MIT Innovation Initiative

The MIT Innovation Initiative (MITii) is a cross-school effort to strengthen and promote innovation and entrepreneurship at MIT. Our mission is to ensure that, within the wealth of activities in the innovation and entrepreneurship landscape, we establish clear and effective pathways for the MIT community to move powerful ideas from conception to impact.

In accordance with the provost and the deans of the School of Engineering and the Sloan School of Management, the initiative works to ensure alignment with broader Institute objectives. This year, MITii strengthened and enlarged its scope of operations by focusing its efforts around four goals: (1) making world-class innovation education available to all MIT students, (2) developing and implementing new models for moving ideas through to impact, (3) ensuring that MIT is recognized as the global leader in innovation, and (4) enabling diversity and inclusion in innovation and entrepreneurship on campus and beyond. These goals emphasize MIT's leading role in moving ideas to impact and training the next generation of global innovators.

Innovation Education

Entrepreneurship and Innovation Minor

The entrepreneurship and innovation (E&I) minor educates students to serve as leaders in the innovation economy with the knowledge, skills, and confidence to develop, scale, and deliver breakthrough solutions to real-world problems. Jointly offered through the School of Engineering and the Sloan School of Management and administered by the MIT Innovation Initiative, the E&I minor continued to see strong growth in student participation this year. To date, 12 undergraduates have been awarded the minor.

Hackathons

This year MITii brought a *mens et manus* approach to innovation on campus with a series of hackathons during which students worked on mission-oriented challenges such as countering human trafficking and addressing the future of global security. In the initiative's flagship hackathon, Incube, an interdisciplinary team of MIT students reimagined the ambulance of the future while living and working in a glass cube for four days as part of a global startup competition.

MIT Innovation 101

The initiative launched MIT Innovation 101: A Guide to Innovation at MIT and the MIT Innovation Ecosystem, a pilot seminar designed to give students at all levels a comprehensive overview of innovation at MIT. The hour-long presentation was first rolled out to Sloan Fellows in July 2018. Following the success of that offering, the seminar was expanded to two modules, one covering innovation and the wealth of resources available within the MIT innovation ecosystem and the other involving a fireside chat with student founders on their entrepreneurial journey. MITii delivered the seminar to over 300 students, including undergraduates, Sloan Fellows, Executive MBAs, and MBAs throughout the course of the academic year.

Idea Week

In March 2019, first-year Executive MBAs (EMBAs) participated in a six-day hackathon facilitated by MITii for the fourth consecutive year. More than 120 EMBA students were challenged to pitch their own startup concepts, form teams, and pressure-test their ideas with classmates. The initiative invited 12 external mentors to support the students and provide daily updates, guidance, and oversight.

Seed Grants

The MIT Innovation Initiative's Student Group Collaboration Grant encourages partnerships between innovation- and entrepreneurship-focused student groups. The seed grants support diverse groups that are working together on an event or project that will have an impact on the MIT innovation ecosystem. In AY2019, the initiative awarded up to $1,000 each to 12 projects that brought unique opportunities to the MIT community.

Ideas to Impact

Proto Ventures

The MIT Proto Ventures Program is a new approach to venture formation inside one of the world's preeminent academic and research institutions. Proto Ventures, formally introduced in April 2019, supports the initiative's commitment to strengthening innovation pathways at MIT to help students and faculty bring their ideas to impact. The program will oversee the emergence of new ventures along a full life cycle: discovery of ideas and resources within the MIT community, 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 and the robustness of the technology.

Mission Innovation Lab

The initiative launched the Mission Innovation Lab this year to leverage relationships with MIT's Visiting Innovation Fellows: Ash Carter, director of the Belfer Center for Science and International Affairs at Harvard's Kennedy School and former secretary of defense, and Eric Schmidt, technical advisor to Alphabet Inc. The lab will develop funded education and research around mission-driven innovation pathways with organizations including the US Department of Defense and the European Commission's European Innovation Council.

