# MIT Innovation Initiative

Established in 2013, the MIT Innovation Initiative (MITii) is a cross-school effort aimed at strengthening the vibrant culture and programming of innovation and principled entrepreneurship at MIT. The mission of the initiative is to connect the varied pathways and networks in this domain to empower the MIT community and its partners, stewarding the innovation process from ideas to impact.

In accordance with the provost and the deans of the School of Engineering and the MIT Sloan School of Management, the initiative works to set strategic direction and ensure alignment with broader Institute objectives. MITii works toward these goals by administering impactful programs structured to support, connect, enable, and inspire MIT's innovation and entrepreneurial (I&E) community in six key impact areas:

1. Student and community activation
2. Innovation infrastructure
3. Inclusion and diversity
4. Venture development
5. Corporate and government innovation
6. Innovation thought leadership

The MITii team is proud of what it has accomplished and is pleased to share the following summary of milestones reached this year.

## Student and Community Activation

### Entrepreneurship and Innovation Minor

Jointly offered by the School of Engineering and the MIT Sloan School of Management, the Entrepreneurship and Innovation Minor (E&I Minor) is designed as an interdisciplinary program with a combination of conceptual and practical elements that draws on a wealth of prior educational activities in this domain. In the time since the minor was established in 2016, 18 graduates have been conferred the E&I Minor.

### Coworking Space

Our goal is to support the people, programs, pathways, and places that make up MIT's innovation and entrepreneurship community. To help meet this goal, MITii offers open coworking space to MIT students each semester where they can bring their ideas to life. More than just a physical space, these coworking spaces encourage community building by providing digital tools and activities for the teams to bond as a cohort. This year, MITii selected 10 startup teams from 38 applications.


*Spring 2020 Innovation and Entrepreneurship Resource Roundup*

## Resource Roundup

Each year, MITii gathers the I&E community together in the Ray and Maria Stata Center to present the many innovation and entrepreneurship resources available on campus. The groups set up tables staffed by representatives who talk one-on-one with students about classes, sources of funding, mentoring programs, makerspaces, prize competitions, and more. This year, 22 departments, labs, centers, and student groups exhibited, and hundreds of students attended.

## Virtual Campus Preview Weekend

When Campus Preview Weekend events were forced online due to COVID-19, the MITii team rapidly developed a unique virtual experience for prospective students and their families. MITii worked closely with MIT Admissions to create the I&E Virtual Campus Preview Weekend site, which hosted 37 live Zoom events for more than 500 prospective students and their families. The experience was so successful that MITii plans to host some Campus Preview Weekend events virtually next spring.


*Screenshot of COVID-19 Rapid Innovation Dashboard*

## COVID-19 Rapid Innovation Dashboard

The virus that shut down the country presented both challenges and a unique opportunity for MITii. As campus was shutting down, researchers, student groups, alumni, and MIT-founded startups kicked into gear to work on solutions—everything from mass production of cloth masks to vaccines. MITii recognized that the vast amount of work being undertaken by the MIT community needed to be aggregated and presented to the world in a single location that could simultaneously provide a platform through which to seek input, volunteers, and funding for projects. Built in four days, the COVID-19 Rapid Innovation Dashboard launched on March 19, 2020. It very quickly gained MIT community support and garnered positive press. FY2020 statistics are as follows:

- Total projects: 25
- Alumni projects: 37
- MIT research projects: 57
- MIT student projects: 17
- MIT-affiliated startups: 68
- Funding opportunities: 27
- Pageviews: over 36,300
- Unique users: more than 18,000 from 141 countries

## Summer Startup Match Platform

As the academic year started to come to a close, it became apparent that many students would lose their summer internships due to COVID-19. Again, MITii quickly found its role by helping students and growing the I&E community. In partnership with the MIT Startup Exchange and The Engine, MITii launched Summer Startup Match Platform, a marketplace for MIT students to explore and apply for exclusive internships with MIT-affiliated startups. The platform hosted more than 200 internships; 20 students found opportunities. The Inclusive Innovation Grant (described later in this document) launched simultaneously with the platform, providing underrepresented minority students with opportunities they may not have had otherwise.

