Entrepreneurial Ventures Launched by Graduating MIT Students: Insights on Founding Teams, Business Models, Execution Challenges and Impact

By

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B.Tech, Information Technology
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Submitted to the MIT Sloan School of Management on May 6, 2011 in partial fulfillment of the requirements for the degree of Master of Business Administration

ABSTRACT

This thesis examines entrepreneurial ventures launched by graduating MIT students with the goal of understanding entrepreneurship activities of students while in full-time graduate degree programs and drawing insights on founding teams, business models, execution challenges and impact. These insights are key around the world as universities decide their approach to entrepreneurship education, and also relevant to academics, prospective founders, and early stage investors.

I developed qualitative and quantitative insights on survival rates of founders from MIT Sloan MBA Class of 2010 graduates based on their demographics, experiences, businesses, resources and challenges. Students with prior experience in entrepreneurship or at a small company, who choose to intern at a small company, or who build diverse teams, are correlated with higher survival rates. Further, I present a methodology for a longitudinal study on studying venture creation by graduating students considering entrepreneurship.

In conclusion, I provide early recommendations. Universities could facilitate early cross-campus collaboration, provide tactical support, and adapt their strategy for encouraging entrepreneurship by industry. Academics can leverage data in this thesis to both provide examples of founders among recent alumni, and offer advice on team building. Prospective student entrepreneurs could consider data in this thesis while identifying co-founders, develop early relationships across campus, and start early on ventures.

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INTRODUCTION

This thesis examines entrepreneurial ventures launched by graduating MIT students with the goal of understanding entrepreneurship activities of students while in full-time graduate degree programs and drawing insights on founding teams, business models, execution challenges and impact.

Entrepreneurship research documents the role of alumni but it is an open question how successful university entrepreneurship activities actually are in driving the career trajectories of students into entrepreneurship. A classic example of entrepreneurship research, focused on alumni, is Entrepreneurs in high technology: Lessons from MIT and beyond (Roberts, 1991). I chose to focus specifically on the context for launching a company immediately on graduation, since this is key around the world as universities decide their approach to entrepreneurship education, and also relevant to academics, prospective founders, and early stage investors.

Ideally, to answer this question, we would need a survey of students ‘at risk’ for doing entrepreneurship activities, which follows the MIT Founder’s Survey (Hsu, Roberts, Eesley 2007) tradition of looking at a “population”. However, in the short duration, I focused on a small population of 28 MIT Sloan MBA Class of 2010 graduates, who at graduation, were identified as working full-time toward creating ventures.

We developed qualitative and quantitative insights on survival rates based on their demographics, experiences, businesses, resources and challenges. Student groups with prior experience in entrepreneurship or at a small company, who choose to summer at a small company, or who build diverse teams, are correlated with higher survival rates.

Further, I present a methodology for a longitudinal study on studying venture creation by graduating students considering entrepreneurship, by surveying the broader population of students, and specifically, those students working on ventures. This can be
executed beginning Fall 2011 across all the graduate schools at MIT, and potentially be replicable at other universities; it is also of relevance to the MIT Entrepreneurship Center 'Digital Shingle Project' celebrating and tracking ventures launched by recent alumni.

The survey tool I present has two parts: Stage I: Starting with all the students, and analyzing the trajectory of people into status of full-time entrepreneurship, part-time entrepreneurship or not engaging in entrepreneurship, and Stage II: Doing a deep dive into the stories of those who run full-time entrepreneurship ventures beyond graduation.

For developing questions to ask (potential) entrepreneurs, I found it useful to refer to Entrepreneurial Impact: The Role of MIT (Roberts and Eesley, 2009) which surveyed MIT alumni; the key difference to my mind was that these entrepreneurs were at a later stage in their careers and ventures, and had more data on impact. As an analog, while developing questions on the choices made in the face of alternatives, I found it useful to refer to What Do Entrepreneurs Pay for Venture Capital Affiliation? (Hsu 2004) and Do Scientists Pay to Be Scientists? (Stern 2004), and based on this included questions on the alternatives that students may forego by launching full-time ventures.

In conclusion, I provide early recommendations. Universities could facilitate early cross-campus collaboration, provide tactical support, and adapt the strategy for encouraging entrepreneurship by industry. Academics can leverage data in this thesis to both provide examples of founders among recent alumni, and offer advice on team building. Prospective student entrepreneurs could consider data in this thesis while identifying co-founders, develop early relationships across campus, and start early on ventures.

\footnote{Survey in appendix}
RESULT I: DATA FROM INTERVIEWS

DESCRIPTIVE STATISTICS

### KEY VARIABLES

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COMPARISON: FOUNDERS COHORT AND MBA CLASS

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<th>Variable</th>
<th>Founders</th>
<th>MBA Class of 2010</th>
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<td>Running your entrepreneurial venture full-time at graduation?</td>
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<td>----------</td>
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<tr>
<td>MIT team member</td>
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</table>
DEMOGRAPHICS

CITIZENSHIP

There appears to be similar levels of entrepreneurship activity and survival among US and non-US citizen founders. International students represent 36% of the founders group, versus 41% of the MBA class, and there are similar survival rates with both groups seeing 50% of their founders managing to keep their ventures running full-time.

GENDER

Women seem to be underrepresented in entrepreneurship activity and survival rates. They represent only 21% of the founders, versus 35% of the MBA class, and also reported lower rates of full-time survival at 33% versus 55% for men. Yet, only one founder explicitly referenced the challenge of being a woman entrepreneur, and did so in the context of the culture of the non-US country in which she located her venture.

FOUNDERS IN FAMILY

The cohort with any of their parents or siblings as founders represented 57% of founders group, and also saw their survival rate as being higher at 57% versus 42% for others.

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2 Primary country of citizenship at point of graduation from MIT for program of study. U.S. permanent residents are not counted among citizens.
3 Gender: Male / Female / Other
4 Parent or Sibling as Founder
EXPERIENCES

YEARS BETWEEN UNDERGRAD AND BUSINESS SCHOOL.\textsuperscript{5}

Founders matriculated to business school an average of 4.75 years after undergrad, comparable to the median MBA student at MIT Sloan. Years since undergrad does not appear to be a predictor of survival, with groups joining business school after 3 years or less, 4-5 years, and 6 years or more, showing comparable full-time survival rates of 50\%, 54\% and 43\%.

