Institute-wide Planning Task Force

Preliminary Report

WORKING DRAFT

August 18, 2009

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Introduction from the Task Force Coordinating Team

This is a preliminary report of MIT's Institute-wide Planning Task Force, which has been charged with identifying opportunities for efficiency and cost reduction that do not sacrifice MIT's core mission. The work of the Task Force represents a concerted, inclusive, sustained effort to strengthen MIT by improving our operations, preserve the Institute's financial stability and enhance its global leadership in research and education.

The report includes a full accounting of the 200-plus ideas conceived by the Task Force (see Appendix III). It also includes a set of five recommendations. The first four are procedural: suggestions for ways the Task Force ought to govern itself as it moves from generating ideas to probing specific possibilities. The fifth is a recommendation for how to act on the ideas.

The results of the working groups are organized around five themes: New Educational Opportunities for MIT; Framework for Accountability and Transparency; Gaining Efficiencies and Supporting Standards; Process Modernization—Digital MIT; and Modern Workforce Policies and Practices. These themes cut across the Institute just as they cut across the Task Force working groups, and serve, we believe, as the most illuminating lens through which community members can view the work of the Task Force. For that reason, we begin with a theme-based look at the Task Force's most promising ideas.

The recommendations in this report are the product of six months of effort by the members of the Task Force working groups. Faculty, staff, administrators, and students worked shoulder to shoulder to generate the many good ideas found here. Much of the language directly reflects their thinking and writing.

Our report centers on the future: it sets forth ideas meant to help the Institute navigate the road ahead. However, the urgency of its call to action is best understood in light of the present and the recent past: powerful, historic forces beyond the control of MIT have made financial discipline critical to the short- and long-term prospects of the Institute.

One final note: because the Task Force was formed to help MIT explore new ways of doing business, its recommendations, by definition, are proposals for change. MIT has been successful in no small measure because of its distinctive decentralized and entrepreneurial culture that highly values the contributions of individual faculty, staff and students. Any proposals for change must carefully account for their likely effects on those parts of the culture that have made MIT a great institution that generates the admiration and loyalty of its community members. Giving the MIT community the opportunity to consider such value judgments and trade-offs is exactly the purpose of releasing this report today. MIT in 2010 will not look as it does today, but drawing on the collective wisdom of the community, it is bound to stay true to its core.

The Global Financial Crisis and MIT

While the Institute faces great challenges in the months and years ahead, it entered the recent economic downturn from a position of relative strength. In fiscal year (FY) 2009, MIT's General Institute Budget (GIB)—which accounts for about half of the Institute's overall operating expenses and which consists of centrally managed, unrestricted funds—was balanced for the first time in over a decade. However, the current financial crisis threatens to throw this budget out of balance for a lengthy period. *If left unaddressed, this potential budget debt could drain Institute resources, leading to a more severe budgetary crisis and endangering MIT's ability to sustain the level of excellence for which it is known.*

Like any other pool of investments, the MIT endowment is subject to the movements of the world's major markets. On June 30, 2008, the market value of MIT's endowment achieved its highest peak, at slightly over $10 billion. However, from June 30, 2008 to December 31, 2008, the endowment is estimated to have lost approximately a quarter or more of its value.

This loss directly affects the operations of MIT, since a significant portion of the Institute's general revenue support—21 percent of the overall operating budget—comes from payout from our endowment. This includes not only direct, unrestricted endowment payout to the operating budget, but also payouts to support specific areas (such as financial aid, endowed chairs, fellowships, or endowment funds that support activities in a particular department).

Projections of a number of different market scenarios showed that the Institute would incur an annual budget deficit in the neighborhood of $100 million to $150 million if expense growth continued at rates we have experienced in the past decade while endowment values remained depressed or declined further. The Institute would need to achieve significant budget reductions in response to this situation: $50 million in FY 2010 and, if endowment performance did not improve significantly, another $50 million annually in FY 2011 and FY 2012 to put the Institute back on course for a balanced budget.

A second economic issue facing MIT is the potential for significant growth in expenses related to future pension and retirees' health care liabilities. Due to substantive positive investment performance of the funds set aside for future pension benefits, MIT's defined benefit (DB) pension plan has been significantly overfunded for several years. MIT received an accounting credit in each of the past several years due to the DB plan's overfunded status, freeing the Institute from having to make contributions to the plan beyond the appreciation of the assets. The retiree health plan has also been well funded and has required limited budgetary funding. These effects allowed MIT to enjoy a greatly discounted employee benefit (EB) rate overall, which in turn has kept both the benefits expenses charged to the GIB and research salaries—as well as our F&A rates—much lower than they would have been otherwise.

However, if investment returns for the DB plan assets were to continue downward (or merely to grow slowly), even though the pension plan is expected to remain well funded relative to expected liabilities, the Institute would eventually be required to begin recognizing pension expense each year. Similar performance for the retiree health care funds would also require contributions to the retiree health plan. These effects would reduce or eliminate the discount to the EB rate we have enjoyed in the past and require a substantial increase in the benefit rate over the next five to ten years. This in turn would increase benefits expenses on both GIB and research salaries and hurt our competitiveness for new research grants. Depending on future investment performance and actuarial assumptions, the benefit rate, which is now at 22 percent, could rise into the mid-30 percent range in the coming years, should action not be taken.

Responding to the Economic Crisis

In December 2008, as the gravity of the economic situation became clear, Provost L. Rafael Reif, Chancellor Phillip L. Clay, and Executive Vice President and Treasurer Theresa M. Stone called for MIT to reduce expenses in the General Institute Budget by up to $150 million over the next two to three years, beginning with FY 2010. The FY 2010 budget reduction of $58 million (on a goal of $50 million) was achieved through the identification of immediately available cost-cutting opportunities across units. Longer-term cuts required a more strategic approach. These cuts were not achieved without both individual and shared sacrifice, including some work-hour reductions, voluntary and mandatory furloughs, and some number of layoffs. We were, however, able to make these reductions and still increase the funding of undergraduate financial aid by 10 percent.

In February 2009, the provost, chancellor, and executive vice president and treasurer formed an Institute-wide Planning Task Force to identify and assess opportunities to reduce costs at the Institute for FY 2011 and beyond. Task Force members were charged with exploring how MIT translates its mission into day-to-day operations and finding ways to maximize the efficiency and effectiveness of these operations.

Coordinated by Vice Chancellor and Dean for Graduate Education Steve Lerman, Vice President for Finance Israel Ruiz, and Associate Provost Martin Schmidt, the Task Force is made up of nine working groups. These working groups comprise approximately 200 people, including some 20 students, 85 faculty, and 90 staff members. Students were selected based on a regular student-nomination process directed by the Undergraduate Association and the Graduate Student Council. Faculty and staff membership was determined by MIT's leadership team in consultation with the Task Force Coordinating Team and co-chairs, as well as with senior academic and administrative leaders. Each working group is co-chaired by at least one member of the faculty.

Community-Wide Participation and Input

The Task Force is part of a broad, deliberate, and inclusive process in which all branches of the Institute are working together to reassess priorities and the use of resources. From the outset, the Task Force has sought input from across the MIT community. Shortly after the Task Force first met, the Institute launched the Idea Bank, a website where community members could not only offer suggestions on ways to cut costs and improve efficiencies, but also comment on the suggestions of their peers.

The innovative and collaborative spirit of the MIT community was apparent in the more than 1,000 submissions to the Idea Bank. The Task Force categorized Idea Bank recommendations into nine areas that corresponded to its working groups: Administrative Processes; Education; Human Resources and Benefits; Information Technology; Procurement; Research; Revenue Enhancement; Space; and Student Life. Among the most popular proposals received were paperless solutions—including digital processes and systems and reductions in campus mailings and printing—which accounted for 46 percent of all submissions related to administrative processes, and ideas for improving the efficiency of heating and cooling systems, which made up 26 percent of suggestions related to space usage.

In addition to considering the ideas deposited in the Idea Bank, the working groups assessed the feasibility of other high-level strategies and estimated the degree of savings that would result. They also identified incremental improvements and changes that, taken together, could offer significant savings to the Institute. Throughout the process, Task Force members reached out directly to faculty, students, and staff in order to gain a broad and diverse perspective. The community responded by providing candid and useful insights, readily discussing difficult choices and expressing appreciation of the consultative process.

In the short time they have been meeting, members of the Task Force working groups have developed a number of high-impact ideas related to promoting new educational opportunities for MIT, gaining efficiencies, and modernizing many Institute processes. These recommendations reflect the collaborative efforts of faculty, staff, and students who brought their experience and knowledge to address problems in meaningful ways that might not have been evident in the absence of broad-based and sustained collaboration. Though its work was unusual in size and scale, the Task Force reinforced those qualities that we most expect from the MIT community: innovation, relentless commitment to improvement, and creative change. As a result, the recommendations have the potential to make a lasting impact on MIT's culture.

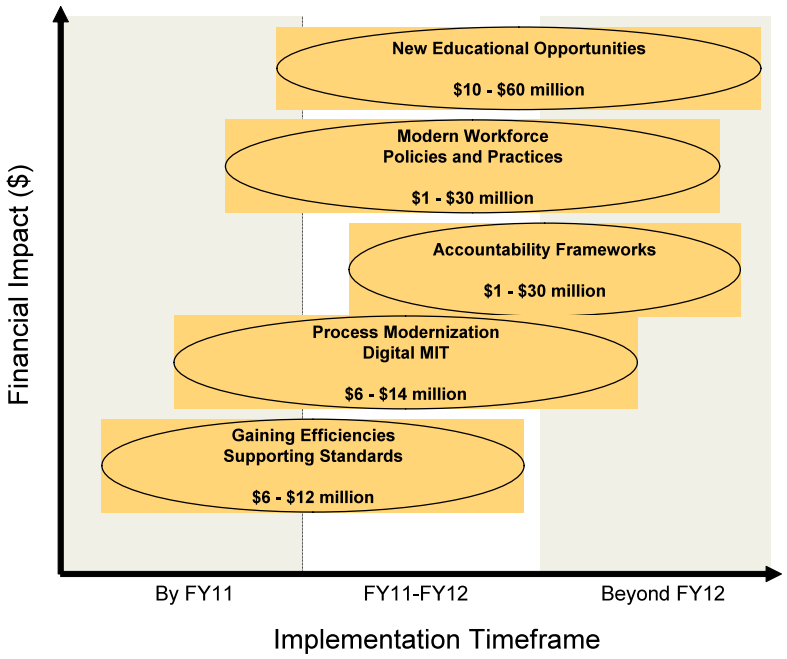
Approaching the Numbers

The work of the Task Force suggests that MIT can be much more efficient while significantly improving service levels, adopting sustainable practices and increasing overall community satisfaction. However, more efficient and cost-effective practices will require

some cultural and behavioral adaptation. It is clear that some aspects of the MIT culture that may need to evolve as recommendations are pursued and resource utilization is optimized.

Although preliminary estimates were quickly developed and contain an abundance of assumptions, we can envision $10 million to $15 million in GIB savings with limited adaptation in FY 2011. The size of the opportunity in the long term could be over $50 million, but the level of effort and change required deserves further study, and recommendations have been made to that effect. Enabling some of these savings will require some level of investment, but substantial savings and efficiencies will accrue to departmental budgets and help lower research costs. Detailing appropriate levels of investment and further refining the estimated impacts will require more-detailed studies by the appropriate units or teams during the proposed next phase of work.

Notwithstanding any necessary caveats concerning the nature and quality of estimates regarding future financial conditions, the following chart shows the size of the opportunity and a tentative implementation timeframe for each of the report's major themes.



How You Can Comment on This Report

Community members who wish to comment on the report's recommendations will have the opportunity to do so via the Idea Bank; Task Force coordinators will ensure that all comments received are reviewed. Many of these recommendations are expected to become

the basis of a plan that will span several years. Some are likely to be adopted soon, others will require several months, and yet others may take years to evaluate and implement. We also anticipate that there will be a variety of meetings and forums organized by parts of the faculty and student governance and the senior administration.

The past year has included an ambitious and vitally important process of planning for MIT's future; integrating that planning work with new fiscal constraints will strengthen the Institute by making it more efficient and more effective. The world values MIT for its unrivaled education, pioneering scholarship, and real-world innovations. Together, the MIT community is designing new operating strategies that draw on more-limited financial resources without sacrificing our core values and which enhance our ability to fulfill our mission of world-changing education, research, and service.

The Five Themes

The following five themes frame the Task Force's recommendations according to the thematic areas that have the potential to save or increase financial resources and promote best practices in activities that support MIT's core mission. Ideas included in each of these themes are detailed in separate sections and range widely in their financial impact, difficulty, and level of effort, investment, and cultural change required.

Theme 1: New Educational Opportunities for MIT

Background

Education is one of the core activities of MIT, and not surprisingly, a substantial portion of the GIB is devoted to supporting it. However, as with other areas of MIT's operations, many allocation decisions are based on prior history. In today's economic environment, MIT must increasingly approach these decisions from a system-wide perspective informed by hard data about the cost of providing various types of educational activities. This method will help inform a reallocation of resources to best serve students and work within the reduced budget in the coming fiscal years.

The Education Working Group of the Task Force undertook a systematic examination of MIT's current educational cost model, evaluating alternatives to lower these costs and considering options to utilize resources (particularly fixed infrastructure of buildings, classrooms, and staff) in a more efficient and less expensive way. This self-study includes estimates of the cost of teaching by school, examination of the full cost of education (including the net effect of under-recovery of tuition through various forms of financial aid to students), and analysis of the components of cost (including expenditures at the school level) and central costs. Central costs include elements associated with Information Services and Technology (IS&T), the Department of Athletics, Physical Education and

Recreation (DAPER), the Libraries, and the Dean for Undergraduate Education (DUE). While the model needs additional work, it offers a framework for assessing opportunities for savings. Some of the most relevant observations from the Education Working Group's deliberation include:

- On average, the cost of education per student significantly exceeds the average undergraduate net tuition revenue derived per student. Estimates by the Education Working Group indicate true costs exceed net tuition by a factor of 1.8 to 2.3; the range depends on how costs are allocated for space, administrative costs, and graduate education.
- Most of the costs of education are the result of expenditures in the schools, and most of the schools' expenditures are for salaries and benefits of faculty and administrative personnel.
- There are opportunities for reducing duplication across the departments and central organization in areas such as information technology, graduate admissions, and subject offerings in multiple departments that have substantial overlap with each other.

Both the Education and Student Life Working Groups noted that the Institute does not fully utilize either dormitory or classroom capacity, particularly during the summer. These facilities provide us with significant opportunities for increasing our revenue.

The Revenue Enhancement Working Group also examined options for educational delivery. Most notably, the Group noted that there are technological opportunities to create scalable, Internet-based learning platforms allowing MIT to expand the range and type of students it serves. These students could provide substantial new net revenues and thereby reduce the depth of budget cuts needed in the coming years. The Working Groups offer the following ideas for further consideration.

New Educational Opportunities

Summer session

The Education Working Group has proposed that MIT consider establishing an undergraduate-oriented summer teaching program focusing primarily on the foundational general Institute requirement (GIR) subjects, introductory subjects to departmental majors, and other common prerequisites (e.g., 18.02, 18.06, 6.041, 6.00, and 1.00). These subjects would be open to non-MIT students who might be interested in a summer educational experience (and who could transfer the credit for these classes to their home institutions).

The summer session would run for a ten-week term, with 12 unit classes meeting twice per week for two hours. There would be no admissions process required and no financial aid available. Tuition would be charged per subject at rates similar to those in place at peer institutions. Faculty would be compensated for teaching through summer salary, and teaching assistants (TAs) would be assigned based on enrollments (with revenues from tuition covering these costs). Students would be eligible for summer housing at rates that are at least equal to average operating costs per bed. Since undergraduate dorms are not fully utilized during the summer, the revenue from summer program residents would be net positive.

It is estimated that there are approximately 20 classrooms available during the summer, which are appropriate for teaching the foundational courses. (Other classrooms are either not air-conditioned or are being used by programs such as the Research Science Institute (RSI) and the Minority Introduction to Engineering and Science Program (MITES), or by summer conferences.)

If these 20 available classrooms were fully utilized, 120 courses could be offered each summer. Based on reasonable assumptions about teaching costs and other expenses, and assuming an enrollment of 30 students per course, net revenue from this program would be approximately $5.5 million per summer. This figure does not include additional net housing revenue.

The Working Group notes that there may be additional costs to implement this plan, including staffing in the Office of the Registrar, utilization of MIT Libraries and the Stellar learning management system, and costs associated with operating laboratories for the summer. Any detailed plan for this option should consider the effect a summer program could have on the ability to undertake major classroom renovations.

Increasing Undergraduate Enrollment

Approximately 4,150 undergraduates are currently enrolled at MIT. Each of these students pays tuition, but 60 percent of students receive financial aid from MIT. The net revenue per undergraduate is therefore considerably less than tuition. In FY 2009, the average annual net tuition revenue per undergraduate was approximately $20,000. Assuming no changes in MIT's need-based financial aid policy, the question of whether it would be in MIT's financial interest to expand undergraduate enrollment depends on whether the marginal cost per student is less than or greater than average net tuition revenue.

Of course, there are more than budgetary issues to consider when assessing enrollment levels. The Education Working Group considered how an increase in undergraduate enrollment would impact the quality of admissions, freshman advising, medical services, student life services (such as athletics and student support services), the libraries, IT infrastructure and services, and the availability of housing; they also considered the

educational effects of larger classes and, assuming no expansion of the faculty, the impact on the workload of faculty and academic staff who support undergraduates in DUE and the academic departments.

The Working Group suggests that increasing the number of undergraduates by 10 percent could be accommodated within the existing infrastructure and would generate annual net revenue of approximately $4 million per year. This figure is based on rough estimates of the incremental cost per student, and further refinement of these estimates would be required before MIT commits to expanding enrollments. It also assumes a modest and historically acceptable degree of crowding within existing dormitories during the fall semester, placing more students in unused capacity within the Fraternities, Sororities, and Independent Living Group (FSILG) system, and continued—possibly expanded—undergraduate use of beds in graduate dormitories. Alternatively, the renovation of the W1 residence hall may be possible through the generosity of donors and housing revenues (rather than GIB), so that the capacity of the undergraduate dormitories is sufficiently increased.

The Working Group also suggests that the Institute consider options for expanding undergraduate enrollment beyond simply admitting more freshmen each year. One option is to admit a larger number of transfer students than the 10 to 30 currently admitted each year. A second option is to partner with other colleges to offer a "3+2" program, in which students spend three years at a liberal arts college and two years studying science or engineering at MIT, after which they would receive a bachelor's degree from each institution. At one time, MIT operated a similar program with select American colleges, and many international universities with outstanding students and educational programs may be interested in partnering with MIT to create such an option for their students. Students in this program would conceivably not be eligible for MIT financial aid and would therefore contribute a greater share to net tuition revenue than the regular undergraduate body.

<u>E-learning Opportunities</u>

The Working Group on Revenue Enhancement identified a range of educational ideas based on "scalable educational platforms," i.e., educational offerings that use online tools (sometimes in conjunction with traditional face-to-face education) to create new learning opportunities that could reach a greater number of students. The Working Group explored the following ideas, which are offered for further consideration:

- Offering select undergraduate subjects for credit via online education;
- Creating select master's degree programs that would be taken primarily via online education;
- Creating an "extension studies" program for continuing education using a combination of on-campus courses, distance learning, and an enhanced OpenCourseWare website;

- Providing lifelong educational opportunities to MIT alumni through short courses and modules, both on campus and via distance learning;
- Partnering with corporate universities to deliver continuing education to their workforce;
- Creating a wider range of executive/professional education programs that enhance existing and future corporate partnerships;
- Creating a thematic set of educational offerings in the area of energy that can be delivered on or off campus through a range of mechanisms.

Many of these ideas would require some radical changes in how MIT has traditionally delivered education. Some would require changes in degree requirements voted by the faculty, and others would require creating new programs in continuing education to serve nontraditional students. Any of these would require significant investment to create new subjects, raise public awareness of them, and recruit faculty and nonfaculty instructors to teach them. Estimates of revenue from these ideas are approximate and embed assumptions about the pricing, market size, and costs of delivery that would require extensive benchmarking to verify. With these caveats, it is estimated that the annual revenues for each of these ideas range from $10 million to $60 million.

