MIT Sandbox Innovation Fund Program

Jinane Abounadi, Executive Director
MIT Sandbox provides seed funding, mentorship, and tailored entrepreneurship education that empowers student innovators to explore ideas, take risks, and prepare to launch
MIT’s motto “Mens et Manus” (mind and hand) is supported by 3 pillars: Education, Research, and Innovation

<table>
<thead>
<tr>
<th>Education</th>
<th>Research</th>
<th>Innovation/entrepreneurship</th>
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<tbody>
<tr>
<td>• Professor</td>
<td>• Advisor</td>
<td>• Mentor</td>
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<tr>
<td>• Teaching Assistant</td>
<td>• Research group</td>
<td>• Market/Customer</td>
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<tr>
<td>• Classes/Lectures</td>
<td>• Research Lab</td>
<td>• Application</td>
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<tr>
<td>• Laboratory work</td>
<td>• Hypotheses</td>
<td>• Technology Ready</td>
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<td>• Problem sets</td>
<td>• Experiments</td>
<td>• Product</td>
</tr>
<tr>
<td>• Projects</td>
<td>• Thesis</td>
<td>• Product Market Fit</td>
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<tr>
<td>• Testing</td>
<td>• Discoveries</td>
<td>• Value Proposition</td>
</tr>
<tr>
<td>• Ultimate goal is to “ace” the class</td>
<td>• Inventions</td>
<td>• Business Plan</td>
</tr>
<tr>
<td>• Grades</td>
<td>• Publications</td>
<td>• Hiring</td>
</tr>
<tr>
<td>• Transcripts</td>
<td>• Conferences</td>
<td>• Fundraising</td>
</tr>
<tr>
<td>• Failing is “bad”</td>
<td>• Books</td>
<td>• Product Launch</td>
</tr>
<tr>
<td>• Spend time in library</td>
<td>• Peer Reviews</td>
<td>• Assumptions</td>
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Failure is “expected”
• Learning from failure is critical
• Entrepreneurship mindset
• Fail, learn, pivot (adapt)
• Spend time with “customers”
Universities Offer Various Entrepreneurship Programs

- Classes (typically offered by business schools)
  - Basics of entrepreneurship
  - Case Studies
  - Venture development classes (experiential learning)
- Funding of translational research
  - Deshpande Center, Translational Fellows Program, NSF I-Corps
- Selective accelerators (available for a small number of teams, e.g. deltaV)
- Competitions & Challenges (e.g. MIT$100K – one or two winners)
- Entrepreneurship centers creating an eco-system connecting students with industry mentors

Sources: Entrepreneurship and Innovation at MIT Continuing Global Growth and Impact, Edward B. Roberts, Fiona Murray, and J. Daniel Kim, MIT Sloan School of Management
Opening the Door to Entrepreneurship

- MIT Sandbox is not a competition
- Open to all MIT undergraduate and graduate students from all schools
- Focused on student-driven entrepreneurship
- Supports students at all stages of the startup journey
- Up to $25K in cumulative funding
  - Funding non-dilutive - exempt from usual IP ownership
  - Students apply for funding – no need for Principle Investigator
  - Funding is distributed in the form of reimbursements
- Milestones and pace of work are flexible to accommodate academic and research obligations
- Large scale - 300-350+ teams per cohort (fall, spring, summer)
Supporting Teams as They Progress

- Three cohorts per year: fall, spring, and summer
  - Teams stay in program for 2-3 semesters on average (12-18 months)

- Early-stage teams
  - Most initially funded at the $1K level
  - Focus on preliminary market research and refining their problem definition/solution

- Advanced teams
  - Pitch to the Sandbox Funding Board, which provides feedback, advice, and recommends funding at the $5K - $25K level
  - Often deep in the customer discovery process and prototype development phase

- Focus is on learning, experimenting, and growing
  - Many teams pivot several times
  - Many teams do not launch successful startups but team members gain the knowledge and hands-on experience of being an entrepreneur
Early-stage teams participate in group mentoring
  - Introduced to a framework of foundational entrepreneurship and business concepts

Advanced teams are paired with two mentors who provide personalized guidance and insights
Ensure team is:
  - Asking the right questions
  - Developing a plan to validate their assumptions
  - Making connections with key contacts and resources

Over 100 Sandbox Mentors and 15-20 Fellows

Guidance from Mentors with Extensive Entrepreneurial and Management Experience
Expert Advice and Workshops

- Ongoing office hours with experts who offer advice on a broad range of startup-related topics:
  - Legal and regulatory advice
  - Technical advice
  - Startup advice from VCs and serial entrepreneurs

- Workshops covering founder-focused topics:
  - Introduction to the Lean Launchpad framework
  - Design Thinking
  - Startup Equity
  - Agile Project Management
  - Founder-to-Founder Topics
Celebrating 5 Years of Empowering Student-Led Entrepreneurial Teams at MIT
An Inclusive Innovation Community

- We are committed to fostering a culture of equity and inclusion represented by a diverse set of teams who participate in a community where they are supported and experience a sense of belonging.