SIZE OF LAST WORK ENVIRONMENT PRE-MBA.\textsuperscript{6}

Founders joining the MBA program from “small” organizations, with less than 500 employees, reported higher survival rates of 57\% versus 42\% among others, while representing 50\% of the founders.

PREVIOUS ENTREPRENEURSHIP EXPERIENCE.\textsuperscript{7}

Founders with prior experience founding ventures full-time appear more likely to survive, as they reported higher survival rate (100\%) versus those with part-time experience (70\%) and no such experience (31\%). 43\% of the founders have previous experience in entrepreneurship on either a full-time or part-time basis.

ACTIVE IN ATHLETICS/SPORTS.\textsuperscript{8}

Participation in competitive sports may not be a predictor of survival, with the cohort that was not active showing survival rate (45\%) comparable to those were active (52\%).

One entrepreneur, who was not active in sports but now runs a venture full-time, said “I just don't buy the idea of entrepreneurship being correlated with competitive spirit from

\textsuperscript{5} Number of years between completion of undergraduate degree and start of business school (rounded to nearest whole number)
\textsuperscript{6} Big (500+ Employees), Small (<500 Employees)
\textsuperscript{7} Founding ventures on a full-time or part-time basis
\textsuperscript{8} Competitive sports at college level or higher
sports - it's just a sound byte, and I think it actually comes from [a] natural intellectual curiosity to learn, and creativity”, whereas a founder who was active in sports said “Playing for a national level team definitely helped, and gave me a lot of discipline.”

STARTED/COMPLETED ENTREPRENEURSHIP & INNOVATION TRACK

Interestingly, a sizeable 43% of founders did not even sign up to participate in the Entrepreneurship & Innovation (E&I) Track offering at MIT Sloan, and reported a full-time survival rate (67%) actually higher than those that completed the track (50%) as also than those that started but did not complete the track (17%).

It may be important to clarify that this was the very first offering of E&I, which founders considered restrictive, with quotes such as “It's ironical. Why bog down some of the most entrepreneurial students with extra requirements,” and "It was great meeting my cohort and I benefited from our internal network -- but found it too restrictive.”

SUMMER INTERNSHIP⁹

Choice of summer internship may be predictor of survival with 42% founders doing their summer internship at a big company, reporting lower full-time survival rates of 45% versus 64% among those interning at another startup.

As one founder, who subsequently abandoned his venture, said: “There are pressures and influences at Sloan, and I felt like there was need to go to name brand company -- looking back, I have a nice name on my resume, but the experience wasn't terribly useful for me, I would have been better off working at a startup”

Sought Jobs in Final Year of Business School¹⁰

Perhaps not surprisingly, the founders who reported actively recruited for jobs in their final year saw lower survival rates of 40% versus 57% among others.

⁹ In case of multiple summer internships, picked the one with the most bandwidth invested, and then looked at number of employees. The segment interning at their own startup is excluded, since two of the four represented one venture.

¹⁰ Apply to at least three jobs
AT LEAST ONE CO-FOUNDER FROM SAME UNIVERSITY\(^{11}\)

Teams with their first co-founder also from MIT Sloan represented higher failure/abandonment rates (58%), versus mixed MIT teams (25%) and others (0%). Yet, a good 46% of founders found their first co-founder in the same school.

NUMBER OF CO-FOUNDERS AT GRADUATION

Teams with 1, 2 and 3+ founders at graduation reported comparable full-time survival rates of 50%, 50% and 63%, that is consistent with data from the MIT alumni survey suggesting that ventures with larger founding teams had higher odds of survival.

At time of survey, founders were part of teams with an average of 2.07 co-founders, down from peak of 2.37 founders, with 26% founders being part of teams that lost co-founders since graduation. As one founder, who abandoned his venture, said: “Just when we were going to raise money, our technical co-founder who owned the technology decided to instead pursue academia; it was pretty much over right there.”

STUDENT LOANS\(^{12}\)

75% of the founders working on ventures at graduation had outstanding student loans. There is no clear correlation between loan status and survival of venture as those with loans showed slightly higher survival at 57% versus 48% for others.

Founders vary in their views on how much the student loan influences them with quotes such as: “There is a six-month gap after graduation before you start re-paying your loans, and we were very aware of that date, so try and do what you can over the summer”, “Student loans is the only reason I’m currently employed in corporate finance, once I pay it off and go do our startup full-time”, “Ultimately it doesn’t make a difference – graduating from MIT, we can figure it out”, and “The reason I took a loan was not because I needed it, but only because of the low interest rate”

\(^{11}\) In case of cofounders from both same program, and across campus, select category representing first co-founder to join
\(^{12}\) Loans to finance the program of study at MIT
BUSINESS

COUNTRY/CITY

83% founders were building startups in the US, including 60% in Boston, 11% in New York, and 8% on West Coast. Among ventures being built in the U.S., founders who are U.S. citizens reported a full-time survival rate of 47% versus 33% for non-U.S. citizens.

A founder who moved to an international location described her local challenge: “Hiring people who want to really work and learn is difficult, culture is very difficult, being a woman is difficult, especially with lot of corruption that I experienced firsthand.”

INDUSTRY? GLOBAL/LOCAL? PRODUCT/SERVICE?

86% of founders are working on product ventures, and 36% on ventures spanning more than one country. Of founders in surviving full-time ventures, 29% are in health, 29% in web/IT, 21% in energy and 21% in others.

Founders suggest that business models changed rapidly, though less so for high-tech / high capital ventures and more so for the Consumer Internet space. Quotes include:

- Business model changed the moment we spoke to real customers (Abandoned)
- The trigger for us changing the business model? Gut. In consumer internet, it’s a lot about trends and forecasting (Consumer Internet Entrepreneur)
- Fundamental tension existed between what we’d want our friends to use, and something that might be profitable (Abandoned)
- New Enterprises and Energy Ventures helped us crystallize the idea. 80% of business plan was developed in school year (Energy Entrepreneur)

TECHNOLOGY INNOVATION AND PATENTS

60% of founders claimed to be working on ventures driven by technology innovation, but only 32% were working on ideas that had received or could expect to receive patents. Interestingly only 10% of the founders were commercializing technology from MIT, and only one of them has a surviving venture.
RESOURCES AND CHALLENGES

TOP CHALLENGE: TEAM, TECHNOLOGY OR CAPITAL?

When asked to identify their top challenge, 63% of founders selected team, followed by 30% who selected capital, and 7% who selected Technology. Of those that listed Capital as their top challenge, 50% were in the Energy sector.