All of these ideas have substantial revenue potential, but they would all require careful study and a decision by the administration and faculty that these new educational options serve the best interests of both MIT and its students. Given the changes needed to implement any of these ideas, the Task Force recommends that MIT create two study groups to further advise the senior administration on the practicality and desirability of moving forward with any of them. The first study group would take an in-depth look at the expanding educational opportunities presented by the working groups. The second study group would further evaluate new educational opportunities around e-learning. It is recommended that these efforts be chartered by the Provost and appropriately funded to engage professionals with experience in this field to provide advice and assistance in what would be a major planning study. The study groups should be charged to include an assessment of how each option would fit into MIT's current culture and whether the prospects for significant revenue can in fact be realized.

Theme 2: Framework for Accountability and Transparency

Background

A common theme emerged from several of the working groups, namely, a need to understand the MIT enterprise in quantitative terms to enable informed decisions. The Task Force has indicated that a focused effort on establishing accountability around certain metrics, and transparency of those metrics, would enhance MIT by leading to opportunities for sustained savings and increased efficiency in operations.

- The Education Working Group spent considerable time attempting to construct a cost model for undergraduate education. Such a model, once complete, helped to provide a quantitative framework for assessing opportunities for savings in the education process. It is recognized, however, that while the cost model is valuable, it cannot be applied without some metrics to assess the effectiveness of processes, particularly across units. The Group suggests that if such metrics and costs are identified, some degree of transparency of this information may be appropriate, as this could potentially drive behaviors toward the common best interest of the Institute.

- The Space Working Group constructed its own models and believes the community would benefit by understanding the cost of space and space renovations. Further, the Space Working Group suggests that incentives are needed to achieve effective space utilization. Making metrics and utilizations broadly publicized would possibly lead to the more appropriate use of space. Lastly, there is a sense that the community needs fiscal incentives to promote efficient use of space. The creation of metrics and utilization accounting paves the way toward the creation of a space "currency" (i.e., fees charged for use of space).

- The Research Working Group identified a number of opportunities to increase efficiency by leveraging economy of scale (i.e., consolidating small laboratories and centers), as well as benefits from shared infrastructure (i.e., shared experimental facilities). The Working Group suggests that a clearer understanding of the cost of conducting research would help investigators consider means to achieve greater efficiencies. Further, cost models for research and research infrastructure would help to quantify the value of shared facilities and allow for consideration of quantitative incentives for sharing and consolidation.

The consensus of these three groups is that a focused effort on establishing accountability and transparency around certain measurements would lead to opportunities for sustained savings and increased efficiency in operations.

Accountability and Transparency

The following ideas developed by the working groups provide support for the notion of increased accountability and transparency. While it is not possible to assign a specific financial benefit to implementation of these ideas at present, each working group suggests that implementation should lead to savings.

<u>Ideas from the Education Working Group</u>

- Flexible metrics for measuring efficiencies
- Understanding faculty workloads

- Program evaluation

The Education Working Group found that wide diversity across schools, departments, laboratories, and centers (teaching methodology, expenditures, and expectations) makes it difficult to effectively compare areas, pinpoint inefficiencies, and formulate ways in which the educational experience can be improved while reducing cost. Consequently, across-the-board cost-cutting measures (e.g., reducing TAs, eliminating staff positions, establishing minimum class sizes) can have great impact on some schools or departments while ignoring issues in others. The Education Working Group suggests that MIT needs a process to help academic leadership understand where resources are being focused with optimal outcome.

The Group suggests that a set of flexible metrics be developed, which allow a dean or department to measure and understand the resources used to provide education to graduate and undergraduate students. These metrics could include programmatic ratios (e.g., enrollment/subject, TA-staff/subject, enrollment/staff) as well as financial ratios (e.g., cost of teaching/credit unit, cost/subject). Once these metrics have been developed, a dean or department head could use them as part of annual unit assessments during budgeting cycles. While it is hard to quantify the potential financial impact of such metrics and processes, if they enabled even a 1 percent increase in efficiency, in budget terms, the savings would be approximately $1.6 million per year.

The Education Working Group also noted that the substantial discrepancies in teaching loads across schools and departments. The nonfaculty teaching staff has been a source of considerable budget growth while faculty counts remained static. The Working Group suggests that MIT might reduce reliance on other academics and TAs by seeking an optimal distribution of effort among faculty. It is proposed that standards for the appropriate minimum number of institutional- or teaching-related responsibilities be developed. The Working Group suggests that the dean of each school, in consultation with the respective school council, consider developing metrics to assure even-handedness and transparency in faculty loads. If, as a result of improved efficiencies gained from such metrics, the Institute were to reduce nonfaculty staff by 5 percent, the savings would be approximately $1.8 million annually.

Over the years, many programs, centers, and divisions have been created to address the changing realities of research and education. While this flexibility is considered positive and fundamental to the Institute's leadership role, the Education Working Group points out that not all of these programs need to continue indefinitely. The Group supports the views of the Research Working Group included below and believes it would be useful for the deans of the schools to begin an assessment of existing programs. In order to support this effort, metrics for program effectiveness could be defined. Such metrics would be helpful not only in assessing existing programs but also in establishing success criteria for new programs.

Ideas from the Space Working Group

- Creating a space economy and incentives to drive behavior and efficiency
- Better understanding space usage
- Establishing a space "bill of rights"

The Space Working Group found few incentives in the current system of space management for units to seek efficiencies in space utilization or release underutilized space (except in the case of overcrowding within a unit). Because of the challenges in acquiring space across units, in most circumstances, there is a disincentive for releasing space out of concern that the unit will not be able to gain space in the future when programmatic growth might require it.

One of the most compelling ideas presented by the Space Working Group is to create an economy for space. Such an economy would create incentives for optimizing space. In order to achieve this, the Institute would need to develop methods to track utilization and define standards for space. Specifically, standards for space utilization (e.g., square footage allocated per person) vary widely across units. Further, very few units track utilization as part of a space management process. The Space Working Group suggests that establishing a method for tracking utilization is critical, and that publication of the utilization metrics may help drive appropriate behaviors. It is suggested that these metrics would need to be flexible to reflect the diversity of operational models across schools. It was further recognized that the quality of space varies substantially across campus, a fact that would need to be considered in any standardization effort. Along these lines, the group proposes establishing standards and possibly creating a space "bill of rights," which establishes community standards for space.

Lastly, the cost of space needs to be more broadly understood and tracked so that it can be factored into decision-making on new activities or assessments of existing activities. Thus, data on space costs need to be coupled with space utilization metrics. Developing space cost models would allow the Institute to create an economy for space, where tangible economic transactions could occur between units when space is exchanged. Creating metrics and an economy for space would dramatically improve space utilization. Currently, the Institute spends $260 million per year maintaining space. Consequently, if better metrics and a space economy resulted in a 10 percent reduction in space through improved utilization, an annual savings of as much as $26 million might be realized.

Ideas from the Research Working Group

- Consolidation of smaller laboratories and centers and/or providing shared services to clusters of small laboratories and centers
- Consolidation or termination of some service facilities

- Re-evaluation of criteria for MIT support to laboratories and centers

The Research Working Group concluded that the current level of resources committed by MIT to the administration of some laboratories and centers might not be justified by their research volume and administrative complexity. Therefore, the group suggests that smaller laboratories and centers be evaluated to determine whether their goals could be achieved more efficiently by merging them with other laboratories and centers. It suggests that periodic review of laboratories and centers be conducted using a set of evaluation criteria. As in the case of the Education Working Group, it is clear that a set of flexible metrics would greatly facilitate the ability to conduct such evaluations.

In addition to the consolidation of certain laboratories and centers, the Research Working Group also suggests that there is the potential for consolidation or termination of some service facilities. The Research Working Group points out that in FY 2009, MIT had 78 Service Centers, which accounted for $17.2 million in expenses. At issue is the observation that service centers have been created over time and historically have been justified based on the direct expense of running the facility, without considering the additional cost of space and utilities required to run the operations. Of concern is whether outside services might in fact be preferred if the total cost of operating service centers were considered. It was also suggested that user charges for energy-intensive facilities could reflect the cost of the energy used by these facilities. Creating metrics to measure the effectiveness of these service facilities would inform decisions relating to the consolidation and/or termination of particular facilities. These metrics would need to be flexible to capture the unique nature of the facilities.

Regarding support to laboratories and centers, the Research Working Group notes that the guidelines for support of laboratories and centers (e.g., director/staff salaries, discretionary support) have not been revisited since 1995. The group notes that new criteria for evaluation of the support deserved and needed by laboratories and centers may be warranted.

The Task Force recommends that members from the Education, Space, and Research Working Groups, together with the members of the Data Group, be asked to form a project team to fully develop models and frameworks for accountability. The team would be charged with developing metrics for education, space, and research. Embedded in the development of these metrics is the need to develop improved cost models for education, space, and research. These metrics would be used to improve accountability and transparency in our academic enterprise and would ultimately lead to sustained savings through increased efficiency in our operations.

Theme 3: Gaining Efficiencies and Supporting Standards

Background

Staying at the forefront of science and technology requires intensive use of resources—space, money, and people. In its endless pursuit to invent the future and educate the next generation of students and scholars, the Institute may at times overlook the most efficient ways of utilizing resources. A premium on effectiveness, combined with decentralized structures for decision-making, can lead to duplication of efforts, suboptimal processes, or costly habits.

The charge to the Task Force called for exploring ways to maximize the efficiency and effectiveness of MIT's core activities and operations, in the context of the need to reduce the use of resources. Multiple outreach efforts have allowed the Institute to gain perspective from the MIT community, which has been open to providing candid and useful insights and discussing difficult choices and appreciates being included in the consultative process. As a result, the working groups have identified many opportunities to be more efficient not only in the core areas of teaching and research, but also in the areas of student life, space utilization, procurement practices, administrative processes, information technology, and energy usage.

More importantly, the work of the Task Force highlights some aspects of the MIT culture that will need to evolve in order to pursue recommendations and optimize resource utilization. These more-efficient and cost-effective practices will require some adaptation. As the working groups recommend limiting available choices, consolidating course offerings and activities, and supporting standards, community behaviors may need to adapt. However, the working group findings suggest that MIT can be much more efficient while significantly improving service levels, adopting sustainable practices, and increasing overall community satisfaction. Some of the intriguing ideas for gaining efficiencies are offered below.

Gaining Efficiencies

<u>Effectively Utilizing Faculty Time</u>

One of the consequences of reduced budgets is that support for lecturers, adjunct faculty, and teaching assistants is likely to decline. Given MIT's commitment to providing students with high-quality education, it will become ever more important to make the most effective use of faculty time and energy in teaching and advising.

The Working Group on Education examined the teaching load and expectations of teaching assistants across the schools. The group identified a number of practices that lead to inefficient allocations of faculty or TA time, including: a wide range in expectations about

course load per faculty member; a large number of classes with very small enrollments; inconsistent expectations for the period during which teaching assistants are expected to support faculty; lack of recognition of cross-school teaching; and inflexibility in the calendar that tends to bias departments toward full-semester courses in situations where a more modular approach or shorter courses might be educationally more effective.

In order to maximize faculty time and make effective use of faculty who can teach across school boundaries, the following suggestions are offered for further consideration:

- The dean of each school should consider, in consultation with his or her school council, developing metrics to assure even-handedness and transparency in faculty loads, taking into account educational, research, and service contributions.
- Each school should consider adopting an explicit teaching policy for all faculty members that clearly expresses the commitment of the faculty to the educational mission of MIT.
- Faculty teaching at MIT should be valued in the teaching policies of each school, and the practice of paying for faculty to teach outside their departments should be ended.
- Departments should consider creating more learning units composed of half-semester courses and six-unit courses, as increased modularity would enable faculty to allocate their time more effectively.
- Uniform expectations should be established across MIT for TAs and undergraduate learning assistants. The Institute should consider adopting the Sloan School's policy of expecting from TAs a 19-week commitment per semester.
- The role of the problem set as a learning tool versus an evaluation tool might be examined within the context of each department. Departments could explore whether, in some courses, problem sets could be used as learning tools and therefore not be graded. Solutions could be provided to aid students in studying, and problem sets would not have to be completely rewritten each semester.
- The possibility of replacing, as much as possible, graduate TAs with undergraduate assistants for responsibilities of grading should be considered.
- Departments should consider adding a teaching requirement to their PhD programs as part of the overall graduate educational experience. It is recognized that many departments already do this.

The Education Working Group notes that, at the undergraduate level, there is a student-to-teacher ratio of 4.6. This is among the lowest of our peer institutions. Some increase in this ratio could possibly be accommodated through the above measures without hurting the quality of education. Ratios at other universities include Harvard (5.74), Yale (6.09), Columbia (6.11), Princeton (6.87), Stanford (7.10), CMU (8.81), and Berkeley (15.93). Moving to a student–faculty ratio of 7 would save an estimated $50 million per year. Smaller increases in this ratio would have less financial impact but still yield substantial savings.

Recognizing that educational programs and needs vary by school and department, the Task Force suggests that the administration consider the option of setting school-level budget savings targets in the education area and allow the deans and their department heads to craft educational plans that best meet their students' needs while still meeting overall goals.

Improvement of Housing Utilization During the Summer

The Working Group on Student Life affirms that housing utilization during the summer is low, particularly in undergraduate dormitories. All dormitories remain open, although needs for undergraduate housing and summer programs require only two dormitories. The working group proposes a more rational utilization of MIT's summer housing stock by defragmenting the use of the dormitories so that particular dormitories are either fully used by MIT students and/or MIT or outside revenue-generating programs, or closed to residents other than year-round residents, such as graduate resident tutors (GRTs) and housemasters.

Annual savings of upward of $1 million would result from reductions in maintenance costs and utilities.

Energy and Space Efficiencies

The Space Working Group has identified numerous practices that lead to inefficiencies in the utilization of space and energy, execution of renovations, and performance of maintenance activities. The MIT Energy Initiative Campus Energy, or "Walk the Talk" Task Force, is already exploring some of these activities. In particular, significant reductions in energy usage could be achieved by more efficiently operating the 1,100 fume hoods across campus. By lowering the volume of heating and cooling air exhausted from hoods and shutting down unused hoods, it is estimated that as much as $825,000 could be saved annually.

The working group suggests that the underinvestment in preventive maintenance results in more-costly repairs and increases energy use over the long term, and that we must balance the need to constrain expenditures with the need to invest in regular, preventive maintenance. One study indicates that a $30 million investment in proactive maintenance over the next two years could result in savings of as much as $100 million in the approximately $1 billion of deferred maintenance backlog.

The working group also suggests that the Institute look for economies of scale, bundling renovations, collocating like functions such as computer clusters and wet labs, and developing a better approach to back-filling space when relinquished. A fractured approach

leads to additional costs and inefficient usage. MIT should also consider designing for modularity and flexibility to the extent possible to enable long-term, efficient use of space.

Supporting Standards

Many working groups have identified the benefits of providing standards as a way to control costs and provide better service to the MIT community. The Procurement @ MIT and IT @ MIT Working Groups, as well as the Space Working Group, have put forward the majority of ideas related to standards. The working groups learned that many of MIT's activities and processes are highly fragmented, not optimally structured, redundant, and present opportunities to achieve greater efficiencies.

In recognition of MIT's culture and environment, the IT @ MIT Working Group proposes supporting standards rather than requiring them, noting that different levels of standards are appropriate for different MIT activities. The group suggests that standards would be more appropriate for administrative activities and business processes than for some research and educational activities. The group also notes that the key to allowing users to use nonstandard equipment or configurations is to require them to pay the incremental costs and risks of doing so. In many cases, the standards would also improve service, quality, and cost, making their implementation and adoption easier across MIT.

Purchasing Standards

Currently the MIT community has an overabundance of choice in the area of goods and services, available vendors to supply these good and services, the size of orders placed, and the method of procurement (purchase order, credit card, electronic commerce). Choice is key to MIT's culture and the working group does not suggest imposing a top-down approach to procurement. Rather, the group suggests reducing choice in electronic catalogues and the number of service providers in ways that aggregate purchases and thus drive down costs and encourage greater sustainability. Some examples are included below.

- Support a small number of standard configurations for laptop and desktop systems. People who use the supported standards would receive a variety of benefits such as quantity discounts, help-desk support, and guaranteed compatibility with other supported standards. And, even though some people would still pay additional costs for non-standard systems, we expect that MIT overall would realize significant savings from buying and supporting large numbers of standard systems.
- A new standard for MIT Travel—credit card and expense reporting: In the current model, MIT and Lincoln Laboratory travelers reconcile travel expenses with manual processes that are paper-driven, time-consuming, and challenging to manage. The Procurement @ MIT and the Administrative Processes Working Groups jointly highlighted the need to modernize and streamline MIT's business travel processes, and to support the projects already underway to do just that.

Capital and Renovations Projects Standards

The project scope in capital and renovation projects tends to expand incrementally and without explicit acknowledgment of the changes, resulting in a final cost that exceeds the original budget. The Space Working Group expresses the need for a process to develop a detailed scope at project outset, to obtain buy-in from all involved parties, and to track all scope changes in the same way that construction changes are tracked by change orders. The Memorandum of Understanding (MOU) would be a standard contract among all parties participating in the definition, development, and execution of a capital or renovation project. The MOU, as a standard, would clearly articulate the scope, budget, and schedule expectations.

The Task Force recommends that specific ideas presented by the working groups, some of which are briefly described above, be referred back to the appropriate units for further evaluation and determination of next steps in accordance with the summary of recommendations included with this report. In particular, issues concerning the effective use of faculty time should be addressed by the provost in collaboration with the deans of undergraduate and graduate education, and the deans of the five schools, among others.

Theme 4: Process Modernization—Digital MIT

Background

People, process, and culture have long defined organizations and their identities. MIT is no exception, with a world-renowned reputation for excellence, the high caliber of its people, and a problem-solving culture. However, not much is said or known about the multitude of processes that support MIT's mission of education and research. This is true even internally, where most community members not directly involved in a particular activity do not have an appreciation for the complexity or staff involved with some of these processes. Across MIT there are more than 2,600 staff members not directly conducting research or teaching who are involved to some degree in administrative and support processes.

The Task Force Working Groups have taken this opportunity to examine the current state of a vast array of processes, evaluate alternatives to improve them, and consider the level of savings that could be obtained by making them more efficient. Through extensive discussion, surveys, analysis of submissions to the Idea Bank, focus groups, and face-to-face interviews, the working groups have identified numerous opportunities for improvement. The Education, Research, Administrative Processes, IT @ MIT, and Procurement @ MIT Working Groups have put forward recommendations to make the Institute more effective and efficient.

Their findings speak to the complexity of distributed decision-making and to the organic and decentralized evolution of these processes across different parts of MIT. In some cases, people have replicated similar, but at the same time unique, processes to meet the same need. Alternatively, some process changes have shaped organizations, roles, and even institutional culture. Paradoxically, at a time of generalized productivity increases attributable to the use of information technology, processes and systems at MIT have grown in complexity, even as the need for simplicity and management of information has never been more essential.

The following possibilities present an incredible opportunity to become more efficient and streamline administrative processes in support of MIT's mission. The goal is to be able to soon recognize MIT's processes as a showcase for best practices in administrative services and systems in a university setting: modern, digital, and customer centric.

Ultimately, MIT has the opportunity to enable a fundamental transformation that will no doubt unlock greater efficiencies over both the short and long term. Even more important, there is an opportunity to influence and change the mindset that characterizes our institution from one of "accepting unnecessary complexity," as the IT@ MIT Working Group put it, to one of "expecting excellence."

Process Modernization

The Administrative Processes, IT @ MIT and Procurement @ MIT Working Groups recommend modernizing, digitizing, de-customizing and creating standard processes across MIT. Among the ideas presented, the following opportunities have emerged as those with the greatest potential to enable a digital MIT culture and long-term efficiencies.