## Hackathons

MITii continues to provide support and resources to I&E organizations across campus. For example, MITii helped the To the Moon to Stay program by supporting their hackathon and related K–12 activities. Although the hackathon was ultimately canceled due to COVID-19, MITii provided logistical and communications support and will resume activities with this group and others virtually and physically in the year ahead, as safety allows.

## INNOVATION INFRASTRUCTURE

*InnovationHQ: Future home of the MIT Deshpande Center, MIT I-Corps, Legatum Center, MITii, Sandbox, and Venture Mentoring Service*

### Innovation Headquarters

MITii is overseeing the construction of MIT's new hub for innovation and entrepreneurship. The space, known as InnovationHQ, was on track to open in July, but COVID-19 changed those plans. Key construction milestones reached in FY2020 included the complete design of the InnovationHQ, which integrated the physical, social, and programmatic elements of the I&E ecosystem.

- Innovation space: 25,000 square feet
- Chair count: 700
- I&E residents: MIT Deshpande Center, MIT I-Corps, Legatum Center, MITii, Sandbox, and Venture Mentoring Service

### I&E Data Backbone

Significant progress has been made in the development of the digital data infrastructure to support and enable MIT's I&E community. Inputs from several thousand sources have been sorted into three data layers that inform the overall makeup of people, programs, organizations, and impacts of the community. This infrastructure supports and informs many MITii programs and projects, including the I&E Census.

### I&E Census

In advance of the opening of the new InnovationHQ, MITii undertook a project to understand the data "baseline" for activities in the MIT innovation ecosystem. As a result, for the first time, MITii now has a complete snapshot of all the activities within MIT's I&E ecosystem on an annual basis. These insights will guide the development of how to grow and maintain impact. Key data from the I&E Census shows the following:

- 6,345 student interactions
- 320 events with 22,200 attendees
- 2,000 mentoring sessions with 700 mentors
- 450 MIT startups and 800 future startup teams
- $5.5 million direct distributions ($4.3 million to students and $1.2 million to faculty)

## Inclusion and Diversity

### Inclusive Innovation Programs

One of the founding goals of the MIT Innovation Initiative is to become the leader in enabling diversity in I&E. MITii takes this role very seriously and has developed several data-driven Inclusive Innovation programs to accelerate the participation of underrepresented groups in I&E activities at MIT.

- The Women in Innovation and STEM Database at MIT is an initiative designed to promote the visibility of women in our academic community and make it easier to find talented and diverse speakers for various events. Launched on March 8, International Women's Day, the community has grown to 67 members and the platform has been accessed by over 2,800 unique users in 24 countries.
- The Celebrating Women page, also launched on International Women's Day, is a digital space that showcases the accomplishments of women in innovation and entrepreneurship. Stories are promoted across MITii social media platforms under the campaign hashtag #sheINNOVATESatMIT.
- The Inclusive Innovation Grant Program, launched in conjunction with MITii's Summer Startup Match platform, endeavors to close the racial innovation gap by reducing the financial barrier for underrepresented minority students to pursue typically unpaid opportunities with startups. In addition to funding, the grant program includes a community-building component in which the students participate in group and one-on-one mentoring and other cohort activities. Fifteen grants were awarded to undergraduate students to work at 11 MIT-affiliated startups.

## Venture Development

*Proto Ventures Artificial Intelligence and Health Forum, Samberg Conference Center, February 25, 2020*

### Proto Ventures

Proto Ventures is a new approach to venture formation from within MIT. It oversees the emergence of new ventures along a full lifecycle: from discovery of ideas and resources at MIT to exploration of the problem-solution space, a methodical de-risking process, and the building of a "proto venture" that demonstrates the viability of the venture. In February, the first Proto Ventures Forum was held. The forum brought together 48 representatives of corporations, startups, venture capital firms, local hospitals, the pharmaceutical industry, and MIT researchers. Thirty-eight curated "proto venture" ideas were discussed and screened through roundtables, expert discussions, and a voting process to gather multi-sectoral input on the anticipated value and impact of the proposed ventures.