Quotes suggest that team challenges reference trust and finding complementary skills

• **Team:**
  o It's like an HR game, all about people - about making something that everybody finds interesting, and dividing up tasks
  o We were missing a huge skill set and experience set - somebody who can push back on your product and say I can't sell it
  o Consumer internet is focused on very fast iteration, so not being technical is a big impediment - important to know your weakness, and compensate for them with a technical co-founder
  o There's always general overarching uncertainty. Everything else can adapt but if you don't have the right team you can't survive. It's helped that we've made disagreements about the business and not the people
  o It's very difficult since people don't come to you. You're not Google. Other part that's difficult is everybody is passionate and has lot of stakes, and your making decision in face of uncertainty so important that people understand that there will be ups and downs

• **Technology:**
  o We simply didn't make something people wanted. Period.

• **Capital:**
  o Money is a big problem. I'm bootstrapping my life and need to make enough to make my rent, so that I can focus on this company I want to do but then you get into nasty cycle of focusing more on silly jobs to pay the rest, so that's a huge problem (Abandoned)
We never learn in school how to effectively raise money - time it takes is much longer than what you would have thought.

Funding challenge is chicken and egg - people love concept, they want to put in $ once they see the prototype. Team is definitely a challenge with part-time people.

Hardest challenge is raising money when we're doing something unconventional in a world with few institutional investors (for our space)

MIT-AFFILIATED TEAM MEMBERS\textsuperscript{13}

Only 38\% of the founders were part of ventures that recruiting MIT-affiliated team members to grow their team. Some founders deliberately refrained from recruiting additional team members or interns until they became certain of the business model; however, this may reduce the number of resources available to them.

As one founder said, “Programs such as the MIT VMS Ventureships became a very good tool to get some work done and screen potential full-time employees and summer interns. You have to recognize half of the interns will not work – but the few that do give us leverage.”

RAISING OUTSIDE CAPITAL AT GRADUATION\textsuperscript{14}

Most founders planned to get outside funding after graduation, and none of the surveyed founders reported having raised outside funding in excess of $250K at the time of graduation, with 92\% of founders having not raised any outside funding.

Founders appear confident about raising money, as following quotes suggest:

\begin{itemize}
  \item We didn’t raise money, but never felt like we couldn’t – we wanted to make sure we were fully committed to put our names and other peoples money on the line; weren’t really willing to go there for sure (Abandoned)
\end{itemize}

\textsuperscript{13} At least one non co-founder team member with an MIT affiliation

\textsuperscript{14} Financing from institutional investors, and not self/family
• We lived on our savings and loans, and decided we had time until December of the year we graduated. My cofounder had a family commitment. Bottomline, we were in constant negotiation with possible investors but it didn’t work out since it was very hard to make our price sustainable because of how much money it takes to get a customer, and how much time we had to recoup this investment

INFLUENCE OF PEER FOUNDERS

39% of founders claimed that having classmates launching ventures influenced their decision to work toward founding a venture. The majority of entrepreneurs made decision to found independent of peers, with quotes such as:

• Even if nobody did a venture, I would have still done one
• We would see each other, and it was nice to know that you’re not the only one, and there’s somebody else who knows what you’re going through
• I like connecting with friends, but on a day-to-day basis, this does not impact me, and does not push me towards doing a business, since I’m not a serial entrepreneur who cares about doing a startup just to do a startup

SOURCE OF BEST ADVICE

When asked to identify the source of the most valuable advice, 50% of founders listed MIT affiliated resources and 50% listed non-MIT affiliated resources. Most teams had not built a formal advisory board, claiming to not be ready

Founder quotes show that they appreciate MIT support for innovation-based entrepreneurship

• Bill Aulet has been great. People from dotcom and energy efficiency are so far off from our work, and it helps to have people with relevant expertise (Energy Entrepreneur)
• Howard Anderson is just gold. It’s also useful to talk to startup CEOs

15 Peer Founders refers to classmates in the same program and cohort launching full-time ventures at graduation
• Reading blogs by investors such as Mark Andreesen has been helpful (Consumer Internet Entrepreneur)
• The best feedback comes from customers I've spoken to - some are very opinionated and just tell you what they think
• We've got positive feedback for building an advisory board early. My thought is always: how can we leverage other people? Our skill set will not cover everything, so when we fall short, we have business advisors from industry and science advisors familiar with the technology.

VENTURE MENTORING SERVICE

Participation in VMS is correlated with higher survival rates, as the 57% of founders who took part reported higher full-time survival rates of 63% versus 33% among others

Quotes suggest that VMS received mixed feedback, potentially being less useful for founders in Consumer Internet

• It's' been really good - two of them are among very few who genuinely want us to succeed. Very connected. (Energy Entrepreneur)
• Not necessarily the most helpful - people we were paired with didn't know about our space, consumer Internet. Sometimes you get people who were very successful in their careers in a different space, but want to give you advice (Consumer Internet Entrepreneur)
• Fairly helpful initially in terms of keeping us on track- puts some structure to have somebody ask you what you did this week (Healthcare Entrepreneur)
REFLECTIONS

Founder quotes show value of classes, competitions, and experiential learning

• Classes:
  o Glad I took as many project based classes and exercises as possible - startups are a lot about product and team fit, and there's a lot of luck. Entrepreneurial Finance helped
  o Ethics is now ingrained into me - starting your business is like starting your baby, and I want to choose the right path

• Cross-Campus Community Building and Competitions:
  o Enjoyed the E-Center: resources, connections, and community
  o Appreciate entrepreneurial activities like the MIT $100K which was valuable. Being forced to hit deliverables and milestones makes you reflect on your technology and something to work through

• Internships:
  o Coming from an analyst role at a big company to MIT Sloan, doing an internship right away working part-time at a startup and getting just the experience being there, seeing how it operates, seeing inefficiency was very useful

• Company Building:
  o Doing things - cold calling is an excruciating process but one that forces your brain to go through all the things that are important to starting a company
  o From our entrepreneurship classes, we got the message that in the beginning it’s not time for any power plays - like who will be CEO - we each kept our egos by the side

Founders quotes show they wish they had started tactically working on their ventures much earlier, and built relationships with engineers and mentors

• Cross-Campus Relationships:
  o Take as many non-Sloan engineering classes as you can
  o Started going to cross-campus events too late
• **Seek Mentors:**
  - Get mentors, people who have done similar things, older and more experienced, something we didn't do since we wanted to just build product

• **Start Earlier, with Focus on Product over Strategy:**
  - Start work on a product with someone. If you find out you hate them, you can always go work with somebody else. A lot of it is just trial and error.
  - You spent all your time on things that don't matter - competitive landscape, strategy -- it's worthless. Move from exploratory phase to action phase. If we started one year earlier, would have had time to recover from early challenges
  - A warning sign: do customers get what you are talking about right away, or do you go around in circles? If you do, you have to change quickly or not be afraid to abandon that relationship and move on.

