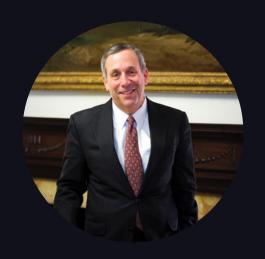


HARVARD IN
MASSACHUSETTS:
FACTS & IMPACT



# " HARVARD UNIVERSITY IS PROUD TO BE PART OF A REMARKABLE ECOSYSTEM OF INNOVATION.



As we strive to overcome the challenges of the COVID-19 pandemic, we remain committed to mission-driven work that benefits Massachusetts and contributes to the region's vitality. Discoveries and advances made in our labs, expertise and experience shared with our partners in government, and dedication and resolve demonstrated by health care workers in our affiliated hospitals are all causes for hope and gratitude as we look forward to resuming our important work together.

LAWRENCE S. BACOW
PRESIDENT OF HARVARD UNIVERSITY

# HARVARD IN MASSACHUSETTS:

#### **FACTS & IMPACT**



With thousands of students, employees, and alumni from across the Commonwealth of Massachusetts, Harvard University is proud to be a part of the state's cultural and economic life. Through generous financial aid, cutting-edge research, and strategic partnerships, Harvard ensures expanded access to education, spending in the regional economy, and that discoveries made on-campus translate into solutions and startups to address societal needs. Harvard strives to connect its nonprofit mission of teaching and research to the state and to help make Massachusetts a thriving region in which to live, learn, and work.

#### $\longrightarrow$

#### **HOW DOES HARVARD CONTRIBUTE?**



#### Education 2

Expanding access to education and innovative opportunities for learning. Supporting students with generous financial aid.



#### Research 4

Attracting hundreds of millions of dollars in research funding to Massachusetts. Fueling science, medical discoveries, and spending in the regional economy.



#### Innovation 6

Driving discoveries that attract private investment, launch new ventures, and advance social impact. Sparking the region's entrepreneurial spirit.



#### **Employment 8**

Anchoring a knowledgebased economy as one of the largest employers in the state. Providing jobs that empower employees to grow and advance in their careers.



#### Impact 10

Supporting local businesses through purchasing.
Contributing to the vitality of companies and nonprofits.



# Civic Engagement & Public Service 12

Encouraging acts of service and public interest careers. Partnering for the common good and engaged communities



#### **Education**

Expanding access to education and innovative opportunities for learning. Supporting students with generous financial aid.

#### STUDENT POPULATION

2019-2020 ACADEMIC YEAR

35,685

STUDENTS AT HARVARD

6,716

HARVARD COLLEGE STUDENTS

13,815

**GRADUATE STUDENTS** 

15,154

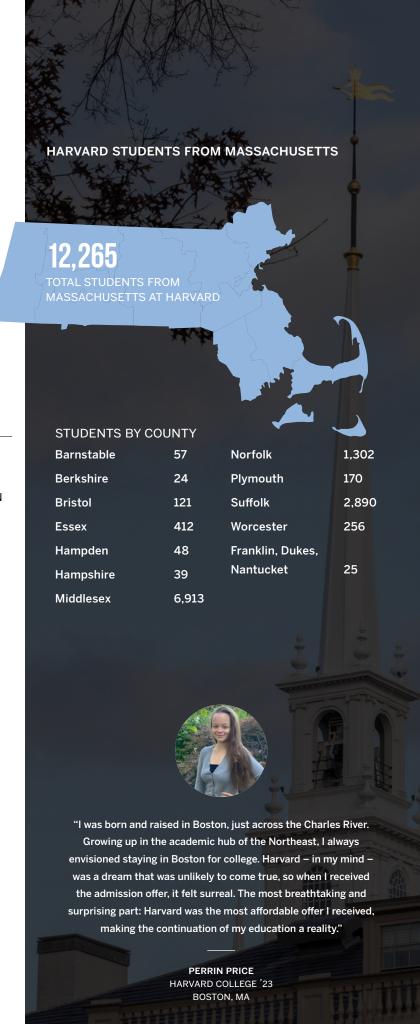
HARVARD EXTENSION SCHOOL STUDENTS

# PROFESSIONAL AND GRADUATE SCHOOLS

Harvard University has 12 professional and graduate schools and the Radcliffe Institute for Advanced Study. Every year, these schools confer more than 5,500 master's and doctoral degrees across a wide range of fields—contributing to the vitality of the region's knowledge-based economy.

