

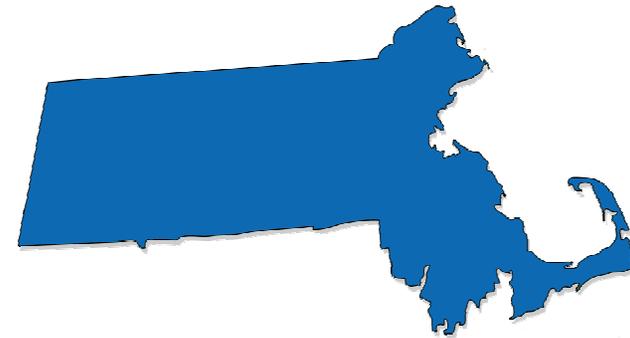


MAPEIG D'INNOVACIÓ MASSACHUSETTS

SECTOR BIO-IT / DIGITAL HEALTH

9 de febrer de 2016

CATALUNYA I MASSACHUSETTS



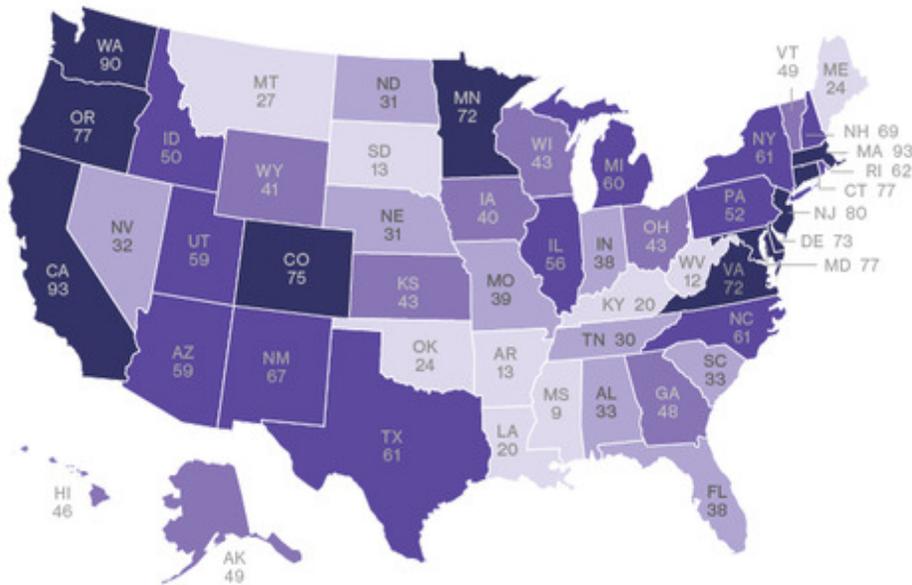
	CATALUNYA	MASSACHUSETTS
Sup. (km ²)	32,107	27,360
Habitants	7,504,008	6,349,097
PIB (milions €)	199,786	427,365
PIB per càpita (€)	26,624	67,311
Atur	17.7%	4.7%
R&D sobre PIB	1.5%	5.67%
Universitats	12	122

MASSACHUSETTS INNOVADOR

Most Innovative States

Massachusetts and California ranked as the most innovative states in 2015, Mississippi the least

Innovation score (1 – 100 scale)



Sources: Bloomberg, Bureau of Economic Analysis, Bureau of Labor Statistics, National Science Foundation, StatsAmerica.org, U.S. Census, U.S. Patent and Trademark Office



Bloomberg State Innovation Index

Rank/State	Total score	R&D intensity	Productivity	High-tech density	STEM concentration	Science & engineering degree holders	Patent activity
1 Massachusetts	93.33	2	6	1	4	7	2
2 California	93.30	4	7	2	6	2	1
3 Washington	90.40	5	9	7	1	4	3
4 New Jersey	80.42	10	8	5	15	13	7
5 Connecticut	77.18	8	4	22	13	10	11
6 Oregon	77.08	13	12	17	10	5	12
7 Maryland	76.82	3	15	24	2	1	25
8 Colorado	75.12	19	18	15	5	6	10
9 Delaware	72.72	6	3	30	8	9	25
10 Minnesota	71.85	16	21	10	9	22	4
11 Virginia	71.77	21	17	16	3	3	27
12 New Hampshire	68.60	9	33	4	18	14	17
13 New Mexico	67.42	1	27	6	17	12	35
14 Rhode Island	61.95	15	24	3	24	19	32
15 Texas	61.25	32	11	27	14	20	8
16 North Carolina	60.80	23	20	14	20	24	14
17 New York	60.70	33	1	21	33	21	6
18 Michigan	59.75	7	30	37	7	27	5
19 Arizona	59.05	17	42	8	11	29	13
20 Utah	59.00	20	34	11	12	28	20

Note: **R&D intensity:** Research and development spending, % state GDP (GSP). **Productivity:** GSP per employed person (12-month average employment). **High-tech density:** Number of highly technologically intensive public companies — in industries such as aerospace and defense, biotechnology, large pharmaceutical, hardware, software, semiconductors, Internet software and services, and renewable energy — domiciled in each state, as % total publicly listed companies domiciled in the state. Included: states with at least five public hi-tech firms; companies actively trading as of 12/2015. **STEM concentration:** Science, Technology, Engineering and Mathematics (STEM) professionals, % state total employed. **Science & Engineering degree holders:** % state population. **Patent Activity:** Utility patents (patents for invention) granted by the state of origin, % U.S. total & per million of state population All metrics equally weighted. Most recent available data used.

Sources: Bloomberg, Bureau of Economic Analysis, Bureau of Labor Statistics, National Science Foundation, StatsAmerica.org, U.S. Census, U.S. Patent and Trademark Office



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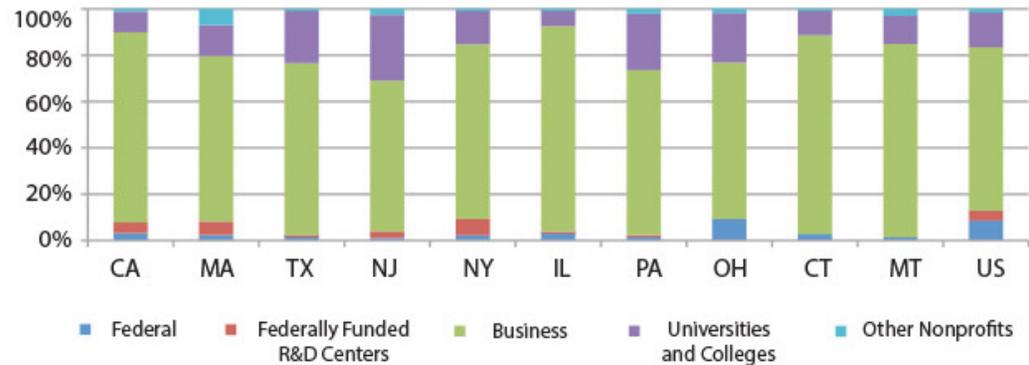
MASSACHUSETTS INNOVADOR