• **Finances:**
  - Save money: Graduate with at least $10K-$20K to their name as a cash cushion to work on ideas
ROLE OF MIT

WHAT COULD MIT DO TO GROW SUSTAINABLE VENTURES BUILT?

Founder quote suggest that they welcome cross-campus collaboration, preparation for tactical challenges and increasing focus on practice over business planning

- Cross-Campus Collaboration:
  - We can do more to create an atmosphere for cross campus collaborations - there are many centers of entrepreneurship, and it would be to everybody's benefit if we can cooperate.
  - Sloan can help MBAs connect with undergrads
  - I wish MIT would provide more specific support to those technology ideas which are not nurtured within MIT; for instance, devote resources from labs

- Preparation for Tactical Challenges:
  - Would be helpful to have a factory of starting a startup: once you get the point where you need to incorporate, just have documents that you can use... also a 2-day workshop on the basics of doing a startup, that's well advertised across campus, not just Sloan - something tactical - this is a contractor vs. employee, this is how you get your logo designed, super basic stuff
  - Sloan & E&I are with you till you graduate, and then they forget about you - and that's when you need help the most
  - Why not have a course/SIP on entrepreneurs who have failed, and are willing to talk honestly about their failures? I'm sick of only hearing from successes, and not the losers.
  - I suggest we bring in entrepreneurs at various stages: who are raising money, or facing daily struggle or challenges, and questions such as: Should we hire an accounting company to do payroll? Should we go to Chicago for this expo - is it worth it?

- Communication on Resources:
  - Push information on the option to do an independent study on your startup for credit - I didn't know about it
• Practice over Business Plans:
  o Business Plans for consumer internet are worthless, it's a worthwhile exercise to think, but talk to any startup founder, they would say it's useless.
  o To redo E&I, in first few weeks I'd make you do something real.

• Alumni Connections:
  o Could Sloan specifically identify alumni as potential angel investors - Sloanies funding Sloanies!
  o Do better job on alumni network - feels so dispersed; that network is missing and not as strong as I would have thought.

• Financial Support:
  o Will be very helpful to bridge gap between being student with loans and insurance from MIT, and going into world where all of that is cut off. An incubator program of some sort, which would change it from a hard stop to slow transition, would help a lot of people.
  o Working out of classrooms is not same as having a desk to call theirs. Could there be class of Fellows, maybe they serve as TAs? Would give financial freedom and also intellectual freedom
RESULT II: DETAILED SURVEY THAT CAPTURES COMPLEXITY OF STUDENT ENTREPRENEURSHIP TRAJECTORY

I propose using as survey methodology the combination of Stage I survey, administered to a broad population representing all students to track their trajectory into one of three states of entrepreneurship, and a Stage II survey, specifically aimed at those working on full-time ventures at graduation, tracked longitudinally.

STAGE I SURVEY

Starting with all students in each department, and analyzing their trajectory into full-time entrepreneurship, part-time entrepreneurship or not engaging in entrepreneurship. Ideally, we would like to perform this survey more than once: on joining the program, one year before graduation, and at graduation. For MIT, this might be possible for the MBA program, but be more difficult to achieve at scale across the university. One solution could be to progressively select only those students who respond Yes/Maybe to expectation to start a company, for future interviews/tracking.

**General**
- Name
- Sex? □ Male □ Female □ Other
- Graduate School ________ Degree and Year of Graduation ________
- Pre-Program Work Experience:
  - How many years post-college full-time? (Rounded to nearest whole number) ________
  - Did your last work environment before business school have 500 or more employees? □ Yes □ No
- Any Previous Experience Founding and Running Entrepreneurial Venture\(^{16}\): □ Yes - Full Time □ Yes - Part Time □ No
- Your parents / siblings founders of entrepreneurial ventures? □ Yes □ No

\(^{16}\) For family business, specifically excludes participation in an existing venture, but includes participation in creating a new venture
Entrepreneurial Activities

- Play competitive sports at high school, college or higher?  □ Yes □ No

- In-Class: Taken at least 2 courses on entrepreneurship? □ Yes □ No
  Describe what was helpful and not in your experience

- Out-of-Class: Taken in part in a startup competition? □ Yes □ No.
  Describe what was helpful and not in your experience

- Non-University: Attended entrepreneurship events organized independent of the university? □ Yes □ No
  Describe what was helpful and not in your experience

- Which of the above has been most useful? □ In-Class □ Out-of-Class □ Non-University

Alternatives

- Do you have offer/s for a summer job opportunity? □ Yes □ No.
  If so what is the average monthly compensation ______

- Do you have an offer for a full-time job opportunity? □ Yes □ No.
  If so, what is the average monthly compensation ______

- If you do not launch your own venture, what do you expect to do professionally? □ Job at company with 500+ employee □ Job at company with less than 500 employees □ Other (please specify)

- If you are in your final year, which is the primary place where you spent your previous summer? □ Company with 500+ employee □ Company with less than 500 employees □ Own Startup □ Nothing □ Other (please specify) ______

Expectation

- Do you expect to start a company full-time on graduation □ Yes □ Maybe □ No. If Yes or Maybe, please answer following:
  □ Team: Where do you most likely expect to find your next co-founder?
    □ My department □ Another department at same university
    □ Former colleagues □ Other (please specify)
STAGE II SURVEY

For the students who are working full-time on an entrepreneurial venture immediately on graduation, representing a focused group of alumni for the university, we perform a deeper study on their story, both individually and as a cohort of founders.

The objective is to gain insight into the team, business model, challenges / resources, and impact.

With each of the founders, we perform in-depth interviews that span both a standardized set of quantitative questions, with additional qualitative probing that provide additional insight but that may be difficult to ask of all entrepreneurs.

