

MIT Faculty Newsletter

<http://web.mit.edu/fnl>

On May 16, 2012 the MIT Corporation announced the selection of MIT Provost L. Rafael Reif as the seventeenth President of MIT. Please see page 6 for the text of President-Elect Reif's address to the Institute community on that date.



President-Elect L. Rafael Reif

Highlights from the 2012 Senior Survey

IN LATE MARCH 2012, MIT invited 1,047 fourth-year undergraduates (seniors) to participate in a survey that asked them about their satisfaction with various academic and non-academic experiences, perception of how their abilities changed while at MIT, and post-graduation plans. The survey closed in early May with a 73% response rate.

MIT conducts the Senior Survey every two years. This is the sixth administration. This particular survey is being administered simultaneously at a number of peer institutions.

Available at web.mit.edu/ir/surveys/senior.html are overall frequencies for each question on the survey, along with summary charts. Following are some of the highlights.

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Editorial A Letter to the Class of 2012

GREETINGS TO YOU, THE graduates and your families!

We share with the thousands of families gathered for Commencement, the excitement, pride, and promise in our new MIT 2012 graduates. During the past four years you have been instructed, educated, and guided by our faculty; you are now launching your own careers and your contributions to our society will be the proudest product of our academic labors.

At the same time, we are anxious about the world you are moving into: a dangerously volatile ecological environment; a depressed and uncertain economy; a political environment in which the major institutions supporting science and technology in our nation are having their budgets cut back; states disinvesting in public education and teachers, and continuing foreign wars.

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Editorial Save MIT Campus Land for Academic, Not Commercial, Uses

MIT IS MUCH MORE than the sum of its classrooms, laboratories, dormitories, and recreational facilities. And yet this infrastructure of land and buildings is critical for our health. We have grave concerns over several aspects of the proposals from the MIT Investment Management Corporation (MITIMCo) for the predominantly commercial development of the east end of the MIT academic campus.

The MITIMCo proposal transfers unique remaining campus land resources – acquired for MIT's future educational and research needs – to commercial applications for periods on the order of half a century. The land available for MIT academic expansion in the north campus between Massachusetts Avenue and Main Street has already been leased to commercial tenants for 40- and 60-year periods.

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A Letter to the Class of 2012

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MIT faculty do not have magic answers or prescriptions to these problems. Most of us do, however, believe that investment in new knowledge of the natural and engineered worlds is invaluable; that the application of advances in science and technology to pressing social problems is among the most effective means of raising the human standard of living; and that such progress depends on an educated and dedicated scientific and technical workforce. We also know a great deal about the ills that afflict human populations, including disease, lack of clean water and air, the burdens of poverty, and the destructiveness of large-scale war.

We believe that in the world of the twenty-first century there can be no true democracy without an electorate that is scientifically, historically, and technologically literate, that can reason analytically and face the facts.

We believe that science and technology must be used wisely, taking human needs and history into account.

We have seen with pride the active interest that many of you have taken in mitigating and reversing the consequences of climate change, your desire to improve the Earth and the well-being of its inhabitants; that is one of the pillars of an MIT education.

We are deeply disturbed by the predominance of military solutions to settle conflicts with the loss of lives and the diversion of hundreds of billions of dollars that could be used to develop ours and others' societies. Despite disarmament progress, thousands of nuclear weapons are still on hair-trigger alert around the world, reducing our security through their possible accidental use, and draining productive economic resources. Redirection of these fiscal resources into alternative energy programs, new approaches to diagnosing and treating diseases, improved education for our young, and continued expansion of telecommunication networks and technologies, offers enormous prospects for concrete advances in our economy and general standards of living. Sharing these advances with other countries could make the world more secure for all. These are the kinds of jobs that we hope many of you will be doing in the future.

On behalf of the entire faculty, we wish you the strength and commitment for these tasks. We know that you have the skill and training. May you have good luck as well. ■

The Editorial Board of the *MIT Faculty Newsletter*

Save MIT Campus Land for Academic, Not Commercial, Uses

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The new proposal prepares the way to make comparable long-term leases on MIT's precious remaining land resources on the east end of campus. Future development of educational, housing, recreation, and academic research facilities will be sharply constrained. This is the last remaining land available for campus-based uses. Implementation of MITIMCo's plan has the potential to do serious and irreversible damage to MIT's future educational and research missions.

We recognize that the MITIMCo development will generate substantial real estate investment returns to MIT's endowment. However, returns on astute real estate investment can be had all over the U.S. and in many cities outside the U.S. Land for MIT campus development in Cambridge is unique and irreplaceable. Using it solely to generate financial returns neglects the enormous opportunity cost incurred if we lose MIT's options for future expansion and development of our current community learning and living centers. This seems to us to be fundamentally unsound.

Many of our concerns have been raised in the *Faculty Newsletter*, web.mit.edu/fnl/, with articles related to "MIT 2030" by knowledgeable faculty and staff in the November/December 2011 issue. A general response from the administration appeared in the March/April 2012 issue, but the following concerns are not directly addressed:

- The plan was developed without proper and critical input from MIT's faculty, staff, and students. The process even failed to incorporate the advice and experience of MIT faculty who are national experts on urban development.
- The very serious housing needs of our graduate students, staff, postdoctoral fellows, and (especially younger) faculty have been given low priority. In fact, the initial plan included only 60 units of housing, ignoring the serious analysis and request from the Graduate Student Council (GSC) for substantial new housing, and earning the hostility of our East Cambridge neighbors. (See related article by the GSC president, page 10.)
- The proposal fails to seriously consider the impact of the resulting tens of thousands of increased daily auto and transit trips into and out of Kendall Square on the ability of MIT faculty, students, and staff to get to and from the Institute.
- The proposal may violate prior agreements between MIT, the City of Cambridge, and the federal government, risking substantial liability.

We fear that MITIMCo's separation from responsibility for MIT's educational and research integrity has contributed to the imbalanced proposal. We are also concerned that the substantial participation in plan development by individuals who may stand to gain directly in proportion to the size of the commercial

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Save MIT Campus Land for Academic, Not Commercial, Uses

