

MIT Innovation Initiative

The [MIT Innovation Initiative](#) (MITii) is a cross-School effort to strengthen and promote innovation and entrepreneurship at MIT. The initiative's mission is to ensure that, within the wealth of activities in the innovation and entrepreneurship landscape, there are clear and effective pathways for the MIT community to move powerful ideas from conception to impact.

By understanding the needs of our community, we have been expanding hands-on innovation and entrepreneurship education and building a more extensive and user-friendly innovation infrastructure across campus. In order to build on this foundation, we are widening our strategic focus to further our core mission in more effective ways and to broaden MITii's impact at every level, from individuals and organizations to regional, national, and global levels.

As part of this expansion, Michael Cima was named associate dean of innovation for the School of Engineering, joining Fiona Murray, the William Porter (1967) Professor of Entrepreneurship and associate dean of innovation for the Sloan School of Management, as co-director of the MIT Innovation Initiative. Dean Cima, the David H. Koch Professor of Engineering and faculty director of the Lemelson-MIT program, began his appointment in March 2018. He took over the role from Vladimir Bulović, the Fariborz Maseeh (1990) Professor of Emerging Technology, who departed after serving in the role since 2013 to lead MIT.nano as the inaugural director.

In addition, we established a set of four goals to help concentrate our efforts. These goals will serve as guiding principles for the initiative in the coming years, as MITii works toward realizing its vision of bringing MIT innovation to the forefront, ensuring that MITii's constituents have the resources they need to create their own pathways on their ideas-to-impact journey.

The initiative has four goals:

- Make world-class innovation education available to all MIT students
- Develop and implement new models for the ideas-to-impact journey
- Ensure MIT is recognized as the global leader in innovation
- Become the world leader in enabling diversity in entrepreneurship and innovation

Innovation Education and Community

Entrepreneurship and Innovation Minor

The Innovation Initiative celebrated a successful first full cycle of the Entrepreneurship and Innovation (E&I) Minor as one of the top 10 minors awarded in academic year 2018. The E&I Minor tied with management, mechanical engineering, and political science in the number of graduating students. Only five other minors had higher graduation numbers (mathematics, economics, music, computer science, and brain and cognitive sciences).

The E&I Minor is jointly offered through the School of Engineering and the Sloan School of Management, but is led by an Institute-wide group of faculty. Requirements for the minor are structured around five courses, with students completing a core curriculum consisting of two foundational subjects—15.359/6.901 Innovation Engineering: Moving Ideas to Impact, and 15.373J/2.912J/3.085J Venture Engineering.

- Innovation Engineering takes students through the innovation process, from an idea's inception through a product's impact on the economy, regardless of organizational setting. In fall 2017, 41 students completed the sophomore version of the course that is taught by Vladimir Bulović and Fiona Murray.
- Venture Engineering provides an integrated approach to the development and growth of new ventures. In spring 2018, 31 students completed the course taught by Scott Stern, Eugene Fitzgerald, and Bill Aulet.

Project Manus

Expanding MIT's pioneering role in linking education and practice, Project Manus, which MITii supports under the leadership of Professor Martin Culpepper, has built a comprehensive maker ecosystem to meet the needs of a new generation of innovators and to set the gold standard in academic maker systems worldwide.

- Curriculum: In fall 2017, Project Manus, in partnership with the Martin Trust Center for MIT Entrepreneurship, offered the fourth semester of 15.351 Introduction to Making, a highly immersive, hands-on introductory class for undergraduate and graduate students in any course of study. Project Manus also supported the freshman seminar MAS.A19 Designing Consumer Electronics by providing maker carts to participants for the second year.
- Training: MakerLodge completed its second year of training incoming first-year students on basic maker technologies, including laser cutters, 3D printers, drill presses, band saws, and hand tools, to get them into the MIT maker ecosystem. MakerLodge has trained more than 1,000 students to date.
- Mobius: Since launching in 2016, the Mobius app has connected more than 1,900 users to maker resources on campus.
- Boot camps: The Make Impact Consortium Boot Camp is an introductory suite of four week-long workshops designed for participants to gain knowledge, skills, and tangible tools to conceptualize, design, create, and maintain vibrant makerspace communities. The first workshop was held at MIT in June 2018. Boot campers from around the globe enjoyed a hands-on experience, creating a makerspace and building their own microdrones using a variety of essential maker equipment.

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 key stakeholders in Hong Kong and the neighboring Pearl River Delta through a range of educational activities.

- MIT Entrepreneurship and Maker Skills Integrator (MEMSI): Held twice each year in January and June, the Hong Kong Innovation Node hosted an international cohort of 50 MIT and Hong Kong–based students for its flagship program, a hardware start-up boot camp that takes participants on an accelerated journey through two weeks of entrepreneurship, making, and factory visits in China. MEMSI culminated in a showcase where students presented their business ideas and proof-of-concept prototypes to an audience of more than 100 industry professionals, MIT alumni, and partners on the last day of the program.
- MIT Entrepreneurship and FinTech Integrator (MEFTI): Building on the success of MEMSI, the Innovation Node launched a sister program for aspiring financial technology (fintech) entrepreneurs.
- Grand opening: In September 2017, the Innovation Node celebrated the grand opening of its permanent home, a 5,000-square-foot facility with prototyping equipment, a makerspace, and multipurpose areas. The new collaborative space is housed within the Hong Kong Productivity Council building in the central location of Kowloon Tang.