While we are limited by the use of self-reported information from the entrepreneurs, in order to mitigate the risk of getting poorer quality information, we can perform this interview at three distinct points in time: immediately on graduation, six months after graduation and one year after graduation. (For each of these points in time, I consider an interview within a range of fifteen days before to fifteen days after as acceptable). By tracking information at multiple points in time, we can observe trends instead of snapshots (“lines” instead of “dots”), enabling us to generate hypotheses that can be tested across the group.

---

STATUS

Provides information on demographics, experiences/choices made and team that can be a means of segmentation of data, and resulting comparative insight.

General

[Sourced from Stage 1 Survey; listed here for completeness]

- Name __________________________
- Sex? □ Male □ Female □ Other
- Graduate School ____________________
- Degree ______ Year of Graduation ______

Pre-Program Work Experience:

○ How many years post-college full-time? (Rounded to nearest whole number) ______

○ Did your last work environment before business school have 500 or more employees? □ Yes □ No

- Any Previous Experience Founding an Entrepreneurial Venture\textsuperscript{18}: □ Yes - Full Time □ Yes - Part Time □ No

- Are any of your parents or siblings founders of entrepreneurial ventures? □ Yes □ No

- Play competitive sports at high school, college or higher?
  □ Yes □ No

Motivation

- Why are you electing to do a startup full-time?

- Did you seek any jobs? If so, have any offers open?

- In the event of this venture failing, what would you do next?

Team

- How many co-founders did you have at inception, and now, and how did you find them (Your program, another department at same university, former colleagues, others?)

\textsuperscript{18} For family business, specifically excludes participation in an existing venture, but includes participation in creating a new venture
**BUSINESS MODELS**

Provides information on business model, financing and iteration in plans, that provides insight into the steps beyond ideation.

**Description**
- City ____ Country ____ (best describes startup location)
- What industry classification best captures your business?
  - Internet: Services ★ Internet: E-tailer ★ Internet: Infra
  - Software ★ Medical Devices ★ Biotech ★ Energy
  - Communications ★ Computer hardware ★ Other (please specify)
  
  • Did you launch a new business, or takeover/build on an existing business? ____________
  • Is your business local, serving one country, or global, serving more than one country? ★ Local ★ Global
  • Is your business primarily providing a service or offering a product: currently? ★ Service ★ Product. A year from now? ★ Service ★ Product
  • Is your startup based on a technology innovation? ★ Yes ★ No
  - Have received or expect any patents? ★ Yes ★ No
  - Any licensing from university? ★ Yes ★ No
  - If yes, MIT? ★ Yes ★ No

**Financing**
- How much capital has been invested by outside investors?
  - 0 ★ >$0, under $250K ★ >$250K, under $1M ★ $1M or more
  • Who is the biggest source of your capital?
  - Self, Friends or Family ★ Angel, Venture Firm ★ Other
  • Did you receive any free money? If so, from where?

  - Do you have any additional source of income? ____________
  • Are you servicing a student loan? ★ Yes ★ No
  - Over $50K? ★ Yes ★ No

**Changes**
- When did the most significant changes in your business model take place? ★ Before graduation ★ After graduation
- What was the trigger for this change? _______________
EXECUTION CHALLENGES

Provides information on challenges in execution, and resources that can be helpful to prospective founders

Challenges
- Which would you describe as your top challenge? □ Team □ Technology □ Capital.
  - Describe your Team Challenges
  - Describe your Technology Challenges
  - Describe your Capital Challenges

Resources
- What is the source of the most valuable advice? _________________
  Affiliated to MIT? □ Yes □ No
- Did having the other founders in your cohort influence your decision to create a company? □ Yes □ No How have they been a resource to you?
- Were you part of MIT Venture Mentoring Service? □ Yes □ No

Ideas
- What has been your big learning? Looking back, what could you have done differently to prepare for these challenges?
- What could the university have done during the course to prepare you? What could it do now?

IMPACT

Provides early information where available on the impact of student entrepreneurial ventures

Financial
- Investment Raised ($) _________________

Impact
- Revenues ($), if willing to disclose _________________

Economic
- Full-Time Jobs Created (#) _________________

University
- How many MIT-affiliated team members? _________________

Impact
- Interns? _________________
METHODOLOGY

SAMPLE

While the broader longitudinal study of founders can begin in Fall 2011, in the immediate, I wanted to study founders from the MIT Sloan MBA Class of 2010 with two objectives: to obtain early hypothesis / insights that can be validated at scale over next several years, and to test a simplified case of the above methodology to identify improvements to be made.

SEMI STRUCTURED INTERVIEW

The MIT Entrepreneurship Center listed as “The Magic 419”, 39 people who were working on their startups at the point of graduation, plus two people who confirmed that they were not working on a new venture that I have excluded (one of them grew a successful venture started before Sloan). When I reached out to all of them, I could interview 28 founders, and one person explicitly declined participation. For my insights I interviewed but eventually decided to exclude two other founders creating search funds to keep a focus on new company creation. This data was then entered into Excel for each person using the template on the following page, and compared.

This immediate set of interviews has three limitations: the sample size, the lack of tracking over time, and the lack of comparison against the broader MBA class. However, it’s helpful that among founders working on ventures at graduation, there have emerged three segments: working Full-Time, working Part-Time, and not working on that venture.

Nevertheless, in the interest of leveraging early insights, I believe the way to interpret this section is as earlier hypotheses that will validated or sharpened in the coming iterations of this study. By immediately accessing these insights, I hope that universities, academics and prospective founders can strengthen their entrepreneurship ecosystems, and influence individual choices made toward entrepreneurial careers.

19 List in appendix
**TEMPLATE FOR ENTERING DATA (SIMPLIFIED INTERVIEW)**

<table>
<thead>
<tr>
<th>Name</th>
<th>Section</th>
<th>Question</th>
<th>Data</th>
<th>Comments</th>
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<tbody>
<tr>
<td></td>
<td>Team</td>
<td>Citizenship</td>
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<td>Program</td>
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<td>Years between UG and business school</td>
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<td>Size of last work environment pre-MBA</td>
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<td>Previous entrepreneurship experience</td>
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<td>Founders in family?</td>
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<td>Started E&amp;I?</td>
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<td>Summer Internship</td>
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<td>Sought jobs in final year of business school?</td>
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<td>At least one co-founder from same university</td>
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<td>Number of cofounders at graduation</td>
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<td>Business</td>
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<td>Industry</td>
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<td>Launch new business?</td>
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<td>Global or local?</td>
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<td>Service or product?</td>
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<td>Technology innovation-based enterprise?</td>
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<td>Involves patents?</td>
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<td>Technology from MIT?</td>
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<td>Outside capital at graduation ($)?</td>
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<td>If so, lead source of capital</td>
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<td>Servicing a loan?</td>
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<td>Changes in Business Model</td>
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<td>Challenges</td>
<td>Top Challenge?</td>
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<td>Source of Best Advice</td>
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<td>Did other founders influence decision?</td>
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<td>Participant in MIT VMS?</td>
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<td>Glad I Did</td>
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<td>Wish I Did</td>
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<td>Impact</td>
<td>Had any revenues?</td>
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<td>MIT-affiliated team members?</td>
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CONCLUSIONS: INSIGHTS INTO EFFECTIVENESS OF INTERVENTIONS IN ENTREPRENEURIAL ECOSYSTEM TOWARD SHAPING TRAJECTORY OF STUDENTS INTO ENTREPRENEURIAL CAREERS

In this section, I recommend actionable insights for multiple stakeholders.

