has increased 76% from a 2010-2012 three-year average of \$392 million to a 2017-2019 three-year average of \$689 million. Boston's northern suburbs also experienced remarkable growth with biotech companies from Somerville to Lowell seeing their 2010-2012 annual average of \$73 million in venture capital funding increase 388% to a 2017-2019 average of \$356.2 million driven by large deals at Kaleido Biosciences of Bedford and Frequency Therapeutics of Woburn.

If venture capital flow is a bell-weather for future hiring and leasing, then the increasingly strong performance of Boston's suburban submarkets indicates that the outward expansion and densification of lab stock in these areas is a near-term inevitability.

SUBURBAN VENTURE CAPITAL FLOW



Source: National Institutes of Health, CB Insights, CBRE Research

BOSTON'S TALENT POOL

Boston's Academic Pipeline

Boston's deep talent pool is supported by its high-caliber local research institutions. Seven of U.S. World & Report's top-100 national universities are in the Boston metropolitan area. This pipeline of life sciences degree holders is a renewable source of qualified labor and future innovators and patent holders.

BIOLOGICAL, BIOMEDICAL, AND BIOMEDICAL ENGINEERING DEGREES FROM TOP-RANKED BOSTON UNIVERSITIES (2017-18)

NATIONALLY RANKED UNIVERSITIES IN METRO BOSTON (TOP 100)				
SCHOOL RANK	INSTITUTION NAME	DOCTORATES TOTAL		
2	Harvard University	208	593	
3	Massachusetts Institute of Technology	49	128	
29	Tufts University	46	436	
37	Boston College	4	245	
40 (tie)	Boston University	93	1118	
40 (tie)	Brandeis University	18	260	
40 (tie)	Northeastern University	9	357	

Where Do Life Sciences Workers Live?

They live in the suburbs. An analysis of where the region's science and engineering degree-holding workforce resides indicated that there were nearly 330,000 such individuals residing within Route 128. Unsurprisingly, over 90% of these degree-holders reside in Boston and Cambridge and in the suburbs to the north and west.

Another 240,000 degree-holders reside in the mid-distance suburbs between Route 128 and 495 with another 140,000 living beyond Route 495 or in Boston's southernmost suburbs in Bristol, Plymouth, and Barnstable counties. While the largest concentration of life sciences talent is clustered near Cambridge, the labor pool is decently distributed across the region and well into its furthest reaches. In total, 53% of the region's workforce lives outside of Route 128 and 34% live in Boston's southern suburbs.

Where Life Sciences Workers Live in Boston

LIFE SCIENCES RESIDENCY AT THE REGION'S CORE	
Boston*	100,973
Cambridge	32,788
West Middlesex County (Inside Route 128)	70,587
North Middlesex County (Inside Route 128)	95,321
Norfolk County (Inside Route 128)	29,311
TOTAL	328,980
LIFE SCIENCES RESIDENCY IN MID-DISTANCE SUBURBS	
West Middlesex County (Between Route 128 and 495)	75,387
North Middlesex County (Between Route 128 and 495)	64,274
Norfolk County (Between Route 128 and 495)	78,826
Norfolk County (Route 3A)	20,345
TOTAL	238,832
LIFE SCIENCES RESIDENCY IN OUTER SUBURBS	
North Middlesex County (Outside 495)	29,183
Barnstable County	28,489
Bristol County	41,676
Plymouth County	38,841
TOTAL	138,189
GRAND TOTAL	706,001