Conflicts of Interest and Visas

In 2017, MITii participated in The Engine Working Groups to help guide development of policies and simplified procedures as they relate to MIT's launch of The Engine, an external innovation accelerator for "tough tech" startups. The final report of The Engine Working Groups was the catalyst for the initiative to take on two very important issues for the translation of MIT research to impact: conflicts of interest and visas for entrepreneurs. The initiative performed a study of conflict of interest management in a dozen major research universities and worked with the vice president of research and the Committee for Intellectual Property on the formation of a new subcommittee to develop a process for approving conflict of interest management plans. In addition, MITii continued its ongoing exploration of global entrepreneur-in-residence programs across the country to determine the viability of alumni venture founders having access to H1-B visas through MIT support.

Innovation Community and Communication

MIT Innovation Fair

On April 13, 2019, the initiative presented the MIT Innovation Fair as part of Campus Preview Weekend for the second consecutive year. The event celebrated innovation at MIT and showcased the breadth and depth of innovation, entrepreneurship, and maker resources available to students who aspire to move ideas from conception to impact. Hundreds of admitted students and their families stopped by DuPont Gymnasium to experience the innovation and entrepreneurship community. By turning the spotlight on this vibrant landscape, the event aimed to convey a dynamic, connected, and welcoming community that embodies innovation, creativity, diversity, and support for those driven to make a positive difference in the world.

Resource Roundup

MITii hosted the biannual Entrepreneurship and Innovation Resource Roundup, a community event that takes place at the beginning of each semester. The initiative convened groups such as the Martin Trust Center for MIT Entrepreneurship, the Sandbox Innovation Fund Program, the Technology Licensing Office, and the BU/MIT Law Clinics to host informational tables in the Stata Center where students could learn about the wealth of resources and offerings on campus related to innovation and entrepreneurship, including sources of funding, prize competitions, mentoring services, and places to seek legal advice for their startups.

Innovation and Entrepreneurship Hub

MITii continued to lead the planning process for the MIT Innovation and Entrepreneurship Hub, a new building that will co-locate key innovation and entrepreneurship groups—including the Innovation Initiative, the Legatum Center for Development and Entrepreneurship, the Sandbox Innovation Fund Program, the Venture Mentoring Service, and others—in one place for the first time in the Institute's history. The building will offer enhanced work areas for students and their startup teams with an emphasis on large, open, collaborative spaces where serendipitous meetings and cross-pollination of ideas can occur. The hub, which is part of MIT's grander vision of increasing the vitality of its eastern gateway in Kendall Square, will open in summer 2020.

Diversity in Innovation

This year, MITii initiated work on its goal of increasing diversity in innovation and entrepreneurship activities on campus through research and a thorough data-gathering process. In collaboration with the Technology Licensing Office and Institutional Research, the initiative started examining gender differences in faculty participation in patenting, licensing, and startup formation. Additionally, MITii kicked off its collaboration with MIT President Emerita Susan Hockfield and Professors Sangeeta Bhatia and Nancy Hopkins to build new programs to support female faculty in engaging more deeply with entrepreneurial mentors and the venture capital community. The initiative also worked with the MIT Sandbox Innovation Fund Program on the implementation of a series of experiments (e.g., A/B testing) to provide a data-driven understanding of the impact of communications strategies on the gender balance of participation in innovation and entrepreneurship programs.

Innovation Programs and Ecosystem Support

Corporate Innovation

The initiative launched the MIT Corporate Innovation Program this year to provide corporations worldwide with a new model of university partnerships centered around innovation. The inaugural cohort, consisting of four members spanning a diverse range of industries, will explore innovation as conceived and practiced at MIT. They will engage with students and faculty to provide real-world problems to solve together and explore issues in a dynamic, intellectually generative innovation "third space" with other corporate innovation practitioners over the course of the two-year pilot program.

MIT Hong Kong Innovation Node

Under the faculty leadership of Professor Charles Sodini and with the support of the Innovation Initiative, the MIT Hong Kong Innovation Node links students and faculty to unique opportunities in Hong Kong, Shenzhen, and the neighboring Greater Bay Area through a range of educational activities.

Over the summer, the Innovation Node hosted 26 MIT and Hong Kong–based students for the MIT Entrepreneurship FinTech Integrator to learn about the vibrant financial technology ecosystem in the Asia Pacific region and to find out what it takes to build a venture in this domain in an emerging market. During the January 2019 Independent Activities Period, 34 students took an accelerated journey through two weeks of entrepreneurship, making, and factory visits in China as part of the Innovation Node's flagship program, the MIT Entrepreneurship Maker Skills Integrator (MEMSI). MEMSI culminates in a showcase where students present their business ideas and proof-of-concept prototypes to an audience of more than 200 industry professionals, alumni, students, and partners.