UNIVERSITIES

- Serve high demand for facilitation of collaboration across campus early in the academic program, ideally as friendships and shared working experiences instead of specifically for the purpose of entrepreneurship. This appears to increase the access to complementary founders, and remove barriers faced by student entrepreneurs.

- Experiment providing tactical support through template documents, incubation spaces, and increasing engagement with founders among recent alumni. This appears to support founders in transition from plan to attack real issues earlier in their program.

- Adapt strategy by industry: while business plan competitions appear to be effective in preparing founders of high technology / high capital ventures (e.g., energy), these very tools are seen as not being agile or relevant to many ventures such as consumer internet that may need different tools. Based on explicit student feedback, consider supporting them in launching parallel programs (potentially modeled on Silicon Valley) for iterative challenges.

- Increase communication on opportunities such as independent research so that founders can dedicate greater bandwidth on their ventures, while integrating their progress with meeting academic requirements.

- Make deliverables even more action-oriented (e.g., developing real products, selling to consumers) over theoretical documents.

- Explore providing financial support to the cohort of founders at graduation, even if source of funding be different from university.
ACADEMICS

- Consider using data, in Section II of this thesis and from follow-on research, as case studies or class examples focused on the specific challenges of launching ventures on graduation as distinct from launching ventures at other stages in career.

PROSPECTIVE FOUNDERs

- Develop early relationships across campus, and consider building founding teams that are diverse, and not just from the same program.
- While considering potential partners, especially consider students with prior experience in entrepreneurship or at a small company environment, summer experience at a small company, and not actively recruiting for post-MBA jobs.
- Seek mentors by building out an advisory board, and grow the team beyond founders to increase leverage.

FOLLOW UP AND NEXT STEPS

As next steps, I recommend that the MIT Entrepreneurship Center begin a longitudinal study using the above instruments beginning Fall 2011 for MIT Sloan, and aim at extending across MIT beginning Fall 2012. This will create greater confidence from bigger sample size, tracking over time, and comparison across MIT schools.
APPENDIX

THE MAGIC 41\textsuperscript{20}

Adam Rein \hspace{0.5cm} Jeff Vyduna
Alex Hsi \hspace{0.5cm} Jess Manzonson
Alex Rosemblat \hspace{0.5cm} Joshua Tayloe
Amanda Peyton \hspace{0.5cm} Konstantinos Mavroeidis
Amanda Symonds \hspace{0.5cm} Leah Derus
Ash Martin \hspace{0.5cm} Marc Bartomeus
Ashley Baker \hspace{0.5cm} Max Sadler
Bryan Muir \hspace{0.5cm} Mike Norman
Carter Dunn \hspace{0.5cm} Natanel Barookhian
Chris Mather \hspace{0.5cm} Nir Hasson
Christian Zerbi \hspace{0.5cm} Oladapo Bakare
Crede Kinder \hspace{0.5cm} Pedro Santos
David Nelson \hspace{0.5cm} Sergei Arkhipov
Dorothee Bergin \hspace{0.5cm} Shobin Uralil
Elizabeth Greene \hspace{0.5cm} Shuba Swaminathan
Fan Jin \hspace{0.5cm} Sombit Mishra
Frederick Taarnhoj \hspace{0.5cm} Spencer Irvine
Gauti Reynisson \hspace{0.5cm} Ted Rorer
Iker Marcaide \hspace{0.5cm} Woojae Kim
Javier Lozano \hspace{0.5cm} Xing Fang
Jayoon Choi

MIT FOUNDERS SURVEY INSTRUMENT\textsuperscript{21} (following pages)

\textsuperscript{20} As accessed at http://entrepreneurship.mit.edu and converted to alphabetical order. Includes one person who confirmed not working on a venture at graduation, and another who worked on a successful venture started before MIT Sloan and had not founded a new company

\textsuperscript{21} As accessed at http://www.kauffman.org/uploadedFiles/mit_founders_survey.pdf
We invite you to participate in the 2003 survey of MIT founders to expand our knowledge of entrepreneurship and enterprise creation. MIT graduates, students, and faculty have founded thousands of companies, and this new survey will contribute valuable insights into the entrepreneurial process and its sources of inspiration and support. We hope that our findings will create a deeper understanding of the factors encouraging discovery, innovation, and economic development and, by so doing, help encourage current and future generations of entrepreneurs by informing the institutions supporting them.

We ask you to help by completing this survey even if you participated in our 1995 survey. We expect that the process will take less than 30 minutes. Please rest assured that our findings will be reported only in the aggregate and that the particular data you provide will be kept strictly confidential. We will be pleased to share our results with you before the end of the calendar year. We look forward to receiving your response by Friday, August 1st.

Your name: ____________________________

What is your affiliation with MIT?

☐ Alumnus/a Course(s) Degree(s) Year(s)

☐ Faculty

☐ Staff

companies you have founded

1. How many companies have you founded or co-founded over the course of your lifetime? ________________

2. Please list them here, starting with the most recent:

<table>
<thead>
<tr>
<th>Company</th>
<th>City</th>
<th>State</th>
<th>Country</th>
<th>Year Founded</th>
<th>Operating Status*</th>
<th>If Closed Year</th>
<th>Public or Private</th>
</tr>
</thead>
</table>

☐ Check here if more than five. Feel free to attach a separate page listing those companies.

*Under “Operating Status”, please choose from the following three options: • in operation • acquired by another firm • out of operation

If you have founded more than one company, we are interested in learning about the one that you think is the most significant. Pick one, drawing from the criteria listed below, and use that as the focus of this survey.