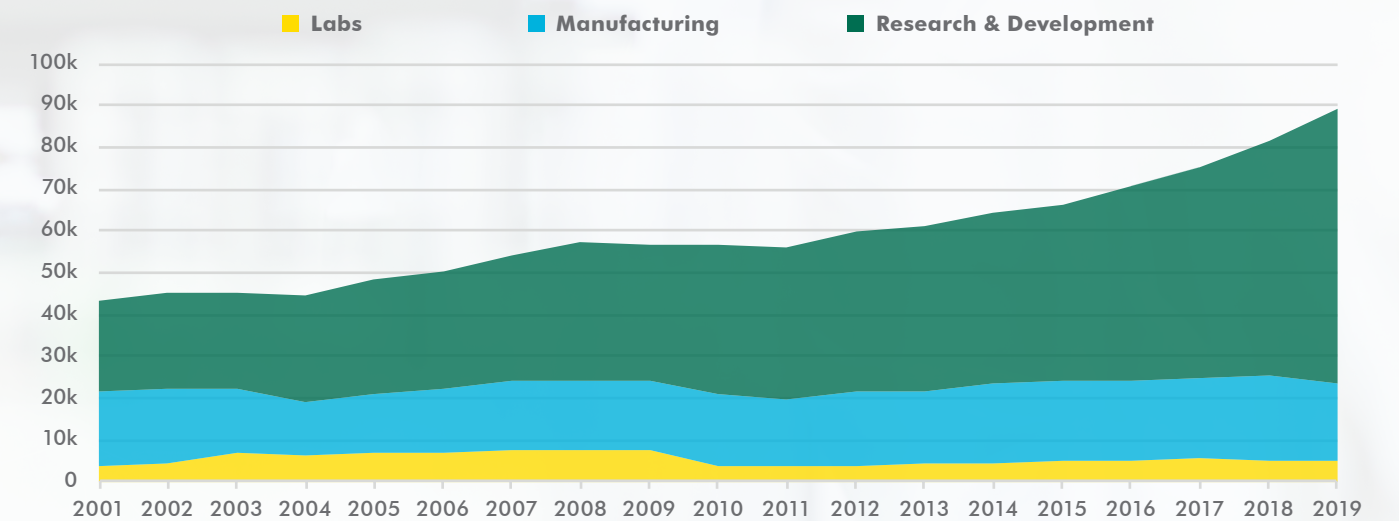
*Boston is inclusive of all Suffolk County

Source: Esri, U.S. Census 2015 American Community Survey, CBRE Research

BOSTON'S LIFE SCIENCES LABOR ALLOCATION

Since 2001, total life sciences employment in Suffolk, Middlesex, and Norfolk Counties – encompassing Boston, Cambridge, and their nearest suburbs to the north, west, and south – has grown to nearly 90,000 jobs. Furthermore, life sciences' share of total employment in this geography has grown from 3% in 2001 to 5% as of Q2 2019. The life sciences industry's annual growth rate from 2010 to Q2 2019 averaged 4%, outpacing the overall private employment growth rate of 2%.

