Report of the Academic Affairs Sub-Committee
Strategic Planning Task Force
UMass Boston 2025: A Campus Transformed
June 8, 2010

OVERVIEW

Co-chairs: Donna Kuizenga and Bala Sundaram

Committee Members: Joan Becker, Jeffrey Burr, Donna DeGennaro, Jacqueline Fawcett, Judith Goleman, Andrew Grosovsky, Robyn Hannigan, Laura Hayman, Peter Kiang, William Kiernan, Jean-Pierre Kuilboer, Joan Liem, Anna Madison, Esmaeil Mahdavi, Maura Mast, Theresa Mortimer, Stephen Mrozowski, Denise Patmon, Russell Schutt, Dan Simovici, Rajini Srikanth, Karen Suyemoto, Roberta Wollons, Zong-Guo Xia.

Charge: The charge to this committee is to help the university focus on areas of academic programs and research, that will 1) identify UMass Boston regionally, nationally, and globally as a leading student-centered, urban, public research university; 2) improve the long-term learning, teaching, and (more generally) working environment; 3) complete the tasks, related to 1 & 2, which have been left uncompleted in the last strategic plan; and 4) contribute to the economic development of the communities which UMass Boston serves.

The Committee’s Work: The committee met in full session on March 1, March 24, April 8, April 26, May 11, and May 26, 2010. Meeting minutes and relevant documents were posted on the committee’s wiki space. The committee also constituted two working groups, one on the university’s future research profile, and one on teaching and learning at both the undergraduate and graduate levels. These workgroups, whose membership is listed below, provided draft recommendations to the full committee for its discussion.¹

Research Profile Work Group:
   Jeffrey Burr (convener), Joan Liem, Robyn Hannigan, Esmaeil Mahdavi, Laura Hayman, Stephen Mrozowski, William Kiernan, Roberta Wollons, Jean-Pierre Kuilboer, Zong-Guo Xia

Teaching and Learning Work Group:
   Rajini Srikanth (convener), Judith Goleman, Esmaeil Mahdavi, Andrew Grosovsky, Maura Mast, Dan Simovici, Karen Suyemoto

The committee’s open hearing for the campus community was held on March 29, 2010. In addition, information was solicited from the deans about current and future areas of research strength. (See Appendix 1.)

¹ Diann Simmons, assistant dean of the College of Liberal Arts and doctoral student in leadership in higher education, provided able support to the committee.
This report is the result of a process of discussing, questioning, and refining a broad series of recommendations on the university’s future academic mission. The thoughtfulness and insight of the committee’s members, as well as the input from the open hearing, have helped shape the vision of a vibrant future characterized by the synergies of research, teaching, and learning.

MAJOR GOALS

In 2025, the University of Massachusetts Boston will be known nationally and internationally as a public research university whose program of basic, applied, and community-engaged research will generate new knowledge and will be the “intellectual engine” for local, state, regional, national, and international organizations and issues. Our students, both undergraduate and graduate, will be engaged in deep learning, working with active researchers and developing the sophisticated intellectual skills they will need to succeed in the twenty-first century. Our teaching and research will be seamlessly integrated and characterized by continuous improvement through innovation, cross-disciplinary collaboration, assessment, and peer review.

By the year 2025, the University of Massachusetts Boston will have:

- achieved a Carnegie Research/High ranking;
- increased external funding for research;
- expanded its global reach and impact;
- strengthened its innovative undergraduate curriculum in a way that both deepens learning and allows students to move beyond the scope of their own experience and become world citizens;
- supported the success of its students as measured by increased graduation rates and their attainment of major educational goals which are articulated and assessed on an on-going basis; and
- expanded its graduate offerings, especially at the doctoral level, fully integrating graduate students into the research and teaching life of the university.