Company Selected: ____________________________

Headquarters’ Location: City/State or Country ____________________________

Reason Selected (Mark only one)

☐ First

☐ Most Recent

☐ Largest

☐ Most Successful

☐ Most Important Technology

☐ Other ____________________________

You may access this survey online by visiting our website at web.mit.edu/surveys/founders. If you have questions, contact us by email at founders-study@mit.edu or by phone 617-253-3648.
Please answer the questions that follow for the company you have selected:

3. Please tell us your position with the company when it was founded and your current position, if you are still active.

<table>
<thead>
<tr>
<th>List of Positions</th>
<th>At Company Founding</th>
<th>Current Role</th>
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<tbody>
<tr>
<td>President/CEO</td>
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<tr>
<td>Chairman (if not also CEO)</td>
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<td>Chief Operating Officer</td>
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<tr>
<td>Chief Scientist/Chief Technology Officer/Chief of R&amp;D</td>
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<td>Chief Finance Officer</td>
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<tr>
<td>Chief Information Officer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vice President</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outside Director</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consultant or Advisor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other employee (specify)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Active</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. If you are no longer still active in this company, are you currently (check as many as apply):

- Working in another company that you have founded
- Employed elsewhere
- Starting a new company
- Retired
- Consulting
- Other

**Company Profile**

5. In which industry would you categorize your company?

(Please mark one primary industry sector and as many secondary sectors as apply.)

<table>
<thead>
<tr>
<th>Manufacturing</th>
<th>Primary</th>
<th>Secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerospace</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drugs, Biotech, Medical Devices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemicals, Materials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumer Products</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electronics, Computers, Telecommunications Devices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machinery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Manufacturing</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Services</th>
<th>Primary</th>
<th>Secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy, Electric Utilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telecommunications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management &amp; Finance Consulting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Publishing, Schools</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Software</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Law, Accounting, Miscellaneous Business Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. For most recent fiscal year available, what were:

- Total Company Revenues $ ____________ Fiscal Year ____________
- Total Company Employment ____________ Fiscal Year ____________

7. What percentage of annual revenues is invested in R&D? ____________ %

8. Where does your company generate its revenues? Please provide an approximate percentage by region (the total should be 100%).

<table>
<thead>
<tr>
<th>For US Companies</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td></td>
</tr>
<tr>
<td>Non U.S.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>If Headquartered Outside U.S.</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your Headquarters' Country</td>
<td></td>
</tr>
<tr>
<td>The U.S.</td>
<td></td>
</tr>
<tr>
<td>Rest of the World</td>
<td></td>
</tr>
</tbody>
</table>

If available, what percentage of US sales is in your headquarters' state? ____________%

9. Is your company located in Cambridge or Greater Boston (the area on or within the Route 495 belt)?

- Yes
- No
- If NO skip to question 11.

10. What is your company's activity, including branches as well as headquarters, in Cambridge or Greater Boston?

<table>
<thead>
<tr>
<th>What percentage of total company employment is in:</th>
<th>Cambridge</th>
<th>Greater Boston</th>
</tr>
</thead>
<tbody>
<tr>
<td>What percentage of total company revenues originates in:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
company information

11. How many people founded the company? _______________________

Please list all your co-founders and mark their affiliation, if any, with MIT, and the role(s) they served in the company's founding.

<table>
<thead>
<tr>
<th>Founder Name</th>
<th>Alum</th>
<th>Student</th>
<th>Faculty/Staff</th>
<th>Non MIT</th>
<th>Technology</th>
<th>Finance</th>
<th>Marketing</th>
<th>Other</th>
</tr>
</thead>
<tbody>
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</tr>
</tbody>
</table>

12. Where did you meet the other founders? (Mark as many as apply)

While at MIT:

- [ ] In Class/Course
- [ ] Doing research/lab (Specify)
- [ ] In your residence/living group (Specify)
- [ ] In connection with the MIT $50K Entrepreneurship Competition
- [ ] In connection with other extra-curricular activities (Specify)
- [ ] Networking
- [ ] Socially
- [ ] Other (Specify)

Before coming to or after leaving MIT:

- [ ] At another university (Specify)
- [ ] In connection with the MIT Enterprise Forum
- [ ] In connection with MIT Alumni Activities Association (Specify)
- [ ] Through MIT contacts
- [ ] Working in business
- [ ] Working in government
- [ ] Family connections
- [ ] Networking
- [ ] Socially
- [ ] Other (Specify)

13. What was the source of the idea for the product or service leading to the founding of the company? (Please answer even if the idea came from one of your co-founders and not from you.) Mark one primary source and as many secondary sources as apply.

<table>
<thead>
<tr>
<th>Source</th>
<th>Primary</th>
<th>Secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td>At MIT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>At Another University</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Sources</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14. Was intellectual property (patented or copyrighted material) a critical factor in the company formation? □ Yes □ No

15. Were you an inventor or author of the intellectual property? □ Yes □ No
16. If yes, is the patent or other intellectual property owned by you or one of the founding team?  
☐ Yes  ☐ No
If not, did you license (or get an assignment of) its use from any of these?
☐ From MIT
do not exceed 100% total)  
☐ From another university  
☐ From a government lab  
☐ From another company
do not exceed 100% total)  
☐ From an individual inventor

17. Prior to starting the company, did you receive financial help to demonstrate feasibility and/or develop a prototype?  
☐ Yes  ☐ No
If so, how much was this? $

Did this help come from any of the following sources (check as many as are appropriate):
☐ From a university (Specify)  
☐ From MIT  
☐ From another company  
☐ From another university  
☐ From a government lab  
☐ From an individual inventor  
☐ State government programs  
☐ Federal defense research (DARPA/DOD)  
☐ Business community initiatives  
☐ Other federal research grant (NSF/NIH/DoE)  
☐ Friends, family  
☐ SBIR  
☐ Angel investors  
☐ Other 

Early Funding
18. How much capital did you raise to get your company off the ground? $

19. Roughly what percentage came from each of the following sources during the start-up phase (roughly defined as within the first year)