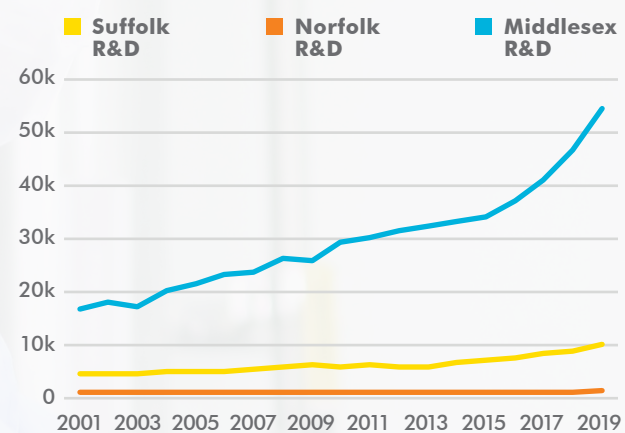
LIFE SCIENCES EMPLOYMENT IN SUFFOLK, NORFOLK, AND MIDDLESEX COUNTIES



Source: U.S. Bureau of Labor Statistics as of Q2 2019, CBRE Research

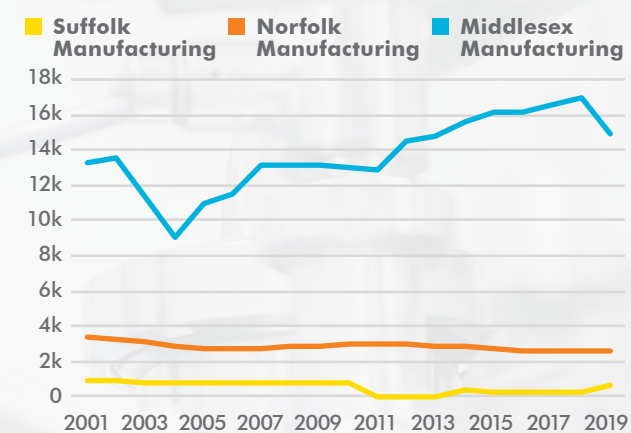
LABOR ALLOCATION: A CLOSER LOOK

RESEARCH & DEVELOPMENT



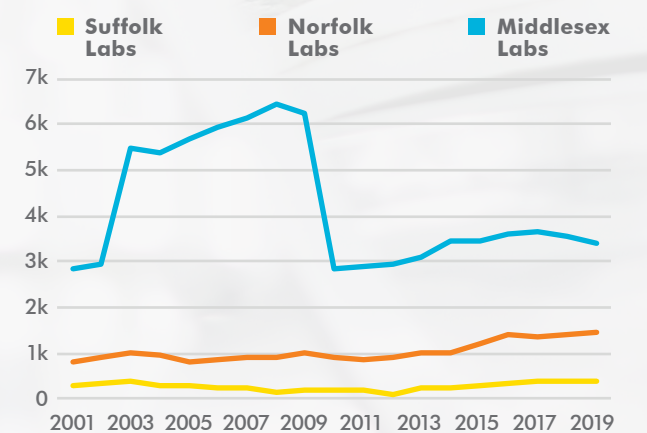
The largest life sciences subsector in the region is research and development in the physical, engineering, and life sciences (R&D) with 75% of all life sciences employees engaged in this work. Middlesex County, anchored by Cambridge and inclusive of most of Boston's expansive northern and western suburbs, commands 83% of all R&D jobs in the region. While most of the region's explosive job growth has occurred in Middlesex County, Boston and its southern suburbs in Norfolk County also gained 6,200 R&D jobs since 2001.

MANUFACTURING



The region experienced modest manufacturing job losses during the recession but has since recovered those positions and more with a slight geographic redistribution. Middlesex County increased its share of manufacturing positions, a likely corollary to Middlesex County's R&D dominance and the need for manufacturing operations to remain in physical proximity. The expansion of R&D employment in Boston and the southern suburbs could signal an eventual reversal in fortune for manufacturing.

TESTING & DIAGNOSTIC LABS



In the testing and diagnostic lab segment, Middlesex County lost market share to Boston and the southern suburbs. This was largely due to unrecovered job losses coinciding with the global recession. Boston and Norfolk County now account for a combined 35% of testing and diagnostic lab positions—an increase over their 28% share in 2010. This translates to 665 new lab and diagnostic positions, just shy of Middlesex County's gain of 671 diagnostic positions over the same period.

Source: U.S. Bureau of Labor Statistics as of Q2 2019, CBRE Research

Where Do Biotech Cluster Commuters Come From?

■ <10 miles
 ■ 10-24 miles
 ■ 25-50 miles
 ■ >50 miles



Source: U.S. Census Bureau (LEHD Origin-Destination Employment Statistics), 2017

WHAT'S NEXT

Suburban R&D Expands – and Manufacturing Follows

Congestion and transit delays remain the Achilles heel of the Boston region. Leasing activity is likely to increase in the office parks of Waltham, Lexington, Wakefield, Bedford, and Burlington as more office properties undergo conversions and fresh lab stock is brought online. The growing inventory of suburban lab space in combination with the challenging commuting climate can enhance the attractiveness of developing life sciences clusters in peripheral submarkets closer to Route 128.

With life sciences companies increasingly seeking to secure space near their R&D operations, the suburbs will be called upon to host biomanufacturing facilities like the 90,000 sq. ft. Wave Therapeutics manufacturing plant in Lexington and the Siemens manufacturing plant in Walpole. Manufacturing is likely to continue prospering along the 495 corridor where lower congestion, cheaper land, and a well-aligned workforce are plentiful.

The Seaport Gains Market Share

The Seaport’s status as an independent and globally competitive life sciences cluster continues to rise. Much like Kendall Square, the Seaport is now anchored by

large pharmaceutical giants like Vertex and Alexion while still having ample space to accommodate emerging companies and several incubators. Vertex and Ginkgo Bioworks will both expand in the Seaport in the coming years as the neighborhood’s inventory of apartments and hotel rooms also accumulates. The Seaport has managed to establish a virtuous cycle of growth and its rising prominence as a life sciences cluster is unlikely to slow anytime soon.