- MIT printed materials—reductions to campus bulk mailings
- Paperless solutions, including electronic document retention strategies
- HR/Payroll transaction processing
- Modernization of the MIT travel system
- Electronic pay stubs and W-2 forms
- Next-generation student systems
- Electronic graduate student admissions
- Financial reporting and forecasting
- Budget process redesign
- Use of improved electronic tools for purchasing and payables

The opportunity to unlock the potential from improving the above processes has been estimated to add up to $4.3 million annually. Additional gained efficiencies in the form of reductions in the amount of time spent on processes would be enabled over time by these projects. These efficiencies would amount to an additional $7.5 million each year, assuming a reduction of 5 percent of labor costs involved in administrative and support processes.

Enabling a Digital MIT Culture

There are three components of the overall digital MIT theme:

- Paperless solutions for document management and current printed materials
- Digitization of existing labor-intensive paper-based systems
- Process simplification and improved adoption of electronic tools

The Institute should consider providing for information on demand through electronic document management systems, coupled with comprehensive record retention policies. Options to stop printing or to opt-in to paper mailings, combined with effective communication strategies, would balance the value of choice with the need to reduce costs. These paperless solutions, in conjunction with a plan to automate existing paper-based systems and processes, and increased adoption of electronic tools, would help to modernize the labor-intensive processes so pervasive across MIT.

Those systems and processes highlighted for modernization include the development of a web-based system that is integrated with SAP for HR/payroll transaction processing to replace the manual system for processing more than 10,000 transactions annually. Implementation of an electronic solution for e-pay stubs and W-2 forms would replace the current manual system for generating and mailing approximately 300,000 of these documents per year. The overall modernization of the MIT travel system would provide a complete portfolio of options to assist travelers with trip planning through online booking, payment for expenses with a travel credit card, electronic post-trip expense reporting, and direct deposit for reimbursement of out-of-pocket expenses.

A series of projects referred to as next-generation student systems (NGS3) aim to use current technology to automate manual business processes and improve services to students, faculty, and staff. The MIT student system is a complex enterprise system comprised of more than 1,500 software programs grouped into 115 applications. It is envisioned that a paperless online graduate student admissions system would also be implemented that would yield savings in printing and mailing, reduce the time demands on application reviewers, give reviewers the flexibility to review applications anywhere, permit rapid cross-Institute evaluation, and lead to better and more timely admissions decision making.

Additional efficiencies can be gained through process simplification and improved use of electronic tools. A web-based platform for reporting and financial forecasting would result in enhanced compliance monitoring, improved forecasting, and considerable time savings across the Institute. Such a system could replace BrioQuery, an application that is complicated and difficult to use. Streamlining MIT's budget process would result in further efficiencies. Under the envisioned solution, the Institute would plan for and allocate high-

level authorized budgets, with fewer cost element details, and possibly eliminate forecasting for research and fund expenditures within the budget system at the local level.

The Procurement @ MIT Working Group calls for the expansion of existing programs, establishment of new tools, and focused strategic sourcing. Wider adoption of electronic procurement tools could be achieved in part by raising the per-transaction and monthly spending limits on procurement credit cards and by increasing the number of electronic catalog (eCat) vendors. Other potential new programs include an electronic invoicing system, a vendor management system for recurring contract services, and electronic reimbursement for out of pocket expense, coupled with direct deposit functionality. Savings from reductions in check preparation and postage, combined with bank incentives for increased volume on the procurement card, promise to be substantial.

<u>De-customization of Enterprise Systems</u>

MIT runs highly customized versions of its core enterprise student and administrative systems. Because MIT was the first educational institution to use SAP, the Institute needed to develop customized software to adapt SAP to the educational environment. Since the original installation in 1996, a number of enhancements have been incorporated to facilitate the use of SAP at other universities. MIT could now replace many of the customizations with standard SAP software, with the potential to realize substantial savings in SAP developer time over the long term.

Similarly, MIT uses three custom enterprise educational systems that could now be replaced with industry-standard solutions. The MIT student information system WebSIS was originally based on industry software but has outdated code, and modifying it to meet current demands is expensive. Stellar and OCW were developed locally at MIT, and replacing these systems with industry-standard systems might enable MIT to evolve processes and reduce staff developer time required to maintain these systems.

The IT @ MIT Working Group recognizes that reducing the amount of customization embedded in these existing applications is a laborious and complex undertaking, but after further study it may be deemed worthwhile if the investment can be repaid with systems and processes that are easier to operate and maintain.

It is estimated that annual savings of $2.6 million would result from de-customizing these systems.

The Task Force recommends that specific ideas presented by the working groups be referred back to the appropriate units with ownership for related business activities in accordance with the summary of recommendations included with this report. Responsible parties include the vice president for finance, the Department of Facilities and the vice president for information services and technology, among others. Due to the number of units involved in

printing publications and reports, it is also recommended that a team be convened to continue work around printing infrastructure to enable smart printing and reduce costs and distribution of printed materials. The team would develop record-retention policies and pursue electronic storage systems as noted in the summary of recommendations.

Theme 5: Modern Workforce Policies and Practices

Background

MIT's accomplishments as one of the preeminent research institutes in the world would not be possible without the contributions and commitment of our most valuable resource—the faculty, staff, and students who work here. The HR and Benefits Working Group examined MIT's current compensation, benefits, and human resource (HR) policies for potential cost reductions. This work was done within the context of broader HR policy issues that should guide MIT as it considers any changes in workforce practices and compensation. It is recognized that both layoffs and reductions in employee compensation (salaries or benefits) are painful choices for the individuals affected and can have lasting deleterious effects on our ability to attract and retain the best people. However, the situation concerning the employee benefit (EB) rate described above and changes in the competitive landscape force MIT to rethink these strategies very carefully.

The decisions facing MIT during this economic downturn will have a profound impact on the Institute's workforce. The way that work is done will change, some jobs will be eliminated, and new opportunities will be created. It is critical that MIT plan for these changes in ways that best enable the university's mission.

The Working Group considered the core MIT principles that should guide the Institute when making decisions about human resource policies. In particular, while the group recognized that some layoffs are likely to be necessary in the coming years, it suggests that MIT should:

- Avoid across-the-board layoffs as a budget reduction mechanism
- Make efforts to place employees who are laid off in other positions at MIT
- Retrain laid-off employees to make them eligible for new positions at MIT
- Continue existing layoff policies to ensure that the process of deciding who is laid off is fair and equitable, and that layoffs are done in a caring and humane way that recognizes the contributions of terminated employees
- Wherever economically feasible, use MIT employees to do work that might otherwise be outsourced
- Explore options such as furloughs and voluntary time off as alternatives to layoffs, particularly in areas where workload may be seasonal
- Consult with key community stakeholders who will be affected by reductions in staffing

Budget savings from changes in workforce policies and practices can come from three sources: changes in how work is done or other human resource practices that result in increases in productivity, reductions in the number of staff or their hours of work, or reductions in the combined salary, wage and benefits compensation per employee. The Working Group on HR and Benefits, in consultation with several other working groups, explored all three sources of savings.

Human Resource Practices and Work Processes

Reducing Office Space by Enabling Employees to Work Independently from Various Locations

The Working Group on Information Technology explored how supporting location-independent work could improve employee productivity and satisfaction as well as save MIT money by reducing total office space needs and the amount spent on periodically renovating offices. The Working Group proposes that MIT provide the technological and organizational support to allow employees more flexibility to decide where and when they work. This would permit some employees to work at home one or two days each week, and a smaller number to spend most of their work time at home. These employees would share pooled office suites, thereby reducing our total space needs. The benefits would include cost savings for the Institute, reduced travel time and costs for employees (with potential consequent productivity and employee satisfaction gains), and the ability to recruit and retain a more geographically dispersed workforce.

MIT has approximately 11,200 office spaces assigned to 11,500 employees, research assistants, and teaching assistants who work on campus. Assuming 10 percent of employees working at home 1-2 days each week, approximately 115 (or 1 percent) of all offices might reasonably be released. This would allow MIT to give up some of the most expensive leased space, translating into annual savings of approximately $2.1 million. Given that the Institute periodically renovates all offices, the reduced inventory of space would, in steady state, save approximately $600,000 per year in renovation costs, for a total annual savings of $2.7 million.

Reducing Temporary and Consulting Services by Developing Talent Pools of MIT Employees

The HR Benefits Task Force and the Procurement Task Force worked together to try to understand the amount of money MIT currently spends on temporary help and outside consulting services. MITemps currently processes payroll forms for over 500 temporary help positions annually. The working group estimates that it may be possible to save 10 percent of the $60 million to $80 million spent on outside professional services. Doing so

would involve two steps, both of which will require considerable organizational change and management discipline:

- Negotiate a single Vendor Management Contract with an outside firm.
- Develop internal systems and management discipline to maximize use of expertise within the MIT workforce before turning to temporary or consulting services. One option for doing so would be to create department-, school-, or Institute-wide talent pools from which units in need of temporary services could draw on current employees who have the skills needed to perform the work. The Sloan School is currently developing a pilot program to test this idea.

Voluntary Furloughs, Reductions in Working Hours, and Early Retirements

A number of MIT departments and units used temporary furloughs and reduction in hours to meet their FY 09 budget reduction goals. We encourage discussion of these options at the unit/department level across the Institute as ways of reducing compensation costs and minimizing layoffs, and providing employees the option of better matching their work hours/schedules to their personal and family needs.

At various points in the past MIT has offered financial incentives for early retirement of faculty and/or staff. We explored this option but decided not to include it as a recommendation for a very simple reason: The costs of such plans tend to exceed the projected savings from replacing those who leave with entry-level employees.

Negotiating Changes in Labor Contracts

The Working Group recognizes that existing labor contracts would need to be renegotiated to achieve some of the changes in benefits or work practices covering the unionized portion of the workforce. We encourage informal discussions with union representatives and employees about the changes outlined in this report to begin or to continue where they have already begun.

Reducing Future Compensation Costs

It is important to note that for two reasons benefit savings do not all translate into reductions in the GIB. First, about half of the overall Institute budget comes from research grants and contracts and therefore compensation reductions are shared in roughly equal proportions between the GIB and costs charged to research grants. Second, many of the actions listed below affect the actuarial calculations that determine how much money MIT must allocate to cover future pension and retiree healthcare liabilities. Both of these actions, however, have the important effect of reducing the benefit rate per dollar of salaries.

The Working Group examined projections for the overall benefit rate, particularly how the rate is likely to increase over time and how increases would affect MIT's competitiveness for research grants. Depending on assumptions about returns on investments and actuarial forecast, the benefit rate MIT will need to charge to the GIB and research contracts may rise into the mid-30 percent range over the next five years. This increase would put MIT at a substantial competitive disadvantage in competing for research grants and would cause severe strain to the GIB.

Retirement Benefit Options

The HR and Benefits Working Group examined MIT's package of retirement benefits to consider options for reducing the budget while still appropriately providing for the retirement of MIT employees and remaining competitive in the job market.

MIT provides very attractive retirement packages to its employees. For example, MIT is one of a declining number of employers to provide both defined benefit and defined contribution (401K) retirement plans. The Institute currently matches up to the first 5 percent an employee contributes to the 401K plan (within specified IRS regulatory limits).

The net effect of these plans and various enhancements to them introduced over the years is that, on average, individuals retiring from MIT after reasonable periods of employment currently receive greater than 100 percent of their prior earnings when the value of Social Security, the defined benefit plan, 401(k) savings, and retiree healthcare are added together. In some cases the replacement ratio is substantially above the 100 percent threshold. This is the case even after reasonable estimates of the recent decline in the value of 401(k) accounts are taken into consideration. For example, a 51-year-old employee with 19 years of service would, if he or she retired at age 65, receive a projected total income (including the basic MIT retirement, 401(k) withdrawals, Social Security and retiree medical benefits) of 108 percent of his or her annual income just prior to retirement. The projected income of MIT employees with longer periods of service is likely to be even greater than in this example.

For these reasons, we believe some reductions in selected retirement benefits are warranted. However, our task force believes MIT should maintain its longstanding commitment to ensuring its workforce can retire with dignity and adequate financial security. We also believe it would be unfair to take away benefits from current retirees who made their decisions and financial plans based on the programs in place when they retired. As with salary freezes or small increases resulting from budget cuts, reductions in the retirement plan would have differential effects on different employees, depending on how close to retirement an employee is and on the employee's salary history. Therefore we propose "grandfathering" current beneficiaries wherever appropriate.

The Working Group recommends that MIT consider selecting a subset of changes to retirement plans from the menu of options briefly summarized below. The specific subset that will best balance the need for budget savings with the goal of remaining fair to employees and competitive in the market remains to be determined. The options below also should be examined closely to ensure the retirement plan passes all legal requirements.

The options proposed by the Working Group for further consideration include:

- Revise the 401(k) plan to match the first 100 percent of the first 3 percent contributed by employees and 50 percent of the next 2 percent contributed. The net result would be a 1 percent reduction in the MIT match for employees currently contributing the maximum 5 percent match from their salaries.
- Freeze special death benefits provided to a surviving spouse. This element of the retirement plan is unique to MIT and duplicates the option built into retirement plans that provides for annuities tailored to offer ongoing benefits to surviving spouses.
- Eliminate pension disability benefits in which employees who qualify for MIT's long-term disability coverage continue to accrue benefits in the defined benefits plan.
- Change the actuarial method for accruing defined benefits after age 65 for active employees who have not reached age 65. The current method is more generous than pension regulations require and exceeds benefits provided by most employers who still offer a defined benefit plan.
- Cap the career-based pension formula of the defined benefits plan for current employees to a maximum of 30 years of service. The current plan provides for 1.65 percent of accumulated MIT earnings until an employee retires.
- Change the interest rate used on the cash balance pension plan.
- Shift to a 5 percent cash balance defined benefit pension plan for new hires and/or current employees with shorter years of service. Consider grandfathering longer service employees who would experience significant reductions in retirement income if this change in the defined benefit plan was applied to them.
- Shift the vesting period in the defined benefits plan to three years for new hires.
- Eliminate supplemental pension accruals for employees paid more than $230,000 per year.

More work is needed to estimate the specific savings that would accrue over time from different combinations of these options. However, the accounting savings in the form of reduced pension liabilities (and the dollars that need to be set aside to cover these liabilities) would be substantial: approximately $27 million over the next two years to approximately $199 million over the next ten years.

In addition to these reductions, significant savings to the GIB may be achievable by adopting an allocation strategy that matches pension assets to liabilities, with the goal of

fully recovering pension costs on federal grants and contracts. Further analysis of the feasibility of this option and whether it is allowable under existing law is currently underway.

Medical Benefits

One of the most significant and highly valued benefits of employment at MIT is medical insurance and the provision of comprehensive on-campus medical services through the MIT Medical Department. MIT offers five different plans to active employees. A comprehensive review carried out several years ago reaffirmed the value of maintaining these services and plans. However, some aspects of the current insurance plans could be modified without undermining the fundamental need to provide excellent coverage to every employee and his or her dependents.

The ideas presented for consideration by the Working Group include:

- Adding a co-payment to the plans available through MIT Medical.
- Providing financial incentives through co-payment differentials to encourage all medical plan participants to use services at MIT.
- Improving the management of prescription medication expenses.
- Eliminating the MIT-paid spousal subsidy for employees covering a divorced spouse.
- Consolidating current health plan offerings into one risk pool with one commercial insurance company.
- Modifying the health plan for retirees to align the benefits more closely with those of current employees. This will result in the introduction of some co-payments for retiree health services. Some of these changes would apply to new hires only, and others could be immediately applied to all current employees.

The accounting savings in the form of reduced retiree healthcare liabilities (and the dollars that need to be set aside to cover these liabilities) would be substantial: approximately $12.5 million over the next two years to approximately $63 million over the next ten years.

The Task Force recommends that an advisory group be formed to work with the Vice President of Human Resources and other administration leaders to further develop these options, their cost saving estimates, and their impacts on the workforce if implemented. This group should include the current working group co-chairs, members of the faculty officers, and additional faculty, staff, and Lincoln Lab representatives. The charge of the advisory group should come from the senior leadership.

Recommendations

Originally, the work of the Task Force was envisioned in two phases with a preliminary report in the summer of 2009 and the final report due in October 2009. After thoroughly

reviewing the work of the working groups, we consider that the original charge to the Task Force (Appendix I) has been largely fulfilled. As we enter the implementation phase of this work, the following approach is recommended.

It is recommended that the Task Force leadership consider:

Governance

Recommendation 1 – Making the preliminary report and accompanying appendices public to the entire MIT Community and open for comments to be incorporated in the final report due in the fall of 2009.

Recommendation 2 – Charging the working groups with finalizing their individual reports to be appended to the final report.

Recommendation 3 – Creating an advisory role for the co-chairs of the working groups during the implementation phase. The co-chair advisory group would be charged with providing periodic assessments on the progress of Task Force recommendations.

Recommendation 4 – Coordinating an open and transparent communication strategy with the entire community as recommendations are further discussed and considered.

Acting on the Ideas

Recommendation 5 - In order to speed up the path to implementation, the assignment of tasks in accordance with the detailed recommendations below asks unit leaders for a report back in the Fall of 2009, in time to inform budgetary decisions for FY 2011.

A. This includes the formation of four project teams:
   Project Team 1: E-learning opportunities
   Project Team 2: Expanding educational opportunities
   Project Team 3: Frameworks for accountability
   Project Team 4: Printing infrastructure and record retention

B. It is recommended that opportunities identified by the working groups that are sufficiently developed be assigned to individual units and existing committees as detailed below for implementation and determination of next steps.

C. Particular ideas are highlighted for further development, which could occur in parallel with the formation of project teams included above.

D. A few ideas are not recommended for action at this time and are noted below. These ideas were deemed to either require an investment of resources that would be difficult to defend at this time, be in direct conflict with the MIT culture of caring, or represent a major change that may be untenable to the MIT community.

Framing Recommended Actions

In order to structure the range of possible recommendations, we have developed a framework for categorizing the ideas toward an action plan. Broadly speaking, we consider the ideas based upon two criteria: their maturity and "actionability." With respect to maturity, some ideas were sufficiently well-developed by the working groups to determine, without further work, whether to act on them. In other instances, the idea, while compelling, required more work or were dependent on the outcome of some other recommendation to further develop it and quantify its potential impact before an action decision was possible. With respect to "actionability," some proposed ideas fall entirely within the purview of a particular operational unit. For example, an idea to modernize the back office processes of the MIT travel system could be acted upon by Travel without extensive input from the MIT community. In contrast, some recommendations, such as implementation of an electronic graduate admissions system, cut across many units and therefore would require coordination across those units to ensure effective implementation of the idea.

With this framework, four possible actions are considered for each idea as listed below:

Not at this time: These ideas are not considered worth pursuing at this time because they require investments in time or money that may not hold the greatest value in comparison to other opportunities.

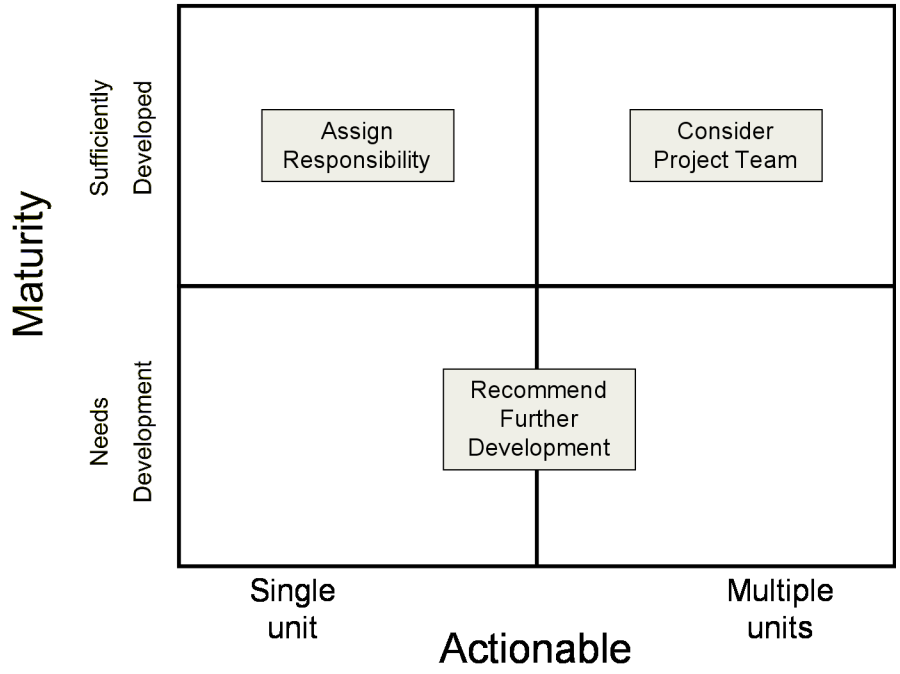
Recommend assigning responsibility: These ideas are sufficiently mature and actionable within one lead unit, such that the idea may be assigned to the particular unit with a request that the unit recommend next steps (either to implement the idea or respond as to why implementation cannot or should not be pursued).