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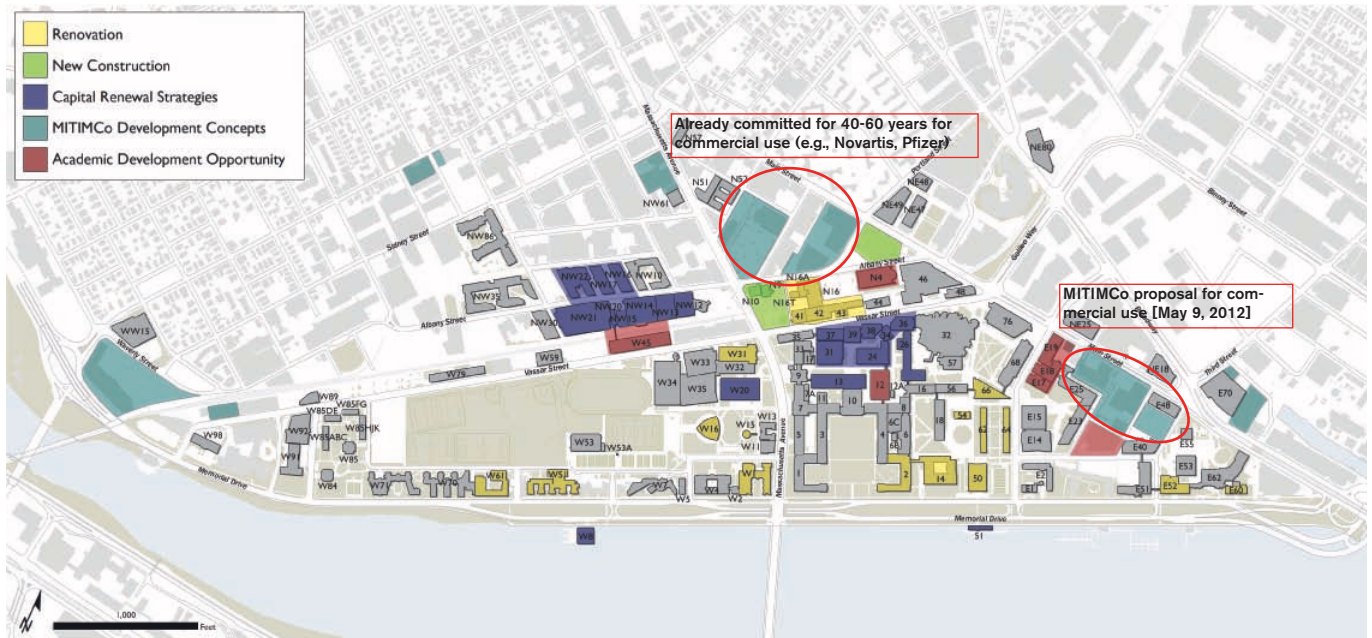
development introduces conflict of interest issues, and departs from traditional MIT decision-making processes.

We believe the MIT Corporation should instruct MITIMCo to refrain from submitting the zoning petition they

apparently plan to place before the Cambridge Planning Board until there has been a fuller and more careful further review by a faculty committee that includes DUSP representatives as well as student and staff constituencies. This will

allow a more thorough, thoughtful, long-term plan for irreplaceable land resources that are crucial for MIT's future. ■

Editorial Subcommittee (six members of which are Cambridge residents)



Source: MIT Department of Facilities

From The Faculty Chair MIT Values and Culture

Samuel M. Allen

THE SEARCH FOR MIT'S seventeenth President provided an unusual opportunity to poll the MIT community on the challenges and opportunities facing the Institute, and to engage in discussions about what candidate qualities the Search Committee should be seeking. I participated in the majority of the Search Committee's meetings with community groups. Summaries of the major discussion points were prepared and distributed to the entire Committee. The Search Committee will be meeting with our President-Elect, Professor L. Rafael Reif, during the last week of May to share many of the things we learned. There were many recurring themes in our discussions, ranging from the need for renovation of

many of the campus' buildings to the expectation that the share of MIT research that will be supported by the federal government will diminish significantly in the near future. But there were also quite a few discussions centered on MIT's values.

The topic of MIT's *organizational culture* has interested me since I took a class called "Cross-Cultural Conflict" two years ago at UMass Boston. One of the papers we read for the class was "Organizational Culture," written by our colleague MIT Sloan School of Management Professor Emeritus Edgar Schein (*American Psychologist* 45 (2) pp. 109–119 (1990)). Schein defines culture:

as (a) a pattern of basic assumptions, (b) invented, discovered, or developed by a given group, (c) as it learns to cope with its problems of external adaptation and internal integration, (d) that has worked well enough to be considered valid and, therefore (e) is to be taught to new members as the (f) correct way to perceive, think, and feel in relation to those problems.

Schein makes the point that an organization's cultural assumptions are not easy to pin down and that they are best investigated by an outsider through extensive observation, interviews, and analysis. I proposed writing a paper about MIT's culture for one of my classes at UMass and my professor,

David Matz, discouraged it because he'd "have no way of judging if [my] analysis was correct." My interest in the topic has not waned, and in light of all the input to the Presidential Search Committee it seemed like a good opportunity to revisit the idea. While my perceptions of MIT's culture are based on more than 30 years on the faculty, they are those of an engineer, not a psychologist or ethnographer, and may overlook important issues. Nonetheless I do hope this column will spur discussion of the topic, and I look forward to learning more from future discussions.

Values

An organization's *values* are distinct from its culture, but they provide a tangible window into its *culture*. A number of values were expressed repeatedly as the Search Committee surveyed different groups:

Integrity was mentioned as a top priority in screening candidates for President, and it certainly is a foundational aspect of MIT's culture. The swift dismissal a few years ago of a highly-visible member of the community who falsified a résumé and the extensive publicity about the disciplinary action exemplify the depth of MIT's commitment to this aspect of organizational culture.

Meritocracy is also a fundamental value of the MIT community that was mentioned frequently as something held dear by the community. The Institute's rigorous processes for undergraduate and graduate admissions and processes for faculty promotion and tenure certainly reflect our focus on academic excellence.

A **commitment to diversity** was another consistent theme. While achieving the Institute's diversity goals is a work in progress, the recent past has seen significant steps forward, such as: founding MIT's Presidential Committee on Race and Diversity (1994), *The Report of the Status of Women in Science* (2002), the *Diversity Leadership Congress* (2008), the *Report of the Initiative on Faculty Race and Diversity* (2010), the *Inventing our Future Website* (2011) and the recent highly successful *Diversity Summit* (2012).

Individual viewpoints on meritocracy and diversity vary on campus, and have been expressed prominently in recent articles for the *Faculty Newsletter* and *The Tech*. Schein's article claims that disagreements over values are common in organizations and can provide insight to organizational culture.

Creativity is celebrated at MIT. The Institute has a wonderful reputation for fostering innovation and entrepreneurship, and we excel in the arts.

MIT also excels at **collaboration**. The relatively porous boundaries between departments, and increasingly between Schools, play a huge role in our success. Collaboration pervades research, educational programs, and community activities. It requires flexibility of organizational structures as well as governance systems and we do this very well.

We place a very high value on **educational opportunity** at MIT. This is exemplified by curricular breadth, the incorporation of cutting-edge research into classroom experience, extensive engagement of students at all levels in research, adaptation of new technologies to enhance learning, and needs-blind undergraduate admissions.

Several groups expressed appreciation of "**one MIT**" – the collective educational breadth of MIT's five Schools, and the value that students get by exposure to the variety of perspectives and methods of thought of different disciplines.

Each of these values is embodied in MIT's Mission Statement (see web.mit.edu/facts/mission.html).

Culture

Considering Schein's definition of organizational culture, and the values expressed to the Search Committee, I suggest the following as a set of components of MIT's culture:

- Academic rigor prepares MIT graduates for life.
- Research and teaching go hand-in-hand.
- A common educational experience designed around the General Institute Requirements prepares MIT graduates for

a broad range of career options and builds strong relationships with alumni/ae.

- Through its exceptional teaching and research, MIT has a significant role and responsibility in developing solutions to the world's major challenges.
- Inter- and multidisciplinary diverse groups, often including international collaboration, are required to work effectively in the pursuit of solutions to big challenges.
- Systems of shared governance were created so that decisions can be made with input from all stakeholders.
- The potential for excellence has no borders – such as nation, race, or social class – and an MIT education is accessible to everyone without regard to ability to pay.
- The pursuit and promotion of excellence will maintain MIT's position as a world-class leader in higher education.