R&D Spending as Percent of GDP

Massachusetts & LTS - 2002, 2009, 2010 & 2011

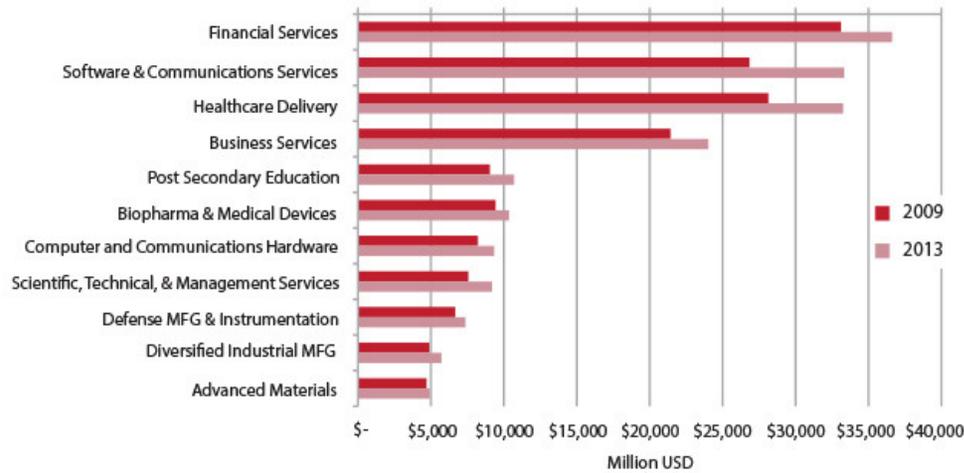
	2002	2009	2010	2011
Massachusetts	5.26%	5.62%	5.30%	5.67%
California	4.15%	4.36%	4.30%	4.79%
Connecticut	3.76%	5.36%	3.40%	3.88%
New Jersey	3.25%	4.30%	3.70%	3.18%
Minnesota	2.78%	3.08%	2.70%	2.64%
Illinois	2.21%	2.00%	2.40%	2.38%
Pennsylvania	2.24%	2.51%	2.30%	2.35%
Ohio	2.15%	2.24%	2.20%	2.11%
New York	1.55%	1.54%	1.50%	1.59%
Texas	1.80%	1.77%	1.60%	1.56%

Distribution of R&D by Performer
Massachusetts, LTS & U.S., 2011



KEY INDUSTRIES

Industry Output
Million \$
Massachusetts, 2009 & 2013



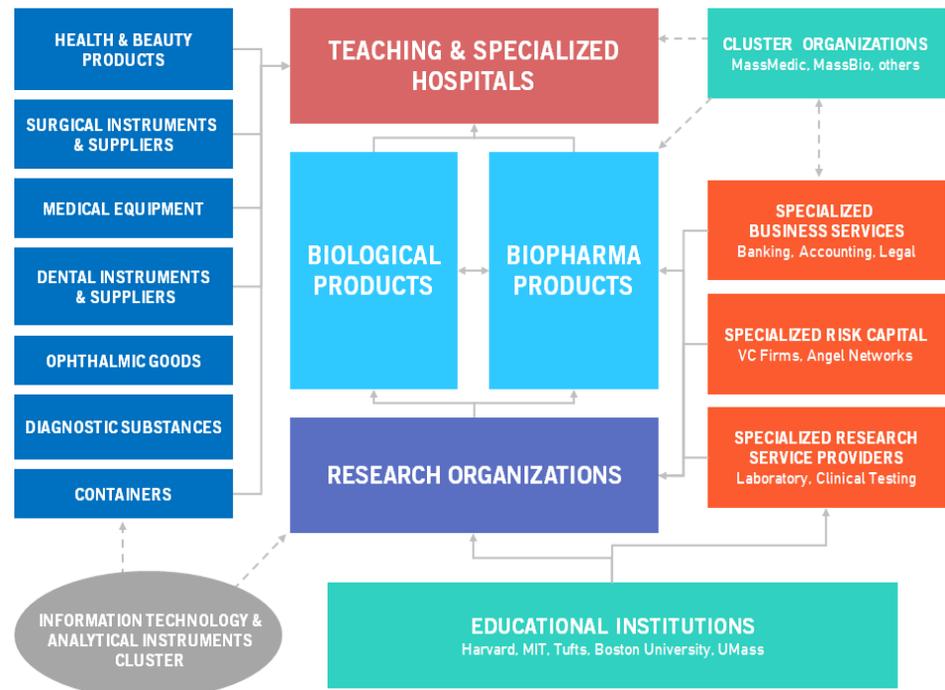
Financial Services
Technology
Medicine and Life Sciences
Manufacturing
Fishing
Tourism

Big Data
Digital Health

LIFE SCIENCES

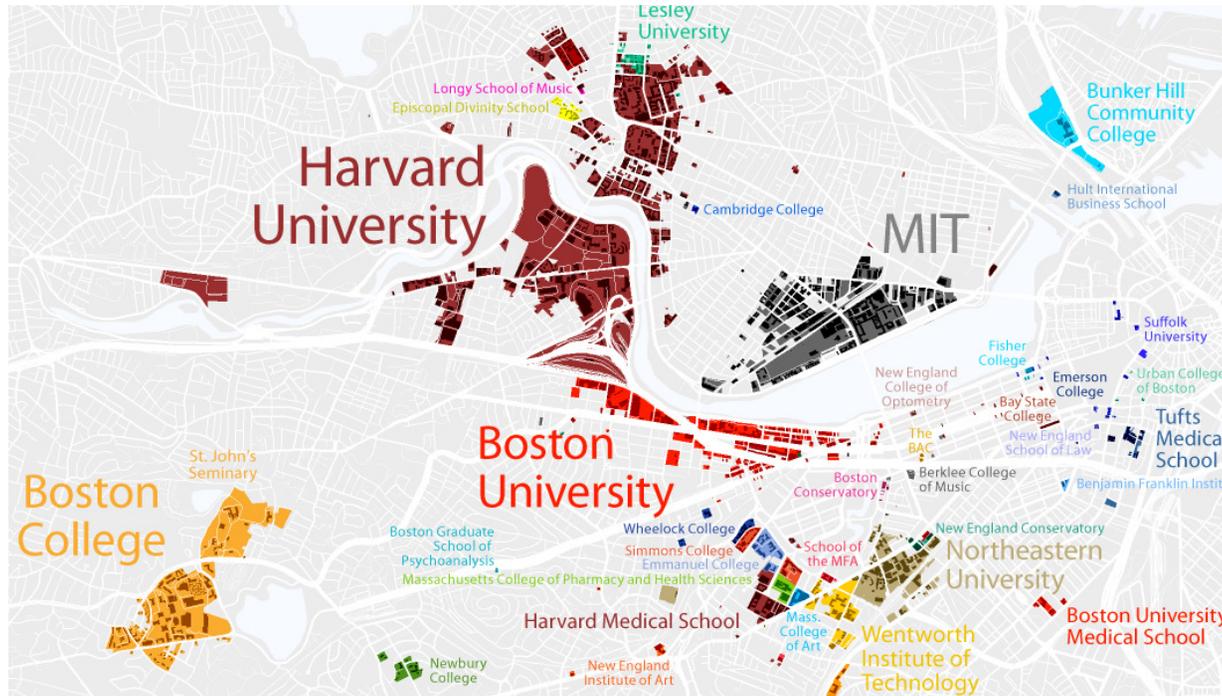


The Boston Biopharmaceuticals Cluster



UNIVERSITATS

El sistema d'ensenyament superior de Massachusetts és dual; és a dir, format per una xarxa de centres públics i una de centres privats. La majoria de les 122 institucions d'educació superior que acull l'estat, i també les més destacades en termes d'excel·lència acadèmica i investigadora, pertanyen a l'àmbit privat, encara que la potència del sistema públic també és remarcable.



l·listar principals amb algun indicador RECERCA?