#### HARVARD EXTENSION SCHOOL

With more than **900 courses** in a variety of academic disciplines, the Extension School offers students and adult learners the opportunity to advance in their careers, pursue a degree, or explore an academic passion—expanding access to both undergraduate and graduate education opportunities through a combination of online and on-campus programs.



#### **FINANCIAL AID**

Building on the University's commitment to expanding access to an affordable college education, the Harvard Financial Aid Initiative (HFAI) ensures students can attend Harvard College regardless of economic obstacles.

#### HARVARD FINANCIAL AID INITIATIVE

\$0

families with annual incomes of less than \$65,000 pay nothing towards their child's education of undergraduates receive need-based grant aid

100%

of students can graduate debt free

\$**2.4**<sub>B</sub>

in grant aid distributed to undergrads since HFAI was launched in 2004

2019-2020 ACADEMIC YEAR

\$209.9N
in institutional need-based grant aid provided to Harvard College students

\$49,250

average award to
Massachusetts students
enrolled in Harvard
College receiving aid

1.021

Massachusetts students enrolled in Harvard College 427

Massachusetts students enrolled in Harvard College received need-based scholarship assistance

\$**21**M

in scholarships awarded to Harvard College students from Massachusetts



#### PARTNERING TO RESPOND TO COVID-19



Supporting Remote and Hybrid Learning in Massachusetts

Developed by Harvard University Faculty of Arts and Sciences in collaboration with the Amgen Foundation, LabXchange is a free digital learning platform, designed to support classroom learning and to bring the scientific process to life. Through high-quality content, including simulations, assessments, and opportunities for mentorship, LabXchange helps to expand access to STEM education and promote students' exploration of STEM careers. With this technology becoming an even more critical tool during the pandemic, LabXchange worked to support schools across Massachusetts as they transitioned to remote and hybrid learning.

16,000+

Massachusetts educators and students supported

90+

school & institutional collaborators

9,800+

hours of teaching and learning

70+

educator co-developers and content collaborator

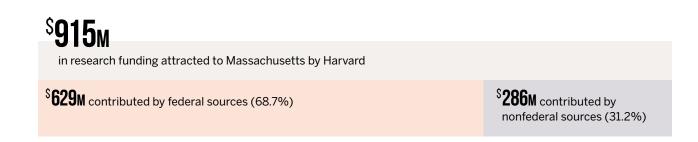


#### Research

Attracting hundreds of millions of dollars in research funding to Massachusetts. Fueling science, medical discoveries, and spending in the regional economy.

#### **FY19 RESEARCH FUNDING**

Expanding Knowledge, Anchoring Massachusetts Industries and Innovation



#### LOCAL JOBS, LOCAL PURCHASING



# PARTNERING WITH THE COMMONWEALTH TO ADVANCE RESEARCH & INNOVATION FY10 - FY19

Harvard has been proud to work with state agencies on a range of research initiatives that are critical to the region's innovation economy and Massachusetts residents, driving collaborations among academia, industry, and the Commonwealth. In the past decade, Harvard has partnered with 19 state agencies, including the Massachusetts Life Sciences Center and Massachusetts Technology Collaborative, on more than 70 research projects focused on addressing educational, environmental, and public health issues.

research projects, advancing educational, environmental, and public health initiatives Commonwealth of Massachusetts partners





# Massachusetts Consortium on Pathogen Readiness

Harvard University led the formation of the <u>Massachusetts Consortium on Pathogen Readiness (MassCPR)</u>, a coalition of leading researchers and institutions dedicated to fighting COVID-19 and the SARS-CoV-2 virus that causes it, as well as to prepare for future epidemics. MassCPR includes scientists and clinicians from Harvard, MIT, Boston University, Tufts University, the University of Massachusetts, local biomedical research institutes, biotech companies, and academic medical centers. This collaborative is supported by other institutions including the Massachusetts Life Sciences Center. Since it was launched this year in early March:

\$17.6m awarded

**64** projects

addressing epidemiology, clinical disease management, vaccine development, new therapies, diagnostic tools, and understanding how the virus impacts the body



"The COVID-19 pandemic is a watershed moment in human history and has been nothing short of a rallying cry to those of us who have dedicated our lives and careers to science and medicine. MassCPR is our response to this historic moment."