In thinking about recommending next steps, we have favored assignments that foster accountability and speed up decision-making toward implementation. We also suggest to the units assigned with responding to the recommendations that they contact or include working group members as necessary and that they also take into account community feedback.

Consider formation of a project team: These ideas are sufficiently mature, but their implementation cuts across many units or groups of stakeholders. In this case, special "project teams" can be formed that report to the units involved to develop implementation plans. These project teams should consult with the existing faculty committees and other standing councils, presidential committees and working groups that have advisory or governance responsibility in the relevant areas.

Recommend further development: These ideas, while compelling, may require further development or depend on the outcomes of some other recommended actions. In this case, the recommendation would be to further develop the idea or hold until outcomes are available. These last three actions are illustrated graphically below.

Ideas Presented by the Working Groups



Details of Recommendation 5 – Acting on the Ideas

Using the framework described above, actionable ideas from the working groups are categorized for consideration. Each suggested action responds to single page ideas offered by the working groups. These ideas are noted and numbered as included in the master list of ideas submitted with this report as Appendix III.

Recommendation 5. A. It is recommended that four project teams be formed to address the following issues.

Project Team 1: E-learning Opportunities

This team would further evaluate new educational opportunities around e-learning. These "scalable educational platforms", i.e., educational offerings that use online tools to create new learning opportunities, could reach a greater number of students.

Ideas Presented by the Working Groups—continued

Revenue
- 2 - Selected undergraduate subjects for credit via e-learning
- 3 - E-learning master's degrees
- 4 - MIT continuing education program (extension studies)

Project Team 2: Expanding Educational Opportunities

This team will take an in-depth look at the expanding educational opportunities presented by the working groups. These opportunities range from professional education to offering existing class capacity to special students and visitors.

Education
- 13 - Increase number of special students
- 18 - Enhance professional education

Revenue
- 5 - MIT lifetime academy
- 6 - Partnerships with corporate universities
- 7 - Executive/professional education to enhance corporate partnerships
- 8 - MIT energy pathways

Project Team 3: Frameworks for Accountability

The team will examine our academic frameworks for accountability and develop metrics and improved cost models for education, space, and research. These metrics will improve accountability and transparency and ultimately lead to sustained savings through increased efficiency of our operations.

Education
- 1 - Flexible metrics for measuring efficiencies
- 2 - Improve understanding faculty workloads
- 3 - Program evaluation
- 19 - Study and understand graduate education model

Space
- 7 - Better understanding space usage
- 8 - Establish a space "bill of rights"

Ideas Presented by the Working Groups—continued

Research
- 1 - Consolidation of smaller labs and centers
- 3 - Re-evaluation of criteria for MIT support to labs and centers
- 12 - Consolidation or termination of some service facilities

Project Team 4: Printing Infrastructure and Record Retention

This team will continue to work on the area of printing infrastructure to enable smart printing and reduce costs and distribution of printed materials. The team would develop record retention policies and pursue electronic storage systems.

Administrative Processes
- 10 - Stop or reduce campus bulk mailings
- 11 - Document retention and ownership

IT
- 11 - Reduce printing costs

Recommendation 5.B. It is recommended that specific ideas be assigned to individual units and existing committees as noted below for implementation or determination of next steps.

Dean for Undergraduate Education (DUE)

Education
- 5 - Develop summer classes for GIRs and other courses
- 10 - Change drop/add dates
- 14 - Eliminate Athena clusters
- 17 - Reduce costs for alternative freshman programs
- 24 - Eliminate the physical education requirement (alternate models)
-

Administrative Processes
- 8 -– Next Generation Student Systems (jointly with DGE and IS&T)

Dean for Graduate Education (DGE)

Education
- 12 - TA cost abatement
- 16 - Centralize graduate admissions
- 20 - Study impacts of graduate financing plan
- 21 - Right-sizing the graduate population
- 22 - Study impacts of time-to-completion

Ideas Presented by the Working Groups—continued

Administrative Processes
- 8 - Next Generation Student Systems (jointly with DUE and IS&T)
- 9 - Graduate student admissions

IT
- 3 - Centralize online process for graduate admissions

Student Life
- 1 - Fee structure for visiting students

Vice President for Research (VPR)

Education
- 7 - Soften faculty salaries
- 8 - Change RA tuition subsidy

Research
- 2 - Sharing of lab/center infrastructure
- 4 - Re-evaluation of intellectual property and royalty distribution
- 5 - Post award administration, financial reporting and forecasting, sharing of lab/center infrastructure
- 11 - Reduce or eliminate commodities (consumables) supplied by internal providers
- 13 - Implement shared equipment pool
- 16 - Web inventory of service centers
- 17 - Amortization of service center equipment
- 18 - Lab equipment "time share" system
- 19 - Charge academic year salary to grants
- 21 - Termination policy for senior and principal research associates
- 22 - Mentoring for postdocs
- 23 - Consolidation of salary decisions

Administrative Processes
- 4 - Reporting and forecasting

IT
- 15 - Create a more cost-effective research-computing environment

Ideas Presented by the Working Groups—continued

Revenue
- 10 - Large-scale institutional initiatives
- 11 - Lower cost-recovery rate for foundation research grants
- 12 - Foreign government collaborations
- 13 - Transition laboratories

Dean for Student Life (DSL)

Student Life
- 2 - Improvement of housing utilization during the summer
- 4 - Metering of dormitories
- 6 - Implementation of meal plan changes in house dining, fall 2010

Revenue
- 21 - Dorm room summer rental

Libraries

Research
- 15 - Evaluation of research-library journal subscriptions and conference proceedings

Revenue
- 22 - Replace library roaming stacks with new business model

Associate Provost for Space

Space
- 4 - Adopt a stronger cost-based and schedule-based approach to capital and major renovation projects
- 5 - Economies of scale, bundling of renovations, and co-location of like functions
- 9 - Accelerate space decision-making
- 12 - Whole-building or large-scale renovations
- 15 - Reduce MIT's lease expenses
- 16 - Decrease or eliminate Pool C real estate

Ideas Presented by the Working Groups—continued

Vice President for Finance (VPF)

Administrative

- 1 - Modernization of the MIT travel system
- 2 - Buy-pay process and electronic tools
- 3 - Budgeting
- 6 - HR/Payroll transaction processing
- 7 - Electronic pay stubs and W-2 forms

Procurement

- 1 - Reduce the number of purchasing choices
- 2 - Automate and streamline key processes
- 3 - Educate the community about procurement processes
- 4 - Renegotiate and bid out contracts for key goods and services
- 5 - Promote sustainable purchasing practices
- 6 - Ensure that cost savings are not achieved at the expense of others (jointly with VPHR)
- 8 - Standardize personal computing purchases on Dell PCs (jointly with VPIST)
- 9 - Standardize on a common solution for all web/audio/video conferencing services at MIT (jointly w/VPIST). This common solution should be picked by an effective RFP/RFI process.
- 10 - Reduce the number of fax machines throughout MIT (jointly with VPIST)
- 11 - Purchase only MIT-recommended desktop and laptop configurations (jointly with VPIST)
- 12 - Change purchasing card rules to make it possible to buy computers directly on a purchasing credit card
- 13 - Examine the impact of the $3,000 capital equipment rule on computer purchases
- 16-22 - Furniture and laboratory supplies
- 23-35 - Administrative supplies and travel
- 38 - Implement a vendor management system

HR/Benefits

- 33 - Reduce temporary help and consultant expense (jointly with VPHR)

IT

- 1 - Centralize purchasing and management for computer hardware (jointly with VPIST)
- 2 - Centralize purchasing and management for computer software (jointly with VPIST)

Ideas Presented by the Working Groups—continued

Vice President for Human Resources (VPHR)

Administrative
- 14 - Nonfaculty recruiting and search
- 15 - Vacation tracker for nonsponsored exempt staff

HR/Benefits
- 2-9 - Health plan for active employees
- 10-13 - Health plan for retirees
- 14-24 - Retirement
- 25-30 - Paid time off
- 2-9 - Health plan for active employees
- 31 - Implement salary-based contribution toward cost of parking on campus
- 32 - Reduce temporary help and consultant expense (jointly with VPF)

Procurement
- 6 - Ensure that cost savings are not achieved at the expense of others (jointly with VPF)
- 7 - Develop creative solutions and fair policies
- 36 - Employee job share bank
- 37 - In-house casual labor

Vice President for Information Services and Technology (VPIST)

Education
- 15 - Limit printing in Athena clusters

Administrative Processes
- 8 - Next Generation Student Systems (jointly with DUE and DGE)

Procurement
- 8 - Standardize personal computing purchases on Dell PCs (jointly with VPF)
- 9 - Standardize on a common solution for all web/audio/video conferencing services at MIT (jointly w/VPIST). This common solution should be picked by an effective RFP/RFI process.
- 10 - Reduce the number of fax machines throughout MIT (jointly with VPF)
- 11 - Support a small number of standard configurations for laptop and desktop systems (jointly with VPF)

Ideas Presented by the Working Groups—continued

IT

- 1 - Centralize purchasing and management for computer hardware (jointly with VPF)
- 2 - Centralize purchasing and management for computer software (jointly with VPF)
- 4 - Decustomize administrative enterprise systems
- 5 - Decustomize educational enterprise systems
- 7 - Outsource voice and video communication
- 8 - Replace landlines with mobile phones
- 9 - Remove disincentive for outsourcing research technical support services
- 10 - End support for selected IT products and services
- 12 - Streamline help-desk support and outsource as appropriate
- 13 - Reorganize committees and organizational units related to IT

Department of Facilities (DoF)

Space

- 6 - Design for modularity and flexibility
- 11 - Establish memoranda of understanding for renovation projects
- 13 - Project bundling to reduce costs
- 14 - Raze structures to stop annual maintenance and utilities expense
- 17 - Reduce or charge for storage space
- 18 - Dispatch for utilities operations
- 19 - Vehicle fleet purchase and maintenance
- 20 - Energy savings through efficient fume-hood management

Administrative Processes

- 12 - Innovative scheduling to minimize premium pay
- 16 - In-house services versus outsourcing
- 17 - Shuttle services
- 18 - Key request process

Procurement

- 14 - Consolidation of design services leading to partnering agreements
- 15 - Leverage facilities-related purchasing power across departmental boundaries

Vice President for Resource Development (VPRD)

Ideas Presented by the Working Groups—continued

Revenue
- 14 - Expansion of Office of Corporate Relations/Industrial Liaison Program
- 15 - MIT Research Multiplier Fund
- 16 - Expansion of the Resource Development program
- 17 - Expansion of acceptable gift planning vehicles

Alumni Association (AA)

Revenue
- 19 - Forge high-return alumni connections: "William Barton Rogers Visitorships"

Executive Vice President and Treasurer (EVP)

Space
- 1 - MIT's physical infrastructure should be recognized as part of the endowment
- 2 - Invest in preventative maintenance
- 3 - Endow maintenance and energy costs when fund-raising for new buildings
- 6 - Remove pain points in using MIT enterprise systems (to be done in collaboration with the Office and the Provost and the VPIST)

Revenue
- 20 - Maximize use of MIT owned real estate (jointly with MITIMCo)

Provost

Education
- 11 - Modify faculty compensation
- 23 - Manage faculty positions better

Administrative Processes
- 13 - Faculty search

HR/Benefits
- 1 - Moderate salary increases

Revenue
- 18 - Market the MIT brand

Ideas Presented by the Working Groups—continued

Research Administration Coordinating Committee (RACC)

Research
- 6 - Standardize sponsored research proposal process
- 7 - Research administration training for faculty and staff
- 8 - Review staffing of units
- 9 - Enact efficient procedures for industrial research contracts
- 10 - Project managers for PIs

Administrative Processes
- 5 - Research proposal submissions

Enrollment Management Group (EMG)

Education
- 6 - Increase undergraduate enrollment

Student Life
- 3 - Relaxation of four-year on-campus housing commitment
- 5 - Adjust financial aid to match true food costs

Recommendation 5.C. The following ideas are in need of further development, which could occur in parallel with the formation of the project teams included above.

Education
- 4 - Increase productive faculty/student educational interactions

Space
- 10 - A space economy to drive better behavior and efficiency

IT
- 14 - Support location-independent work. The further development of this capability should be done jointly by the VPHR and the VPIST.

Recommendation 5.D. The following ideas are not recommended for action at this time.

Education
- 9 - Cap balances in faculty discretionary accounts

Research
- 14 - Development of a new research facility such as Light Source

- 20 - Incentives for retirement

Administrative Processes
- 19 - Room scheduling and events registration

Revenue
- 1 - Online freshman year

Appendix I

Charge to the Institute-wide Planning Task Force

Charge to Institute-wide Planning Task Force

In a letter to the MIT Community in December, we presented early steps in our response to the Institute's decreasing revenue sources due to the declining national economy. We described the formation of an Institute-wide Planning Task Force to assess how MIT's mission is translated into our day-to-day operations and to explore ways to maximize the efficiency and effectiveness of these operations, in the context of our need to reduce significantly overall expenses. The Task Force is intended to be directly advisory to the provost, the chancellor, and the executive vice president and treasurer. We now write to express our appreciation for your willingness to serve with fellow faculty, staff, and students on this newly formed Task Force and to provide a charge to the Task Force to guide your deliberations.

First, it is important to provide a set of overarching principles that should guide the Task Force in its work:

- Our mission is unchanged: The mission of MIT is to advance knowledge and educate students in science, technology, and other areas of scholarship that will best serve the nation and the world in the 21st century. The Institute is committed to generating, disseminating, and preserving knowledge, and to working with others to bring this knowledge to bear on the world's great challenges. MIT is dedicated to providing its students with an education that combines rigorous academic study and the excitement of discovery with the support and intellectual stimulation of a diverse campus community. We seek to develop in each member of the MIT community the ability and passion to work wisely, creatively, and effectively for the betterment of humankind.

- Unity: We are committed to preserving MIT's unified structure, with one faculty, one staff, and one student population, which operates under generally common sets of policies and procedures for the benefit of all areas of the Institute.

- Excellence in teaching and research: We remain committed to our tradition of engaging in cutting-edge research and closely integrating teaching with research as a means of providing the best education to our students.

- Inclusiveness: We will continue our commitment to need-blind admissions and need-based undergraduate financial aid.

- Diversity: Our strong commitment to increasing the diversity of our community remains unchanged.

- Transparency and communication: We are committed to working and communicating with the entire MIT community in common purpose to fulfill the

Institute's mission in a context of declining resources. Community participation is a key to the success of our work.

We charge the Task Force to:

1. Review and analyze current practices and expenditures that support the Institute's mission and operations.

2. Identify those activities or operations that are closely connected with MIT's core mission and those that may be less strongly aligned with our mission.

3. Identify opportunities for efficiency and cost reduction (not simply cost shifting), including:

3.1. Explore alternative ways of fulfilling our mission that could be as effective as current practices but with lower costs. Best practices at other institutions (universities and companies) should be identified and considered for adoption at MIT.

3.2. Identify possible synergies among existing MIT units that might present opportunities for cost reductions and service improvements.

3.3. Explore new processes for assessing the quality and effectiveness of our programs and activities on an ongoing basis (including how to provide "sunset" clauses where appropriate).

4. Identify and estimate costs/benefits of proposed operational changes and prioritize these proposed changes in terms of optimal outcomes for the Institute.

5. Acknowledging that operational changes may require significant change across the Institute, identify paths to implementation that preserve our community's mission, values, and culture.

6. Explore opportunities to promote 21st-century practices at MIT with regard to environmental impact and sustainability.

We ask the Task Force to apply the foregoing charge to four distinct areas, listed below. Following each of the four areas are lists of topics that we hope each working group will focus on. However, these are not meant to be exhaustive lists and we encourage consideration of additional areas of focus that the working groups themselves may identify in their discussions. Input from the community will be solicited and incorporated by the working groups into their deliberations.

1. ACADEMIC PLANNING

The task of the Academic Planning effort is to explore new approaches to teaching and research that maintain excellence and, at the same time, achieve economies and efficiencies. Ideally, for example, we would like to explore ways to achieve savings in the cost of education at MIT (estimated to be roughly twice the tuition we charge), while at the same time improving further the quality of an MIT education, by examining the efficiency of the educational services we provide. Similarly, we would like to explore how to lower the costs, while at the same time improving the efficiency, of conducting research at MIT. For example, we want to explore ways to reduce the indirect costs of conducting research in order to reduce the overhead rate so that more dollars will flow toward the direct costs of research and fewer toward overhead.

The Academic Planning effort will be divided into three working groups: Education, Research, and Space.

Education:

- Undergraduate education
- Graduate education
- Numbers of faculty, other academic staff, and teaching assistants
- Teaching load/distribution
- Number and types of subjects we offer
- Class size
- Use of web-based tools (e.g., OCW, academic computing)
- Admissions
- Student information system
- Efficient use of resources, such as classroom scheduling
- Faculty tenure and retirement polices

Research

- Laboratories and centers: appropriate number, start-up, shut-down
- Lab directors' account
- Lab/center reporting structure
- Research subsidy and under-recovery of overhead
- RA tuition subsidy
- Pre-award and postaward support
- Use of shared research facilities
- Lowering indirect costs
- How to stimulate the faculty to work in new ways to generate research funding
- Charging partial academic year salary of faculty to grants
- Research infrastructure and other support in areas where research funding is

relatively scarce
- Support new faculty in starting programs and senior faculty in embracing new research agendas

Space

- Both campus space and off-campus space used to accommodate MIT activities
- Commercial space owned by MIT
- Planning, funding, and construction of new buildings
- How best to allocate and reallocate space in a context of competing needs
- Explore incentives to optimizing use of space (e.g., charging for space usage, relinquishing space that is no longer needed)
- Develop space management policies for research, education, student life, and administration that are guided by benchmarking tools and utilization analysis
- Space renovation, maintenance and repair
- Utilities and energy efficiency

2. ADMINISTRATIVE PLANNING

The Administrative Planning effort will consist of four working groups: Procurement, Human Resources/Benefits, Information Technology, and Administrative Processes. We want to explore ways to deliver service offerings more effectively, while at the same time improving efficiency. Some of the topics on which these working groups will focus include:

- Administrative services and processes supporting the mission of the Institute, including different ways to group or organize these functions that may lead to greater efficiency
- Range of information technology services and productivity tools available to the community
- Procurement and sourcing strategies
- Service-level agreements and possible standardization of choices
- Employee benefits (including housing benefits for faculty, retirement benefits, and other forms of nonsalary compensation)
- Expanded opportunities for job sharing and other job arrangements
- Diversity goals and the quality of our work environment

3. STUDENT LIFE

The Student Life section will consider all student activities, curricular and extracurricular, including, but not necessarily limited to, the following areas:

- Residential Life programs (housing, dining services)
- Campus Activities Complex
- Student Activities
- Athletics and Physical Education
- Student Support Services
- Staffing and operations
- Effective collaboration with other units, including Facilities, Medical, and Libraries

4. REVENUE ENHANCEMENT

This effort should explore all present, as well as possible future, revenue-related activities in order to maximize the Institute's revenue flow. Areas of consideration should include:

- Resource Development
- Corporate Relations/Industrial Liaison Program
- Professional education
- Use of MIT space and facilities (such as auditoriums, dining areas, dormitories, athletic facilities) during the academic year, evenings, and summer
- Review of fee structures for use of Institute facilities and services, including comparisons with those at peer institutions
- Possible OCW certificate, credit or degree programs, and other possible opportunities for distance learning
- Possible Summer school, extension or adult learning school
- Explore improved ways to connect with new donors, such as graduate alumni

Interaction with appropriate units and senior officers: To coordinate the work of the Task Force with budget plans now being developed for FY 2010, it will be important for each working group within the Task Force to engage in close discussions with appropriate administrative or academic units as well as with members of Academic Council. Academic Council members will advise the Task Force working groups about budget plans in the areas that report to them.