ACCIÓ

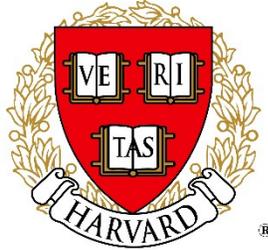


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UNIVERSITATS



HARVARD

Any fundació: 1636

Faculty members : 2,400

Students: 21,000

Alumni: 323,000 living alumni,

Budget: \$4,500 milliom

MIT

Any fundació: 1861

Professors (all ranks): 1,021

Other teaching staff: 809

Students: 11,319

Applicants: 18,356

Admits: 1,447

Percentage admitted: 7.9%

Patents granted: 275

Budget: \$2,920 million



MIT

Biology/bioengineering

- Bioinstrumentation Engineering Analysis and Microscopy (BEAM)
- BioInstrumentation Laboratory
- Biological Engineering
- Biology
- BioMicro Center
- Biopolymers Laboratory
- Brain and Cognitive Sciences
- Broad Institute
- Center for Biological and Computational Learning
- Center for Biomedical Engineering
- Center for Biomedical Innovation
- Center for Educational Computing Initiatives (CECI)
- Center for Environmental Health Sciences
- Center for Gynepathology Research
- Chemical Engineering
- Chemistry
- Computational and Systems Biology (CSBi)
- Computational Biology
- Computational Genomics
- David H. Koch Institute for Integrative Cancer Research
- Division of Comparative Medicine
- Environmental Microfluidics Group
- Emergent Behaviors of Integrated Cellular Systems
- Harvard-MIT Division of Health Sciences and Technology (HST)
- Human Genomics Laboratory
- International Consortium for Medical Imaging Technology
- Laboratory for Computational Cell Biology and Biophysics
- Laboratory for Multiscale Regenerative Technologies
- Materials Processing Center
- McGovern Institute for Brain Research
- MIT Media Lab
- Microsystems Technology Laboratories (MTL)
- MIT Portugal Program
- Nonlinear Systems Laboratory
- Parsons Laboratory for Environmental Science and Engineering
- Picower Institute for Learning and Memory
- Research Laboratory of Electronics (RLE)
- Sea Grant College Program
- Transgenic Facility
- Whitehead Institute for Biomedical Research

MIT

Cancer

- Biological Engineering
- Biology
- Broad Institute
- Chemical Engineering
- Chemistry
- Computational and Systems Biology (CSBi)
- David H. Koch Institute for Integrative Cancer Research
- Whitehead Institute for Biomedical Research

Neurosciences

- Auditory Physics Group
- Brain and Cognitive Sciences
- Center for Brains, Minds and Machines (CBMM)
- Gabrieli Lab
- Martinos Imaging Center at the McGovern Institute for Brain Research
- Materials Processing Center
- McGovern Institute for Brain Research

Cognitive science

- Brain and Cognitive Sciences
- Center for Brains, Minds and Machines (CBMM)
- Computer Science and Artificial Intelligence Laboratory (CSAIL)
- Laboratory for Information and Decision Systems (LIDS)
- Linguistics
- McGovern Institute for Brain Research
- MIT Media Lab
- Nonlinear Systems Laboratory
- Picower Institute for Learning and Memory
- Whitehead Institute for Biomedical Research

MIT

Medical sciences

- Age Lab
- Auditory Physics Group
- Bionuclear Science & Engineering
- Boron Neutron Capture Therapy (BNCT)
- Brain and Cognitive Sciences
- Broad Institute
- Center for Biomedical Engineering
- Center for Biomedical Innovation
- Center for Environmental Health Sciences
- Center for Gynepathology Research
- Chemistry
- Clinical Decision-Making Group (MEDG)
- David H. Koch Institute for Integrative Cancer Research
- Division of Comparative Medicine
- Harvard-MIT Division of Health Sciences and Technology (HST)
- International Consortium for Medical Imaging Technology
- Laboratory for Multiscale Regenerative Technologies
- Martinos Imaging Center at the McGovern Institute for Brain Research
- McGovern Institute for Brain Research
- Medical Vision Group
- Newman Laboratory for Biomechanics and Human Rehabilitation
- Picower Institute for Learning and Memory
- Program on the Pharmaceutical Industry
- Research Laboratory of Electronics (RLE)
- Transgenic Facility

HARVARD



Basic and Social Science Departments

- Biological Chemistry and Molecular Pharmacology
- Biomedical Informatics
- Cell Biology
- Genetics
- Global Health and Social Medicine
- Health Care Policy
- Microbiology and Immunobiology
- Neurobiology
- Stem Cell and Regenerative Biology
- Systems Biology

Hospital-based Departments

- Anaesthesia
- Celiac Research
- Dermatology
- Emergency Medicine
- Medicine
- Neurology
- Neurosurgery
- Obstetrics, Gynecology, and Reproductive Biology
- Ophthalmology
- Orthopedic Surgery
- Otolaryngology
- Pathology
- Pediatrics
- Physical Medicine and Rehabilitation
- Population Medicine
- Psychiatry
- Radiology
- Radiation Oncology
- Surgery

HARVARD



SCHOOL OF PUBLIC HEALTH
Powerful ideas for a healthier world

- Center for Health Promotion
- China Initiative
- College Alcohol Study
- Environment And Reproductive Health (EARtH Study)
- EPA/Harvard Center on Ambient Particle Health Effects
- Harvard Opinion Research Program
- Harvard Malaria Initiative
- Health Professionals Follow-Up Study
- Health and Transportation Policy Forum
- Initiative on Global Health Quality
- International Health Systems Program
- Lung Cancer Disparities Center
- Lung Cancer Susceptibility and Outcomes Study
- Neuroepidemiology Research Group
- Nurses' Health Study (w.Channing Laboratory, Brigham and Women's Hospital, and HMS)
- Nurses' Health Study II
- Program in Cardiovascular Epidemiology
- Program on the Global Demography of Aging
- Program in Health Care Financing
- Program on Health Care Negotiation and Conflict Resolution
- Program on Humanitarian Policy and Conflict Research
- Program in Molecular and Genetic Epidemiology
- Program in Quantitative Genomics
- Public Health Disparities Geocoding Project Monograph
- The Nutrition Source

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HOSPITALS

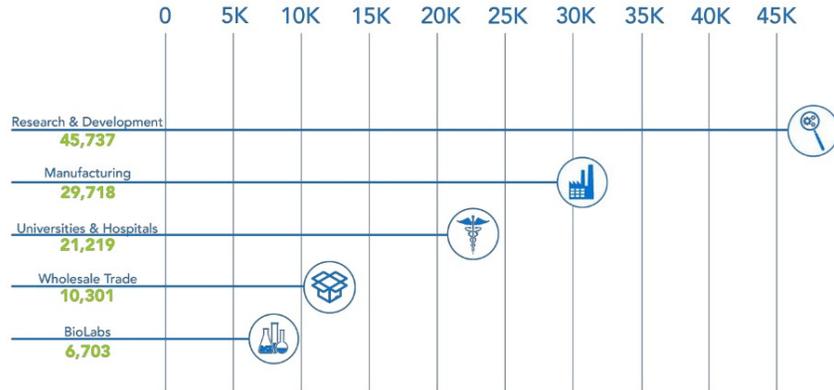
Massachusetts has about 110 hospitals.