Our success will be measured by attaining a Carnegie/High ranking, by increasing our extramural funding, by increases in research productivity both funded and unfunded, by an increase in the awards, prizes, and honors won by our faculty, by increased graduation rates for undergraduates, and by increased numbers of doctorates awarded in programs with acceptable completion and time-to-degree rates. In attaining this research status, we will consciously nurture the synergies between research and

\[\text{Carnegie Ranking System: the parameters for moving up in the Carnegie system include (a) number of doctoral students graduated per year, (b) annual research and development expenditures, and (c) number of non-tenured research personnel (e.g., post-docs). While these are benchmarks, the evaluation of rankings takes a “blended” approach. UMass Boston currently ranks near the bottom in many of these categories.}\]

\[\text{Here we allude not only to the six-year graduation rate for first-time first-year students, but increased graduation rates for all our students, no matter what path they come to us by.}\]
teaching that are essential to our future as a public research university with a strong commitment to the success of all of our students.

Discussion of Major Goals

We recognize that we are a large and complex university where definitions of research, scholarship, and creative activity mean different things in different disciplinary and interdisciplinary contexts. Our research does and will range from basic to applied to community-engaged. What unites our undertakings is that all are held to the highest standards—national and international—applicable to the activities. For some fields, the generation of extramural funding is an appropriate and expected activity. More broadly, peer review is the accepted measure of research, scholarship, and creative activity. Only by holding to standards of excellence, and only by having a rich palette of research, scholarship, and creative activity, can we promote synergies in inquiry and give our students access to cutting-edge knowledge and understanding that, in many cases, is not yet in the textbooks.

As members of an active research community, our undergraduate and graduate students should be taught and mentored by active researchers, often working together in vertical teams. Our student population is heterogeneous – traditional, non-traditional, urban, suburban, full-time, part-time, international, English-language learners, entering freshmen, transfers, and graduate students. Many are well prepared, others less well prepared for the challenges of study at a research university. They also often bring substantial strengths – skills and perspectives gained from life experiences. Our responsibility is to provide them all with learning opportunities in a variety of settings that allow them to both build on their strengths and expand their scope of knowledge and capabilities so that they may become effective and successful global citizens.

REMAINING WORK AND IMPLEMENTATION

Between the present day and 2025, the university must build the faculty and infrastructure necessary to achieve these ambitious goals. As we move forward we must not lose the identification of issues and solutions contained in the work that undergirds the 2007-2010 Strategic Plans, notably the reports of the Academics Sub-Committee and the Research and Graduate Studies Sub-Committee. This continuity will also help us define realizable intermediate goals and targets en route to the institution envisaged for 2025.

We must be much more intentional in cultivating and rewarding success in research, scholarship, and creative activity, making it clear that enhancing our research profile is a central university priority. This recommendation can be implemented by providing resources to successful individuals and programs. It can be implemented by consciously reforming the rhetoric we use to promote this institution and its contributions, so that
research, scholarship, and creative activity are always at the forefront. This in no way means that we will abandon our commitment to teaching, but rather suggests that we have erred in the past by not foregrounding our role as a research university. We must rectify this as we must continually reaffirm that research and teaching go hand in hand and are not two competing priorities.

In the years to come, we will need to make difficult decisions about the allocation of resources. The most basic principle that must guide us is that we can neither devote all resources to strengthening existing programs nor all our resources to new programs. In every area discussed in the rest of this report, this question must be answered. There is a diversity of views, both on our committee and between our committee and the Academic Enrollment Planning Sub-Committee, on what the distribution of investments should be, and whether this distribution should deal only with new revenues or with the allocation and reallocation of current revenues. Views range from the belief that there should be fairly radical reallocation to areas of excellence, to a proposal that new revenues should be split evenly between core investments and investments in innovation, to the view that we should invest the bulk of our resources—75 to 80%—in the core and the remaining 20 to 25% in new programs and innovations. Given these wide-ranging scenarios, one of our recommendations for action in 2010-2015 is to make a decision on our investment strategy going forward.

In the short term, the key steps we need to take to meet our goals by 2025 are:
- building the tenure-stream faculty;
- developing additional doctoral programs; and
- developing a network of infrastructure and support that will make it possible to realize our goals.