Access to data: In order to make informed recommendations, the working groups will need access to data regarding costs or other information associated with the various functions being examined. We will work with the co-chairs of the working groups to facilitate the provision of such data as necessary.

Timeline for Task Force report: We request a preliminary set of recommendations from the Task Force by June 2009 for possible implementation in FY 2010, and a full report and final recommendations by October 2009, which will be reviewed for implementation beginning with the FY 2011 budget.

Again, we are most grateful for your participation in this important planning effort on behalf of the Institute. We look forward to working with the Task Force in the course of its discussions and to sharing a broad range of ideas that we are confident will lead the Institute to strengthen its operations while meeting its fiscal challenges.

Sincerely,

L. Rafael Reif, Provost

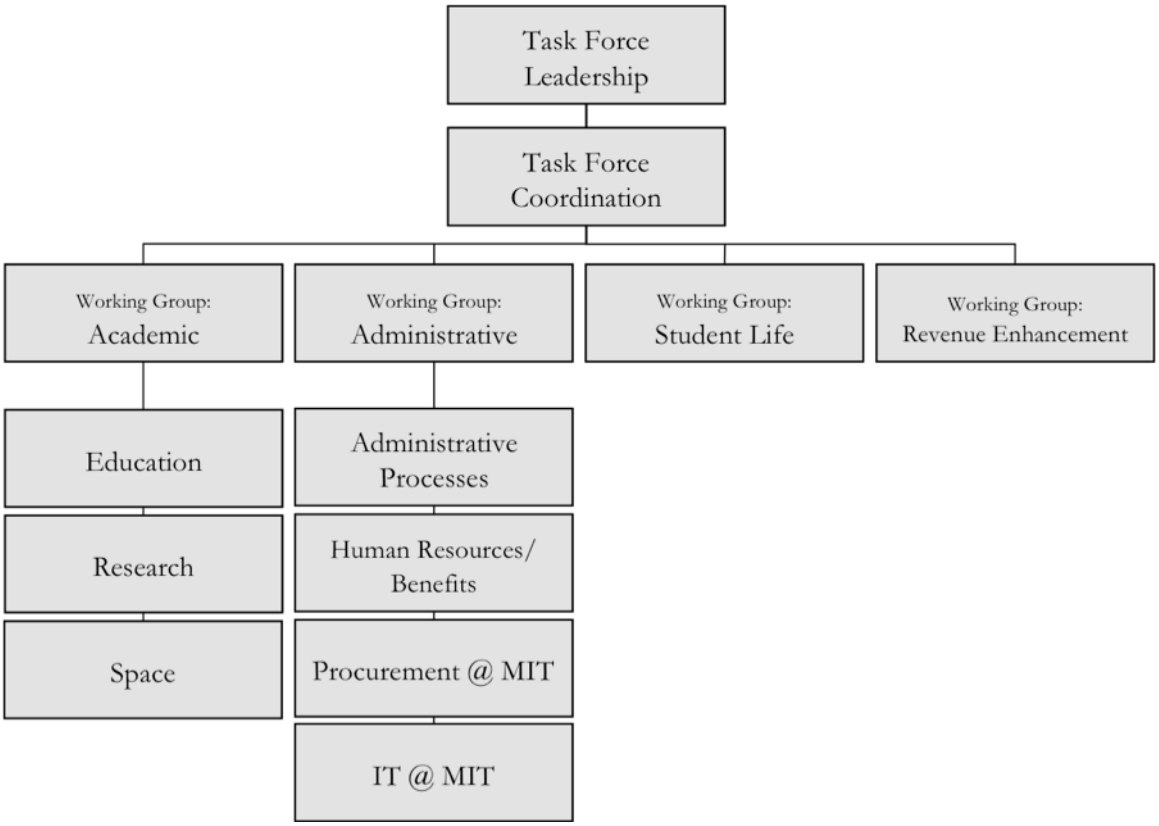
Phillip L. Clay, Chancellor

Terry Stone, Executive Vice President & Treasurer

Appendix II

Task Force Membership

Task Force Structure



Task Force Coordinating Team

Steven R. Lerman, Vice Chancellor and Dean for Graduate Education
Martin A. Schmidt, Associate Provost
Israel Ruiz, Vice President for Finance

Education

Faculty:
Cynthia Barnhart, School of Engineering
Mary Boyce, Department of Mechanical Engineering
Vladimir Bulovic, Department of Electrical Engineering and Computer Science
Kai von Fintel, School of Humanities, Arts, and Social Sciences, Linguistics and Philosophy
Dennis Freeman, Department of Electrical Engineering and Computer Science
Stephen Graves, Sloan School of Management
W. Eric Grimson, Department of Electrical Engineering and Computer Science, Co-chair
Steven Hall, Department of Aeronautics and Astronautics
Daniel Hastings, Office of the Dean for Undergraduate Education, AeroAstro, Co-chair
Timothy Jamison, Department of Chemistry
Mark Jarzombek, School of Architecture and Planning
Young S. Lee, Department of Physics
Caroline Ross, Department of Materials Science and Engineering
Hazel Sive, School of Science, Biology
Janet Sonenberg, Music and Theatre Arts Section
Gigliola Staffilani, Department of Mathematics
Phillip Thompson, Department of Urban Studies and Planning
Matthew Wilson, Department of Brain and Cognitive Sciences
JoAnne Yates, Sloan School of Management

Staff:
Arne Abramson, Department of Facilities
Sheren Aram, Harvard-MIT Division of Health Sciences and Technology
Mark Damian, Information Services and Technology
Cecelia d'Oliveira, OpenCourseWare
Douglas Pfeiffer, Office of the Provost
Stephanie (Richardson) Toews-Moeling, Budget, Finance and Treasury
Stuart Schmill, Admissions Office
Karen Yegian, Department of Urban Studies and Planning

Students:
Nicole Bucala, Undergraduate, Political Science
Stephen Woodrow, Graduate, Engineering Systems Division

Research

Faculty:
Emery Brown, Department of Brain and Cognitive Sciences
Claude Canizares, Vice President for Research and Associate Provost, Physics, Co-chair
Anantha Chandrakasan, Microsystems Technology Laboratories
Douglas Hart, Department of Mechanical Engineering
Richard Holton, Department of Linguistics and Philosophy
John Joannopoulos, Institute for Solder Nanotechnologies
Simon Johnson, Sloan School of Management
Jacqueline Lees, Department of Biology
Barbara Liskov, Office of the Provost, Electrical Engineering and Computer Science
Frank Moss, Program in Media Arts and Sciences
Bernhardt Trout, Department of Chemical Engineering
Maria Zuber, Department of Earth, Atmospheric and Planetary Sciences, Co-chair

Staff:
Sarah Brady, Budget, Finance and Treasury
Michelle Christy, Office of Sponsored Programs
John Donahue, Office of Sponsored Programs
Deborah Leitch, Office of the Executive Vice President and Treasurer
Antonio Pensa, Lincoln Laboratory
Charlene Placido, Office of the Vice President for Research and Associate Provost
Cynthia Quense, David H. Koch Institute for Integrative Cancer Research
David Rodriguera, Laboratory for Manufacturing and Productivity
Alison Salie, Department of Biology
Karen Shirer, Computer Science and Artificial Intelligence Lab
Stephen Steadman, Laboratory for Nuclear Science
Richard Wilk, Department of Chemistry

Students:
Paul Youchak, Undergraduate, Nuclear Science and Engineering
Scott Carlson, Graduate, Biological Engineering

Space

Faculty:
Michael Cima, Department of Material Science and Engineering
Martin Culpepper, Department of Mechanical Engineering
Michael Dennis, Department of Architecture
Karen Gleason, Department of Chemical Engineering
Bradford Hager, Department of Earth, Atmospheric and Planetary Sciences
Jacqueline Hewitt, Kavli Institute for Astrophysics and Space Research

Leslie Kaelbling, Department of Electrical Engineering and Computer Science
Martin Schmidt, Office of the Provost, Department of Electrical Engineering and Computer Science, Co-chair
Jeffrey Shapiro, Research Laboratory of Electronics
Edward Steinfeld, Department of Political Science
Timothy Swager, Department of Chemistry
Ian Waitz, Department of Aeronautics and Astronautics, Co-chair

Staff:
Johnathan Bartels, Materials Processing Center
Pamela Delphenich, Department of Facilities
John Dunbar, Office of the Provost
William Fitzgerald, Alumni Association
James Harrington, School of Architecture and Planning
Phillip Walsh, Campus Activities Complex
James White, School of Science

Students:
Aditi Verma, Undergraduate
Nan Gu, Graduate, Physics

Administrative Processes

Faculty:
Tania Baker, Department of Biology
Steve Eppinger, Sloan School of Management, Co-chair
David Gifford, Department of Electrical Engineering and Computer Science
Bengt Holmstrom, Department of Economics
Michael Sipser, Department of Mathematics

Staff:
Margaret Benson, Controller and Accounting Services
Rebecca Chamberlain, Department of Architecture
Agnes Chow, Department of Electrical Engineering and Computer Science
Michelle Christy, Office of Sponsored Programs
Peter Cummings, Office of the Dean for Student Life—Administration
Mark DiVincenzo, Office of the General Counsel
Martin Dugal, Department of Facilities
Robin Elices, Office of the Vice President for Finance
Christine Meholic, Vice President, Information Services and Technology
O'Neil Outar, Office of the Vice President for Resource Development
Israel Ruiz, Office of the Executive Vice President and Treasurer, Co-chair
Donna Savicki, School of Engineering

Amanda Tat, Center for Environmental Health Sciences
Wayne Turner, Human Resources Department
Heather Williams, School of Science

Students:
Emma Rosen, Undergraduate
Matthew Walker, Graduate, Physics

Human Resources and Benefits

Faculty:
Wesley Harris , Office of the Provost, AeroAstro
Thomas Kochan, Sloan School of Management, Co-chair
Stewart Myers, Sloan School of Management
Edwin Thomas, Department of Materials Science and Engineering
Dick Yue, School of Engineering, Department of Mechanical Engineering

Staff:
Ramona Allen, School of Architecture and Planning
Martha Collins, Human Resources Department
Olivia Contrada, Human Resources Department
Joshua Freedman, Institute for Soldier Nanotechnologies
Ronald Hasseltine, Office of the Vice President for Research and Associate Provost
Howard Heller, Medical Department
Pamela Liu, Sloan School of Management
Magdalene Lee, Controller and Accounting Services
Sophia Maniaci, Human Resources Department
Mary Markel Murphy, Media Laboratory
Jean Samuelson, Human Resources Department, Co-chair

Students:
Albert Chang, Undergraduate
Kieran Downes, Graduate, Science, Technology, and Society

Procurement @ MIT

Faculty:
David Autor, Department of Economics
Hae-Seung Lee, Department of Electrical Engineering and Computer Science
Patrick Jaillet, Department of Civil and Environmental Engineering
Richard Locke, Sloan School of Management, Co-chair
Richard Milner, Department of Physics
Susan Silbey, Anthropology Program

Staff:
Michelle Carmichael, Human Resources Department
Paul Conroy, Lincoln Laboratory
Lawrence Gallagher, Academic Media Production Services
Jeanne Hillery, Office of the Dean for Undergraduate Education
Michael Kearns, Department of Facilities
Diane McLaughlin, School of Architecture and Planning
Eileen Ng-Ghavidel, School of Engineering
Theresa Regan, Information Services and Technology
Anthony Sharon, Lincoln Laboratory, Co-chair
Diane Shea, Procurement
Derek Welcome, Procurement

Students:
Keone Hon, Undergraduate, Mathematics
Rebecca Uchill, Graduate, Architecture

IT @ MIT

Faculty:
Peter Donaldson, Literature Section
Edward Farhi, Department of Physics
Frans Kaashoek, Department of Electrical Engineering and Computer Science
Thomas Malone, Sloan School of Management, Co-chair
Mitchel Resnick, School of Architecture and Planning

Staff:
Donna Behmer, Sloan School of Management
John Costanza, Computer Science and Artificial Intelligence Lab
Wilson D'Souza, Information Services and Technology, Co-chair
Joseph Flynn, Lincoln Laboratory
Steven Gass, Libraries
Christopher Hill, Department of Earth, Atmospheric and Planetary Sciences
Marc Jones, School of Humanities, Arts, and Social Sciences
Allison Parisi, Budget, Finance and Treasury
Taeminn Song, Information Services and Technology
Jane White, Human Resources Department
Carol Wood, Office of Sponsored Programs

Students:
Evan Broder, Undergraduate, Department of Electrical Engineering and Computer Science
Emilio Nanni, Graduate, Department of Electrical Engineering and Computer Science

Student Life

Faculty:
Robert Berwick, Department of Electrical Engineering and Computer Science
Steven Lerman, Chancellor's Office, Department of Civil and Environmental Engineering, Co-chair
Anne McCants, History Section
Muriel Medard, Department of Electrical Engineering and Computer Science, Co-chair
Robert Silbey, Department of Chemistry
Julie Soriero, Department of Athletics, Physical Education and Recreation
Charles Stewart, Department of Political Science
Kim Vandiver, Department of Mechanical Engineering

Staff:
Costantino Colombo, Chancellor's Office, Dean for Student Life
Peter Cummings, Office of the Dean for Student Life
John Donnelly, Budget, Finance and Treasury
Sandra Harris, Office of the Dean for Student Life, Housemaster
Pamela Schickling, Office of the Dean for Graduate Education
Blanche Staton, Office of the Dean for Graduate Education

Students:
Michael Bennie, Undergraduate, Department of Electrical Engineering and Computer Science
Liz Denys, Undergraduate
Kevin McComber, Graduate, Materials Science
Eleni Orphanides, Undergraduate, Economics
David Singerman, Graduate, Science, Technology, and Society

Revenue Enhancement

Faculty:
Angela Belcher, Department of Materials Science and Engineering
Klavs Jensen, Department of Chemical Engineering, Co-chair
Chris Kaiser, Department of Biology
Philip Khoury, Office of the Provost, History Program, Co-chair
Richard Larson, Department of Civil and Environmental Engineering, Engineering Systems Division
Donald Lessard, Sloan School of Management
Thomas Levenson, Program in Writing and Humanistic Studies
Ernest Moniz, MIT Energy Initiative
Roberto Rigobon, Sloan School of Management

Yossi Sheffi, Engineering Systems Division
Charles Sodini, Department of Electrical Engineering and Computer Science
Li-Huei Tsai, Department of Brain and Cognitive Sciences
Robert van der Hilst, Department of Earth, Atmospheric and Planetary Sciences
Victor Zue, Computer Science and Artificial Intelligence Lab

Staff:
Daniel Barkowitz, Student Financial Services
Karl Koster, Office of the Vice President for Resource Development
Jason Pontin, Technology Review
Beth Raffeld, Office of the Vice President for Resource Development

Students:
Paul Baranay, Undergraduate, Biological Engineering
Lorenna Lee-Houghton, Graduate, Biological Engineering

Data And Analysis Group

Staff:
Gillian Emmons, Office of the Vice President for Finance
Deb Leitch, Office of the Executive Vice President and Treasurer
Allen Marcum, Office of the Vice President for Finance
Lydia Snover, Office of the Provost

Appendix III

Master List of Ideas

Institute-wide Planning Task Force
Ideas Presented by the Working Groups

Working group	Number	Idea	Short Description of Idea	Recommended Action
Academic Education		**Accountability and Associated Metrics**		
Academic Education	1	Flexible metrics for measuring efficiencies	Academic units to measure and understand the resources utilized to provide education to both graduate and undergraduate students and draw upon that awareness to identify inefficiencies and adjust resources.	FORM: TEAM #3
Academic Education	2	Improve understanding of faculty workloads	Academic units to measure and make transparent faculty teaching loads to ensure that teaching loads are fairly distributed and balanced with non-faculty teaching staff.	FORM: TEAM #3
Academic Education	3	Program evaluation	Deans to begin an assessment of their various programs for continued relevance, quality and importance to the overall profile of the School.	FORM: TEAM #3
Academic Education		**Higher Impact Action Steps**		
Academic Education	4	Increase productive faculty/student educational interactions	As an initial target, consider raising student to teacher ratio from 4.6. Currently: 1. There is a large variation in the expected standard teaching load for faculty across the Schools. 2. There is a large number of small classes (221 classes with less than 9 students per class). 3.Expectations of TA's is inconsistent across MIT. 4. TAs spend signficant time creating new problem sets as opposed to standard problem sets that can be re-used 5. Significant barriers exist for cross-School teaching. 6. The 12 unit class is not always the optimal size of a subject offering.	FURTHER DEVELOPMENT
Academic Education	5	Develop summer classes for GIRs and other courses	Use capacity of educational plant during idle period to increase revenue - This idea requires further study	ASSIGN: DUE
Academic Education	6	Increase undergraduate enrollment	Increase the number of undergraduates by 10%, from about 4,200 to 4,600. Idea requires further study of impact, including housing analysis and financial aid impacts. The assumption is that the incremental teaching costs from additional students is very low for many subjects and for many departments.	ASSIGN: EMG
Academic Education	7	Soften faculty salaries	a. Increase academic year salary distribution to research funds -- savings potentially shared between GIB and faculty discretionary funds. b. Shift January salary distribution to research funds -- savings potentially shared between GIB and faculty discretionary fund. c. Explore possibility of "returning" to faculty some portion of overhead funds collected on research beyond a certain volume threshold.	ASSIGN: VPR
Academic Education	8	Change RA tuition subsidy	Consider a reduction in the academic year tuition subsidy from the GIB from 50% to 45% (i.e., 55% paid from grants). Further study is required as to the desirable size of the graduate student and post doc population.	ASSIGN: VPR
Academic Education	9	Cap balances in faculty discretionary accounts	There are approximately 375 endowed faculty chairs. Idea is to more tighly manage the funds provided to the chair holders as annual scholarly allowances by considering a reduction in the annual allowance and not allowing more than two years' allowance to be held in discretionary accounts.	NOT AT THIS TIME
Academic Education	10	Change drop/add dates	Move add- and drop-date earlier in the term or have them coincide on the same day to reduce fluctuation in class size during the term and resulting additional costs.	ASSIGN: DUE
Academic Education	11	Modify faculty compensation	a. Freeze salaries or give a lower than usual increase for one or more years. b. Consider discontinuing contributions to retirement accounts after a certain age, perhaps tied to Social Security eligibility.	ASSIGN: PROVOST
Academic Education	12	TA Cost Abatement	Currently, roughly 600 graduate students receive financial support as a TA each term. In addition to stipends, TAs receive full tuition support. TA appointments and utilization vary widely among departments with regards to roles, responsibilities, expectations and reimbursement methods of TAs, highlighting the different methods of using teaching staff across the Institute.. a. Match appointment and pay to actual TA effort. b. Consider providing every doctoral student with at least one semester of teaching experience for course credit in lieu of pay.	ASSIGN: DGE
Academic Education		**Lower Impact Action Steps**		
Academic Education	13	Increase number of special students	a. Offer excess capacity in existing undergraduate class to the general public for a fee on a term-by-term basis. b. Require visiting students who attend classes to pay.	FORM: TEAM #2
Academic Education	14	Eliminate Athena clusters	Use and importance of clusters has decreased now that 95% of students have laptops; certain clusters have very low levels of usage and should clearly by closed; others areas are still heavily used during peak hours and peak times of semester. Further study is required on how students and faculty actually use the Athena clusters before any drastic action is taken to close any of the heavily used clusters.	ASSIGN: DUE
Academic Education	15	Limit printing in Athena clusters	Reduce waste and promote "green" practice; consider a per-page printing fee to achieve result.	ASSIGN: VPIST
Academic Education	16	Centralize graduate admissions	Migrate all departments to graduate admissions system owned and maintained by EECS to streamline IT support and reduce the overall cost of maintenance.	ASSIGN: DGE