GEORGE Q. DALEY
DEAN OF THE FACULTY OF MEDICINE
HARVARD UNIVERSITY

# RESUMING SCIENTIFIC RESEARCH AT HARVARD

In March 2020, Harvard shuttered the vast majority of laboratory research in response to the pandemic and the Commonwealth's COVID-19 emergency order. As public health and medical experts learned more about the virus and its transmission, Harvard joined public and private research institutions across the state in expert-driven planning processes to inform how labs could reopen safely. Recognizing the strict control of lab space and occupancy. the use of personal protective equipment, and culture of safety in research settings, <u>labs were included in Phase 1</u> of Massachusetts' reopening plan. In addition to allowing critical research to continue, a steady flow of federal funding, and support for Massachusetts' ecosystem of innovation, the safe reopening of labs has resulted in \$1.6 billion in expenditures from the state's academic research labs into the region's economy.



#### **Innovation**

Driving discoveries that attract private investment, launch new ventures, and advance social impact. Sparking the region's entrepreneurial spirit.

#### AN ENGINE OF INNOVATION

Harvard's research enterprise yields discoveries with the potential to improve lives, transform industries, and make a positive social and economic impact. Through the Office of Technology Development, the University advances science, fosters innovation, and translates new inventions into useful products that are available and beneficial to society.

443 innovations reported by

Harvard researchers in FY20

208

new patent applications filed by Harvard in FY20 3,887

total patents held by Harvard as of July 1, 2020 1*2*0+

startups launched around Harvard research innovations during the past decade

899

technology licenses are active with 580 industry partners as of July 1, 2020

in financing raised by startups launched to commercialize Harvard technologies in the past 5 years

#### A BRIDGE TO INNOVATION

Harvard operates two accelerator programs that combine funding strategies, technical support, and business expertise to help technology breakthroughs make the leap from campus labs to the commercial sphere.

Blavatnik Biomedical **Accelerator** 

Advancing innovations to improve health care and medicine

in grants awarded to 122 projects in the past 13 years

in follow-on revenue and research funding generated to support continued innovation at Harvard that contributes to the launch of new Massachusetts-based companies

Physical Sciences & **Engineering Accelerator**  Advancing innovation in robotics, quantum computing, energy storage, and more

in grants awarded to 30 projects in the past 6 years

in financing raised by 10 Harvard-launched startups **EXAMPLES OF MASSACHUSETTS-BASED** COMPANIES LAUNCHED AROUND HARVARD TECHNOLOGIES



















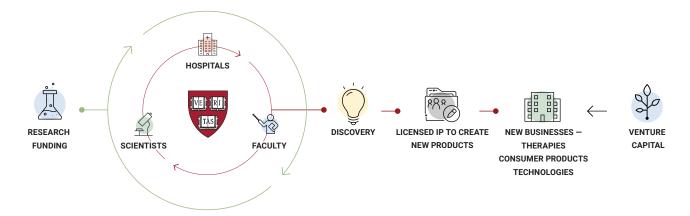
Harvard i-lab
Launch Lab X
Pagliuca Harvard Life Lab

1,600+ ventures created through iLabs in the past decade



#### AT THE HEART OF MASSACHUSETTS' INNOVATION ECONOMY

Harvard is at the heart of Massachusetts' unique ecosystem of innovation. The University's research enterprise, coupled with its affiliated teaching hospitals, create a powerhouse for attracting funding and generating early stage ideas, driving innovation, discovering cures, and building the regional economy.