In its first year of implementation, with a single active venture builder, the proto ventures process has led to more than 243 ecosystem interactions, 319 screened ideas, 12 newly formed connections among MIT communities, and the generation of two active proto ventures and two dormant ones in collaboration with five faculty, seven students, and four MIT staff members.

### Venture Exploration Program

Launched in collaboration with I-Corps and The Engine, Venture Exploration Program: Essentials is a virtual program for PhD candidates and postdoctoral researchers to develop a business model for their product or service, from customer discovery, competitive analysis, and team building to intellectual property, conflict of interest issues, and investment readiness. The program launched in the first week of June. Thirty-one teams applied; 24 teams (36 participants) were accepted and gave their final presentations in the first week of August.

## Corporate and Government Innovation


*Corporate Innovation Program, Design Phase Meetings, Oct 2–3, 2019*

### MIT Corporate Innovation Program

The Corporate Innovation Program (CIP) provides a unique opportunity for global corporations to engage with MIT through an immersive year-long, cohort-based program. A diverse group of corporations gets an inside look at MIT's innovation and entrepreneurship community. MITii kicked off the CIP design phase with an on-campus event on October 2 and 3, 2019, that was attended by executive sponsors and core teams from founding member companies. The event included presentations by MITii staff, peer-to-peer workshops, student discussions, and a working dinner at the MIT Museum. Based on feedback from the design phase, MITii developed a curriculum of six program modules with input from MIT faculty and staff. The initial program launch is set for October 2020.

### Mission Innovation Program

The Mission Innovation Program (MIP) provides education and resources to students, governments, foundations, and mission-driven organizations working through the innovation process. Much of the program focuses on Dual-use Ventures (DuV), that is, public/private partnerships. MITii has launched two DuV projects under the MIP umbrella:

- The Dual-use Ventures Independent Activities Period (IAP) course was offered for the first time in January 2020. Fifty-three students participated, gaining useful and actionable steps to launch and build dual-use ventures.
- Based on the success of the IAP course, MITii launched the MIP Dual-use Ventures Incubator to support MIT-affiliated Small Business Innovation Research/Small Business Technology Transfer–approved venture startups with seed funding. The program not only guides startups through their development process, it acts as a subcontractor, offering a suite of services that complements tough-tech startups seeking new defense customers.

### European Innovation Council Partnership

The European Innovation Council (EIC) represents the largest innovation effort in Europe's history since World War II. MITii is helping set up the EIC through two distinct activities:

- MITii will execute a three-day training of EIC based on practices from the Defense Advanced Research Projects Agency and the Advanced Research Projects Agency–Energy.
- MITii will participate in the International Expert Group that will give recommendations to the European Commission on the implementation of EIC. MITii faculty co-director William Porter, Professor of Entrepreneurship Fiona E. Murray, and Research Director Lars Frolund (chair) are participants in the group.

## Innovation Thought Leadership

### Innovation 101

This presentation, a guide to innovation at MIT and the innovation ecosystem, is designed to give students of all levels a comprehensive overview of innovation at MIT. The hour-long presentation was given 101 times this year, reaching a total audience of 908 people.

### MIT Innovation Initiative Website

This year, MITii has made significant enhancements to innovation.mit.edu, increasing the volume of news, enhancing the content format of news, producing original content, launching microsites for our programs, and simplifying the site experience with featured content and more intuitive navigation. These changes have turned the site into a powerful tool, positioning the organization as a thought leader in innovation and the innovation economy. Site use increased significantly since these changes have been implemented, with a 42% increase in unique users and a 34% increase in pageviews.

### Social Media Strategy

MITii refocused its social media strategy to position the initiative as MIT's innovation thought leader, to build awareness of programs to the broader I&E community, and to drive traffic to innovation.mit.edu. MITii also launched an Instagram business channel in support of this strategy. Our social media follower footprint increased by 75%, led by LinkedIn (163%). By the end of the fiscal year, MITii averaged over 76,000 social media impressions per month, a 108% increase. Social media referral traffic to the MITii website increased by 400%.