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Academic Education	17	Reduce costs for alternative freshman programs	MIT currently provides three alternative teaching models for freshman: the Experimental Studies Group (ESG), Concourse, and Terrascope. Institutionalize these programs and create savings by: a. decreasing the number of Science instructors associated with ESG and Concourse by approximately 50% and substitute with faculty, making ESG/Concourse part of the normal departmental assignments b. consider disbanding Terrascope or integrating it with other alternate freshman programs or departments	ASSIGN: DUE
Academic Education	18	Enhance professional education	Currently, MIT offers relatively few educational programs that unequivocally bring in revenue. There are some professional masters programs and a small boutique program of short professional courses. Currently, the main beneficiaries of the revenue coming in from the Professional Education programs are the faculty instructors. Idea is to expand professional masters programs and professional courses to leverage the MIT brand and target students who would pay full tuition to the Institute. This idea requires further study.	FORM: TEAM #2
Academic Education		**Other Strategic Studies**		
Academic Education	19	Study and understand graduate education model	The work of the Task Force has shed new light on the activities of the Insitute and generated insights for how new efficiencies can be realized. However, this process has also raised new questions that require more time to answer. The idea is to research and model the finances and processes of the Institute to gain a better systems-level understanding of how MIT actually works.	FORM: TEAM #3
Academic Education	20	Study impacts of graduate financing plan	Currently, many graduate students are admitted to departments for doctoral study with offers of funding that are only for their first year. The idea is to require departments to have a plan for supporting their doctoral students beyond the first year and optimally for four or five years, contingent on the student making good progress, possibly resulting in a smaller number of stronger and better supported students.	ASSIGN: DGE
Academic Education	21	Right-sizing the graduate population	MIT and Stanford are the only members of the Ivy-Plus group with an uncontrolled (i.e. free to grow with research volume) graduate student population and MIT is the most dependent on externally funded research assistantships (RAs) of the Ivy-Plus Group. The idea is to understand the marginal cost of a graduate student for different types of students (e.g., Ph.Ds, S.M.s, M.Engs, and MBAs) that have different costs and revenues associated with them to understand the true costs of providing graduate education.	ASSIGN: DGE
Academic Education	22	Study impacts of time-to-completion	Research the feasibility of reducing Ph.D. time-to-completion, as well as mechanisms/incentives for achieving reduction; study outlying students.	ASSIGN: DGE
Academic Education	23	Manage faculty positions better	Currently, roughly 60 to 70 faculty positions remain unfilled in a given year. In general, these TBA slots and the GIB budget allocations associated with them are allowed to remain in departments. "TBA funds" are then applied to replacement teaching costs or to general department operating costs.Idea is as follows: a. Deans to take a more active approach in managing unfilled faculty slots and GIB budget allocations each year, allowing Schools to evolve strategically. b. Reduce the number of unfilled positions	ASSIGN: PROVOST
Academic Education	24	Eliminate the physical education requirement (alternate models)	The PE requirement adds costs to the academic degree programs. Alternative models that enhance the independence and leadership skills of the students, while maintaining, if not improving upon, the rigor of the fitness program include: a. Similar to TAs, using exemplary undergraduate athletes as PE instructors b. Fulfilling the time requirement with cardio machine/swimming laps c. Counting intra-fraternity and dormitory competitions towards PE d. Abolishing IAP offerings and long weekend hiking/climbing trips e. Using life-guard/CPR certified students who earn PE credits as swimming instructors	ASSIGN: DUE
Academic Research		**Laboratories and Centers**		
Academic Research	1	Consolidation of smaller labs and centers	Some labs and centers (LCs) have research volume and administrative complexity that may not justify committing MIT resources to their administration. Smaller LCs should be evaluated to determine whether their goals could be achieved more efficiently by merging them with other LCs.Idea is to develop evaluation criteria for consolidation or elimination that will be used to assess all existing LCs, followed by periodic reviews. Cost reductions to the GIB from consolidating or eliminating some LCs would come primarily through having fewer directors, assistant and associate directors, and administrative staff for labs and centers.	FORM: TEAM #3
Academic Research	2	Sharing of Lab/Center Infrastructure	Idea is to encourage LCs to share various types of infrastructure, including administrative support, IT systems, financial management systems and lab facilities. Cost reductions to the GIB would come primarily through having fewer staff and fewer facilities and systems to maintain. Extending this idea to encourage new faculty to use existing specialized facilities or upgrading such facilities to meet their needs may also reduce the need for large start-up packages for new faculty.	ASSIGN: VPR

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Academic Research	3	Re-evaluation of criteria for MIT support to Labs and Centers	The guidelines used by MIT to set support to director salaries, discretionary funds, assistant or associate directors, and administrative officers is based entirely on research volume and does not appear to have been revisted since 1995. Idea is as follows: a. Reevaluate support provided to labs and centers to maximize value of direct support b. New criteria to be set for evaluation of support deserved and needed by labs and centers; provide support on a case-by-case basis; expect labs and centers to use other sources before GIB; encourage labs and centers to cover part of directors' salaries from grants whereever possible, with some sharing of savings between GIB and department funds	FORM: TEAM #3
Academic Research	4	Re-evaluation of intellectual property and royalty distribution	Current formula for distributing income from intellectual property (IP) very roughly is 1/3 each to the Institute; to the department, lab, or center; and to the individual inventor. Idea is to leave apportionment to inventors at 1/3, re-allocate MIT apportionment between GIB and department relative to inputs of money and effort with creating the IP.	ASSIGN: VPR
Academic Research		**Research Administration**		
Academic Research	5	Post award administration - financial reporting and forecasting sharing of Lab/Center infrastructure	Transition from DLC-specific forecasting processes to standard on-line forecasting and modeling tool. Formulate a team of administrators to share best practices to support the development of the new tool. Create a policy for regular reporting of forecasted results. This type of tool is currently under development through sponsorship of the Office of the VP for Research. Idea is to fast-track the effort to accelerate realization of efficiencies.	ASSIGN: VPR
Academic Research	6	Standardize sponsored research proposal process	In FY 08, MIT submitted over 2,200 new proposals to over 200 sponsors for research funding. The process is complex. Some sponsors require highly prescriptive formats while others are more flexible. Process efficiencies can be realized by: a. Developing a single proposal preparation process that incorporates best practices for consistently preparing and presenting budget information b. Formulating a team of OSP, TLO and faculty reps to review, map and refine the non-federal proposal process c. Developing templates, tools and best practices for MIT-wide use d. Developing and delivering training to all individuals in the process	ASSIGN: RACC
Academic Research	7	Research administration training for faculty and staff	Training classes related to research administration are currently offered by mulitiple central units (OSP, VPF, IS&T). There is no"recommended curriculum based on roles, and a signficant amount of the learning takes place on the job. The learning curve is steep, and the decentralized nature of the training perpetuates local processes that differ across the Insitute. Efficiencies can be realized by: a. Developing a comprehensive research administration training program, with role specific certification b. Developing a PI training program for all new faculty; encouraging existing faculty and PIs to attend This idea builds upon the RAII recommendations.	ASSIGN: RACC
Academic Research	8	Review staffing of Units	Currently, there are over 100 DLCs managing sponsored research funds. Federal regulations and compliance requirements, as well as specialized tools such as Grants.gov, have made research administration increasing complex. Ideas to ensure compliance, efficiency and the highest level of service are: a. Centralize research administration whereever possible b. Develop standard practices and expectations for all of MIT's research administration staff and implement a required training/certificate program c. Establish size thresholds for local research admin support. Pursuing ASO type models for small DLCs and strengthening ties to Dean's office regarding oversight. d. Explore development of appropriate metrics for research administrative staffing levels	ASSIGN: RACC
Academic Research	9	Enact efficient procedures for industrial research contracts	Industrial research volume was $200 million in FY 08 and growing. Grow revenue by developing a separate process for negotiating industrial research contracts with strict timelines to meet the higher level of responsiveness required to win and that is flexible to the different negotiation approaches and interests of the partners.	ASSIGN: RACC
Academic Research	10	Project managers for PIs	It is estimated that faculty funded by federal projects devote 58% of time to active research with the other 42% consumed taken up with administrative and compliance activities. Idea is to increase the amount of faculty time devoted to active research by hiring and sharing project managers amongst several PIs to assist with the adminstrative and compliance aspects of monitoring sponsored research activities. Pilot in one school and DLC to determine viability across campus.	ASSIGN: RACC
Academic Research		**Research Infrastructure**		
Academic Research	11	Reduce or eliminate commodities (cconsumables) supplied by internal providers	Require the "hidden" costs of space and utility usage to be included in an assessment of the cost of producing commodities in campus facilties relative to outside suppliers. Perform this analysis for one laboratory as an example and expand analysis as appropriate.	ASSIGN: VPR

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Academic Research	12	Consolidation or termination of some service facilities	There are 72 service centers in the FY 08 summary report -- with $17.2 milion in expenses, excluding the cost of utilities and the utilization of over 93,000 square feet of space. Assess the portfolio of services and evaluate the economics (including energy costs and space) and determine which facilities are cost effective and fit to Institute needs. Consider phasing out or consolidating some facilities that are not cost effective and do not have a mission critical to the research program.	FORM: TEAM #3
Academic Research	13	Implement shared equipmentpool	Large amounts of equipment are purchased each year to start up programs and then are set aside when projects are discontinued. It is estimated that 10% of the present equipment inventory is surplus that would likely be useful to other groups. Present equipment purchase levels indicate that about $5 million in equipment per year might be resuable. Idea is to create a point system to encourage groups to make their surplus equipment available that can be used towards the cost of borrowing equipment from the pool.	ASSIGN: VPR
Academic Research	14	Development of a new research facility such as Light Source	The Institute in the past has been host to major research facilities in the physical sciences, such as the National Magnet Lab and Bates Linear Accelerator. Capitalize on new national interest on scientific research to develop a major new facility (in the multiple hundreds of million dollar cost range) to bring in new research and increased overhead recovery. One idea for such a facility is a state-of-the-art light source.	NOT AT THIS TIME
Academic Research	15	Evaluation of research-library journal subscriptions and conference proceedings	Part of the F&A recovery supports the use of the libraries by the research community. Replace hard-cover subscriptions to research journals and conference proceedings with on-line versions.	ASSIGN: LIBRARIES
Academic Research	16	Web inventory of service centers	There are at least 72 service center facilities, many of which are used by a limited number of researchers within a specific lab or center, although such facitiies are available to the whole MIT community. Idea is to improve utilization of these capabilities by creating a web inventory of the service centers to help the entire MIT research community understand what exists.	ASSIGN: VPR
Academic Research	17	Amortization of service center equipment	Allow service centers to amortize the purchase cost of equipment to shift costs from Institute funds to sponsored research funds. The current policy only allows service centers to replace equipment with funds from a pool adminstered by the VP for Research.	ASSIGN: VPR
Academic Research	18	Lab equipment "time share" system	Equipment purchases by the DLCs totalled over $300 million between 2004 and 2008. Nearly 40% of these purchases were made using MIT funds. A 10% reduction would reduce cash outlays by about $2.5 million per year and save space, energy and maintenance costs. Create a web-based inventory of eqipment for temporary transfer or shared use.	ASSIGN: VPR
Academic Research		**Research Personnel**		
Academic Research	19	Charge academic year salary to grants	In 2008, faculty AY salaries totaled $128 million -- 73% or $94 million was paid by GIB. Every 1% shift to research saves the Institute about $1.6 million, including benefits. Idea is to share the savings between the GIB and department funds.	ASSIGN: VPR
Academic Research	20	Incentives for retirement	The idea is to identify incentives that will encourage people to retire at predictable milestones. Ideas include: a. Making the current program to incent retirement a bit more generous b. Stopping MIT 401k contributions when employees reach a certain age c. Replacing lifetime tenure with a long-term contract	NOT AT THIS TIME
Academic Research	21	Termination policy for Senior and Principal Research Associates	Senior and principal research associates currently are given enhanced severance benefits beyond what is offered to other MIT employees, usually 1-3 years of notice prior to lay-off, as opposed to a termination period based on the number of years of service. Idea is to eliminate this for new hires and make it consistent with general MIT policy.	ASSIGN: VPR
Academic Research	22	Mentoring for Postdocs	We have a large population of post docs who have been here much longer than the allowed 4 years. To improve the quality of the postdoctoral experience, the idea is to provide a mentoring system that encourages them to think of their employment as a temporary position that should be followed by employment in a different category, either at MIT or elsewhere. NSF is now requiring mentoring plans for postdocs, and it is likely that other funding agencies will follow suit.	ASSIGN: VPR
Academic Research	23	Consolidation of salary decisions	Decisions about the levels of increases for both adminstrative and technical staff could be made centrally within large units. This is unlikely to produce savings, but it could correct an inequities.	ASSIGN: VPR
Academic Space		**Overarching Ideas and Principles**		
Academic Space	1	MIT's physical infrastructure should be recognized as part of the endowment	In this way, investments in addressing deferred maintenance and other actions that require near-term investments but accrue benefits over a long time can be appropriately compared to alternative investment options.	ASSIGN: EVP

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Academic Space	2	Invest in preventative maintenance	MIT currently under-invests in regular preventative maintenance and therefore spends more on costly, reactive repairs with a resulting decrease in space functionality and a net increase in total costs; this practice also increases campus energy use. Idea is to identify priorities and structure a program of capital investment to accelerate capital renewal and address the Institute's deferred maintenance. The goal is to bring existing facilities to a level of physical condition that can be sustained by routine maintenance.	ASSIGN: EVP
Academic Space	3	Endow maintenance and energy costs when fund-raising for new buildings	Currently, the long-term maintenance and energy burdens of capital projects and renovations are not explicitly calculated when making project design decisions. Currently decisions are inappropriately weighted towards first costs, rather than long term costs -- in some cases driving us away from lower-cost, more energy efficient options. The Institute should consider "endowing" maintenance and energy costs when fund-raising for new buildings or major renovations.	ASSIGN: EVP
Academic Space	4	Adopt a stronger cost-based and schedule-based approach to capital and major renovation projects	In the recent past, there are examples at MIT of capital projects (e.g., Sydney-Pacific) that adopted a "developer philosophy" (fixed budget, fixed schedule, limited options, and typically lower costs per square foot). Conversely, there are examples of capital projects (e.g., Simmons Hall and Stata) that adopted more of an "institutional philosophy" (budget and schedule typically increase over time, unique, specialized, purpose-built designs, and typically higher costs per square foot -- both initial costs and long term costs). For future investments, MIT should carefully consider the objectives of the projects in this context.	ASSIGN: AP Space
Academic Space	5	Economies of scale, bundling of renovations, and co-location of like functions	MIT should look for economies of scale, both in terms of back-filling opportunities when space is relinquished bundling of renovations, and co-location of like functions (computer clusters, wet labs, etc.) Much of what is done today is fractured, and this leads to additional costs and inefficient usage.	ASSIGN: AP Space
Academic Space	6	Design for modularity and flexibility	MIT should design for modularity and flexibility to the extent possible. Often this will lead to suboptimal performance for an initial user, but over the longer term, the benefits can be significant in terms of enabling the more effecitive use of space.	ASSIGN: DoF
Academic Space	7	Better understanding space usage	Collectively the MIT community should better understand space usage. Regular accounting of space usage and transparent public reporting of space usage will help identify opportunities for, and provide incentives for, more efficient usage.	FORM: TEAM #3
Academic Space	8	Establish a space "bill of rights"	This will identify what members of the community should reasonably expect in terms of space allocation and usage, to more clearly establish principles for ownership and allocation of space, and to provide benchmarks and standards for both space usage and also renovation and capital project costs. Best practices should be shared among DLCs, ultimately leading to the development of Institute-level recommended practices for space planning and allocation within DLCs.	FORM: TEAM #3
Academic Space	9	Accelerate space decision-making	MIT should develop processes to delegate decisions for smaller space renovations and allocation options, and generally strive to accelerate space decision-making. Currently, people sit on poorly used space because they do not have confidence in the system of space planning (e.g., they are afraid to give up space, because they won't get new space if they need it in the future).	ASSIGN: AP Space
Academic Space	10	Creating a space economy and incentives to drive behavior and efficiency	Such an economy would create incentives for optimizing space. In order to achieve this, the Institute would need to develop methods to track utilization and define standards for space. Specifically, standards for space utilization (e.g. sq.ft./person) vary widely across units. Further, very few units actually track utilization as part of a space management process. The Space Working Group suggests that establishing a method for tracking utilization is critical, and that “publication” of the utilization metrics may help drive appropriate behaviors. It is suggested that these metrics would need to be flexible to reflect the diversity of operational models across schools. MIT should strive to create incentives for a space economy to drive better behavior and efficiency. This may be best accomplished by developing a new financial model for DLCs, potentially involving space charges.	FURTHER DEVELOPMENT
Academic Space		**Renovations and Deferred Maintenance**		
Academic Space	11	Establish memoranda of understanding for renovation projects	Establish memoranda of understanding for all renovation projects to drive better behavior in limiting project scope creep. Create a process to develop a detailed project scope at project outset, to obtain buy-in from all involved parties, and track all scope changes in the same way that construction changes are tracked by change orders to avoid budget overruns and misaligned expectations.	ASSIGN: DoF
Academic Space	12	Whole-building or large-scale renovations	Improve the cost effectiveness of renovations by mimimizing the number of room-by-room renovations, This requires an investment in swing space and other approaches to address funding and management of competing urgent needs.	ASSIGN: AP Space
Academic Space	13	Project bundling to reduce costs	Currently, materials and services for renovations and capital projects are procured on a project-by-project basis. Increase efficiencies and obtain deeper discounts in the bidding process by bundling purchases for more multiple projects. Savings could also be achieved through sharing or bundling project management, architectural services and contractor supervision costs.	ASSIGN: DoF