#### 2019 BIOTECH DEALS

\$1.9<sub>B</sub>

in venture capital funding was received by **61 biotechnology companies** in Massachusetts

\$1.5<sub>B</sub>

of which was received by **54 companies** with connections to Harvard (**80 percent** of the funding awarded) A Harvard alumni or faculty member serves on the board or on the management team of **21 of the 25** largest life science companies in Massachusetts



# **Employment**

Anchoring a knowledge-based economy as one of the largest employers in the state. Providing jobs that empower employees to grow and advance in their careers.

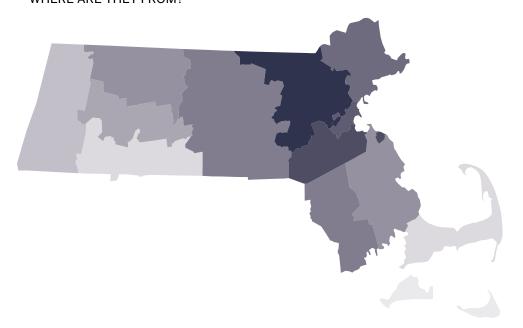
18,627

#### MASSACHUSETTS RESIDENTS DIRECTLY EMPLOYED BY HARVARD

ACADEMIC		NON-ACADEMIC
5,365		13,262
<b>3,277</b> faculty	2,088 postdocs	Includes research and faculty assistants, lab technicians, student services workers, staff members, and administrators responsible for carrying out the University's operations

5th largest#1 largest employeremployer inin the City of CambridgeMassachusettsfor 21 consecutive years

HARVARD EMPLOYEES: WHERE ARE THEY FROM?



#### **MA COUNTIES\*** Barnstable 59 Berkshire/Dukes/ Hampden/Nantucket 22 Bristol 177 Essex 808 Franklin 12 Hampshire 26 Middlesex 10,773 Norfolk 2,282 Plymouth 408 Suffolk 3,728 Worcester 332 Outside of MA 1,464

\* AS OF MAY 2020

#### **COVID-19 Resources for Harvard Employees**

As the pandemic challenged many aspects of life at home and at work, the University announced several initiatives to assist and support the Harvard workforce, including:

- Workplace policies allowing employees to work from home.
- COVID-19 emergency relief grants for employees facing immediate economic hardship due to the pandemic.
- Paid time off for employees to care for family members who are ill or need care arrangements.
- School and after-school programs for parents navigating family life and remote learning during the pandemic.
- Health & Wellness programs, including mindfulness, yoga, and planning during uncertain times.
- Continued pay, health, and other benefits for employees and contract workers whose work has been idled because of the COVID-19 impacts.

# APPRENTICESHIP AND YOUTH INTERNSHIP OPPORTUNITIES AT HARVARD

Harvard partners with local communities to provide internship and apprenticeship opportunities to youth, supporting them in attaining a valuable learning and work experience.

## 700+

high school students have worked in various office and lab positions across Harvard over **the past 5 years** through:

- Summer Youth Employment Program
- · Life Science Lab Apprenticeship Program
- CRLS Marine Science Internship
- Ed Portal Internship Program
- Harvard Science Research Mentoring Program

# 230+

Year Up participants received skills development and job training at Harvard in the past 5 years

#### SPOTLIGHT ON

#### **APPRENT**

Two years ago, Harvard was an early partner in Massachusetts' first technology-focused registered apprenticeship initiative, Apprenti. As part of the program, apprentices complete four months of training and a year-long paid apprenticeship that often leads to full-time employment. Recognizing this collaboration as a critical pathway to creating new pipelines for careers in tech and fostering diversity in key areas of the state's tech industry, Harvard University Information Technology has worked with Apprenti to hire apprentices in developer and business analyst roles.



"The Apprenti experience is an accelerated, hands-on approach that provides the structure to introduce people of diverse backgrounds into the technical field. The program has allowed me to adopt new technical skills, develop my confidence, and transition into a new career. Even after the completion of my training, I continue to learn and grow. Every assignment and obstacle resulted in work that I am proud of. The partnership between Apprenti and Harvard allows apprentices the opportunity to become part of a new community and build their network. Every day, I am humbled that I was given the chance to not only be a part of the Apprenti community but also the Harvard community."



## **Impact**

Supporting local businesses through purchasing. Contributing to the vitality of companies and nonprofits.