## Innovation Partners—Ongoing Support

### MIT Hong Kong Innovation Node

The MIT Hong Kong Innovation Node convenes MIT students, faculty, and researchers to work on various entrepreneurial and research projects alongside Hong Kong–based students and faculty, MIT alumni, entrepreneurs, and businesses. By combining resources and talent, the Node aims to help students learn how to move ideas more rapidly from lab to market.

The Node carries out numerous activities to boost the innovative and entrepreneurial capabilities of MIT students, faculty, researchers, and alumni in collaboration with the Hong Kong community and the Pearl River Delta. These include internship opportunities, educational programs, engagement opportunities, and innovation-focused events.

The Node administers the MIT Entrepreneurship and Maker Skills Integrator, a two-week, fully immersive bootcamp for aspiring hardware system innovators from universities in Hong Kong and from MIT. The program is held twice a year, in January and June, and takes place in Hong Kong and China.

### Project Manus

Project Manus is MIT's effort to upgrade campus makerspaces and foster student maker communities.

Project Manus is leading MIT's efforts to upgrade legacy spaces and equipment, introduce new technologies, create more campus makerspaces, foster student maker communities, and collaborate with peer universities, alumni, government, and industry. In FY2020, Project Manus is engaged in Phase II activities, including:

- Maker Consortium: tangible resources to rapidly create, grow, and develop vibrant makerspaces as part of robust I&E ecosystems on university campuses around the world
- Mega Makerspace: a new 20,000-square-foot, state-of-the-art makerspace
- Maker Sling Shot: additional training opportunities for everyone at MIT to enhance their skill levels with maker technology
- Mobius: a focus on expanding access to Mobius to other universities through the maker consortium; Mobius continues to catalog and add additional makerspaces to the database
- Virtual Maker Tours: creation of video tours of makerspaces
- Maker Metrics: metrics that can be used to understand how effective a makerspace is relative to its goals and the resources it utilizes

### Harvard–MIT Program in Health Sciences and Technology

The Harvard–MIT Program in Health Sciences and Technology (HST) empowers the next generation of clinician-scientists and engineers learning to harness the combined power of science, engineering, and medicine to translate research findings into clinical practice and to improve human health. The program is home to about 300 students. Approximately 20 new medical engineering and medical physics PhD students and 30 new MD or MD-PhD students join the community each year.

HST's Graduate Education in Medical Sciences (GEMS) certificate program is open to students already enrolled in an MIT doctoral program. Through coursework and tailored clinical experiences, GEMS scholars learn how advances in basic science and engineering can become therapies and tools for improving human health.

### National Science Foundation's Innovation Corps: New England Regional Innovation Node

The National Science Foundation (NSF) created Innovation Corps (I-Corps) to nurture and sustain a national innovation ecosystem that builds upon fundamental research to guide the output of discoveries closer to the development of technologies, products, services, and processes that benefit society. I-Corps program participants learn, through customer discovery, how to identify valuable product opportunities that can emerge from academic research. This can accelerate the transformation of research projects from the lab to impact.

- Since its 2011 inception, NSF I-Corps has trained 1,315 teams with a total of 3,745 people.
- Following I-Corps training, teams have raised $301 million in funding to support startup development and created 644 startups with potential societal impact.

- I-Corps at National Institutes of Health has trained 134 I-Corps Small Business Innovation Research/Small Business Technology Transfer teams, which have raised $101 million in post-training funding to support bioscience startups.
- Energy I-Corps has trained 79 I-Corps national laboratory research teams and created six startups which have raised $22 million in post-training funding to support energy-related startups.
- NSF I-Corps has collaborated with eight US federal government agencies, one state government, and one foreign country to provide access to the NSF I-Corps training more broadly.

## MIT Hacking Medicine

MITii began supporting MIT Hacking Medicine, a student-run organization that is quickly outgrowing its status as a student group, by providing administrative and financial infrastructure. Hacking Medicine brings together engineers, clinicians, entrepreneurs, designers, and corporate partners to collaborate around shared interests and develop health solutions through hackathons (ranging from two hours to full two-day events) with potential for greater impact in the health care industry.

MITii was proud to support and promote the various hackathons, including Hacking Medicine's involvement in the MIT COVID-19 Challenge: Beat the Pandemic.

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