- Our goal is to make the opportunity to explore entrepreneurship in MIT Sandbox visible, open, and accessible to students who may not have considered an entrepreneurial path or may not have had entrepreneurial role models.

- The program is not a competition. MIT Sandbox invites and accepts all student-led teams who are interested in learning and experiencing entrepreneurship.

- Through MIT Sandbox, we strive to develop a broader and more representative group of diverse, impactful founders empowered to pursue their ideas within and beyond Sandbox.
Sandbox teams have been winning awards and getting into top accelerators.
An estimated 100+ start-ups have successfully raised seed rounds and have paying customers
Five Years of Sandbox: Alumni Teams Continue to Grow

**FarmWise**

MIT Sandbox: 2016
Raised $20M since 2017
Driverless tractor that uses machine learning and computer vision to eradicate weeds.
[farmwise.io](http://farmwise.io)

**fireflies.ai**

MIT Sandbox: 2016
Raised $19M since 2016
AI voice assistant for meetings. Record, transcribe and search across your voice conversations.
[fireflies.ai](http://fireflies.ai)

**BIOBOT**

MIT Sandbox: 2017
Raised $23.3M since 2017
Wastewater epidemiology tech to analyze sewer systems for traces of Covid-19, other viruses, and substances.
[www.biobot.io](http://www.biobot.io)
MIT Sandbox is Open to Any MIT Student Who is Inspired and Dedicated to Solving a Problem

- Must have one full-time MIT, degree-seeking student in leadership role
  - A team can include non-students and non-MIT members
  - Initial team size of one is acceptable

- Have startup idea you are actively working on or you want to begin working on
  - Clearly defined problem using innovative technology or idea
  - Customer Focus: Plan to validate the idea with potential users
  - All business models, including nonprofit and commercialization of MIT research

- Teams evaluated based on:
  - Commitment to project
  - Ability of team to deliver
  - Educational value of project for team

- Application requires a budget
Program Requirements During Each Cohort

- Attend a kick-off meeting
- Participate in monthly mentor meetings
  - Attendance and participation at all sessions is mandatory
- Dedicate time to your Sandbox project
  - No set time is required but at least 6 hours/week is typical
  - Dependent on the stage of the startup
- Attend 4 workshops or an equivalent class
- Submit a monthly status report and final report
- Attend a Funding Board showcase at the end of your cohort
Students participating in the MIT Sandbox program are expected to continue to make academic and research progress according to their academic program.

Funding and programming will be available throughout the year and available throughout the academic tenure.

It is important to balance entrepreneurship endeavor with the academic program.

- Undergraduate students are encouraged to discuss their engagement with their academic advisor.
- Graduate students are expected to discuss their projects and engagements with their research advisor. If commercializing research, students will be asked to get a form filled and signed by the TLO, requiring a signature from PI.
Application Process on Sandbox Portal

- Completed by a designated Primary Contact, must be an MIT student.
- Team members will be invited as collaborators.
- Application includes:
  - Description of the problem idea addresses and proposed solution
  - Description of the team members and their skills
  - High-level project plan, including milestones
  - Description of achievements to date
  - Budget plan showing how you will use your requested Sandbox funds
  - Refer to the Sandbox purchasing guidelines
Sandbox Funds are Paid in the Form of Reimbursements

Sandbox purchasing guidelines

**How do I get paid?**

1. Make a purchase
2. Request a team Dropbox folder by emailing sandbox-funds@mit.edu
3. Fill out reimbursement cover sheet (available on website)
4. Upload cover sheet and receipts to team Dropbox folder
5. Email sandbox-funds@mit.edu to request reimbursement
6. Please wait until you accumulate $300 or more for reimbursement and do not file reimbursements more than once per week

**What can I buy?**

- Purchases must be made from budget approved by mentor
- Travel can be reimbursed if approved by Sandbox Executive Director [based on MIT Travel Policy]
- Food and meals can be purchased, but only when associated with meetings with prospective customers or subjects of market research
- Legal fees cannot exceed $1000

**What can’t I buy?**

- Only under 25% of funds can be used for outside developers or contractors
- **Tax cannot be reimbursed** (This includes sales tax AND franchise tax). Please inform vendors of MIT’s tax-exempt status and provide forms when requested
- Purchases over $5000 per item (except with approval from Sandbox Executive Director)
Spring 2021 New Team Applications

- New applications
  - Open: January 4
  - Due by: January 14

- Continuing teams
  - Open: December 20 (Apply via Self-assessment)
  - Due by: January 6