Implications

Cultural assumptions are deeply held and slow to evolve, especially in large organizations like MIT. But though deeply held, the assumptions may not serve the organization's long-term interests as the world outside MIT evolves. Understanding the assumptions is critical for an organization's leaders. What tensions currently exist because of these assumptions? Do these tensions indicate the assumptions are outmoded? If they are outmoded, what steps can the Institute's leaders take to promote change? Schein's article discusses a number of "embedding mechanisms" that leaders can adopt to effect change, such as setting criteria for awards, deciding what annual data to collect, and changing organizational structures.

We are embarking on a new phase in MIT's history, with a new President and a community that has recently been engaged in serious reflection about MIT. Understanding assumptions about MIT culture and assessing their appropriateness in 2012 should serve to inform MIT's new leadership team and help chart a course forward. ■

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Text of President-Elect Reif's Remarks to the MIT Community

L. Rafael Reif

On May 16, 2012, it was announced that the MIT Corporation had selected L. Rafael Reif as the seventeenth President of MIT. Following is the text of President-Elect Reif's remarks to the MIT Community Meeting held that afternoon in Building 10-250.

IT IS INCREDIBLY HUMBLING for me to stand before you as the president-elect of MIT. I cannot tell you that this is a dream come true, because this is a dream I never dared to imagine.

My story is not too different from that of many of you. I grew up in a home wealthy in integrity and principles and values, but poor in everything material. I came to the U.S. as a graduate student to prepare myself for an academic career, which was the dream I envisioned for a better life. I did not speak English. A few decades later I am standing here in front of you, ready, eager, excited and inspired to lead one of the most remarkable academic institutions in the world.

I want to start by thanking the Presidential Search Committee and the Student Advisory Committee. I want to thank all the faculty, students and staff who participated in the search process. I want to thank the MIT Executive Committee, and the MIT Corporation.

I am deeply moved by the trust you all are placing in me. MIT is a great human treasure, and serving as its leader is a profound responsibility.

Before I say anything more, I want to take this opportunity to recognize and to

thank an exceptional individual whom I worked closely with for the last seven years: MIT's sixteenth president, Susan Hockfield.

We will have more appropriate occasions to honor Susan for her many accomplishments for MIT, and to honor her and her husband, Tom Byrne, for their service. But today, I want to personally thank Susan for the opportunity she gave me to work at her side to help advance the mission of MIT.

It has been an intense, fascinating, and stimulating assignment. I learned a great deal working with her, and I want to say to her today: Susan – thank you for giving me the opportunity of a lifetime.

.....

As I said, given my history, becoming the president of MIT was very, very unlikely. My dream was to have an academic career back in Venezuela, not even in the U.S. But there was an incredible turning point.

I earned my PhD in electrical engineering at Stanford, and I had stayed on for a year to do research. But it was May, and I had told everyone that I was moving back to Venezuela that fall. I was, in fact, already packing.

While attending a conference, I bumped into a colleague who'd left Stanford for MIT. He said MIT was looking for someone: Would I be interested? I said I was flattered, but I was noncommittal. (After all, I had seen pictures of the Blizzard of 1978...).

Then another MIT professor who chaired the Faculty Search Committee started recruiting me very hard. He would call every other night at home, trying to convince me to interview. Then at one point he said, "What are the chances that if you came to interview at MIT, you might like it?" I didn't want to say "Zero" – I didn't want to offend him. So I said, "Five percent." He said, "Five percent is not zero – why don't you come?"

My brother was actually doing a PhD at MIT, so I thought I could visit him and interview at the same time. So I came, I spent a day here, and I realized – "This is it!"

MIT made me an offer, and I accepted right away (for a lower salary, by the way...). We packed the car with all our belongings, and drove all the way across the country. It took about three weeks, most of it camping. My moving expenses were a bunch of receipts for campsites.

I finally got here – MIT became my home, and I never left.

.....

MIT is a place I call home because it is the institution where I grew up as a faculty member, and that I am indebted to for providing the stimulating, collegial, and collaborative environment that nurtured me and made possible my dream for a better life, my academic career.

I know I am not alone when I call MIT my home. All MIT faculty, students, staff, and postdocs view MIT as their home: the



From left to right: Former President Charles Vest, President Susan Hockfield, President-Elect L. Rafael Reif, Former President Paul Gray

home of an extended family of curious, creative individuals who collaborate daily with each other to advance MIT's mission. I am one of them.

.....

In leading MIT, I will be guided by MIT's values and principles. The values I most cherish include:

- A commitment to meritocracy and integrity,
- A commitment to excellence,
- A commitment to always take the high road and do what is right, and to make a positive, constructive contribution to society,
- A commitment to care for the MIT community, to respect all members of our community, and to recognize everyone's contribution to the mission and well-being of MIT,
- A commitment to equity and inclusion, and to keeping our community open and diverse by every measure, including race, gender, religion, nationality, sexual

orientation, disability, and socioeconomic background.

- And a commitment to our students. Every member of our faculty knows the thrill of teaching our incredible students. The questions they ask make you grateful that the future is in their hands. To prepare them for that future, we need to teach them not only the rigor of their disciplines, but also how to use their gifts, and the human values that make those gifts worthwhile.

In leading MIT, I intend to honor and practice these values – within the following guiding principles:

- I believe that the job of the administration is to support our faculty, students, and staff, to enable them to do what they came to do at MIT: to advance knowledge, to educate students, to address today's great global challenges.
- I believe the job of our faculty is to educate and inspire our students, sometimes in our classrooms and laboratories, sometimes through research, and always by example.

- I believe the job of our students and alumni is to make the world a better place, to leave it better than they found it.

- And I believe the goal of our whole community is to leave MIT stronger than we found it, for the benefit of those who come after us.

- Above all, I believe that MIT – because of what it stands for and because of its distinctive strengths – has been and must continue to be a force for the good, for the nation and for the world.

In the next few months, I will seek your help in collectively imagining the MIT of the future. I suggest we use as our guide the following words of MIT's mission statement:

“To advance knowledge and educate students”

“To bring knowledge to bear on the world's great challenges”

“With the support and intellectual stimulation of a diverse community”

“For the betterment of humankind.”

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Text of President-Elect Reif's Remarks
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Educating students is central to our mission, so let's focus, Institute-wide, on innovations in teaching and learning, to further enrich the powerful MIT formula of "Mind and Hand."

Advancing knowledge is central to our mission too, and so is the responsibility to help understand and overcome the world's great challenges. So let's continue to identify those challenges where we, as a community, can make a significant contribution, for the betterment of humankind.

And let's continue to work together to strengthen MIT's diverse and intellectually stimulating environment, so that every member of our community can grow and thrive.

.....

A time of transition should also be a time for reflection – a time to assess where we are and where we are going. Let's assess what we are doing that works well, and what we are doing that is not working well.

I intend to spend the next few months listening to our community: our faculty and students, our staff and our postdocs, our Corporation members and our alumni. I will start with the Presidential Search Committee and the Student Advisory Committee, since they generously invested so much of their time understanding the needs and aspirations of our community.