In May, the Innovation Node hosted a six-hour design jam workshop to explore solutions within MIT Solve's 2019 Global Challenges: Inclusive Growth, Circular Economy, Child Development, and Healthy Cities. One hundred thirty participants engaged in design-thinking methodology and came up with 17 ideas, of which some will be further developed. That same month, the Innovation Node partnered with MIT Hacking Medicine to host a three-day hackathon focused on the theme of aging. More than 80 participants spent 48 hours developing innovative business ideas to support the rapidly increasing aging population. The participants—ranging in age from 14 to 70 and featuring a mix of high schoolers, medical students, doctors, pharmacists, teachers, and engineers—presented their ideas to an audience of over 100 at the hackathon's final showcase.

The Taste of MIT series welcomed 14 faculty members to the Innovation Node for five talks on mechanical engineering, artificial intelligence, corporate innovation, and digital transformation that were attended by more than 300 people, including MIT students and alumni, Hong Kong–based students, teachers, and industry partners. In addition, five recent MIT graduates are currently taking part in the Entrepreneurs-in-Residence program, serving as volunteers in various capacities while simultaneously working on their own startups in the Innovation Node's collaborative space.

Project Manus

Expanding MIT's pioneering role in linking education and practice, Project Manus, under the leadership of Professor Martin Culpepper and supported by MITii, has built a comprehensive maker ecosystem to meet the needs of a new generation of innovators.

Throughout the year, MIT makers tapped into a number of classes designed with them in mind. In partnership with the Martin Trust Center for MIT Entrepreneurship, Project Manus taught 2.351/15.351 Introduction to Making in the fall and spring semesters. During the January 2019 Independent Activities Period, Project Manus offered two for-credit courses with the goal of comprehensively intertwining physics and calculus curricula with machine use: Principles and Practice of Subtractive Manufacturing and Principles and Practices of Joining. Project Manus also supported the first-year seminars 6.A01 *Mens et Manu*s: The Joy of Making and MAS.A19 Designing Consumer Electronics.

MakerLodge completed its third year of training first-year students on introductory maker technologies. More than 1,300 students have been trained to date at MakerLodge, which also serves as an open maker space for the community of mentors who help train incoming students. In April, Project Manus unveiled The Deep, an experimental maker space open to all of MIT where students and staff work to find the most effective and efficient ways to train students in machine use. The Deep has had over 550 users since opening its doors, providing students access to welding, machining, 3D printing, laser cutting, water jet cutting, and more. MakerLodge and part of The Deep will be moving to Building 6C after the summer to join missions and communities and to create a training stream that encompasses all of MIT.

Since March 2016, the Mobius app has connected 4,000 users to maker resources on campus (630 pieces of equipment in 37 maker spaces). The various spaces have issued more than 9,000 individual credentials to students, enabling them in some cases to apply their training from one space to another.

Project Manus launched the Make Impact Consortium (MIC) to provide tangible resources that speed integration of technology, innovation, making, and entrepreneurship within universities and the technology innovation ecosystem. The vision is to establish a global consortium that creates the resources needed to build university-wide environments that will attract, educate, support, employ, and deploy the next generation of innovation and entrepreneurial makers. The MIC founding members represent Australia, Central America, Europe, the Middle East, and North America.

Harvard-MIT Program

MITii collaborated with the Harvard-MIT Program in Health Sciences and Technology (HST) this year to develop and implement programming for HST 978 Healthcare Ventures, and for Catalyst, a program that aims to accelerate and heighten the potential impact of biomedical research on health technology.

New England Regional Innovation Node

In September 2018, the National Science Foundation announced the selection of MIT as an Innovation Corps (I-Corps) Node, awarding the Institute $4.2 million to develop programs and resources that will accelerate the translation of fundamental research to practical applications. Headquartered at MIT and nested within the MIT Innovation Initiative, the New England Regional Innovation Node serves as the ninth regional I-Corps Node and will be instrumental in assisting researchers across the region.

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 during hackathons (ranging from two hours to full two-day events).

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