Finançament rebut per la NIH 2014

Organization	City	State	Awards	Funding
Massachusetts General Hospital	Boston	MA	770	\$349,524,060
Brigham & Women's Hospital	Boston	MA	558	\$319,409,432
Children's Hospital Corporation	Boston	MA	301	\$122,949,506
Dana-Farber Cancer Inst.	Boston	MA	207	\$122,652,215
Children's Hospital of Philadelphia	Philadelphia	PA	192	\$112,146,779
Beth Israel Deaconess Medical Center	Boston	MA	240	\$108,156,442
Cincinnati Childrens Hosp Med Ctr	Cincinnati	OH	251	\$97,854,412
St. Jude Children's Research Hospital	Memphis	TN	89	\$48,650,426
New York State Psychiatric Institute	New York	NY	99	\$46,903,956
Seattle Children's Hospital	Seattle	WA	84	\$39,068,563
Boston Medical Center	Boston	MA	85	\$38,130,340
Cedars-Sinai Medical Center	Los Angeles	CA	76	\$34,423,825
Tufts Medical Center	Boston	MA	45	\$27,737,457
McLean Hospital	Belmont	MA	81	\$25,413,803

LIFE SCIENCES INDUSTRY

Life Sciences Employment By Sector: 2010-2012

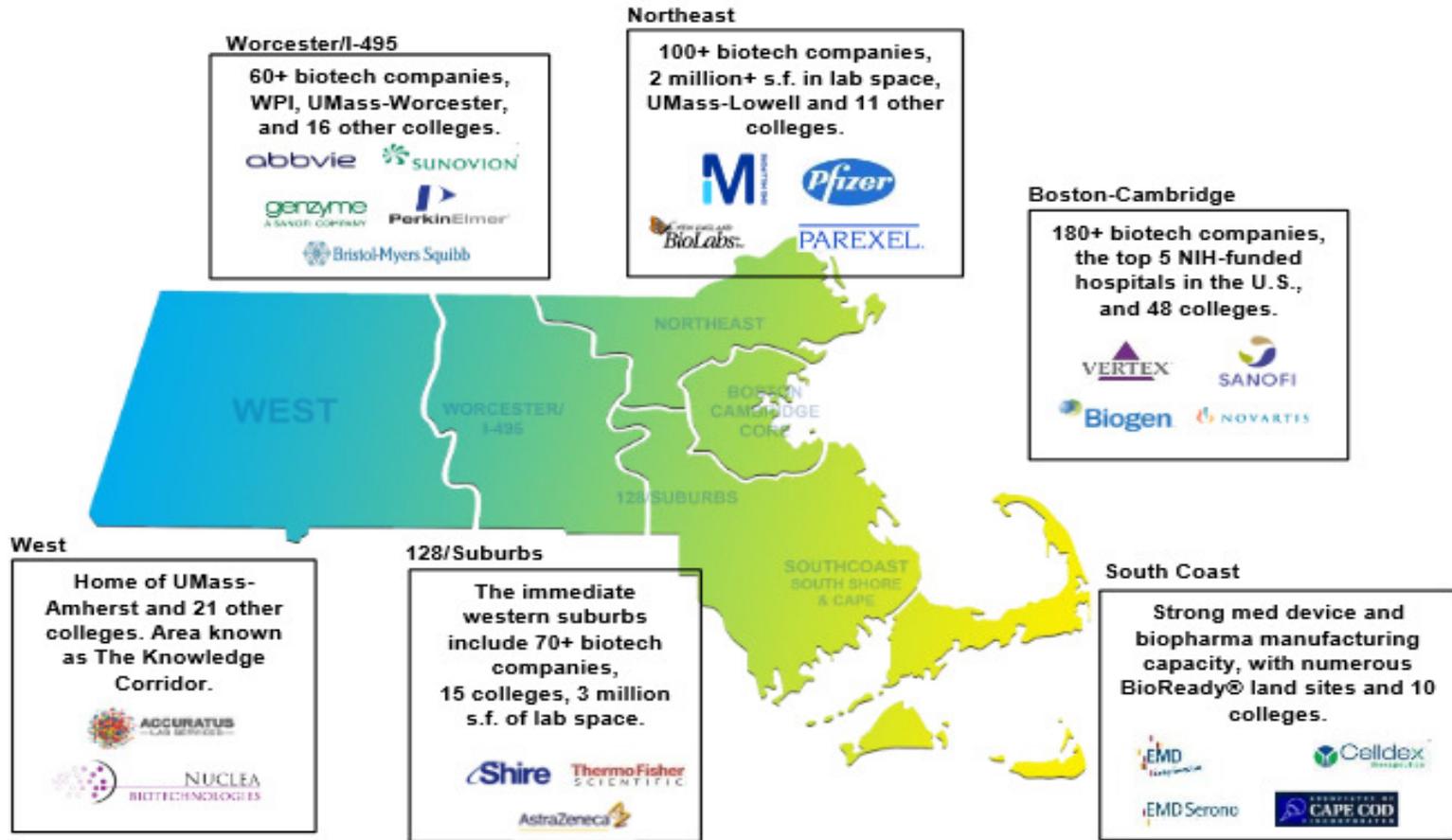


Total Massachusetts Life Sciences Employment:

113,678

1	Genzyme, a Sanofi Company	4,356	16	PerkinElmer	850
2	Biogen	3,100	17	AstraZeneca	700
3	Parexel International	2,800	17	AbbVie	700
4	Pfizer	2,600	17	Sunovion Pharmaceuticals (DSP)	700
5	Novartis	2,100	20	Merck	525
6	Hologic	1,800	21	Bristol-Myers Squibb	400
7	Thermo Fisher Scientific	1,726	22	Lantheus	375
8	Shire	1,500	23	Alkermes	325
9	Vertex	1,300	24	Immunogen	311
9	Takeda	1,300	25	Ironwood	290
11	Quest Diagnostics	1,100	26	Merrimack	288
12	EMD Millipore	1,000	27	New England Biolabs	280
13	Charles River Laboratories	960	28	Amgen	275
14	EMD Serono	860	29	Cell Signaling	270
15	Nova Biomedical	855	30	Momenta Pharmaceuticals	263

LIFE SCIENCES INDUSTRY



Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); MassBio/MHT Directory

LIFE SCIENCES INDUSTRY

Global Leaders are Moving Their U.S. Headquarters to MA

MASSACHUSETTS
LIFE SCIENCES CENTER



The Boston Globe

Merck KGaA moving US base to Billerica, Millipore deal also expected to bring new jobs to state (3/4/10)



Pfizer completes move of research unit to Massachusetts (9/8/11)



Boston Business Journal

GE Healthcare Life Sciences Moves to Marlborough HQ (8/20/14)

**Baxter
BostInno**

Healthcare Giant Baxter International Is Moving to Cambridge (8/27/14)