As I embark on this listening tour, I have one important request: please be candid with me! I love the fact that the people of MIT tell you what they think – even when it's not what you want to hear! That is part of the secret of our success – and I hope you will not allow the "president" title to stop you from speaking to me frankly.



President-Elect Reif and Faculty Chair Sam Allen

Needless to say, the title of "provost" never stopped you. That should not change....

.....

MIT has been privileged in its presidents. This is a community of inspiring values and bold aspirations. Over and over, it has chosen presidents who have lived up to those values and aspirations.

As I embark on this listening tour, I have one important request: please be candid with me! I love the fact that the people of MIT tell you what they think – even when it's not what you want to hear! That is part of the secret of our success – and I hope you will not allow the "president" title to stop you from speaking to me frankly.

Before I conclude, I want to introduce you to my family – my wife Chris, my daughter Jessica, her husband, Benjamin Caplan, and my son, Blake – who are here with me today. They graciously understand (well, most of the time...) that they have to share me with my MIT extended family. I am profoundly grateful to them. They are the source of my strength.

.....

By listening to the collective wisdom of our community, I hope I can do the same.

Let me conclude with the obvious recognition that there is a great deal to do, and that the sooner we start doing, the more we can get done. Which means that I will be approaching you and seeking your help soon, much sooner than you expect.

From the bottom of my heart, thank you all. ■

Text of President Hockfield's Remarks to the MIT Community

Susan Hockfield

TODAY IS A HUGEY EXCITING day for MIT. I cannot imagine anyone better prepared for the job of MIT's president than Rafael Reif. Nor can I imagine anyone better suited to serve this community in this moment. Our president-elect is well known to many in the MIT community, but not to all. So, for those who

Task Force, which allowed MIT to navigate the global economic turmoil while staying true to our central values, and to emerge equipped with important new strengths. Perhaps most important of all is his unfailing ability to listen to, and learn from, many different points of view, without losing his fantastic sense of humor.

pioneer the discipline: by reimagining the undergraduate curriculum." That was when I knew that he understood the inextricable connection between education and research that lies at the heart of a great research university, and it was when I knew I wanted him to help me lead MIT.



President Hockfield Presenting President-Elect Reif with Number 17 MIT Baseball Jersey

have not had the privilege of working with Rafael, I want to give you a sense of the qualities I admire in him most.

President-Elect Reif is a brilliant, far-sighted strategic thinker. His vision helped define the path forward for MIT's global engagements, and he spearheaded the development of MITx and edX. His can-do practicality and creative problem solving strengthened our financial foundation, positioning us to weather the global financial crisis. His collegial, consensus-building leadership inspired and fueled the Institute-wide Budget Planning

When I learned that the Presidential Search Committee had selected Rafael Reif, I thought the choice was perfect, because I knew that they had seen the same remarkable character and wisdom that, in 2005, inspired me to choose him as provost. At the time, Rafael was head of EECS. Under his leadership, the department had embarked on a major revamping of their undergraduate curriculum, and I was puzzled, frankly. Weren't they already the best program in the country? So I asked him to explain, and he answered, "That's how we

Rafael, as you know better than anyone, leading MIT is a team sport. All sports have rules, so, I want to present you with the rulebook, handed down now by three generations of MIT presidents: *Roberts Rules of Order*. Sports also have uniforms, so, in light of your past sporting achievements, I wanted you to have your own team shirt, as you become MIT's seventeenth president: an MIT baseball jersey, emblazoned with your number. Truly great teams have great leaders, and MIT could not be luckier to have found its next leader in you. ■

Concerns Over the Lack of Graduate Student Housing in the MIT 2030 Plan

Brian Spatocco

Introduction

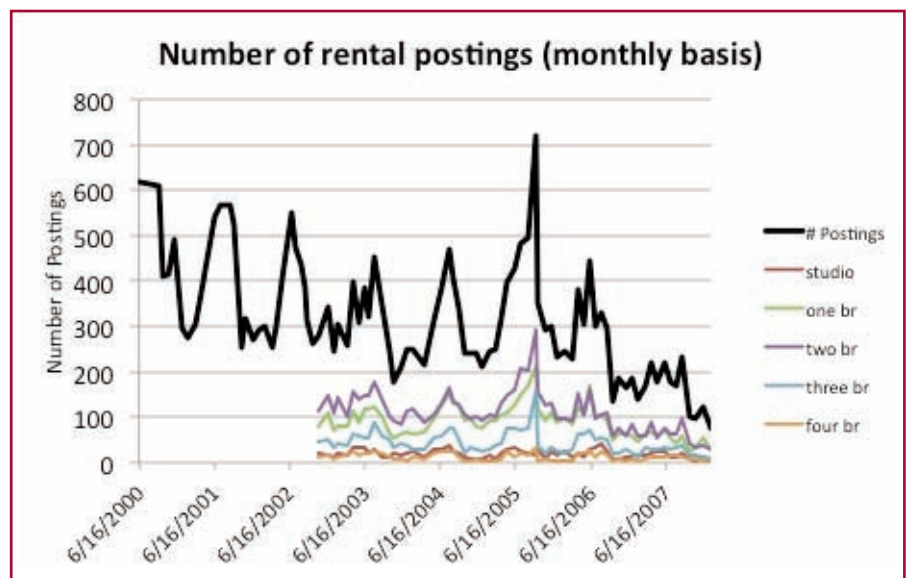
PROMPTED AND MOTIVATED by the recent remarks of our President-Elect Rafael Reif when he noted, “A time of transition should also be a time for reflection – a time to assess where we are and where we are going,” I write today to discuss a very serious external threat to the way our Institute does business and how our community lives. Specifically, during my two years of service as the Graduate Student Council’s (GSC) Housing and Community Affairs (HCA) co-chair and a member of the Kendall Square Advisory Committee, I have developed significant concerns regarding the availability and accessibility of housing in surrounding regions as well as the higher order effects this will have on both the faculty and student communities at MIT.

To be very clear, our institute has shown significant commitment over the last decade with regards to its development of housing and support of our residential communities. In spite of these efforts, we now face unprecedented external market forces which have the power to irrevocably damage the ways and places in which we live. Thus, if we aim to be preemptive, rather than simply reactionary, in addressing the rapid changes that are increasingly taking place around us I propose here that we begin a collaborative conversation among students, faculty, staff, and administrators to set forth a vision for how our communities are defined and how to sustain our vibrant and invaluable residential community in an ever-changing housing market.

Although most of our statistics have come from studies of and on behalf of the

graduate student community, I believe there exist far more commonalities between the faculty and graduate communities than we might otherwise acknowledge. For starters, approximately

other words, we frequently reside where faculty live, with families, and in adjacent stations of life. Thus, I hope that some of my message may find resonance with many among the faculty.