<table>
<thead>
<tr>
<th>Funding Source</th>
<th>% (do not exceed 100% total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Founders' personal savings</td>
<td></td>
</tr>
<tr>
<td>Founders' credit card or borrowing</td>
<td></td>
</tr>
<tr>
<td>Founders' families or friends</td>
<td></td>
</tr>
<tr>
<td>Venture capital</td>
<td></td>
</tr>
<tr>
<td>Company cash flow</td>
<td></td>
</tr>
<tr>
<td>Commercial bank(s)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Funding Source (continued)</th>
<th>% (do not exceed 100% total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angel investor(s)</td>
<td></td>
</tr>
<tr>
<td>University</td>
<td></td>
</tr>
<tr>
<td>Government: federal</td>
<td></td>
</tr>
<tr>
<td>Government: state</td>
<td></td>
</tr>
<tr>
<td>Customers</td>
<td></td>
</tr>
<tr>
<td>Suppliers</td>
<td></td>
</tr>
</tbody>
</table>

20. Which of these factors in your connection with MIT, if any, played a role in the founding of your company? (Check all that were relevant.
☐ Fellow students  
☐ Faculty or staff  
☐ Anyone in particular?  
☐ Research work
☐ Contact with entrepreneurial network

☐ Specific offices, groups, or activities  
☐ Entrepreneurship Center  
☐ Enterprise Forum  
☐ Venture Mentoring Service  
☐ Alumni Regional Club  
☐ Other

The entrepreneurial environment
21. Was MIT's entrepreneurial environment a factor in your choice to attend MIT or to work at MIT?  
☐ Yes  ☐ No
22. Did the reputational benefit of your association with MIT help you to acquire funding?  
☐ Yes  ☐ No
Did it enhance your credibility with clients and suppliers?  
☐ Yes  ☐ No
23. Does your company currently have or anticipate having an ongoing connection with MIT?  
☐ Yes  ☐ No

☐ Recruiting new employees  
☐ Licensing technology  
☐ Funding research  
☐ Joint research with MIT faculty and/or staff  
☐ Faculty Advisors or Directors

☐ Specific offices, groups, or activities  
☐ Entrepreneurship Center  
☐ Enterprise Forum  
☐ Technology Licensing Office  
☐ Venture Mentoring Service  
☐ Alumni Regional Club  
☐ Other

key location and success factors
24. Did you start your company where you were living at the time?  
☐ Yes  ☐ No
If yes, were you living there because (check all that apply):
☐ You grew up there  
☐ You had attended a school or university there  
☐ You were employed there  
☐ Other (please specify)
25. What factors influenced the location of your company?

<table>
<thead>
<tr>
<th>Access to venture capital and other funding</th>
<th>Decisive</th>
<th>Important</th>
<th>Less Important</th>
<th>Not Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>State and local government assistance programs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access to MIT</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proximity to key research facilities or key researcher</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access to other major universities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access to skilled professional workers (engineers, managers)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access to skilled (blue-collar) labor</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Access to unskilled labor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proximity to major markets</td>
<td></td>
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</tr>
<tr>
<td>Favorable regulatory environment</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Favorable tax climate</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Low business costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality of life</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good network of suppliers</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Network of contacts</td>
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</tr>
<tr>
<td>Low-cost land and rental space</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Available land for building</td>
<td></td>
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</tr>
<tr>
<td>Ample and reasonably priced housing</td>
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<tr>
<td>That’s where I lived</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Other factors</td>
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</tbody>
</table>

Skip Questions 26-28 if you are not currently active with the company.

26. When you plan for an expansion, what factors will help determine where it occurs?

<table>
<thead>
<tr>
<th>Access to venture capital and other funding</th>
<th>Decisive</th>
<th>Important</th>
<th>Less Important</th>
<th>Not Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>State and local government assistance programs</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Access to MIT</td>
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<tr>
<td>Proximity to key research facilities or key researcher</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access to other major universities</td>
<td></td>
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<td></td>
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<tr>
<td>Access to unskilled labor</td>
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</tr>
<tr>
<td>Proximity to major markets</td>
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<tr>
<td>Favorable regulatory environment</td>
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<tr>
<td>Favorable tax climate</td>
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<td>Low business costs</td>
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<td>Quality of life</td>
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<tr>
<td>Network of suppliers</td>
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<td>Network of contacts</td>
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<tr>
<td>Low-cost land and rental space</td>
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<tr>
<td>Available land for building</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Ample and reasonably priced housing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proximity to company headquarters or other existing company operations</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Other factors</td>
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</tbody>
</table>

27. Do you plan a major expansion in the next two years? □ Yes □ No
28. What factors are critical in giving your company a continuing competitive edge?

<table>
<thead>
<tr>
<th>Most Important</th>
<th>Important</th>
<th>Less Important</th>
<th>Not Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to capital</td>
<td>Government support programs</td>
<td>Innovation/new technology</td>
<td>Niche product</td>
</tr>
<tr>
<td>Time-to-Market</td>
<td>Superior performance</td>
<td>Market image/brand recognition</td>
<td>Dominant market position</td>
</tr>
<tr>
<td>Customer service/responsiveness</td>
<td>Employee enthusiasm/creativity</td>
<td>Management expertise</td>
<td>Competitive cost structure</td>
</tr>
<tr>
<td>Offshore outsourcing</td>
<td>Other (please specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

comments

Please share your stories and your thoughts about your entrepreneurial experiences, your connections with MIT (past and current), your lessons learned: any comments of your choosing. Feel free to attach additional pages.

an appreciation and an invitation

We are grateful for your participation in the MIT Founders Survey 2003. We hope to share our preliminary findings before the end of the year.

We invite your continued involvement in our ongoing research on entrepreneurial activity. We hope that you will be willing to participate in follow-on studies related to additional companies you have founded or on specific aspects of the entrepreneurial enterprise. Please let us know if you are so willing.

☐ Yes, I am willing to be contacted for follow-on studies

☐ Email Address (if available):

confidentiality and release of information

Your privacy is our highest priority. The information you have provided will be reported only in the aggregate. From time to time, we are asked by MIT administrative offices and the news media for the names of MIT-associated founders, their companies, and the industries and technologies with which they are associated. We would like your permission to release that information when so requested. Please check below ONLY if we do not have your permission.

☐ Do not release my name or the name of my company to MIT offices.

☐ Do not release my name or the name of my company to the news media.

Please return the survey in the enclosed envelope pre-addressed to the MIT Founders Survey 2003, 77 Massachusetts Avenue, Cambridge MA 02139.

You may also fax it to 617-258-8690. Let us know if you would prefer to complete the survey through a telephone interview or if you have any questions by calling the MIT Founders Project at 617-253-3648.

We thank you for your participation!