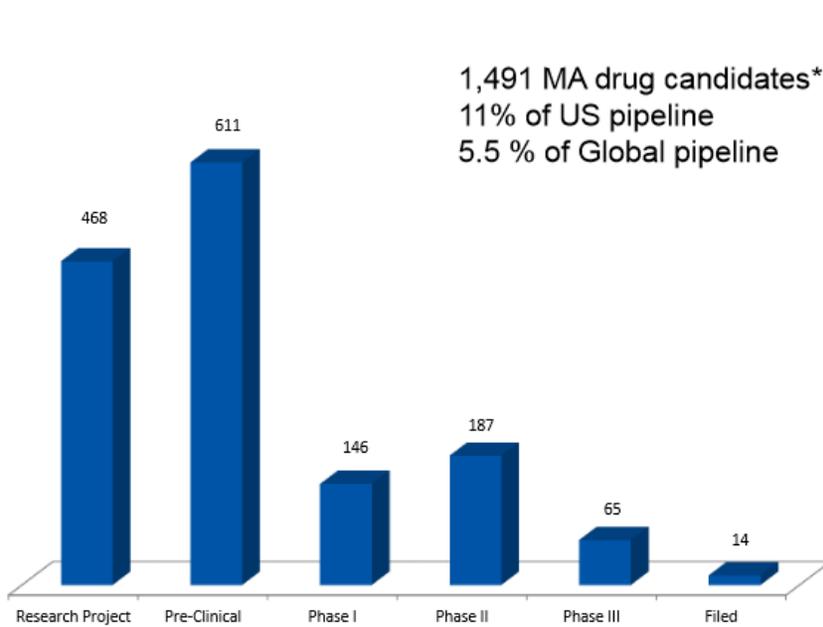
**Shire
The Boston Globe**

*Shire to Move US HQ and 500 Jobs to Greater Boston (11/19/14)
Shire to Buy NPS Pharmaceuticals for \$5.2 Billion and Considering Moving Many of NPS's 400 Employees to its Lexington Campus (1/1/15)*

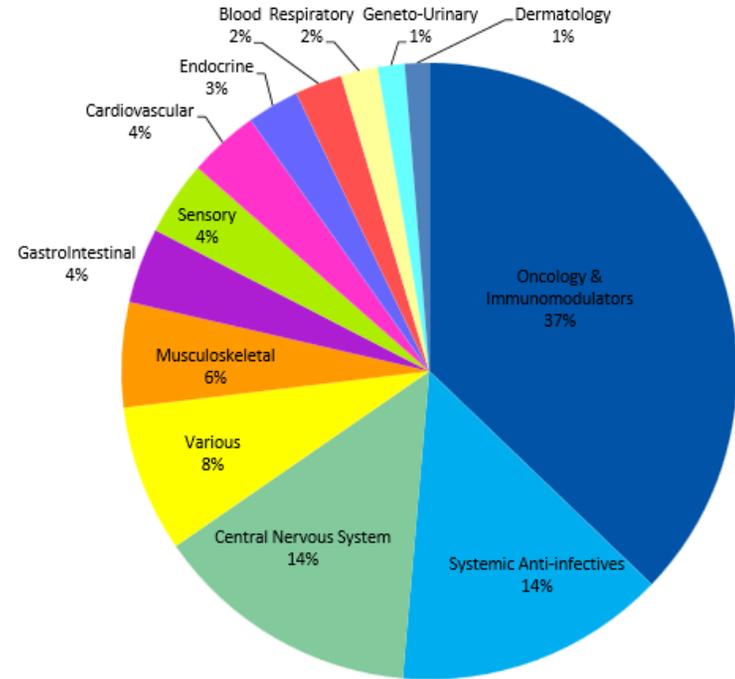
**AMGEN
Boston Business Journal**

Amgen enters heavyweight fray for Kendall Square's few remaining blocks of space (8/19/14)

DRUG CANDIDATES



1,491 MA drug candidates*
 11% of US pipeline
 5.5 % of Global pipeline



Source: EvaluatePharma®, August 2015

NOUS MEDICAMENTS APROVATS 2014

 **Biogen** **Alproliz:** *For the treatment of hemophilia B*

 **Entyvio:** *For treatment of adults with ulcerative colitis and Crohn's Disease.*

 **Sirexto:** *For treatment of acute bacterial skin and skin structure infections*

 **Biogen** **Plegridy:** *For the treatment of relapsing forms of multiple sclerosis*

 **Genzyme**
A SANOFI COMPANY **Cerdelga:** *For treatment of adults with the Type 1 form of Gaucher disease*

 **Genzyme**
A SANOFI COMPANY **Lemtrada:** *For the treatment of relapsing multiple sclerosis*

 **Zebraxa:** *To treat adults with complicated intra-abdominal infections (cIAI) and complicated urinary tract infections (cUTI)*

 **Vertex** **Orkambi:** *For the treatment of cystic fibrosis*

Source: CenterWatch

ENTREPRENEURSHIP

	Ranking		Performance	Funding	Market Reach	Talent	Startup Exp.	Growth Index
Silicon Valley	1	◀	1	1	4	1	1	2.1
New York City	2	▲ 3	2	2	1	9	4	1.8
Los Angeles	3	◀	4	4	2	10	5	1.8
Boston	4	▲ 2	3	3	7	12	7	2.7
Tel Aviv	5	▼ 3	6	5	13	3	6	2.9
London	6	▲ 1	5	10	3	7	13	3.3
Chicago	7	▲ 3	8	12	5	11	14	2.8
Seattle	8	▼ 4	12	11	12	4	3	2.1
Berlin	9	▲ 6	7	8	19	8	8	10
Singapore	10	▲ 7	11	9	9	20	9	1.9
Paris	11	◀	13	13	6	16	15	1.3
Sao Paulo	12	▲ 1	9	7	11	19	19	3.5
Moscow	13	▲ 1	17	15	8	2	20	1.0
Austin	14	NEW	16	14	18	5	2	1.9
Bangalore	15	▲ 4	10	6	20	17	12	4.9
Sydney	16	▼ 4	20	16	17	6	10	1.1
Toronto	17	▼ 9	14	18	14	15	18	1.3
Vancouver	18	▼ 9	18	19	15	14	11	1.2
Amsterdam	19	NEW	15	20	10	18	16	3.0
Montreal	20	NEW	19	17	16	13	17	1.5

3,700 and 4,500 active tech startups

189 of Inc.'s list of 5000 high-growth companies, 12 of which had 2012 revenue above \$100 million.

Dense network of mentors and supportive organizations such as Bolt, Techstars Boston, Harvard Innovation Lab, and MassChallenge

ENTREPRENEURSHIP

Stakeholder	Description	Function within model
Programs and institutions to attract, retain, develop, and concentrate entrepreneurs		
ONEin3 Boston	Guides civic policymaking to better suit needs of key entrepreneurial demographic. Does outreach and provides resources to same demographic.	<ul style="list-style-type: none"> • Attract, retain, entrepreneurial talent over a medium-to-long time horizon.
Stay in MA (private service provider)	Provides funding for local students to participate in local entrepreneurship industry events and conferences.	<ul style="list-style-type: none"> • Develop and retain entrepreneurial talent —long time horizon. • Increase interconnectivity between potential entrepreneurs and existing entrepreneurs and mentors.
Innovation District (government initiative)	Marketing campaign, recruitment, and real estate development. Goal is to attract and concentrate startup companies, entrepreneurs, and the creative class in one neighborhood; additional goal of local economic development for that neighborhood.	<ul style="list-style-type: none"> • Increase interconnectivity among existing entrepreneurs, mentors, and other stakeholders.