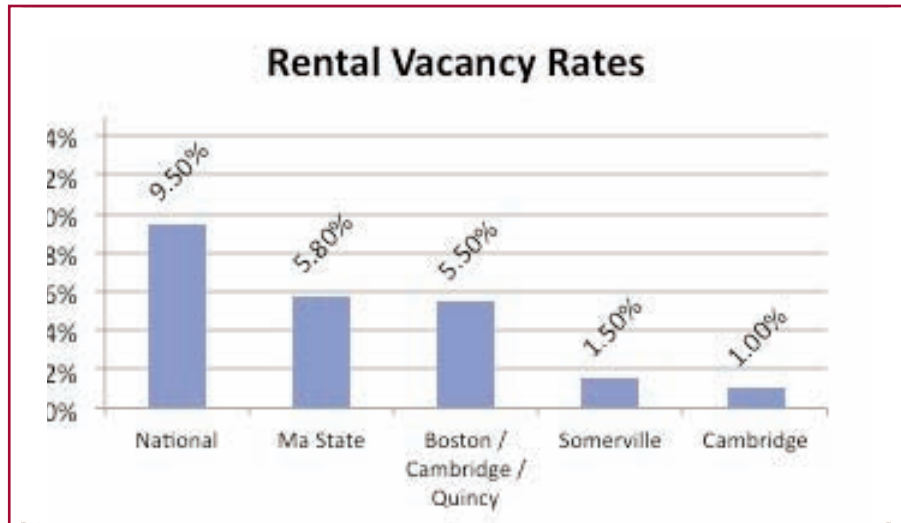


62% of graduate students live off campus. This amounts to over 4,000 graduate students living primarily in the cities of Cambridge (59%), Boston (13%), and Somerville (11%) [percentages are of the total number of students who live off campus (4051). Numbers have an error of approximately +/- 2%] – the same neighborhoods in which a majority of faculty and staff currently reside. In addition to being neighbors, our demographics exist somewhere between undergraduates and faculty in terms of our international diversity (38% international), our marital statuses (31.6% with spouses or partners), and the number of households with dependents (~7% with dependents). In

To get straight to the point: It is our belief that, if left unchecked, the Cambridge rental housing crisis will not only have a profound effect on the quality of life of our many off-campus MIT community members, but it may also markedly impact our ability to attract the talent as well as maintain the level of productivity which fuel our academic pursuits. For these reasons, I propose that an honest and frank conversation begin now in order to equip us strategically to manage the exogenous market as well as guide our current and future campus (and abutting land) development in the best interests of our communities.

Understanding Off-Campus Housing

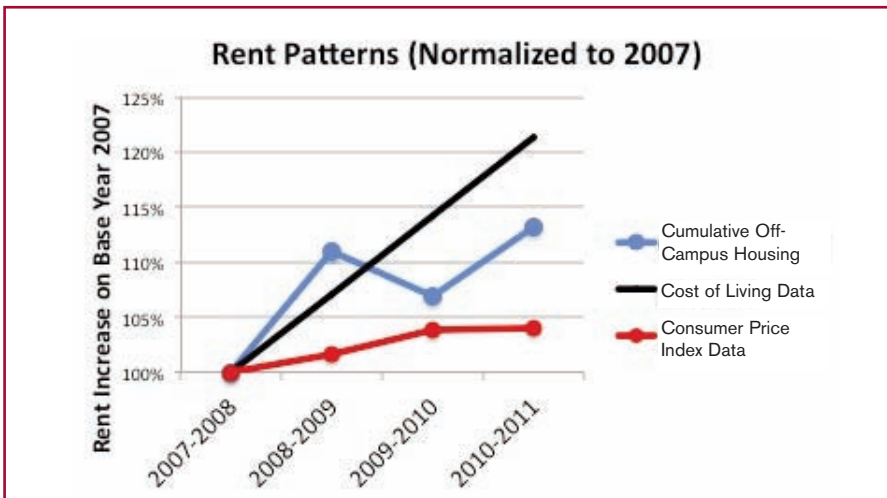
There are some who might cringe at my use of the word “crisis,” noting that the housing market is one which experiences different cycles and characteristic relaxation times than would the demand on other land resources for commercial or industrial uses. Though I would acknowledge that the housing market is indeed particularly complex and dependent on a number of inputs, I believe that all quantitative indicators available speak to an increasingly troubling trend: It is becoming nearly impossible to find, let alone afford, housing in the City of Cambridge. This issue of availability and affordability is poignantly demonstrated if we look at the aggregated listings of rentals in Cambridge and adjacent cities over the last seven years. The data, collected by the MIT Off-Campus Housing Office, shows a 75% decline in the average number of listings from a constant monthly sampling of the rental agencies in the area.



trying to attract to the City of Cambridge or MIT have little choice but to take up residence (and pay taxes) elsewhere. For comparison, the rental vacancy rates in Manhattan, and surrounding universities like Columbia and NYU, were hovering somewhere around 1.08% less than a year

If we then look at the real prices paid by graduate students as measured in the 2007 and 2011 Cost of Living (CoL) Surveys conducted by the Office of the Provost/Institutional Research and jointly funded by the Graduate Student Council and the Office of the Dean for Graduate Education, we can tease out specific increases experienced by various sub-groups or for different types of housing.

From this we can see that rents for Single Off-Campus graduate students have increased an average of 4.23% per year over the last four years. This is significantly higher than the ~1% increases measured by the CPI data. As our Cost of Living and Off-Campus data sets are the most updated and complete publicly available housing data (and inform our Stipend Recommendation processes), we can say with a high degree of confidence that the development and gentrification of Cambridge has resulted in an environment that is not hospitable to a large proportion of our community. Thus, the discussion around whether one should use the word “crisis” is really a distraction from the quantifiable reality: Our community is increasingly unable to live in the vibrant nexus of technology and entrepreneurship that we have developed for them.



This trend is reinforced if we look at the rental vacancy rates in the regions surrounding MIT. Specifically, over the last decade, we have witnessed one of the most precipitous declines in vacancy rates in the Northeast. While MIT and real estate developers have expanded enrollment and commercialized the lands ensconcing MIT, respectively, the housing market lagged seriously behind. We are now faced with a situation in which demand is rapidly outpacing supply and those who we’ve spent so much time and money

ago. In other words, it is likely just as hard now to find an apartment in Cambridge as it is in Manhattan.

Unsurprisingly, with decreasing supply often comes increasing prices. If we normalize back to 2007 we can see the divergence between rent inflation in the immediate area (black and blue) and that of the surrounding three-state region of Boston-Brockton-Nashua as measured in the Bureau of Labor Statistics’ CPI calculations (red).

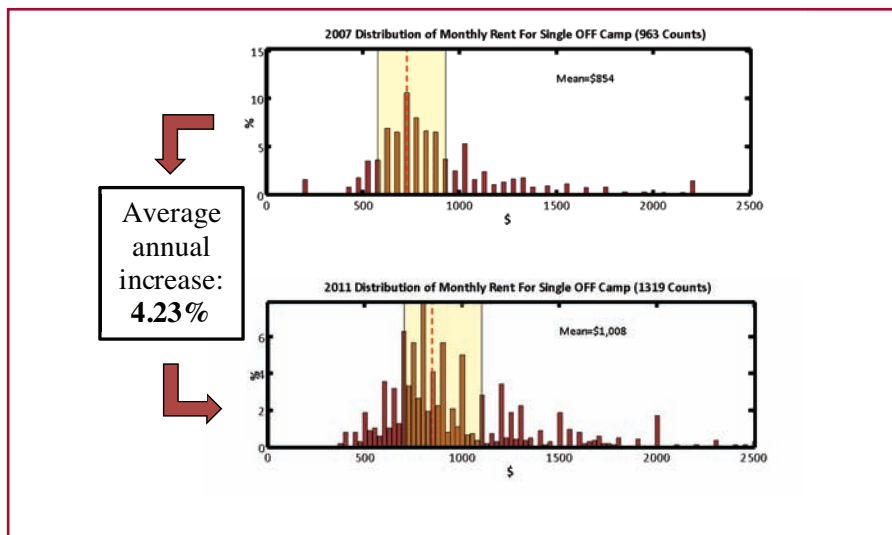
Why should we care?