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Academic Space	14	Raze structures to stop annual maintenance and utilities expense	MIT has a number of buildings designated as "soft" buildings, which are in very poor condition and/or occupy future sites for campus development that may be better off demolished than occupied and maintained. Requires a case-by-case analysis.	ASSIGN: DoF
Academic Space		**Space Utilization and Allocation**		
Academic Space	15	Reduce MIT's lease expenses	MIT pays about $5.2 million annually to lease about 95,000 nasf of research and administrative space. Consider relocating these spatial needs to MIT-owned property, recognizing that this requires a one-time renovation/moving expense and a continued lease expense. Address leases that have no exit strategy.	ASSIGN: AP Space
Academic Space	16	Decrease or eliminate Pool C real estate	Pool C real estate has strategic value for future campus growth, but is currently owned as investment properties. The handling of this class of properties should be systematically re-evaluated.	ASSIGN: AP Space
Academic Space	17	Reduce or charge for storage space	Idea is to increase the efficiency of our use of campus space by providing an incentive structure to use less space and charging units that are using more than their normal amount of space. This would enable us to reduce the approximately $5.2 million annually spent on leased space and the significant maintenance and energy costs for buildings that are old and suited to be razed.	ASSIGN: DoF
Academic Space		**Operations and Maintenance**		
Academic Space	18	Dispatch for utilities operations	MIT generates its own electrical and thermal power. Operations involves a complicated optimization process. Outsourcing assistance to optimize the proper mix of boilers, chillers, etc., for a given day is recommended. Based on a dispatch simulation from one vendor, the savings to MIT, net of fees, is estimated at $1.5 million.	ASSIGN: DoF
Academic Space	19	Vehicle fleet purchase and maintenance	MIT has over 225 vehicles owned and operated by approximately 40 DLCs. There is no formal policy or process for the purchase and/or maintenance of these vehicles. Purchase discounts and reduced maintenance costs can be obtained with the creation of a policy that leverages MIT purchasing power and capabilities and targeted vendor services.	ASSIGN: DoF
Academic Space	20	Energy savings through efficient fume-hood management	MIT has over 1100 fume hoods, which require significant energy. Savings can be obtained by reducing the working height of fume hoods and reducing the face velocity, as well as shutting them off when not in use.	ASSIGN: DoF
Administrative Admin Processes		**Creating a Digital MIT**		
Administrative Admin Processes	1	Modernization of the MIT travel system	Currently travelers make arrangements for air, hotel, conference fees, and related travel needs in the manner of their choosing. A complete portfolio of options would assist travelers with trip planning, payment for expenses, post-trip expense reporting and reimbursement for out-of-pocket expenses and would better serve MIT travelers and realize efficiencies.	ASSIGN: VPF
Administrative Admin Processes	2	Buy-pay process and electronic tools	Currently, only 57% of MIT procurement transactions are processed using efficient payment tools, like eCat and P-card. An analysis identified measures that could lead to 90% usage of such tools. The envisioned solution is to expand existing programs, establish new tools and do focused strategic sourcing. Wider adoption of electronic procurement and payables tools could be achieved in part by raising the per-transaction and monthly spending limits on P-cards and by increasing the number of eCat vendors from 24 to 45. Establishing new programs will also increase usage.	ASSIGN: VPF
Administrative Admin Processes	3	Budgeting	Currently, MIT's budget process is more of a budget allocation process. It lacks systematic planning for how funds will be spent and how savings (fund balances) will be used or increased. The envisioned solution is to transition to a high-level budget authorization process; eliminate (or reduce) budget changes and reallocations; develop a secure repository for financial statements; and consider elminating budget authorizations distribution. Streamlining the budget process would result in efficiencies, while also improving financial planning and reporting.	ASSIGN: VPF
Administrative Admin Processes	4	Reporting and forecasting	Currently, Reporting is done through BrioQuery, which is complicated and difficult to use. Forecasting is done through complex spreadsheets, with little consistency of format or methodology among DLCs. Envisioned solution is to provide a web-based platform for reporting and financial forecasting to achieive efficiencies, enhanced compliance monitoring, improved forecasting, and time savings across the Institute.	ASSIGN: VPR
Administrative Admin Processes	5	Research proposal submissions	Currently proposals are submitted in various forms depending on the sponosoring agency and unit, and compliance with the terms of the sponsor and MIT policies varies widely. Envisioned solution is to develop a common set of tools, templates, and practices for proposal submissions and increase training of DLC administrators which will increase the accuracy of research proposals, minimize staff time devoted to correcting errors, and reveal major policy and logistical ramifications of proposals	ASSIGN: RACC
Administrative Admin Processes	6	HR/Payroll transaction processing	Current manual system processes approximately 10,000 transactions annually. The system entails re-keying and instances of hand-carrying hard copy forms. Envisioned solution is to implement an automated process through SAPWeb, achieiving greater efficiency and accuracy	ASSIGN: VPF

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Administrative Admin Processes	7	Electronic pay stubs and W-2 forms	Currently payroll stubs are generated and mailed manually to on-campus and off-campus locations. Envisioned solution is to implement an electronic e-pay stub solution that provides individuals with access to a secure site to view pay stubs on demand or alternatively "pushes" pay stubs to pay recipients in a secure manner.	ASSIGN: VPF
Administrative Admin Processes	8	Next generation student systems	Currently, the MIT student system is a complex and pervasive enterprise system that pervades every aspect of MIT's academic mission providing the foundation for MIT's educational enterprise and initiatives. Envisioned solution is a series of projects billed as NGS3 that aim to use current technology to automate manual business processes, support business process design efforts in more than 100 functional areas, and improve services to students, faculty and staff.	ASSIGN: DUE/DGE/VPIST
Administrative Admin Processes	9	Graduate student admissions	Currently, different admissions processes are in place across the Institute. Some are paperless; others are paper based. Envisioned solution is to implement an MIT-developed paperless online graduate admissions system through which applicants apply, MIT evaluations are conducted, and decisions are made collaboratively.	ASSIGN: DGE
Administrative Admin Processes	10	Stop or reduce campus bulk mailings	Currently, any MIT organization can print materials and request distribution by MIT Mail Services.Envisioned solution is to set up a system to either stop printing of campus mailing or have opt-in options to current paper mailings.	FORM: TEAM #4
Administrative Admin Processes	11	Document retention and ownership	Currently , some record retention policies are administered by the Archives Dept, but there is not widespread knowledge of the policies, and the policies do not cover all types of records. Envisoned solution is to draft and adopt comprehensive Institute record retention policies for all records. Establish a database so records can be easily accessed. Provide for electronic document management sysytems.	FORM: TEAM #4
Administrative Admin Processes		**Other processes for further evaluation**		
Administrative Admin Processes	12	Innovative scheduling to minimize premium pay	In FY 2008, $5.5 M was spent on overtime pay across campus, excluding Lincoln Lab. Envisioned solution is to adjust methods for assigning work. One option is to create pools of on-call, part-time employees to fill needed gaps. Efforts to increase staff management flexibility will enable us to better align requirements with staff schedules.	ASSIGN: DoF
Administrative Admin Processes	13	Faculty search	Currently, there is a disparate process for applicant submissions, which is reliant upon expensive advertisment posts and in some cases significant manual labor. There is no sharing of best practices. Envisioned solution is to develop a single online system to support the faculty search process and identify opportunities for coordination and savings related to advertising.	ASSIGN: PROVOST
Administrative Admin Processes	14	Nonfaculty recruiting and search	Currently, DLCs use HR Staffing Services for only 25% of the 1,100 searches each year for non-faculty positions. Envisioned solution is to encourage greater use of HR Staffing Services by DLCs seeking to fill non-faculty positions.	ASSIGN: VPHR
Administrative Admin Processes	15	Vacation tracker for nonsponsored exempt staff	Currently, non-sponsored exempt staff members track their own vacation time accrued and used, and only some of those staff members report time used to their vacation administrator for local tracking. At termination, vacation balances are given to Payroll for payout. Envisioned solution is to implement a SAPWeb-based centralized vacation tracker for all exempt staff, based on the system currently being implemented for sponsored-research staff.	ASSIGN: VPHR
Administrative Admin Processes	16	In-house services versus outsourcing	Currently, each year, roughly $9 million is spent annually on facilities-related services, both with the Department of Facilities and externally. Many of the service activities are routine enough that they require full-time contractor staffing. Envisioned solution is to require an in-house proposal when issuing a request for proposal (RFP) for contracted services in situations where the services are envisioned to be continual. The in-house competitive bid can help insure that procurement decisions are made with all options available.	ASSIGN:DoF
Administrative Admin Processes	17	Shuttle services	Current shuttles provide 22.1K hours of service to 661K riders throughout Boston. The FY 08 budget was $1.4 million, with a small revenue stream of $57K from charters and fee-based trips (airport, grocery). Envisioned solution is to reduce potential redundancy of routes (both within Shuttle Service and the MBTA), reduce frequencies, increase fee-based service for non-core routes, and increase frequency of community members choosing healthier options.	ASSIGN:DoF
Administrative Admin Processes	18	Key request process	Currently, there is a manual, paper-driven process for requesting and issuing the roughly 4,700 keys requested each year.The process sometimes requires multiple visits by requestosr before keys are available. Envisioned solution is to automate a process through SAPWeb for requesting keys.	ASSIGN:DoF
Administrative Admin Processes	19	Room scheduling and events registration	Currently, there are various scheduling processes involving faculty, students,and administrators. Event registration is a manual, decentralized process. Envisioned solution is to implement a central tool for room scheduling and event management across the Institute.	NOT AT THIS TIME
Administrative HR/Benefits	1	Moderate salary increases	This is a short-term opportunity to reduce costs. If continued over a longer period of time, it would compromise MIT's competitive position	ASSIGN: PROVOST

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Administrative HR/Benefits		**Health Plan for Active Employees**		
Administrative HR/Benefits	2	Add copay for services received at MIT Medical facility	Currently, there is no co-pay. Recommendation is based on a copay for same visit type in commercial plan. Change will be needed to comply with Mental Health Parity Act (effective 1/1/2010). The savings potential is estimated at $600,000 per year, based on 60,000 visits at $10 copay.	ASSIGN: VPHR
Administrative HR/Benefits	3	Consolidate current plan offerings to one multiple tier offering with all insured risk in single pool	Redesign current healthcare program to consolidate current plan offerings to one multiple tier offering with all insured risk in one pool. Estimated annual savings potential is $200,000.	ASSIGN: VPHR
Administrative HR/Benefits	4	Leverage excess capacity at MIT Medical	Provide financial incentives, through copay differentials, to encourage all medical plan participants to utilize specified services at MIT Medical by self-referring. MIT Medical currently has excess capacity and can provide these services at a lower cost than the commercial plan networks. Services include mammograms, EKG, stress tests, and routine lab panels. The estimated annual savings potential in combination with #5 below is $500,000.	ASSIGN: VPHR
Administrative HR/Benefits	5	Incent employees to use lower cost providers for radiological services	Charge differing copays for radiological services based on "preferred" provider selection would guide employees and medical providers toward more efficient facilities. Estimated annual savings potential in combination with #4 above is $500,000.	ASSIGN: VPHR
Administrative HR/Benefits	6	Leverage MIT Medical covered population in annual rate negotiation with Blue Cross Blue Shield	This would lower administrative costs. The estimated annual savings potential is $25,000-$50,000	ASSIGN: VPHR
Administrative HR/Benefits	7	Reduce rate of growth for prescription medication expense in healthcare program	Access discounting available through MIT Medical and continue to add management features available through Express Scripts. Estimated savings potential: $250,000.	ASSIGN: VPHR
Administrative HR/Benefits	8	Eliminate MIT paid spousal subsidy for employees covering a divorced spouse	MIT currently covers approximately 70 divorced spouses, with 34 divorced spouses enrolled in family or employee & spouse coverage. Current procedure is to allow an employee to keep a divorced spouse in the family unit until either the employee or ex-spouse remarries. Estimated annual savings potential is $120,000-$200,000.	ASSIGN: VPHR
Administrative HR/Benefits	9	Revisit and reaffirm cost-sharing formula or modify	Revisit current cost-sharing formula and determine whether savings from other program recommendations can be used to offset expense of MIT contribution increase. This moves MIT's active healthcare program to a more competitive position with our peer comparison group. Cost TBD based on contribution sharing formula selected.	ASSIGN: VPHR
Administrative HR/Benefits		**Health Plan for Retirees**		
Administrative HR/Benefits	10	Change reimbursement strategy for Medicare eligible retirees on Medex	For employees who retire on or after 1/1/2010, change reimbursement strategy for Medicare eligible retirees on Medex program from Coordination of Benefits to Government Exclusion. Requires retirees to pay 20% of the amount that is eligible for Medicare but is not paid by Medicare. On a $200 expense, this method would require retirees to pay $4. Estimated savings: $1.5 million annual savings, $16 million FASB 106 funding liability decrease recognized over 4 years.	ASSIGN: VPHR
Administrative HR/Benefits	11	Implement new cost-sharing formula for retiree healthcare program	This eliminates complex, service-based calculation. Idea is to freeze MIT's contribution at retirement and lower spouse's subsidy to 50% of retiree's subsidy.	ASSIGN: VPHR
Administrative HR/Benefits	12	Health coverage for retirees with 5-10 years of servuce	Allow employees who retire with between 5 and 10 years of service to purchase retiree health coverage by paying the full cost. Provides access to coverage and is cost neutral.	ASSIGN: VPHR
Administrative HR/Benefits	13	Eliminate MIT paid life insurance that follows employees into retirement	Eliminate MIT paid life insurance that follows employees into retirement	ASSIGN: VPHR
Administrative HR/Benefits		**Retirement**		
Administrative HR/Benefits	14	Revise 401(k) plan to change current match to a discretionary match.	Reduce MIT's matching contribution to the 401(k) plan from 5% to 4% -- match 100% of the first 3% contributed by employees and 50% of the next 2% contributed by employees.	ASSIGN: VPHR
Administrative HR/Benefits	15	Freeze qualified spousal benefit	The qualified spousal benefit is a death benefit to a surviving spouse above and beyond that provided by a joint and survivor payment option.	ASSIGN: VPHR
Administrative HR/Benefits	16	Eliminate pension disability benefits	Currently, employees who become disabled and qualify for MIT's long-term disability coverage continue to accrue benefits in the basic pension plan untl they are 65.	ASSIGN: VPHR
Administrative HR/Benefits	17	Change actuarial methodology used to accrue benefits after 65	Method currently in use provides very generous benefit accrual after attaining age 65.	ASSIGN: VPHR
Administrative HR/Benefits	18	Cap service for pension formula	Cap service for pension formula	ASSIGN: VPHR
Administrative HR/Benefits	19	Change cash balance plan interest rate credit	Change cash balance plan interest rate credit	ASSIGN: VPHR
Administrative HR/Benefits	20	Effective for new hires on or after 01/01/2010, eliminate formula benefit	Implement for employees hired on or after 1/1/2010.	ASSIGN: VPHR
Administrative HR/Benefits	21	Effective for new hires on or after 01/01/2010, reinstall 3-year vesting requirement	Implement for employees hired on or after 1/1/2010.	ASSIGN: VPHR
Administrative HR/Benefits	22	Freeze formula benefit accruals (defined benefit formula) for all participants effective 7/1/2010	Implement for all current participants effective 7/1/2010.	ASSIGN: VPHR

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Administrative HR/Benefits	23	Reduce cost volatility by changing investment strategy in defined benefit (DB) plan	Reduce cost volatility by changing investment strategy in DB plan	ASSIGN: VPHR
Administrative HR/Benefits	24	Eliminate supplemental pension accruals	Impacts individuals making more than $230,000.	ASSIGN: VPHR
Administrative HR/Benefits		**Paid Time Off**		
Administrative HR/Benefits	25	Eliminate 5th week vacation accrual in 10th year of service	Eliminate 5th week vacation accrual in 10th year of service	ASSIGN: VPHR
Administrative HR/Benefits	26	Implement formal tracking system for administrative use of vacation time	Savings potential through improved level of accountability and verified account balances for payout at termination.	ASSIGN: VPHR
Administrative HR/Benefits	27	Accrual of sick time for Support and Service staff	Change method of accrual of sick time for Support and Service staff from annual accrual based on anniversary date, to monthly accrual. Savings potential through improved level of accountability.	ASSIGN: VPHR
Administrative HR/Benefits	28	Extended Sick Leave (ESL) policy	Change practice for maximum absence under Extended Sick Leave (ESL) policy so that employees are no longer eligible to use an additional 26 weeks of ESL after sick leave accrual is exhausted. Savings TBD	ASSIGN: VPHR
Administrative HR/Benefits	29	Implement Short Term Disability program	Implement Short Term Disability program that will replace 60% of pay after one week of absence for up to 26 weeks, when long term disability becomes available. Savings TBD	ASSIGN: VPHR
Administrative HR/Benefits	30	Discontinue practice of counting paid time off for purposes of calculating overtime worked	Discontinue practice of counting paid time off for purposes of calculating overtime worked	ASSIGN: VPHR
Administrative HR/Benefits		**Transportation and Parking**		
Administrative HR/Benefits	31	Implement salary-based contribution toward cost of parking on campus	MIT has historically subsidized the cost of parking on campus and provided various incentives for employees to take public transportation and avoid parking on campus. The estimated cost of a parking space on campus is $3,000 per year. Implement salary-based contribution toward cost of parking on campus, with those making $125,000 and more paying 50% of market rate next year and those making less than $125,000 subject to the 11% increase. Estimated annual savings $500,000.	ASSIGN: VPHR
Administrative HR/Benefits		**Temporary Help and Consultants (Joint with Procurement Task Force)**		
Administrative HR/Benefits	32	Reduce temporary help and consultant expense	MIT temps currently processes payroll forms for over 500 temporary positions annually. The dollar amounts are quite large. The working group estimates the potential for an overall savings of between $60 and $80 million spent on outside professional services. a. Negotiate a single vendor management contract with an outside firm b. Develop internal systems and management discipline to maximize use of expertise within the MIT workforce before turning to temporary or consulting services	ASSIGN: VPHR/VPF
Administrative Procurement		**Procurement - Cross Cutting Process Improvements**		
Administrative Procurement	1	Reduce the number of purchasing choices	Currently, there is an over-abundance of choice, which should be reduced in ways that aggregate purchases and thus drive down costs and drive towards sustainability.	ASSIGN: VPF
Administrative Procurement	2	Automate and streamline key processes	Currently, many procurement processes are still based on paper requisitions, reimbursement forms, manual filing and audits, etc. This will not only reduce costs significantly but also enhance the transparency and even accuracy of the entire procurement process.	ASSIGN: VPF
Administrative Procurement	3	Educate the community about procurement processes	Currently, many people involved in the ordering of goods or services have never been formally trained in how best to use MIT's electronic catalogues and purchasing cards, how to take advantage of special deals with particular vendors, or even how to accurately allocate the correct account number or code for individual purchases. This creates inaccuracies and re-work.	ASSIGN: VPF
Administrative Procurement	4	Renegotiate and bid out contracts for key goods and services	Develop strong, transparent, long-term relations with a small number of key vendors.	ASSIGN: VPF
Administrative Procurement	5	Promote sustainable purchasing practices	Examples include reducing small orders, automating processes where ever possible, migrating towards multifunctional machines, promoting videoconferencing vs. frequent travel, simply reducing the amount of goods we consume on campus every day.	ASSIGN: VPF
Administrative Procurement	6	Ensure that costs savings are not achieved at the expense of others.	Ensure that costs savings for certain goods and services do not enhance our well-being at the expense of others. Example: temporary workers	ASSIGN: VPHR/VPF
Administrative Procurement	7	Develop creative solutions and fair policies	Develop creative solutions and fair policies for the numerous employees who will be impacted by our proposed changes (i.e. internal job banks)	ASSIGN: VPHR