Translational Fellows Program

Recognizing that postdoctoral associates are often critical human agents in bringing ideas out of the laboratory and into the world, the competitive, two-part Translational Fellows Program provides an opportunity for professional development and commercialization of a technology that originated in MIT research.

- Part 1, Essentials: This short, two-month program is open to all postdoctoral associates. Three workshops were held in 2017, with 48 fellows completing it and being introduced to the research-derived innovation process.
- Part 2, Product–Market Fit: Ten fellows were chosen through a competitive selection process to participate in this eight-month program. Funding was provided that enabled the postdocs to take a deep dive into customer discovery, technology application development, and venture planning one day a week.

To date, 14 fellows have secured positions after completing the program. All participants reported learning new skills, both professionally and in entrepreneurship. Further, 95% said that the Translational Fellows Program contributed to their current research. Eight companies were formed, with more than \$1.2 million raised from investors.

BetterMIT Innovation Week

The Innovation Initiative served as the lead sponsor for the inaugural BetterMIT Innovation Week, held from February 12 to 17, 2018. Organized by the Undergraduate Association Committees on Innovation and Technology, the week-long series featured workshops, panel discussions, a community fair, and a makeathon. MITi provided high-level support and guidance to the student organizers on program design and marketing, in addition to co-hosting the annual Entrepreneurship and Innovation Resource Roundup, where the MIT community was invited to learn about the many resources available to them on campus during the spring and summer.

Innovation Mentors

In spring 2018, MITii piloted a student advising program to help student innovators, entrepreneurs, and makers at MIT match their interests and needs with the more than 85 resources that are available to them on campus. Four mentors of diverse backgrounds were selected: a mechanical engineering senior, an electrical engineering and computer science sophomore, a junior with a double major in mathematics with computer science and business management, and a candidate for a master's degree in business administration.

MIT Innovation Fair

As part of Campus Preview Weekend, the Initiative hosted the first-ever MIT Innovation Fair on April 14, 2018. 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. More than 700 admitted students and their families stopped by DuPont Gymnasium to experience the MIT innovation community and learn about the varied pathways of MIT innovators. They talked to a wide range of centers, programs, and student groups dedicated to fostering innovation and entrepreneurship. Visitors also had a chance to tinker with equipment and tools to get hands-on with the maker culture at MIT. With food, games, and prizes added to enhance the carnival theme, the MIT Innovation Fair was one of the five most popular activities during Campus Preview Weekend.

Innovation Programs

MD5 Hacking Emergency Response

Building on the growing understanding of the role of hackathons in driving both education and change, MITii partnered with MD5 (a program office within the US Department of Defense that functions as a national security technology accelerator), Advanced Functional Fabrics of America, and the Department of Defense on a three-day hackathon challenge in July 2017. The challenge was to build product prototypes that incorporated functional fabrics as part of a system to address emergency response in challenging environments. Approximately 125 hackers participated in the hackathon and MIT students were well represented. Out of the 22 concepts presented, 10 teams made it to the final round, with two winning teams sharing the \$15,000 prize.

iEcosystem Symposium

In an effort to foster mutual learning, the MIT Innovation Initiative, in partnership with the MIT Lab for Innovation Science and Policy and the MIT Regional Entrepreneurship Acceleration Program, hosted the MIT Innovation Ecosystem Symposium in October 2017. The two-day conference brought together a global community of practitioners from industry, the risk capital sector, startups, academia, and government. Building on each other's experiences and expertise, participants discussed the implementation of novel models, programs, and initiatives that can enhance economic growth and social progress. They also explored best practices and debated possible future directions for innovation and entrepreneurship. More than 70 multi-stakeholder initiatives from around the world submitted concept papers that described novel, action-oriented programs and informed discussions during the conference. The panels and conversations also drew on MIT's wide range of organizational experiments, including delta v, Sandbox Innovation Fund Program, and The Engine.

VHacks

MITii organized and sponsored an interdisciplinary student team to participate in the first hackathon held at the Vatican City in Rome on the weekend of March 8–11, 2018. More than 60 MIT students applied and the five who best demonstrated real interest, commitment, and the ability to creatively problem-solve were selected. Some 120 students representing 30 countries and six universities took part in the 36-hour challenge. The group came up with a total of 24 ideas that leveraged technology to address current global problems centered on the hackathon's theme areas of social inclusion, interfaith dialogue, and migrants and refugees. The MIT team—comprising a PhD candidate, an MBA candidate, an integrated design management graduate student, a mechanical engineering sophomore, and an undergraduate student in electrical engineering and computer science—developed a platform they named Sajal, a lightweight electronic medical record that refugees can carry with them. Sajal won second place and \$1,000 in the category of migrants and refugees. Fueled by the experience of coming together as a team and building something that they think can have a real impact on those who need it most, the students all agreed that Sajal is an effort worth continuing. They spent the summer building a first version of the product and developing partnership opportunities for a pilot program.

Michael Cima

Co-director

Associate Dean of Innovation, School of Engineering

David H. Koch Professor of Engineering

Fiona Murray

Co-director

Associate Dean of Innovation, Sloan School of Management

William Porter Professor of Entrepreneurship