ENTREPRENEURSHIP



Mentorship and connection programs and institutions		
Martin Trust Center for MIT Entrepreneurship	provides the expertise, support, and connections MIT students need to become effective entrepreneurs	<ul style="list-style-type: none"> ● Develop and retain entrepreneurial talent —long time horizon. ● Increase interconnectivity between potential entrepreneurs and existing entrepreneurs and mentors.
MIT Venture Mentoring Service	Connects student entrepreneurs to relevant mentors through structured guidance programs.	<ul style="list-style-type: none"> ● Develop and retain entrepreneurial talent —long time horizon. ● Increase interconnectivity between potential entrepreneurs and existing entrepreneurs and mentors.
Venture Well / Village Capital	An accelerator program that provides mentorship, investment, and work space for early-stage startups in Boston.	<ul style="list-style-type: none"> ● Develop and retain entrepreneurial talent —long time horizon. ● Increase interconnectivity between potential entrepreneurs and existing entrepreneurs and mentors. ● Provide startup capital to entrepreneurs.
Tech Stars Boston	Structured, for-profit mentorship, incubation, and investment program.	Develop and retain entrepreneurial talent —long time horizon. Increase interconnectivity between potential entrepreneurs and existing entrepreneurs and mentors. Attract media and investor attention to region. *Provide startup capital to entrepreneurs.
BU Kindle	Part of BU’s Office of Technology Development, the Kindle program pairs seasoned entrepreneurs and business executives with student and faculty entrepreneurs working to commercialize university invention or their own ideas.	<ul style="list-style-type: none"> ● Develop and retain entrepreneurial talent —long time horizon. ● Increase interconnectivity between potential entrepreneurs and existing entrepreneurs and mentors. ● Attract media and investor attention to region. Provide startup capital to entrepreneurs

ENTREPRENEURSHIP

Stakeholder	Description	Function within model
Campus innovation and entrepreneurship programs (Universities)		
Venture Development Center at the University of Massachusetts Boston	Curriculum. Internship placement. Network management. Hosting startup companies within a campus-based incubation space.	<ul style="list-style-type: none"> ● Develop entrepreneurial talent through curriculum development. ● Retain talent in Boston through internship placements and networking with local startups. ● Increase interconnectivity between potential entrepreneurs, skilled workers, and existing startups.
Massachusetts Tech Transfer Center	acts as a hub to drive interconnectivity between several important stakeholders: universities, investors, large tech companies and local industry	<ul style="list-style-type: none"> ● Increase flows of technology by making university inventions more accessible to entrepreneurs and partners. ● Increase network connectivity between campuses and entrepreneurial ecosystem through events and programs.
Organizations and information portals		
Greenhorn Connect	Online platform for Boston’s aspiring entrepreneurs (“Greenhorns”) to connect with the entrepreneurship ecosystem. Includes a catalogue of local support platforms and events.	<ul style="list-style-type: none"> ● Increase connectivity between aspiring entrepreneurs and various kinds of support platforms and talent development resources.

ENTREPRENEURSHIP

Support Platforms		
CIC	<p>Incubator/co-working spaces Managed office services firm geared toward the needs of startup companies. Includes services such as month-to-month leases, scalable office space capacity, video conferencing, office management services.</p>	<ul style="list-style-type: none"> ● Increase network connectivity by concentrating entrepreneurial density within a building. ● Speed technology development by giving startup companies a place to rapidly scale as they develop and market products, ● Help increase flow of capital by co-locating investors and entrepreneurs in the same building with a mix of traditional commercial real estate and non-traditional incubation
Venture Café	<p>Meetup group / event organizer Enhances and accelerates the innovation process through spaces, programs, and conversations for individuals and organizations to gather and build relationships.</p>	<ul style="list-style-type: none"> ● Trigger creativity ● Inspire innovation ● Motivate entrepreneurship ● Catalyze action ● Expand interdisciplinary collaboration ● Assist in problem-solving ● Create the relationships that drive the innovation economy.
Mass Challenge	<p>Accelerator MassChallenge is designed to catalyze a global renaissance by connecting high-impact startups with the resources they need to launch and succeed.</p>	<ul style="list-style-type: none"> ● 4-month programs: mentorship, office space, education, network & community, and other resources ● \$2 million+ cash awards, \$10 million in-kind
MassVentures	<p>Government grant maker and seed fund</p>	<ul style="list-style-type: none"> ● Fueling the Massachusetts innovation economy by funding early-stage, high-growth Massachusetts startups as they move from concept to commercialization



INCUBATORS AND ACCELERATORS



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VC

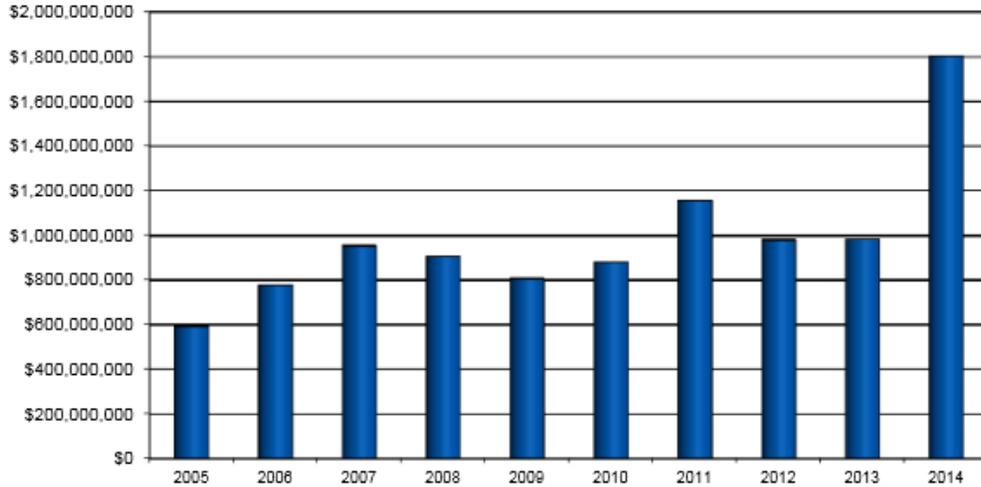


VC Technology Investment In Millions of Dollars Massachusetts, 2013		VC Investment per \$1000 GDP Massachusetts & LTS, 2013	
Industry	Millions (\$)		VC Investment
Biotechnology	\$ 984.75	Massachusetts	\$ 7.68
Software	\$ 742.66	California	\$ 6.72
Medical Equipment	\$ 348.59	New York	\$ 2.13
Industrial/Energy	\$ 255.34	Minnesota	\$ 0.87
IT Services	\$ 158.15	Texas	\$ 0.87
Computers	\$ 117.52	Pennsylvania	\$ 0.74
Electronics	\$ 96.13	Connecticut	\$ 0.73
Media & Entertainment	\$ 89.74	Illinois	\$ 0.60
Semiconductors	\$ 75.91	New Jersey	\$ 0.59
Consumer Products	\$ 54.43	Ohio	\$ 0.55



VC a la indústria BIO

L'any 2014 es va batre el record d'inversió venture capital en la indústria Bio de Massachusetts, arribant als 1.8 bilions americans (1.800 milions europeus) de dòlars invertits



Source: EvaluatePharma®, August 2015

Name	\$ (million)	Series
Moderna Therapeutics	475.0	Series C
Intarcia Therapeutics	200.0	Series H
Voyager Therapeutics	105.0	Series A
Dimension Therapeutics	95.0	Series A
UNUM Therapeutics	77.0	Series A
Blueprint Medicines	75.0	Series B
Seres Therapeutics	58.0	Series B
Civitas Therapeutics	55.0	Series C
Syros Pharmaceuticals	53.0	Series B
Mersana Therapeutics	49.5	Series B
Proteon Therapeutics	45.0	Series D
Flex Pharma	40.0	Undisclosed
SAGE Therapeutics	38.0	Series C
EPIRUS Biopharmaceuticals	36.0	Series B
Synlogic	34.4	Series A