Through cutting-edge research and support for healthcare workers, neighbors, local businesses and nonprofits, Harvard has offered renowned expertise and much needed resources alongside state and local partners to respond to the critical challenges of COVID-19.

#### **Contact Tracing Efforts**

As the state's efforts to mobilize the Massachusetts Community Contact Tracing Collaborative were getting started, the Harvard T.H. Chan School of Public Health, Harvard Catalyst, and Harvard Medical School stepped in to develop training and tools that would be the foundation for the contact tracing initiative. During this time, Harvard volunteers followed up with over 1,200 confirmed cases and over 500 contacts at no cost to the state.

#### **Personal Protective Equipment Donations**

In a coordinated effort across campus, <u>Harvard collected</u> thousands of nitrile gloves, N95 masks, protective eye guards, <u>surgical and procedure face masks</u>, and disposable lab coats to <u>donate</u> to the Massachusetts Emergency Management Agency to be distributed to healthcare providers and hospitals across Massachusetts.

#### Allston-Brighton Emergency Response Grant

Harvard University provided emergency funding to local nonprofits to support the delivery of food supplies, medicine, educational programming, and resources to thousands of people in need during the early months of the pandemic.

**27** 

Harvard grants to local nonprofits

19<sub>K</sub>+

Boston residents reached

#### **Support for Temporary Emergency Shelter**

# <sup>\$</sup>500k

donated by Harvard University and the Massachusetts Institute of Technology to the City of Cambridge to <u>support the creation</u> of a temporary emergency shelter, providing relief for the City's homeless residents during the pandemic.

#### **Supporting First Responders**

Harvard offered the use of the Harvard Square Hotel to the Cambridge Health Alliance and Cambridge Police, Fire, and Emergency Medical Services for housing health care workers and first responders who needed a place to stay in close proximity to hospitals and health care facilities.

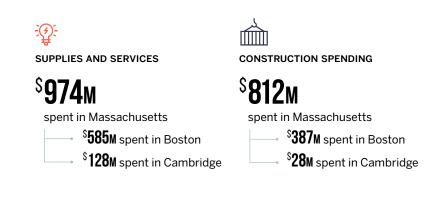
#### IMPACT OF LOCAL SPENDING

In FY19, Harvard spending totaled **\$6.5** billion. Harvard personnel expenses totaled **\$2.6** billion. The majority of Harvard spending went to purchase supplies, maintain and expand the physical plant, and run the University. These activities cost **\$3.9** billion.

\$1.7B
spent in Massachusetts

\$987M
spent in Spent in Spent in Spent in Boston

\$Cambridge



#### **EDS AND MEDS TOGETHER**

More than 10,000 doctors and researchers work at Harvard's 14 affiliated hospitals and have a Harvard Medical School appointment, bringing the specialized knowledge needed to attract research funding and translate discoveries into treatments. In 2019, these hospitals attracted \$1.4 billion in NIH funding to Massachusetts.

#### HARVARD & HIGHER EDUCATION: AN "ECONOMIC FUNDAMENTAL" FOR MASSACHUSETTS

Harvard University is proud to be part of Massachusetts' dynamic higher education sector credited with contributing to the state's knowledge-based economy. In addition to lending stability to local spending and employment, Harvard contributes to innovation in a range of other industries. While colleges and universities have been routinely cited by bond rating agencies as contributing to the City of Cambridge and City of Boston's high credit ratings, this year, Standard & Poor's cited higher education as a key anchor that should position the state for an economic rebound once pandemic restrictions are lifted.



"Harvard's generosity and commitment to working collaboratively with the City of Cambridge is making a real difference in the lives of our residents. The University's partnership in responding to the COVID-19 pandemic is one example that highlights how important it is for neighbors to work together to address shared challenges."

LOUIS A. DEPASQUALE
CITY MANAGER
CITY OF CAMBRIDGE



### Civic Engagement & Public Service

Encouraging acts of service and public interest careers.

Partnering for the common good and engaged communities.