Life Sciences and Artificial Intelligence Converge

In Kendall Square, the next frontier of biotech innovation is revealing itself as the life sciences converge with the emergent field of artificial intelligence. A growing roster of AI-driven biotech companies are promising to expedite various parts of the R&D process, potentially accelerating a company’s growth as they evolve from incubation through manufacturing. Over a dozen companies have been founded since 2013 with the goal of applying artificial intelligence and machine learning to biotechnology research goals. As with biomedical degrees, the Boston region has a distinct advantage. There are currently over 2,000 Master’s and Ph.D candidates enrolled in the region’s top universities in degree programs that could translate to careers in artificial intelligence and machine learning.

ADVANCED DEGREES IN COMPUTER SCIENCE, MATHEMATICS, & ELECTRICAL ENGINEERING FROM TOP-RANKED BOSTON UNIVERSITIES (2017-18)

NATIONALLY RANKED UNIVERSITIES IN METRO BOSTON (TOP 100)

SCHOOL RANK	INSTITUTION NAME	ADVANCED DEGREES
2	Harvard University	173
3	Massachusetts Institute of Technology	533
29	Tufts University	92
37	Boston College	6
40 (tie)	Boston University	644
40 (tie)	Brandeis University	146
40 (tie)	Northeastern University	511

Source: CBRE Research, Integrated Postsecondary Education System (IPEDS) (2017-2018), US News & World Report (2018). Analysis as of Q4 2019

THE NEW LIFE SCIENCES GEOGRAPHY

The Suburbs

The suburbs to the west and north of Cambridge house nearly 50% of all science and engineering degree holders in the Boston region. Surging costs and plummeting availability in Kendall Square has made suburban lab stock increasingly attractive to occupiers ranging from incubation graduates to mature firms. This trend has brought work closer to home for thousands of researchers and has put more R&D operations closer to the bio-manufacturing that skirts the edges of the urban core.



Transit Investments Bring More Suburbs into Cambridge's Orbit

- + The extension of the MBTA Green Line to Boston's near-in northern suburbs and signal and rolling stock upgrades on the Red and Orange Lines will have a strong net-benefit on the life sciences community by providing more frequent and reliable service on the three rail lines that transit through East Cambridge. Not only will these enhancements improve occupiers' ability to draw workers from the suburbs, they will also allow reverse commuting to the suburbs' emerging life sciences clusters.
- + Boynton Yards, a 289,000 sq. ft. speculative development being built by DLJ Real Estate Capital Partners will be walkable to the new Green Line station and to Somerville's busy downtown. Boynton Yards and the Green Line

Western Submarkets Densify

- + To the west, the 110,000 sq. ft. of lab space on offer at The Wilder Companies' Arsenal Yards development has been pre-leased and will be accessible by a shuttle that runs between the development and the Harvard Square MBTA Stop. SQZ Biotech, the lead lab tenant will join 23 life sciences companies and their 1,500-plus employees already operating in the Watertown life sciences mini cluster.



- + Additional developments in the Route 128 West submarket include the addition of a 213,890 sq. ft. lab building at King Street Properties' Hayden Research Campus in Lexington. The complex is already home to an outpost of Takeda Pharmaceuticals, Merck, and Concert Pharmaceuticals.

Life Sciences Grows Up and Out

- + The brisk leasing and development activity have extended as far west as the 495 corridor. All told, the suburban submarkets to the north and west of Cambridge spanning from near-in communities like Somerville and Watertown to more distant suburbs like Bedford and Marlborough have accounted for between 250,000 - 510,000 sq. ft. of leasing activity each year since 2015 – keeping pace with activity in the region's core markets of Cambridge and Boston.
- + As more life sciences companies move to the suburbs and bi-directional commuting becomes easier, suburban life science mini clusters are likely to keep percolating and expanding.