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Administrative Procurement		**Procurement - Information Services**		
Administrative Procurement	8	Standardize personal computing purchases on Dell PCs	In the last fiscal year, Dell and Apple had a relatively even 50/50 split of the total laptops purchased (955 Dell to 883 Apple), while 70% of desktops purchased were Dell. Idea is that standardization allows MIT to better utilize signficant campus agreements in place for Windows and Office software, leverage more time/cost-effective repair and maintenance over the lifecycle of the computer, and take better advantage of the substantial volume of business transacted with Dell. Estimated potential savings is $800K per year.	ASSIGN: VPIS&T/VPF
Administrative Procurement	9	Standardize on a common solution for all web/audio/video conferencing services at MIT.	Currently, MIT uses a variety of web, audio and video conferencing services for meetings, colloborations, events, and conferences -- requiring coordination and planning. The selection of Webex will allow MIT to leverage the existing community around Webex, establish better volume pricing, and centralize our conferencing services with single click web access, without the need for the coordination and planning of today's solutions. Additional data is required to estimate savings.	ASSIGN: VPIS&T/VPF
Administrative Procurement	10	Reduce the number of fax machines throughout MIT	Currently. MIT maintains a significant number of Fax machines simply for occasional use. Leverage VoIP infrastructure to move stand-alone fax machines to new centralized services that allow members of the MIT community to send and receive faxes through email.	ASSIGN: VPIS&T/VPF
Administrative Procurement	11	Purchase only MIT recommended desktop and laptop configurations	Reduce the amount of customization within the MIT recommended desktop and laptop configurations and also to reduce the amount of models and choices available in the MIT recommended choices. Savings potential is estimated at $1.4 million.	ASSIGN: VPIS&T/VPF
Administrative Procurement	12	Change purchasing card rules to make it possible to buy computers directly on a purchasing credit card	Eliminate time-consuming purchase order requirement.	ASSIGN:VPF
Administrative Procurement	13	Examine the impact of the $3,000 capital equipment rule on computer purchases	Eliminate incentive to pad purchases with unnecessary products so that item is capitalized instead of expensed.	ASSIGN:VPF
Administrative Procurement		**Procurement - Facilities**		
Administrative Procurement	14	Consolidation of design services leading to partnering agreements	Design services on renovation projects represented $6.34 million in FY 2008. Of this amount 61% or $3.9 million was for repetitive projects that could have benefited from a partnership approach. 43 separate firms worked on 135 projects in FY 2008.	ASSIGN: DoF
Administrative Procurement	15	Leverage facilities related purchasing power across departmental boundaries	Approximately $15 million of facilites-related purchases, excluding construction, were purchased outside of the Department of Facilities, while the Department of Facilities purchased $8 million. Savings potential estimated at $450K per year.	ASSIGN: DoF
Administrative Procurement		**Procurement - Furniture and Laboratory Supplies**		
Administrative Procurement	16	Combine MIT campus and MIT Lincoln Laboratory furniture procurement	IN FY 2008, Campus purchased $1.5 million in furniture and Lincoln Lab spent $1.2 million (excluding technical furniture). Savings potential is estimated at $75K per year.	ASSIGN:VPF
Administrative Procurement	17	Elminate independent buying from Office Depot	In FY 2008, Campus bought $63,000 of furniture at Office Depot. If the remainder of furniture purchases were made through Office Depot, MIT could have saved an estimated 10% on those purchases. Estimated potential savings is $6K per year	ASSIGN:VPF
Administrative Procurement	18	Convert lab supply and equipment orders < $5K to eCAT/Sciquest or procurement card transactions	FY 08 total lab supplies and equipment purchases were $74.37M - $9.1M, spent on 15,176 orders processed via orders with total amounts less than $5K using manual processing. Estimated potential savings is $30k-96K to GIB, $500K-$1,700K total	ASSIGN:VPF
Administrative Procurement	19	PCARD/eCAT rebate	Rebate was lost by processing orders less than $5K manually.Estimated potential savings is a $75k-$194K rebate per year GIB.	ASSIGN:VPF
Administrative Procurement	20	Renegotiate existing lab supply and equipement contract with VWR Scientific	VWR has currently offered a one-time $350K rebate to be applied to the Insitute's GIB-one time rebate is estimated savings	ASSIGN:VPF
Administrative Procurement	21	Create savings by negotiating scientific equipment contracts with suppliers that currently have GIB spend greater than $100K	The FY 08 GIB spend for lab supplies and equipment was $4.7 million. Nine suppliers exceeded $100,000 in purchases. Estimated potential savings - TBD.	ASSIGN:VPF
Administrative Procurement	22	Renegotiate existing Lab Supply contracts for Sciquest/ECAT suppliers with high volume	Three suppliers total $1.5 million. Estimated potential savings - TBD.	ASSIGN:VPF
Administrative Procurement		**Procurement - Administrative Supplies and Travel**		
Administrative Procurement	23	Use a BanK of America (BOA) travel card with corporate liability	Current practice requires travelers to request an advance or pay out of pocket and seek reimbursement. Use of the credit card for travel will result in rebate income to MIT.	ASSIGN:VPF
Administrative Procurement	24	Concur expense reporting and online booking (Cliqbook)	Current practice requires travelers to reconcile expenses with manual processes that are paper driven, time consuming and challenging to manage -- 31,000 reimbursements are processed each year. On-line booling and expense reporting would eliminate these manual processes. Estimated potential savings is $85k-$127K per year.	ASSIGN:VPF
Administrative Procurement	25	Consolidated travel agency model	Consolidate external travel vendors, introduce a complementary on-line booking system, and consolidate MIT and Lincoln Lab travel offices.Estimated potential savings is $1 million per year.	ASSIGN:VPF

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Administrative Procurement	26	Direct air and national hotel contracts	Currently MIT is a member of the Medical Academic and Scientific Community Organization (MASCO) and has adopted its airline contract pricing structure. Proposal is that MIT negotiate its own direct contracts with air and hotel providers and utilize the MASCO agreement or other if/when they are more favorable.Estimated potential savings is $5.7 m-$7.6 million per year.	ASSIGN:VPF
Administrative Procurement	27	Electronic travel reimbursements	Currently, paper forms are completed to request reimbursement for out-of-pocket expenses for business travel.Direct deposit of these reimbursements would replace paper checks generated for this purpose. Estimated potential savings - TBD.	ASSIGN:VPF
Administrative Procurement	28	Accelerating Green Procurement @ MIT	Support 100% recycled product purchases.Estimated potential savings - TBD.	ASSIGN:VPF
Administrative Procurement	29	Onsite life science operation	MIT's partner for cylinder management (Airgas East) has proposed on onsite solution (state of the art cryogenics facility, encompassing products, services and value added efficiencies geared toward reducing MIT's costs, streamlining mission critical processes and shrinking the Institute's carbon footprint. Estimated potential savings -TBD.	ASSIGN:VPF
Administrative Procurement	30	Airgas proposal	Extend the existing partnership agreement.Estimated potential savings is $70k-$80K per year.	ASSIGN:VPF
Administrative Procurement	31	Vendor consolidation for clerical temporary help	Continuation of vendor consolidation and reducing choice of vendors.Estimated potential savings $600K per year	ASSIGN:VPF
Administrative Procurement	32	Transition from laser jet printers to multifunctional devices	Currently there are 751 copiers and 4,220 printers as part of central inventory system - combine with Institute wide plan to reduce total amount of printing on campus. Estimated potential savings is $3.5 million per year.	ASSIGN:VPF
Administrative Procurement	33	Office supplies - update core contract list, implement a minimum order value of $50 and limited view catalog	The core contract list is for 427 items, which represents 38% of the business. Idea is to update the list to the top 239 items to achieve a $70,822 product savings by lowering prices on products not previously on the core list. Estimated potential savings is $435K per year.	ASSIGN:VPF
Administrative Procurement	34	Office supplies - rebid office supplies	Initial term ends 12/31/2009 - recent third party audit states that MIT has highly competitive pricing structure - but economic conditions may allow further savings. Estimated potential savings - TBD.	ASSIGN:VPF
Administrative Procurement	35	Reduction of small dollar purchase orders processed by MIT procurement	Procurement processes 125,000 purchase orders on a yearly basis, over 46,000 of which are less than $5,000 and are not processed through ECAT system. Idea is to establish and enforce new policies that require use of procurement card or ECAT for small purchases.Estimated potential savings $120k-$180K per year.	ASSIGN:VPF
Administrative Procurement		**Procurement - Temporary Staff and Consultants**		
Administrative Procurement	36	Employee job share bank	Create a central database to track available employees and share resources. Estimated potential savings - TBD.	ASSIGN: VPHR
Administrative Procurement	37	In-house casual labor	Converting casual labor workforce from outside agencies including NextSource to in-house.Estimated potential savings - TBD.	ASSIGN: VPHR
Administrative Procurement	38	Implement a vendor management system	A VMS is an Internet-based procurement application outsourced to a temporary agency which is responsible for managing the process for all outsourced procurement activities outsourced to them. This would require the community changing the way we procure professional services.Estimated potential savings per year: $480-$720 GIB, $8M-$12M total.	ASSIGN:VPF
Administrative IT		**IT @MIT - Standardization**		
Administrative IT	1	Centralize purchasing and management for computer hardware	Currently a loosely managed process. Idea is to standardize a small number of hardware options and then centralize purchasing, installation, maintenance, support and eventually disposal and replacement .Estimated potental savings per year is $1.7 million.	ASSIGN: VPIS&T/VPF
Administrative IT	2	Centralize purchasing and management for computer software	MIT spends over $4 million on software licenses and software management. Savings can be realized with 1. Enterprise-wide licences and quantity discounts, 2. Standardizing on a small number of software products 3. Open source software .Estimated potential savings: TBD.	ASSIGN: VPIS&T/VPF
Administrative IT	3	Centralize online process for graduate admissions	Current process is paper driven, costly and inefficient. Idea was also proposed by the Education and Administrative Processes Working Groups.	ASSIGN: DGE
Administrative IT	4	Decustomize administrative enterprise systems	MIT was an early adopter of SAP, which required major customization -- some capabilities are now standard.Potential savings would be realized from reducing developer time and making processes more efficient. Estimated savings of $2.6 milion per year.	ASSIGN: VPIS&T
Administrative IT	5	Decustomize educational enterprise systems	WEBSIS, Stellar and OCU are the three enterprise educational systems. Decustomizing will require some changes in how MIT does business. Potential savings would be realized from reducing developer time and making processes more efficient. Estimated $0.6 million per year in savings.	ASSIGN: VPIS&T
Administrative IT		**IT@MIT - User-centered IT Systems**		

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Administrative IT	6	Remove pain points in using MIT enterprise systems	Many user interfaces are awkward and prohibit tasks from being done efficiently. Far more emphasis needs to be placed on improvements to the way we provide management information to support our business. MIT administrators estimate that they spend 10-20% of their time translating transactional information into management information. Potential productivity savings are estimated at $1.5 million.	ASSIGN: VPIS&T
Administrative IT		**IT@MIT - Outsourcing**		
Administrative IT	7	Outsource voice and video communication	MIT currently installs and manages its own voice telephone system. Operating costs are estimated at $3.2 million/year and capital costs are estimated at $6 million per year. It is estimated that outsourcing could potentially save 30% of current annual operating costs or $1.3 million.	ASSIGN: VPIS&T
Administrative IT	8	Replace landlines with mobile phones	Currently almost all employees have landlines and also about 10% have cellphones. Proposal requires a serious RFP process but potential savings are estimated at about $0.5 million per year.	ASSIGN: VPIS&T
Administrative IT	9	Remove disincentive for outsourcing research technical support services	Currently this work is done by 1. graduate students, postdocs or research staff; 2. permanent staff and 3. outside vendors. Outside vendors are often a the best solution but overhead is charged on all of these services, creating a disincentive.Idea is to renogotiate overhead rules so that the overhead charge is exempted for amounts over $25K, consistent with subcontracts.	ASSIGN: VPIS&T
Administrative IT		**Streamline operations for IT at MIT**		
Administrative IT	10	End support for selected IT products and services	Over the years, MIT has collected many IT products and services that are no longer appropriate for support -- They are out of date, used by few people, or better altermatives are available.Estimated potential savings from closing or de-supporting some services is $1.2-$1.8 million but requires further investigation.	ASSIGN: VPIS&T
Administrative IT	11	Reduce printing costs	Modifying the way printing is done is estimated to save about $4.3 million or 58% of the total annual printing costs. Ideas are as follows: 1. active print management, 2. elimination of banner pages, 3. duplex printing, and 4. toner savings.	FORM: TEAM #3
Administrative IT	12	Streamline help-desk support and outsource as appropriate	MIT has several departments providing help desk IT services to either the entire community or within their own DLC. There is substantial overlap in services provided. Potential savings are estimated at $1.5 to $2 million annually across the Institute.	ASSIGN: VPIS&T
Administrative IT		**Streamline the governance structure for IT at MIT**		
Administrative IT	13	Reorganize committees and organizational units related to IT	IT at MIT suffers from an overabundance of advisory committees and organizational units, coupled with unclear processes for decision making, often times resulting in a great deal of effort expended to achieve very little.Savings are difficult to quantify but potentially large.	ASSIGN: VPIS&T
Administrative IT		**Innovation and strategic advantage**		
Administrative IT	14	Support location-independent work	Formally provide technological and organizational support for "location independent work." Potential savings are estimated at $4.4 million, with $2.7 million from a reduction in office space and $1.7 million in productivity savings.	FURTHER DEVELOPMENT
Administrative IT	15	Create a more cost-effective research-computing environment	Research computing is at the heart of the MIT community's knowledge-generating work. It is often done in a scattered ad-hoc manner across the campus. Idea is to have a more coordinated centralized approach so that space, cooling and power can be shared (and possibly network infrastructure). Estimate of potential off-campus research computing power savings is $3.5 million.	ASSIGN: VPR
Student Life	1	Fee structure for visiting students	The number of reqistered visiting students has risen dramatically (from ~200 in 2003 to ~650 in 2008). Faculty currently pay a one-time $1,000 fee per visiting student, regardless of a student's duration of stay.Idea is a new an higher pro-rated fee that would cover more overhead.	ASSIGN:DGE
Student Life	2	Improvement of housing utilization during the Summer	Currently, housing utilization during the summer is low, particularly in undergraduate dorms -- all dorms remain open. Idea is to have a more rational utilization of our housing stock during the summer by defragmenting the use of dorms so that they are either fully used by our students, by MT programs or outside programs, or are closed to residents other than year-round residents, such as GRTs and housemasters. Potential savings is estimated at $1.1 to $4.5 million.	ASSIGN: DSL
Student Life	3	Relaxation of four-year on-campus housing commitment	Currently, undergraduates have been de facto guaranteed four-year on-campus housing. Potential savings is based on not going forward with W1 project -- estimated at $2.5 million in yearly savings.	ASSIGN: EMG
Student Life	4	Metering of dormitories	Current cost of metering the remainder of the dorms is estimated at $790K. Current annual energy bill for the dorms is $8 million. Energy savings based on Google metering is 5-15%. If a midpoint of 10% were achieved, savings would be $800K. If we shared with students, savings would be $400K.	ASSIGN: DSL

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Student Life	5	Adjusting financial aid to true food costs	Currently, the board (food) component of the cost of education does not accurately reflect the actual student expenditure on food. This results in a discrepancy in the financial aid MIT allocates for board and students' actual food expense. The MIT board cost is set at $4,460 per academic year. A recent survey found student self-reported expenditures on food ranged from $1,700 to $2,240 per academic year. The idea is to reduce the board component of financial aid to $3,000 per academic year for students who decline the meal plan. Board would remain at $4,460 for students on the meal plan. This change would provide an incentive for students to opt for the meal plan, which would benefit the MIT dining program financially and lead to better student nutrition. It would also lead to significant savings in financial aid allocated to students who decline the meal plan. Potential savings: If board is set at $3,000 and 80% of students decline the MIT meal plan, $2.4 million in UG financial aid savings would be realized.	ASSIGN: EMG
Student Life	6	Implementation of meal plan changes in house dining -- fall 2010	An examination of the Blue Ribbon Committee's (BRC) proposed meal plan changes found the changes would lead to a reduction in MIT's approximately $500K annual subsidy of the dining system. The idea is to provide a $600 dinner plan in place of the current $300 dinner plan as a requirement for new students as of fall 2010. Among the foreseeable benefits of the new plan are that it would create revenue stability and attendance predictability.	ASSIGN: DSL
Revenue Enhancement		**Scalable Educational Platforms**		
Revenue Enhancement	1	Online freshman year	Would radically change MIT culture. Revenue potential of $50-$100 million. Not recommended.	NOT AT THIS TIME
Revenue Enhancement	2	Selected undergraduate subjects for credit via e-learning	Web-based, for-credit, distance-education subjects to learners worldwide. The for-credit subjects would have 24/7 on-line TAs, homework submission, and grading and graded examinations. Revenue potential of $60 million.	FORM: TEAM #1
Revenue Enhancement	3	E-learning masters degrees	Masters degrees at a distance (via asynchronous "e-learning") to both individual learners and to groups of mid-career professionals at companies. On-line support would be offered by 24/7 graduate TA teams. An extensive market analysis, stratified by different market segments worldwide, would be needed. Revenue potential of $30 million.	FORM: TEAM #1
Revenue Enhancement	4	MIT continuing education program (extension studies)	Develop full continuing education degree or certificate program to be executed weekday evenings on the MIT campus and 24/7 online using a modified OCW platform and content. Non-regular faculty to teach on-campus courses. Revenue potential of $10 million.	FORM: TEAM #1
Revenue Enhancement	5	MIT Lifetime Academy	MIT provides early, mid and late career education to advance alumni professionally and personally - in the form of short courses and modules, on campus and at a distance by e-learning. Estimated revneue $9-$45 M	FORM: TEAM #2
Revenue Enhancement	6	Partnerships with corporate universities	MIT preferred partner to corporate universities with a strong scientific and technical orientation. Revenue potential is greater than $10 million.	FORM: TEAM #2
Revenue Enhancement	7	Executive/professional education to enhance corporate partnerships	Complement research in leading corporate relationships with significant custom executive/professional education programs. Revenue potential is $20-$30 million.	FORM: TEAM #2
Revenue Enhancement	8	MIT Energy Pathways	A thematic set of educational offerings that cuts across a variety of delivery mechanisms is proposed. This package of subjects/courseware could be exploited in several on/off campus revenue enhancement schemes. Revenue potential of less than $10 million.	FORM: TEAM #2
Revenue Enhancement		**Corporations and Government**		
Revenue Enhancement	10	Large-scale institutional initiatives	Groups of faculty and researchers within MIT participate in large, interdisciplinary, institutional initiatives. Research income: modest GIB impact. Revenue potential: $10's of millions.	ASSIGN: VPR
Revenue Enhancement	11	Lower cost-recovery rate for foundation research grants	Policy changes to allow charging less than the rate established by the ONR for recovery of overhead costs for research projects funded by foundations. Revenue potential: $30+ million.	ASSIGN: VPR
Revenue Enhancement	12	Foreign government collaborations	International colloborations with foreign governments, in the style of SMA, MIT-Portugal, etc. Requirement for a fixed (say 10%) contribution to the GIB for all such agreements exceeding $10 million/year. Revenue potential: 10's of millions.	ASSIGN: VPR
Revenue Enhancement	13	Transition laboratories	Establish labs and/or teams of faculty and researchers to perform applied research for industry. Primarily research support, but potential for contribution to GIB in form of fees and royalties. Revenue potential: 10's of millions.	ASSIGN: VPR
Revenue Enhancement	14	Expansion of Office of Corporate Relations/Industrial Liaison Program	Increase the number of officers by 5 to expand ILP member portfolio by 50 to 230-240 companies to increase fees, research, and gifts, plus corporate development for major MIT initiatives. Revenue potential: $6 million.	ASSIGN: VPRD

Institute-wide Planning Task Force
Ideas Presented by the Working Groups

Revenue Enhancement		**Issue Based Groups and Individual Donors**		
Revenue Enhancement	15	MIT research multiplier fund	Contributions from individual and corporate donors to match additional funds from private foundation, supporting research, educational projects and other worthwhile initiaitives at MIT. Potential for reduction of unrestricted gifts to MIT. Revenue potential: $25 million.	ASSIGN: VPRD
Revenue Enhancement	16	Expansion of the resource development program	MIT's resource development is efficient but has significantly less staff than peer institutions. Officers currently manage 4,200 prospects, but the Institute has the potential to engage some 3,200 already identified additional major and principal gift prospects. Revenue potential: $25 million.	ASSIGN: VPRD
Revenue Enhancement	17	Expansion of acceptable gift planning vehicles	Generate incremental revenue by expanding its gift planning marketing efforts and gift acceptance policies to include additional instruments, e.g. charitable lead trusts, pooled income funds, and retained life estate gifts of real estate. Revenue potential greater than $10 million.	ASSIGN: VPRD
Revenue Enhancement	18	Market the MIT brand	Devise a business model to vend Institute merchandise cost-effectively to specfic, targeted markets. Revenue potential: $1-5 million.	ASSIGN: PROVOST
Revenue Enhancement	19	Forge high-return alumni connections: "William Barton Rogers Visitorships"	A visitorship for distinguished alumni, who, in conjunction with a signficant gift on the order of $150,000 would come to the MIT campus for an academic year. Revenue potential: $2 million.	ASSIGN: AA
Revenue Enhancement		**Exploiting Physical Assets**		
Revenue Enhancement	20	Maximize use of MIT owned real estate	Attract developer to build conference center (with hotel, retail space, and renovated MIT museum) where MIT provides conference content and outside party runs facility. MIT already has a very capable real estate development office that is profit driven. Revenue potential: not quantified.	ASSIGN:EVP/MITIMCo
Revenue Enhancement	21	Dorm room summer rental	Dorm rooms rented during the summer for academic confernences and other MIT-affiliated events during the summer. Revenue potential: $0.5 million.	ASSIGN: DSL
Revenue Enhancement	22	Replace library roaming stacks with new business model	Phase 1: MIT reinvents "roaming stacks" in libraries by removing them, saving thousands of square feet of prime real estate for more productive purposes (including moving high-rent MIT offices onto campus). Revenue potential: $0.5 million. Phase 2: MIT and its partners change the library book delivery business model into a for-profit national company. This company is the first of several delivering routine services to colleges and universities. Considerable revenue potential not quantified.	ASSIGN: LIBRARIES