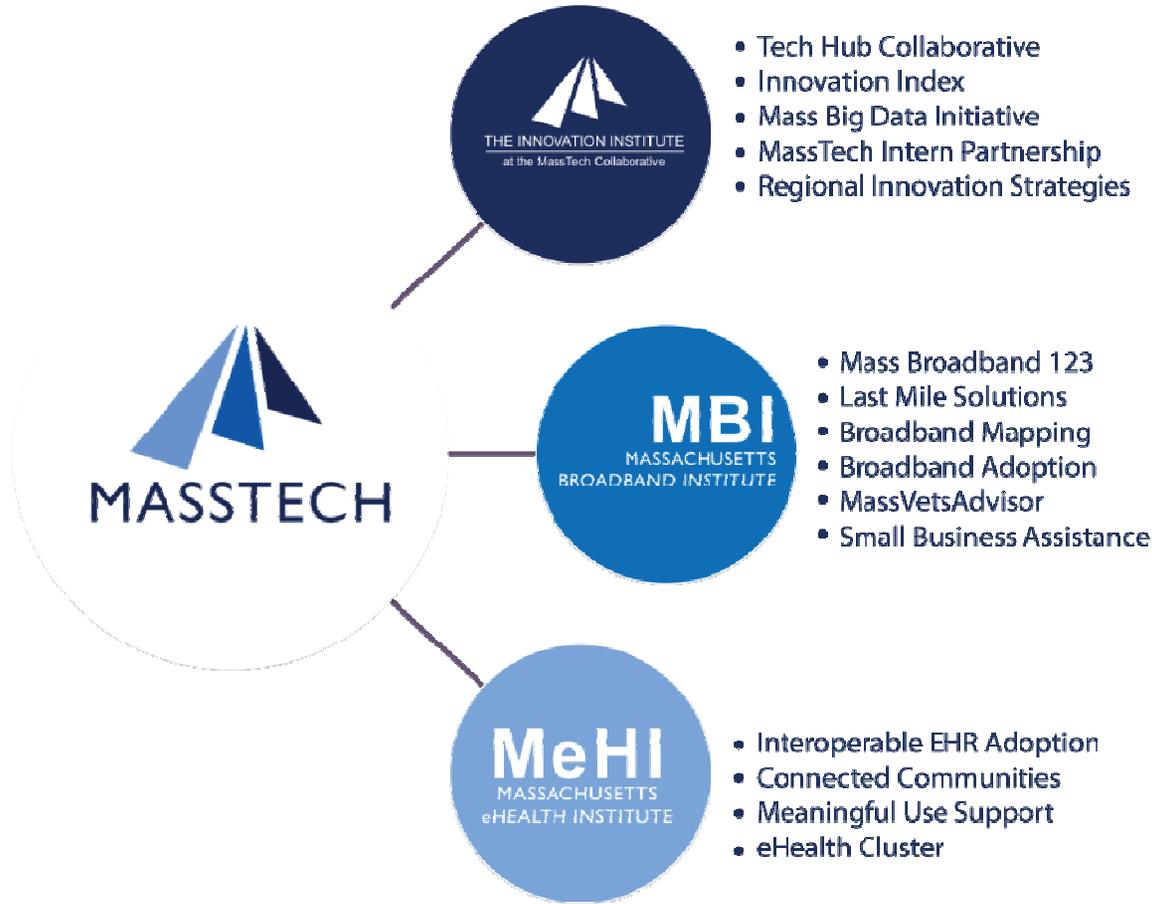
COMMONWEALTH OF MASSACHUSETTS AGENCIES

The Massachusetts Office of International Trade and Investment (MOITI) acts as a connector for Massachusetts based companies looking to expand internationally and for international businesses looking to locate, expand or invest in the Commonwealth

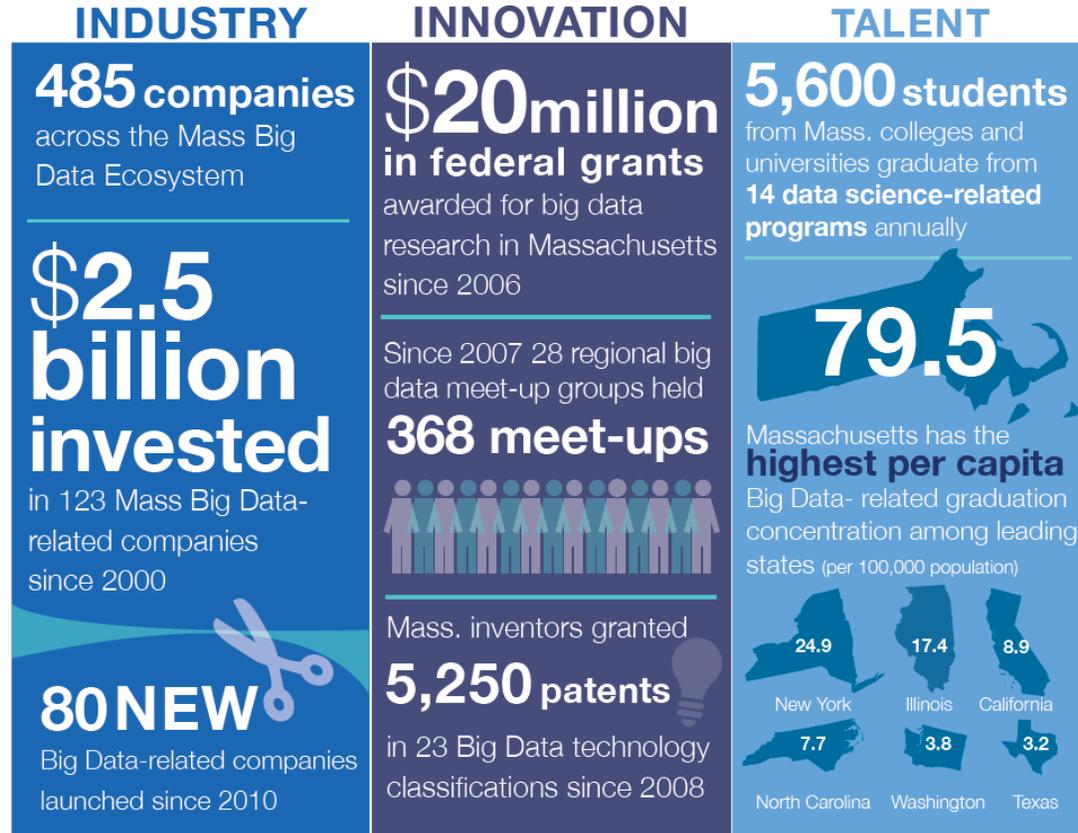
The Massachusetts Life Sciences Center (MLSC) is a quasi-public agency established to promote the life sciences within the Commonwealth of Massachusetts. It is tasked with investing in life sciences research and economic development.

The Massachusetts Technology Collaborative (MTC) is a public economic development agency that fosters a more favorable environment for the formation, retention, and expansion of technology-related enterprises in Massachusetts.