I would assert that living next to one’s place of work is not simply a luxury, but

continued on next page

Graduate Student Housing and MIT 2030
Spatocco, from preceding page

critical to research productivity in many fields core to MIT's portfolio, such as the life sciences. To the first point, we know from numerous studies that graduate students not only work late, but also return home by foot and most frequently alone (approximately > 80% travel alone). The reason for this is that approximately 50% of graduates will depart from the lab after 7:00 PM, a time at which a vast majority of MBTA transportation options (Bus Lines 64, 68, and 85) connecting the surrounding neighborhoods shut down. Put simply, the nature and expectations of many community members' jobs – working late hours in the lab, office, design studio, etc. – is one which is not at all accommodated by the 9-to-5 infrastructure built for the nonacademic world. As a result, the ability to live a



order to tend to some cell culture or growth. Thus we need to ask ourselves: Do we really expect these students and faculty to commute from Arlington or Watertown several times in a night or are we okay with the increasing number of

undergraduate housing portfolio. Similarly, we have recognized this trend and our recent graduate housing stock (SP, Ashdown, Warehouse) reflects this changing sentiment. Thus, prior to entering, graduates are being increasingly courted and coddled by their undergraduate institutions and as a result are unsurprisingly looking for more than a run-down two-bedroom shack in Watertown.

Put simply, the nature and expectations of many community members' jobs – working late hours in the lab, office, design studio, etc. – is one which is not at all accommodated by the 9-to-5 infrastructure built for the nonacademic world. As a result, the ability to live a walking distance from campus is important to the safety, well-being, and quality of life of the graduate and faculty community.

On top of this, we also have to be conscious of the fact that the graduate population, like that of the faculty, is increasingly international. For these groups, the ability to acquire either on-campus housing or nearby off-campus housing is of extremely high priority, particularly for those with no experience in our country, let alone the skills to apartment hunt in the surrounding cities. As a result, both our incoming domestic as well as international communities place extremely high value on the ability to live comfortably and close to campus. A laissez-faire approach to off-campus housing will not help and may jeopardize our ability to attract and retain the great minds that have built our reputation and will hopefully advance our mission in the future.

walking distance from campus is important to the safety, well-being, and quality of life of the graduate and faculty community. In addition, the nature of research is changing to one in which research timelines are more fickle and demanding. If the NIH's expansion over the last decade is any indicator, we're likely conducting significantly more bio-related research at the Institute than we were several decades ago. With this fundamental shift in research focus has come a commensurate change in the way/times in which our population works. It is not unusual for graduates or young faculty to return to the lab after dinner repeatedly until sunrise in

futons we've begun to see in our labs and offices?

A final point worth mentioning is the effect that increasing housing prices and decreasing availabilities may have upon MIT's competitiveness in attracting the best and brightest graduate students. First, we have to recognize the evolving expectations for housing which students are now carrying into their graduate school selection. Residences like Simmons and Maseeh Hall are excellent examples of how our drive to provide elegant, convenient, and fully equipped residences to undergraduates has grown in recent years, particularly in reference to the rest of our

Conclusion

It would be uncharacteristic of the GSC to conclude this piece only having pointed to the problem and having made a couple of

concerned remarks. Instead, I write this today as a call to action. With the MIT 2030 framework being opened to community input, an unprecedented degree of undergraduate-graduate-faculty communication, and the transition to a new administration at the Institute, I would like to end by calling upon the leaders of the student, faculty, staff, and administrators to begin candid and public discussions on what their vision for a residential community welcoming to the academic looks like and how we can work together

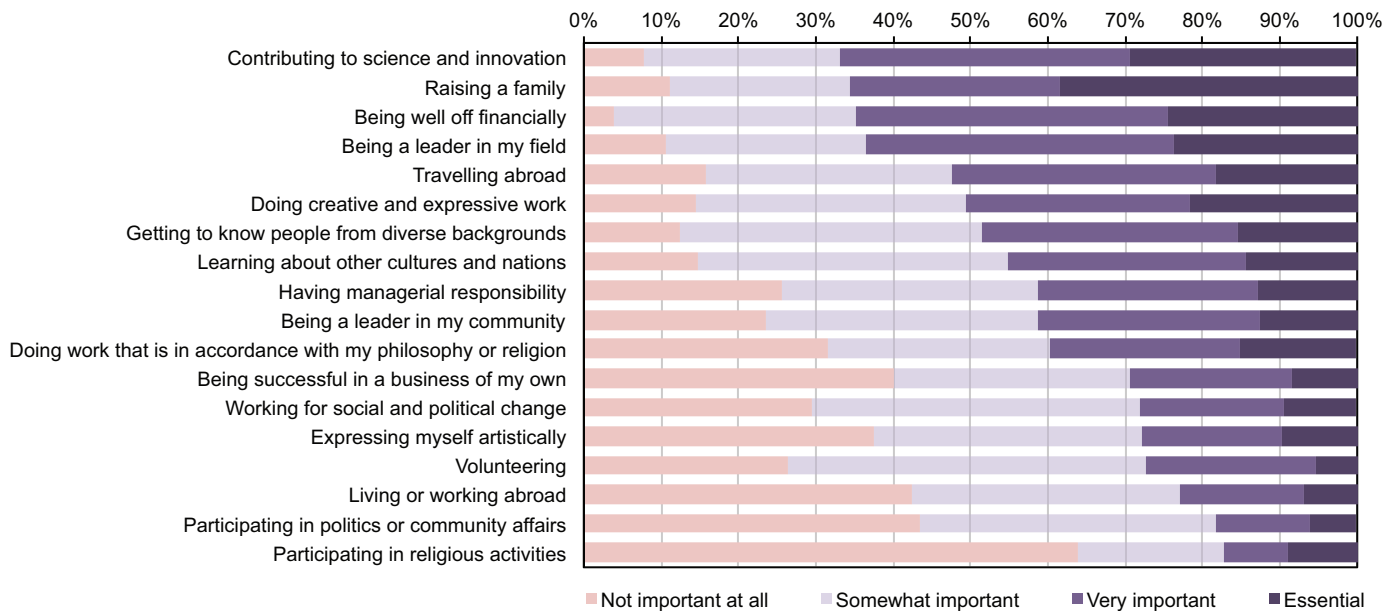
to most effectively address the unprecedented external influences raised in this article. There is no better juncture than now to begin engaging both existing structures (e.g., ODGE/DSL, Institute Committees, Facilities) as well as potentially developing new bodies which further mobilize our members at a more grassroots level. Specifically, I propose the formation of a Student-Faculty-Administration working group whose charge would be to propose a vision for off-campus communities and outline

actions to guide us in this uncertain and unkind market. Though this won't be easy, no MIT-worthy challenge ever is. If, indeed, our greatest common strength is in our inspired experimentalism, then I see no reason why, in this case, we should shy away from the great living lab that is MIT. ■