#### FOSTERING CIVIC ENGAGEMENT

Committed to educating citizens and citizen leaders, Harvard University supports many initiatives designed to strengthen civic engagement and support the public good. This past year, Harvard partnered with its host communities in Boston and Cambridge to support a complete and accurate count of students in the **2020 Census** and launched the <u>Harvard Votes Challenge</u> to empower voter registration and participation among members of the Harvard community.



390

volunteers supported engagement efforts across Harvard's campus

94,000+

text and emails sent to voters

#### SPOTLIGHT ON THE DEMOCRATIC KNOWLEDGE PROJECT AT HARVARD UNIVERSITY

The Democratic Knowledge Project (DKP) is a K-16 educational platform designed to support civic education by providing curriculum and professional development resources to educators. DKP aligns with the 2018 Massachusetts History and Social Studies standards and law supporting civic action projects. It was first piloted with the Cambridge Public School and resources from the curriculum are available to all Massachusetts educators.

2,000+

Massachusetts students reached across

14

school districts



# PARTNERING WITH STATE AND LOCAL GOVERNMENT TO RESPOND TO COVID-19

Harvard students, faculty, and medical and infectious disease experts have been leading the way in responding to COVID-19, contributing to groundbreaking research and informing government decision-making in the fight against the pandemic, including through the Massachusetts Reopening Advisory Board, Massachusetts Vaccine Advisory Board, Massachusetts COVID-19 Health Equity Advisory Group, City of Boston's COVID-19 Health Inequities Task Force, and the City of Cambridge COVID-19 Expert Advisory Panel.



"The opportunity for Harvard Chan faculty and students to work side by side with other wonderful Massachusetts academic institutions during this public health crisis to support our state and local partners is something I am so proud that we can participate in. It mirrors — in a very intense and ideal way — how public health practitioners work together every day. It's an incredible learning opportunity for all of us, in addition to the contribution we want to make."

MICHELLE A. WILLIAMS

DEAN

HARVARD T.H. CHAN SCHOOL OF PUBLIC HEALTH

#### **EMPOWERING PUBLIC SERVICE**

Through programming initiatives, community service, and professional experiences, Harvard University offers multiple pathways for students, staff, and faculty to engage in public service and contribute to local government and nonprofits.

# SPARKING PUBLIC SERVICE THE SUMMER BEFORE HARVARD (SPARK)

An immersive six-week public service program for incoming first-year students, Harvard's SPARK initiative deepens community connections between home and campus by providing students funding and support for their public service projects. This year, Massachusetts-based projects included placements with: HelpSteps, Sociedad Latina, Portal to Hope, Groton Conservation Trust, Ludlow Public Schools, and Westborough Public Library.



# SPOTLIGHT ON PUBLIC SERVICE AT HARVARD LAW SCHOOL

At Harvard Law School, public service is ingrained in the legal teaching and training of students. Through an extensive clinical program, externships, student practice organizations, and career and funding opportunities, the Law School encourages and invests in the students' pursuit of public interest careers.

2019-2020 ACADEMIC YEAR

**1,668** public service placements in Massachusetts

**211,525** public service hours

#### HARVARD DAY OF SERVICE

A community-wide effort to <u>introduce incoming first-year</u> students to a vibrant culture of public service programs at Harvard.

2019-2020 ACADEMIC YEAR

1,540

Harvard students engaged in public service initiatives 4,620

hours of public service

#### **ALUMNI IMPACT**

Harvard alumni are deeply engaged in their communities and in making a positive impact by dedicating their careers to public service and serving as board volunteers.

**50,296**estimated Harvard alumni living in Massachusetts

A Harvard alumni or faculty member serves on the board or on the management team of 22 of the 25 largest nonprofit organizations

21

Harvard alumni are members of the 192nd General Court of the Commonwealth of Massachusetts 55

Harvard alumni are members of the 117th United States Congress



Public Affairs & Communications 114 Mount Auburn Street, 6th Floor Cambridge, MA 02138 617-495-4955

COMMUNITY.HARVARD.EDU EDPORTAL.HARVARD.EDU

#### About the cover

----

As part of the 'Keep Harvard Healthy' campaign, the Harvard community is engaged in coordinated efforts to minimize the spread of COVID-19.