Boston

The City of Boston's share of the life sciences market continues to rise, driven by strong development and leasing activity in the Seaport District and in additional life sciences mini clusters percolating across the city. Boston's centrality to the region's network of highways, subway lines, and commuter trains, its thriving downtown, and world-class cultural amenities are enduring attributes that will continue to lure mature life sciences companies and top talent. Frequent Amtrak service into South Station puts central Boston within easy reach of emerging life sciences clusters up and down the Northeast corridor in Providence, New York, and Philadelphia.



Seaport

- + The allure of the Seaport is in its ground-up live-work-play environment. Replete with apartments, retail, abundant office and lab space, areas for public gathering, and art installations, the Seaport is a built-to-suit community for the 21st century urban economy.
- + The list of companies lured to the neighborhood from Cambridge includes Vertex Pharmaceuticals and Foundation Medicine, acquired by Roche in 2018, which plans to occupy the entire 581,000 sq. ft. of space at 400 Summer Street upon its completion in 2023. The building just broke ground and is being developed by WS Development, which will be building an additional 380,000 sq. ft. of spec space next-door at 350 Summer Street.
- + Alexandria Real Estate Equities and Anchor Line Partners will jointly develop an additional 210,000 sq. ft. of spec space on A Street and Alexandria is likely to build its own spec development at a site the company acquired from GE on Fort Point Channel.
- + Given the current life sciences climate, developers in the Seaport have reason to believe that clients will come forward to take all of the new construction lab space.
- + With Kendall Square running out of shovel-ready plots of land for new life sciences properties, the expansive gray-field sites of the Seaport District offer countless development opportunities within a short walk of South Station.
- + The area is served by the MBTA Silver Line which connects the neighborhood to South Station and Boston Logan Airport.

And Beyond

- + Opportunities for life sciences occupiers abound outside of the Seaport as well. A 250,000 sq. ft. laboratory building in the Fenway neighborhood being built on spec by Samuels and Associates will offer life sciences tenants the opportunity to work blocks from Fenway Park.
- + NEXUS at The Allston Innovation Corridor, a project currently under review by the city, could broadly expand life sciences' reach within Boston by adding over 500,000 sq. ft. of lab space to the rapidly densifying Allston neighborhood. The development would be within walking distance of Harvard University's campus across the Charles River and a 12-minute walk from the MBTA Boston Landing Station.

Cambridge

Even as Boston's life sciences footprint spreads beyond Kendall Square, East Cambridge will retain its status as the center of the regional life sciences ecosystem. This vibrant and transit-rich environment within walking distance of MIT and downtown Boston remains the gold-standard for the clustering of research and technology firms that has driven renewed occupier interest in America's urban centers. In addition to biotech, Kendall Square has attracted outposts of established tech firms like Facebook, Twitter, Google, and IBM's artificial intelligence research group.

This density promotes relationship-building between promising startups like Camp4 Therapeutics—a company with a gene targeting platform—and their pioneering Cambridge neighbor, Biogen, which have partnered on a joint research project. The continued growth and densification of Kendall Square will continue to foster the network effect that has made this the most innovative neighborhood on the planet. The MBTA Green Line extension to Somerville and Medford, MBTA Red Line signal upgrades, and the expansion of the local bike lane network will make East Cambridge more accessible than it has ever been.