Discussion: Building a Faculty for 2025

As we survey our current situation, we see that relative to our peers and to our aspirations, the university has too few tenured and tenure-track faculty members. It is our view that rectifying this should be the university’s highest priority. Our research success grows as we hire tenure-stream faculty whose responsibilities include research as a major component of their work and as we increase the numbers of doctoral students, post-doctoral students, and research faculty.

This emphasis also provides new opportunities for deep and engaged learning to our undergraduate students, for which we must have sufficient faculty who are active researchers and able to give students individual or team research experiences. Our current faculty demography cannot adequately support such an environment.

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4 While some units have the resources to trumpet their achievements, others do not. We must either provide resources to the units for this or make it a priority of our communications operation to assist them in this.

5 The committee intends this recommendation to mean also the need to invest in the core (understood in terms of areas of research and inquiry, centralized support for student success, instrumentation, and so forth) and in innovation (new programs and new synergies of new and existing programs, for example).
The next section of this report provides detailed recommendations about faculty hiring. Faculty hiring alone is insufficient, however, without carefully planned program development, a strong professional development program, and classroom teaching obligations consistent with both our research ambitions and our need to provide better faculty mentoring of undergraduate and graduate students. Many of these aspects affect both programmatic quality and our ability to retain faculty. Finally, another crucial ingredient, infrastructure and support (financial, human, and material), must keep pace with faculty and program building.

**Faculty Hiring**

New faculty lines and replacement hires (meaning replacements for faculty who leave employment at UMass Boston) are the quickest and surest path to changing our research and teaching culture. It is not just a matter of numbers but rather it is the composition of the faculty that makes a difference. While we have made effective strategic hires in a number of areas over the last eight to ten years, we must make much greater commitments moving forward.

We need to establish *principles* for the distribution of new faculty lines and for hiring replacement faculty. From the highest administrative offices to the hiring units to individual faculty members (to the degree possible), there should be a shared commitment to these principles, and the principles should be public knowledge. Some of these principles are listed below.

- New faculty lines should be targeted to enhance existing strong programs and new programs with evidence-based upside potential, while replacement lines should be used to strengthen core programs. The development of a pre-emptive rather than a reactive strategy for making replacement hires would also help in maintaining and expanding programmatic strengths.

- Candidates must have a strong commitment to teaching and engaging students on the undergraduate and/or graduate level, and a commitment to the responsibility of a public university to educate a diverse population of students.

- Candidates should be evaluated with respect to national standards in research or creative productivity for their specific fields. New hires should be characterized by these standards, *and* these standards should be applied without exception in tenure and promotion reviews.

- Each hire should have a proven ability to generate external funds (or the clear potential for such activity in the case of junior faculty) when this is consistent with the candidate’s field of research.

We must also change the ways in which we do faculty hiring:

- Faculty hires should be viewed in the framework of targets of opportunity.
• Cluster hiring is also an important concept (e.g., make sure that hiring in one unit complements and/or supplements hiring in another unit in a manner that facilitates building interdisciplinary strength in key areas as well as building departmental strength).

• New lines and replacement hires offer opportunities writ large to both extend and in some cases replace professional networks, yielding more opportunities for graduate and undergraduate success as well as the development of potential research clusters within and across institutions.

• We should ensure that promises to new faculty hires (and their home units) are promptly honored. In other words, commitments that do not have a reasonable chance of being fulfilled should not be made.

• Searches that do not yield the results implied above should be closed. Units should not be penalized for closing searches that do not meet these objectives (i.e., units that are not successful in hiring under these principles should automatically receive hiring approval for the following recruitment season). In other words, giving hiring units the confidence, incentives, and authority to accomplish the goals of building an enhanced research profile is essential.