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M.I.T. Numbers From the 2012 Senior Survey

As you think about your future, how important is each of the following to you?
 (sorted in descending order by sum of 'Very important' and 'Essential')



Source: Office of the Provost/Institutional Research

Highlights from the 2012 Senior Survey
continued from page 1

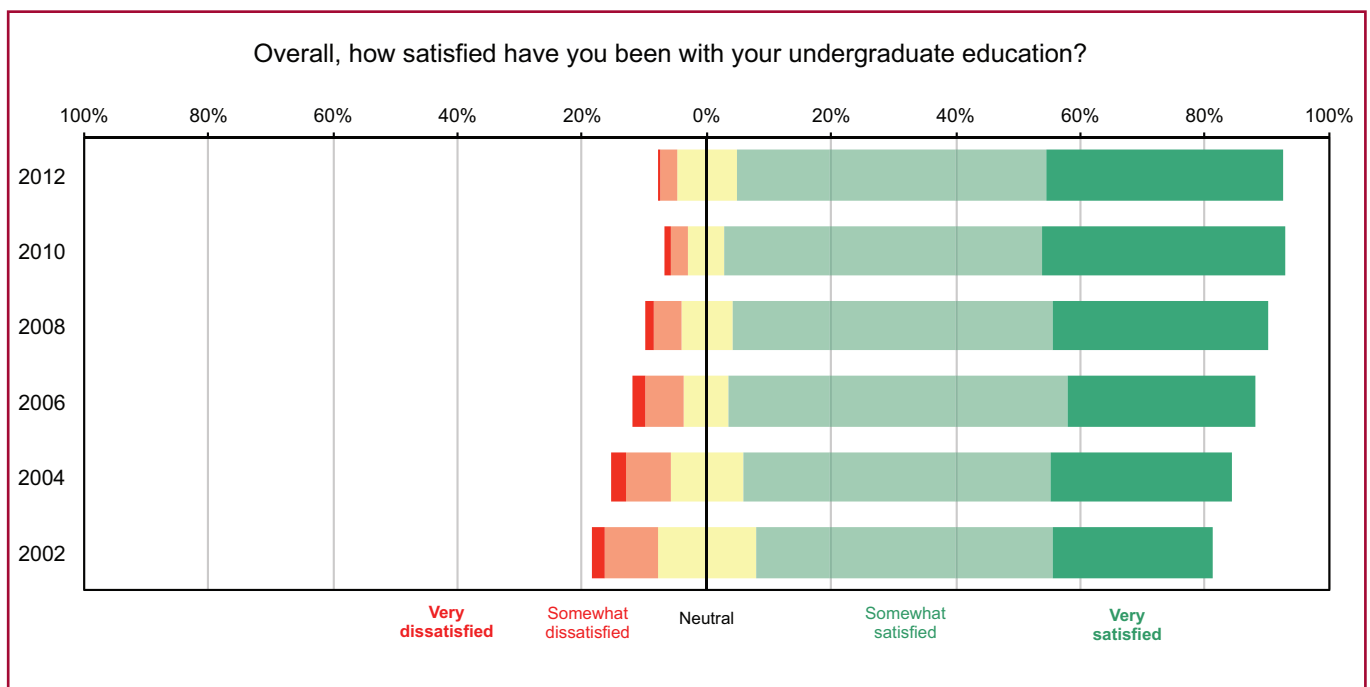
Satisfaction

• 88% of students reported being generally or very satisfied with their overall undergraduate education, slightly lower than in 2010. The chart below shows the results for this question by year.

• When asked about the quality of campus services and facilities, 95% or more of students said that they were satisfied with athletic facilities, classrooms, library facilities and resources, and laboratory facilities and equipment. Students reported being least satisfied with food services (36% were generally or very satisfied), followed by the administration's responsiveness to student concerns (50% were generally or very satisfied).

Skills and Abilities

• Students were asked to evaluate how much MIT had contributed to their knowledge, skills, and personal development in a variety of areas. They responded on a four-point scale: Very little or none, Some, Quite a bit, and Very much. This is a different scale than was used in prior years.



• In terms of the quality of the academic experience, 92% of seniors said that they were satisfied with opportunities to participate in research with faculty, 90% were satisfied with the out-of-class availability of faculty, and 93% with the overall quality of instruction. Satisfaction with academic advising received the lowest ratings in this group of questions, with 56% reporting they are generally or very satisfied. Seniors reported higher satisfaction with the quality of advising within their majors: 69% said they were generally or very satisfied.

• 82% of seniors reported that they were generally or very satisfied with their major(s).

Campus Life

• When asked their level of satisfaction with various aspects of campus life, the three highest-rated categories were the level of intellectual excitement on campus (96% generally or very satisfied), the feeling of security on campus (96%), and the opportunities to participate in intramural and other recreational athletics (96%).

• The lowest-rated categories were student government (44% generally or very satisfied), the sense of community on campus (70%), and the social life on campus (81%).

• The five top-rated areas were: Understanding and using quantitative reasoning; Thinking critically; Thinking analytically and logically; Understanding yourself: Abilities, interests, limitations, personality; and Ability to learn on your own.

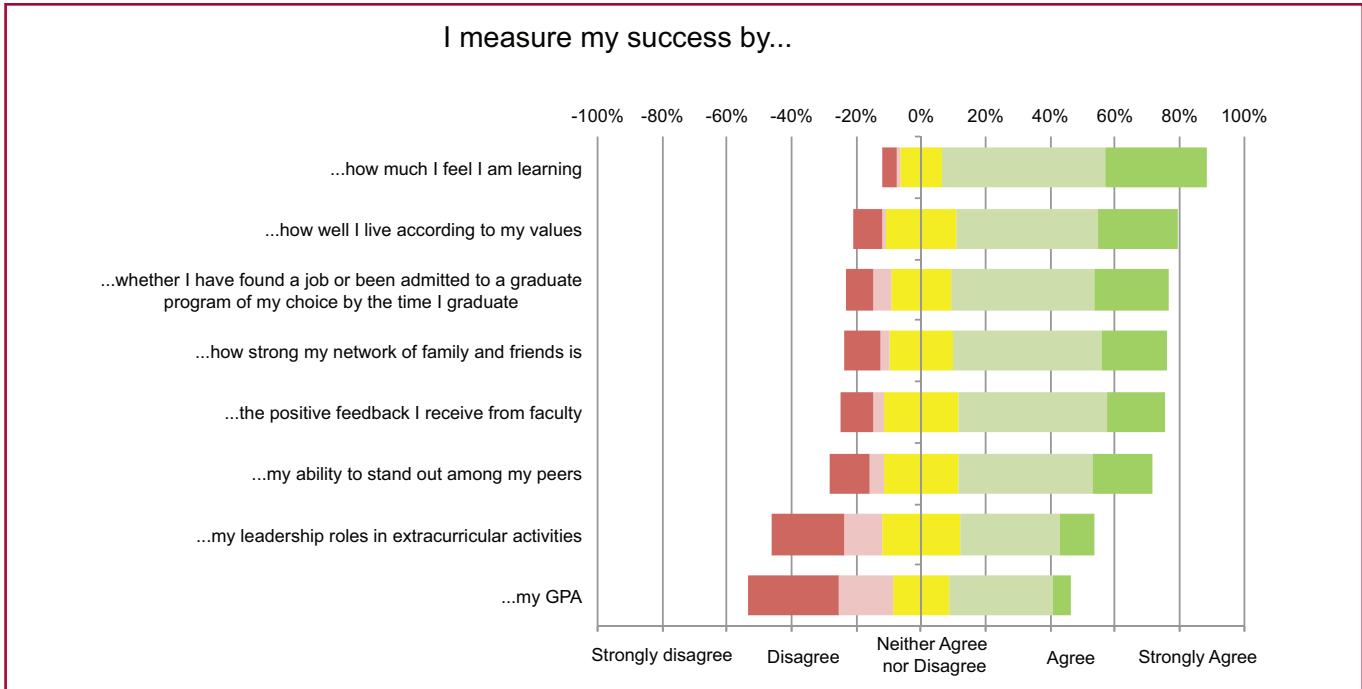
• The five lowest-rated areas were: Reading or speaking a foreign language; Critical appreciation of art, music, literature, and drama; Placing current problems in historical/cultural/philosophical perspective; Writing clearly and effectively; and Constructively resolving interpersonal conflicts.