Details on [sandbox.mit.edu/prospective-students](sandbox.mit.edu/prospective-students)
MIT DHIVE (Dive into Healthcare Innovation and Venture Exploration)

**Goal:** Promote and facilitate MIT student-led entrepreneurship focused on healthcare-related challenges

- Sponsored internship programs over IAP & summer
- Educational talks by domain experts encouraging a deep dive into the problems
- Ideation, team formation and entrepreneurship-focused workshops and mentorship
- Continuation as DHIVE tracks in Sandbox Spring & Fall

Have ideas related to one of the current DHIVE tracks? **Apply to Sandbox by Jan 14**, select:

- Long Covid & Lyme Disease
- Down Syndrome & Associated Disabilities
- Inflammatory Bowel Disease

Questions? Email dhive-ops@mit.edu
Stay Up-to-date and Connected

Website: sandbox.mit.edu
Twitter: @MITSandbox
Facebook: @MITSandbox
LinkedIn: mit-sandbox-innovation-fund-program

Questions? sandbox@mit.edu
Explore Ideas and Take Risks

Although my coursework provided me with an excellent educational foundation, I did not want to graduate without ever having built anything. **Sandbox encouraged me to get my hands dirty** and elevated what would have otherwise been just a technical side project.

— Gabrielle Finear ‘21  
Co-Founder & CEO, Boon
Mentorship and Expert Advisors

Sandbox has been instrumental in making this happen. My mentors were incredible. They always had ideas for overall strategy I hadn’t thought about and somehow knew and introduced me to a bunch of relevant people.

—Nick Bain ’20
Founder, Bleriot Aviation
Commercializing Research

Sandbox has provided the additional push necessary to transition from research and vision to proof of concept. Sandbox program is currently unique to MIT and should be expanded to every university.

—Sebastien Mannai, PhD ’18
Founder & CEO, Acoustic Wells
MIT Sandbox is about making connections and getting support from students, researchers, and alumni who care about our mission. I have met many other students and researchers and learned about technologies we can use to enhance our solution.

—Dr. Nadia Shalaby MBA ’11
Co-Founder & CEO of Pakira Inc
## Attracting Lead Founders from Across MIT

**2020 Lead Founders by Area of Study**

<table>
<thead>
<tr>
<th>Area of Study</th>
<th>Bachelors</th>
<th>Masters</th>
<th>PhD</th>
<th>MBA</th>
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</thead>
<tbody>
<tr>
<td>Electrical Engineering and Computer Science</td>
<td>71</td>
<td>10</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>16</td>
<td>6</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Other Engineering</td>
<td>15</td>
<td>4</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>9</td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Physics</td>
<td>5</td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Other Science</td>
<td>6</td>
<td></td>
<td>18</td>
<td></td>
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<tr>
<td>Engineering Management</td>
<td></td>
<td>53</td>
<td></td>
<td></td>
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<tr>
<td>Architecture and Urban Planning</td>
<td></td>
<td>18</td>
<td>4</td>
<td></td>
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<tr>
<td>Media Arts and Sciences</td>
<td></td>
<td>6</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Management and Finance</td>
<td>4</td>
<td>2</td>
<td></td>
<td>228</td>
</tr>
<tr>
<td>Entrepreneurship &amp; Innovation MBA</td>
<td></td>
<td></td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>Executive MBA</td>
<td></td>
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<td></td>
<td>17</td>
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<tr>
<td>Sloan Fellows</td>
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<td></td>
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<td>24</td>
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**Sandbox Application Paths**

The following two slides illustrate the application process flow for new and continuing teams. The primary difference is that for continuing teams, mentor feedback is a very important element in determining whether a team is engaged and committed to their project and whether the team should receive additional funding in the next cohort.

Spring 2021 application data is highlighted and shows the number of teams that flow to each step. In order to present to the Funding Board, a team must be requesting $5K or more in cumulative funding and is then evaluated in a Mock Funding Board session chaired by Sandbox mentors. The Mock Funding Board determines the readiness of the team for presenting to the Board.
New Teams: Two Application Paths

- Over $5K Mentor & Staff Review: 49 applications
- Mentored & Staff Review: 121 applications
- Mock Funding Board Sessions: 36 applications
- Under $5K granted: 116 applications
- Funding Board Presentations: 5 applications
- Under $5K granted: 156 applications

Numbers reflect Spring 2021 applications

Under $5K granted

$ Award

Mentor Assignment

Mentor & Staff Review

Over $5K

Under 5K

Numbers reflect Spring 2021 applications
Continuing Teams: Three Application Paths and Processes

Numbers reflect Spring 2021 applications

- Over $5K Mentor & Staff Review: 62
- Mock Funding Board Sessions: 40
- Funding Board Presentations: 22
- Under $5K granted: 22
- Over 5K: 62
- Extending: 117
- Under 5K: 39
- Mentor Feedback & Recommendations: 217