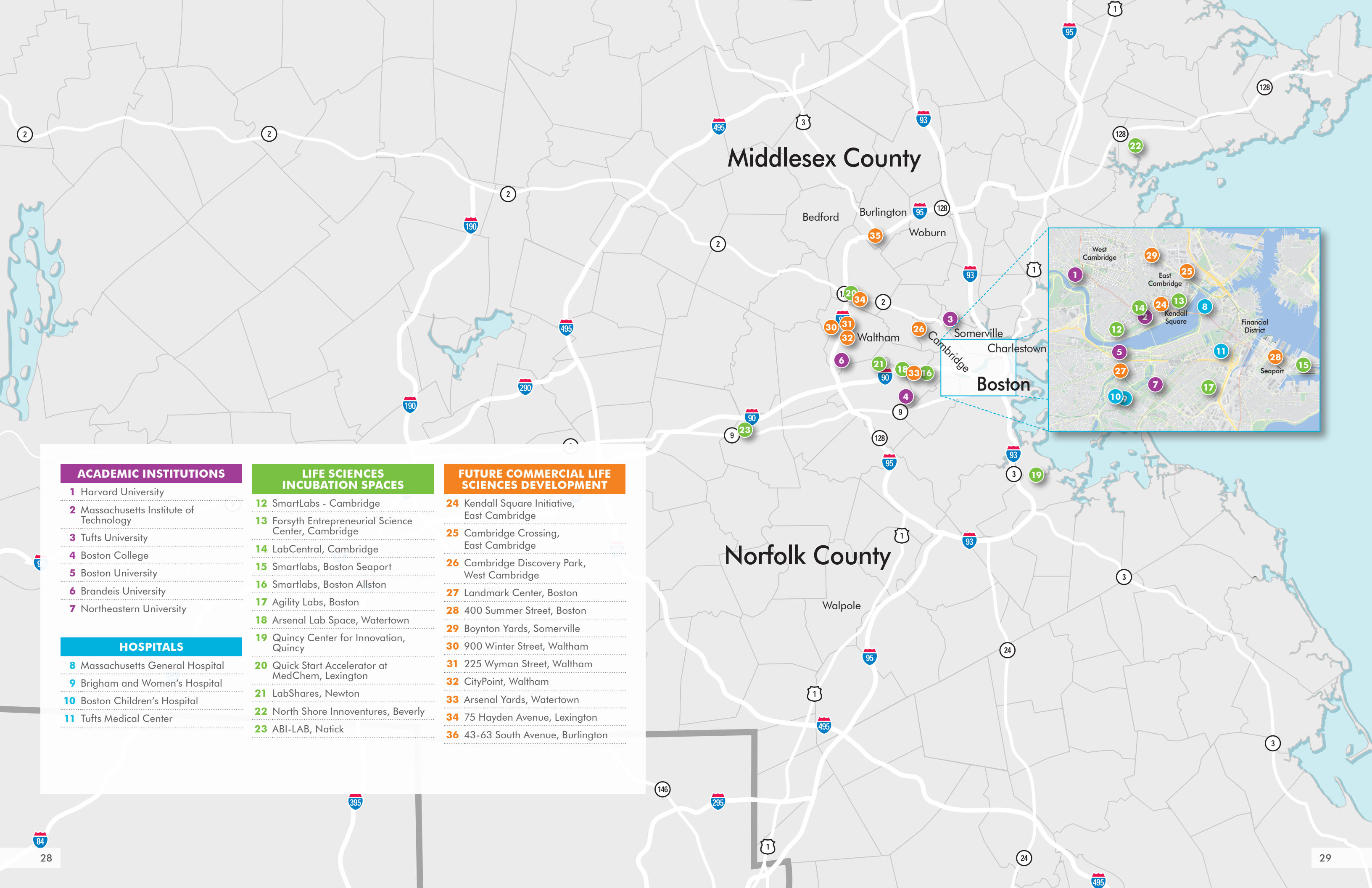
RENDERING OF 314 MAIN STREET

East Cambridge

- + In Kendall Square, a decade-long planning process is materializing in the form of the Kendall Square Initiative – a major expansion and densification of the Kendall Square life sciences cluster spearheaded by MIT. The project will deliver hundreds of apartments and nearly 900,000 sq. ft. of lab and office space, all within the vicinity of the Kendall/MIT Red Line Stop. The first two buildings under development at 238 and 314 Main Street are nearing completion and their office space is 89% pre-leased.
- + Boeing has signed on for 100,000 sq. ft. at 314 Main Street where they will burnish Kendall Square's AI credentials with the establishment of an autonomous aviation research center.
- + At the heart of Kendall Square, an incubator called LabCentral will take advantage of a \$5 million MLSC grant to open a new 100,000 sq. ft. bio-manufacturing incubator. This investment vastly expands the neighborhood's capacity for start-ups while preparing growing companies for bio-manufacturing – the post-R&D phase of the life sciences product life cycle.