MASS TECH COLLABORATIVE



MASSACHUSETTS BIG DATA INITIATIVE



The mission of the Massachusetts Big Data Initiative is to expand the Commonwealth's position as a world leader in the growing big data industry and enable the region to become the premier global hub for big data innovation and technology.

MeHI – MASSACHUSETTS eHEALTH INSTITUTE

Is the designated state agency for promoting Health IT innovation, technology and competitiveness to improve the safety, quality and efficiency of health care. Our mission is to engage the healthcare community and catalyze the development, adoption and effective use of Health IT.



DIGITAL HEALTH

Massachusetts Making Digital Health Sector A Priority

By JIM LEVULIS • JAN 7, 2016

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Massachusetts Governor Charlie Baker speaking at Boston's Children's Hospital Thursday.

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Digital health, or eHealth, is a rapidly growing sector at the intersection of healthcare and information technology, and according to a report by Goldman Sachs represents an approximately **\$32B market opportunity over the next decade.**

The initiative will bring public, private, academic, and healthcare leaders together to build a stronger and more connected statewide digital health ecosystem. To support digital health startups, the City of Boston, Massachusetts eHealth Institute at **MassTech (MeHI)**, and MACP announced the establishment of a digital health innovation hub. The initiative will provide space, programming and strong industry network for digital health startups and will serve as a Boston “hub” for the industry. Programming through the hub will be managed and operated by **MassChallenge**

MASS LIFE SCIENCES CENTER

Primary Sectors



In 2006, a quasi-public agency, the Massachusetts Life Sciences Center (MLSC) was set up to promote the life sciences within the Commonwealth. And in 2007, MA Governor Deval Patrick proposed the Massachusetts Life Sciences Initiative, a 10-year, \$1bn investment to enhance the state’s leadership in the life sciences, and to strengthen the life sciences as the engine for sustained growth in the Commonwealth.

A Portfolio of Investments That Target Key Enablers of Life Sciences Innovation Capacity



National Institute of Health:

The *NIH* invests nearly \$30.1 *billion* annually in **medical research** for the American people.

More than 80% of the NIH's funding is awarded through almost 50,000 [competitive grants](#) to more than 300,000 researchers at more than 2,500 universities, medical schools, and other research institutions in every state and around the world.

About 10% of the NIH's budget supports projects conducted by nearly 6,000 scientists in its own laboratories, most of which are on the [NIH campus in Bethesda, Maryland](#).

Institution	Funding	Grants
Harvard Medical School	\$193,508,468	383
Harvard School of Public Health	\$123,955,103	182
U. Massachusetts Med School Worcester	\$121,907,830	301
Boston University Medical Campus	\$112,678,027	233
Massachusetts Institute of Technology	\$103,988,893	251
Broad Institute, Inc.	\$95,443,418	55
Harvard University	\$61,056,145	125
Tufts University Boston	\$41,918,398	116
Boston University (Charles River Campus)	\$34,618,048	104
Brandeis University	\$28,831,370	93
University of Massachusetts Amherst	\$19,107,287	64
Boston College	\$11,142,110	26
Northeastern University	\$20,812,728	53
Joslin Diabetes Center	\$13,306,601	34
Forsyth Institute	\$12,021,486	24

Organization	City	State	Awards	Funding
Massachusetts General Hospital	Boston	MA	770	\$349,524,060
Brigham & Women's Hospital	Boston	MA	558	\$319,409,432
Children's Hospital Corporation	Boston	MA	301	\$122,949,506
Dana-Farber Cancer Inst.	Boston	MA	207	\$122,652,215
Children's Hospital of Philadelphia	Philadelphia	PA	192	\$112,146,779
Beth Israel Deaconess Medical Center	Boston	MA	240	\$108,156,442
Cincinnati Childrens Hosp Med Ctr	Cincinnati	OH	251	\$97,854,412
St. Jude Children's Research Hospital	Memphis	TN	89	\$48,650,426
New York State Psychiatric Institute	New York	NY	99	\$46,903,956
Seattle Children's Hospital	Seattle	WA	84	\$39,068,563
Boston Medical Center	Boston	MA	85	\$38,130,340
Cedars-Sinai Medical Center	Los Angeles	CA	76	\$34,423,825
Tufts Medical Center	Boston	MA	45	\$27,737,457
McLean Hospital	Belmont	MA	81	\$25,413,803

MATTO is the Massachusetts Association of Technology Transfer Offices

MATTO provides:

A vehicle to address issues affecting the technology transfer profession as a whole in Massachusetts;
Professional development training for its members;
Events that showcase early stage technologies developed at academic institutions in Massachusetts.

Baystate Health
Beth Israel Deaconess Medical Center
Boston Children's Hospital
Boston College
Boston Medical Center
Boston University
Broad Institute
Brandeis University
Brown University
Brigham and Women's Hospital
Center for the Integration of Med. and Inn. Technology
Charles Stark Draper Laboratories
Children's Hospital Boston
Dana-Farber Cancer Institute
Forsyth Institute
Harvard University
Joslin Diabetes Center

Massachusetts Eye and Ear Infirmary
Massachusetts General Hospital
Massachusetts Institute of Technology
Massachusetts Technology Transfer Center
McLean Hospital
The MITRE Corporation
Northeastern University
Partners HealthCare
Schepens Eye Research Institute
Steward St. Elizabeth's Medical Center
Tufts Medical Center
Tufts University
University of Massachusetts
Whitehead Institute
Woods Hole Oceanographic Institution
Worcester Polytechnic Institute
U. S. Army Soldier Systems Center (Natick)

OPORTUNITATS A MASSACHUSETTS

- ✓ Tot el que pugui donar servei a les Biotech / Health / Pharma (TIC, software, anàlisis)
- ✓ Col·laboracions amb Hospitals
- ✓ Col·laboracions amb startups
- ✓ Col·laboracions en Big Data
- ✓ Social Entrepreneurship
- ✓ Digital Health?

ALGUNES EINES PER COL·LABORAR

MLSC - The UP program will provide grants to Massachusetts companies to support an R&D collaboration with a **non-U.S. organization** (such as: a company, research institution, or university). \$50,000 (minimum) to \$200,000 (maximum)

NIH provide leadership and financial support to researchers both inside and **outside the United States**. Approximately 80% of NIH funding goes to support research grants, including grants to **foreign organizations**. Many of the ICs have **international programs/collaborations** that can be linked to from their homepages

Masschallenge - With over 1,650 startup **applicants from 50 countries** and 40 U.S. states, the 2014 MassChallenge Accelerator was the most competitive yet, adding additional inspiration for us to expand and improve our support for the world's highest-impact startups

MIT - The MISTI Global Seed Fund facilitates research collaborations between MIT faculty and their Spanish counterparts.

Espais i incubadores: CIC i Labcentral

EEN: Cerca partners tecnològics a USA

ESDEVENIMENTS

BIO International Convention – June 6-9 – San Francisco

<http://convention.bio.org/2016/>

World Preclinical Congress – June 14-17 - Boston

<http://www.worldpreclinicalcongress.com/>

BIO IT World Conference – April 5-7 - Boston

<http://www.bio-itworldexpo.com/>

Abilities Expo 2016 - September 16-18 - Boston

<http://www.abilities.com/boston/>

Neurotech Investing and Partnering Conference – April 6-7 - Boston

<http://www.neurotechconf.com/>

BIOMEDevice – April 13-14 - Boston

<http://biomedevice.mddionline.com/>



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