Activities

• 88% of seniors reported having done research with a faculty member during their time at MIT.

• 37% of students indicated that paying for their education had a considerable or severe impact on their family, down from 39% in 2010.

• The statements that received the lowest levels of agreement were: I measure success by my GPA; I measure my success by my leadership roles in



• 70% had an internship in the U.S. and 30% had an internship abroad.

• The most popular extracurricular activities were miscellaneous student organizations and clubs (64% reported participating), volunteer service (43%), and intramural athletics (39%). When asked if they held leadership roles in any of these extracurricular organizations, nearly half of seniors responded that they had held a leadership role in one of the many “other” student organizations or clubs.

• 75% of students agreed or strongly agreed that they were able to find a balance between academic work and extracurricular activities, up from 72% in 2010.

Finances

• 58% of seniors reported that they did not personally borrow any money to finance their undergraduate education, up from 46% in 2010.

• When asked which activities they had to pass on due to a lack of money, nearly half of the respondents said they had to forego non-paying research or internship opportunities.

MIT-only Questions

• While the majority of the survey was part of a survey administered in concert with our peers, several questions at the end were MIT-specific questions and asked students about their sense of self, their aspirations, and more skills and abilities questions. A full list of these questions can be found at the end of the aforementioned overall results document.

• Students agreed most strongly with the following statements: I have friends at MIT with whom I can talk if something is bothering me; I am a capable student, at least on an equal plane with others; and I have a support network at home with whom I can talk if something is bothering me.

extracurricular activities; and I measure my success by my ability to stand out among my peers.

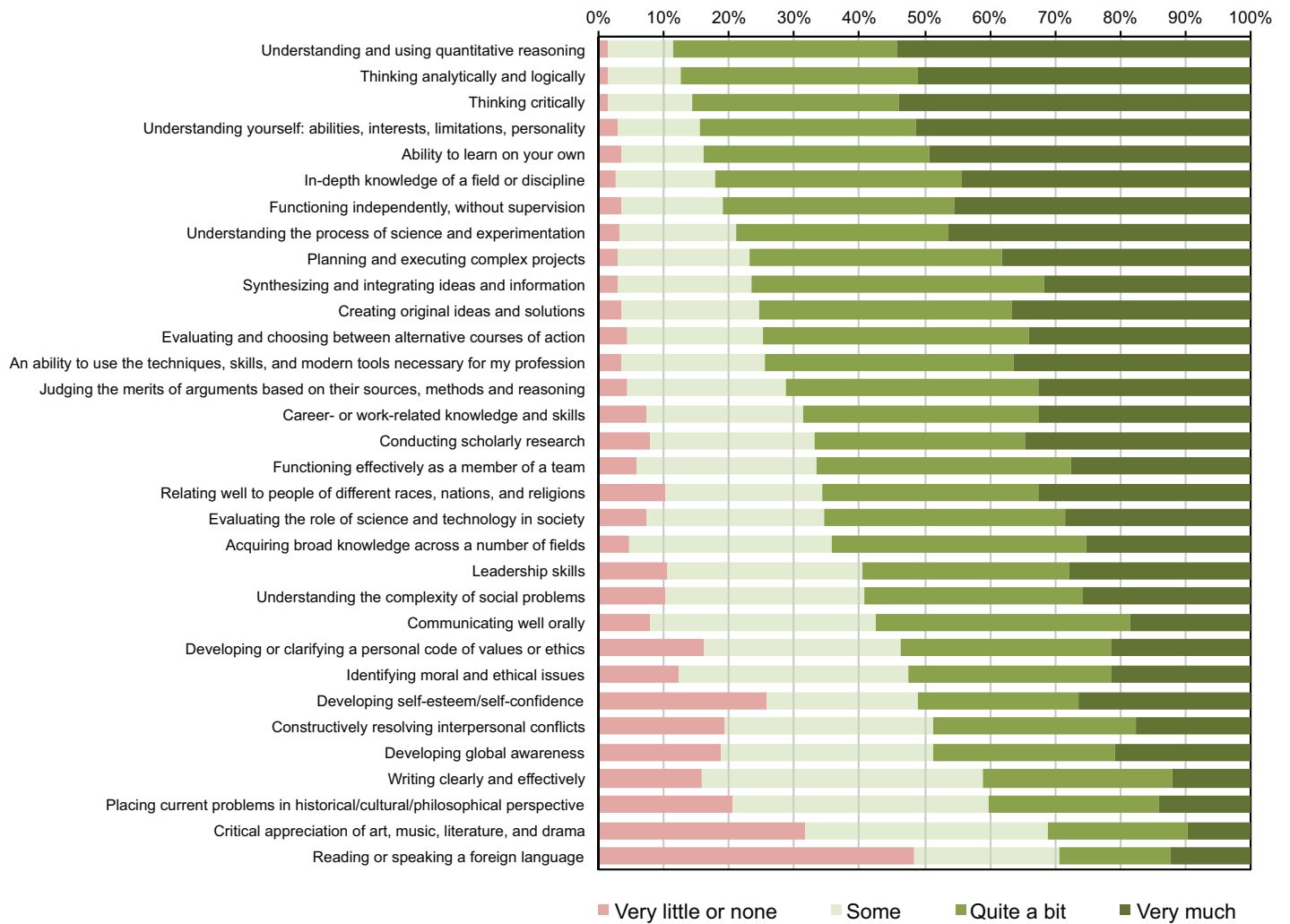
• Students were asked how well their undergraduate experience prepared them to perform a variety of tasks on a scale of Very poorly to Very well. The task that received the highest ratings was: Deliver on all elements of a difficult job or project you agreed to do within the accepted time frame (67% saying More than adequately or Very well). The task with the lowest rating was Start a company (15% saying More than adequately or Very well).

The Senior Survey was created and conducted by the Office of the Provost/Institutional Research. Text for this article was also provided by them. MIT is currently surveying the parents of MIT students about their perception of their child’s experience at MIT.

M.I.T. Numbers

From the 2012 Senior Survey

Indicate how your ability in each area has changed since you first entered MIT.
(sorted in descending order by sum of 'Quite a bit' and 'Very much')



Source: Office of the Provost/Institutional Research