West Cambridge

- + The Alewife neighborhood is situated at the western end of Cambridge at the terminus of the MBTA Red Line just off Route 2. In Q1 2020, Bulfinch completed construction of 400-500 Cambridge Discovery Park – a ground-up life sciences property that added over 250,000 sq. ft. of lab space to the submarket. Current Discovery Park tenant, FogPharma, will expand into the building and newcomers Kintai Therapeutics and Arbor Biotechnologies will also take space.
- + The West Cambridge submarket will continue to claim life sciences market share as the Davis Companies proceeds with 'The Quad' – an in-progress development containing over 500,000 sq. ft. of new lab space across three renovated and one new construction building. The property will include a shuttle to the MBTA Alewife Station.
- + The Alewife District Plan, released by the Cambridge government in fall 2019, envisions a 300-acre rezoning of West Cambridge that is projected to accommodate up to 9,000 new office and laboratory jobs in the district if realized.



ACADEMIC INSTITUTIONS

- 1 Harvard University
- 2 Massachusetts Institute of Technology
- 3 Tufts University
- 4 Boston College
- 5 Boston University
- 6 Brandeis University
- 7 Northeastern University

HOSPITALS

- 8 Massachusetts General Hospital
- 9 Brigham and Women's Hospital
- 10 Boston Children's Hospital
- 11 Tufts Medical Center

LIFE SCIENCES INCUBATION SPACES

- 12 SmartLabs - Cambridge
- 13 Forsyth Entrepreneurial Science Center, Cambridge
- 14 LabCentral, Cambridge
- 15 Smartlabs, Boston Seaport
- 16 Smartlabs, Boston Allston
- 17 Agility Labs, Boston
- 18 Arsenal Lab Space, Watertown
- 19 Quincy Center for Innovation, Quincy
- 20 Quick Start Accelerator at MedChem, Lexington
- 21 LabShares, Newton
- 22 North Shore Innoventures, Beverly
- 23 ABI-LAB, Natick

FUTURE COMMERCIAL LIFE SCIENCES DEVELOPMENT

- 24 Kendall Square Initiative, East Cambridge
- 25 Cambridge Crossing, East Cambridge
- 26 Cambridge Discovery Park, West Cambridge
- 27 Landmark Center, Boston
- 28 400 Summer Street, Boston
- 29 Boynton Yards, Somerville
- 30 900 Winter Street, Waltham
- 31 225 Wyman Street, Waltham
- 32 CityPoint, Waltham
- 33 Arsenal Yards, Watertown
- 34 75 Hayden Avenue, Lexington
- 36 43-63 South Avenue, Burlington

Learn More about CBRE Life Sciences

cbre.us/real-estate-services/real-estate-industries/life-sciences

Definitions

Availability: Space that is being actively marketed and is available for tenant build-out within 12 months. Includes space available for sublease as well as space in buildings under construction.

Future Space: Space available for tenant build-out beyond 12 months that is currently under construction/renovation or where plans to bring space to market have been confirmed.

Incubator Space: Lab space that caters to startups coming out of medical or academic research institutions.

Leasing Activity: Total amount of sq. ft. leased within a specified period of time, including new deals, expansions, and pre-leasing, but excluding renewals.

NNN Average Asking Rent: Weighted average NNN asking rent. NNN asking rents are generally lower than full service gross rents since tenant assumes responsibility for proportional real estate tax, insurance, and maintenance expenses in addition to the base rent.

NNN Effective Asking Rent: Weighted average NNN effective rent.

Step-Out (Graduation) Space: Lab space for early stage life science companies that have outgrown their incubator environment. This space offers more independence than incubator space but may still be shared with another tenant.

Sources

CBRE Research, National Institutes of Health, CB Insights, U.S. Bureau of Labor Statistics, U.S. Census Bureau 2015 American Community Survey, Integrated Postsecondary Education Data System (IPEDS) (2017-2018), U.S. News & World Report (2020), MassBio, Massachusetts Life Sciences Center

NIH Funding: Data as of 12.19.2019. All award amounts.

VC Funding: Data as of Q4 2019. Life Sciences venture capital data comprises the "Biotechnology", "Pharmaceutical/Drugs", "Drug Development", "Drug Discovery", and "Disease Diagnosis" sectors.

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