In implementing a faculty hiring plan, we should maximize the impact of factors that can give us a competitive advantage. These include:

• attractiveness of our public mission and urban commitment;
• our location in the Boston area;
• good start-up packages;
• relatively low cost of course releases;
• tuition and fee waivers for externally funded graduate students;
• spousal hires;
• endowed chairs; and
• strong counter-offers for key UMass Boston faculty recruited by other institutions.

Faculty Development and Retention

The standard teaching load for tenure-stream faculty with research and teaching responsibilities should be lowered to at least 2:2 consistent with most other research universities. It will be useful to have an even lower teaching load for some faculty. Whether a 4+4 curriculum is the most productive way to reach this goal will be examined by a Faculty Council-appointed committee in the next two years. We do observe however, that a change in the classroom teaching load must be implemented in a way that does not simply substitute additional responsibilities and thus result in
reduced time for research, scholarship, and creative activity.\textsuperscript{6} This adjustment in workload is an important element in retention, as faculty often leave UMass Boston for institutions with more appropriately balanced workloads.

To encourage increased levels of extramural funding campus-wide, we should value and reward submissions of grant/contract proposals as well as valuing and rewarding external funding successes. This is a recognition of both the faculty effort as well as the extreme competitiveness inherent in today’s (and projected future) funding climate. We must also understand that success here will be best fostered by valuing all forms of extramural funding, even though we are aware that some kinds can be larger or generate more overhead than others. We should use course-release options to promote grant/contract preparation.

We should establish and resource sustained mentoring programs in the areas of publishing and grant writing. This is especially important for junior faculty but should be extended to senior faculty as well. We have faculty experts on campus that can help make this happen.

To increase the percentage of successful proposals, the following steps should also be taken:

- Have unit colleagues review proposals before submission.
- Create forums to help facilitate the formation of research teams.
- Ensure that support for all facets of grant administration is improved.
- Streamline the pre- and post-award process.
- Establish core support systems (statistical support, writing support, copy editing).
- Provide resources to attend off-site workshops on grant writing and to visit funding agencies.
- Provide resources to pay for external pre-submission review of proposals.

We should provide junior faculty with teaching mentors and offer faculty development workshops for using formative assessment, just-in time assessment, summative assessment, and the articulation of learning outcomes to increase student success. We underscore the importance of the work currently underway on this campus to focus on learning outcomes. In terms of technology and teaching, professional development could include workshops that connect learning theories to technology. The associate provost for faculty development could take up this issue as a priority in the coming years. Faculty should understand the importance of and be encouraged to use a range of pedagogical approaches.

In the context of faculty development, the university should fund innovative curriculum development that expands and deepens learning. We must support faculty development programs for teaching. These programs must assist not only tenure-stream faculty but

\textsuperscript{6} We cannot count current course-load averages by including administrative releases, since many faculty have heavy administrative responsibilities, and the administrative releases, while essential in running the university, do not foster research.
also non-tenure-track faculty, who make important and highly-valued contributions to the university’s teaching work.

Finally we note that building graduate programs will have beneficial effects on undergraduate education, thus allowing us to obtain additional benefits from our investments. Development of doctoral programs with graduate assistants should wherever possible be tied to undergraduate enrollment growth aspirations. Many doctoral students need to learn to teach as part of their professional development – they can teach undergraduate sections (including large classes); they can help as teaching assistants, making large sections feasible; and they can serve as mentors and supervisors on vertical research teams that include undergraduates. Thus we must thus create a “future faculty” development program as a companion to the faculty development initiatives described above. As described later, this interfaces well with the need for increasing the post-doctoral population on campus.

Discussion: Program Development

The campus should develop additional doctoral programs beyond those that already exist or are in the pipeline. Successful programs help increase research reputation and research funding, and are responsive to UMassBoston and UMass strategic goals, including aiding the undergraduate educational experience. Our criteria for developing new programs should combine building on existing strengths with identifying new areas of demand. While having some unique programs is important, it would be counterproductive to focus on uniqueness alone. We must also identify where we are competitive in fields and interdisciplinary areas that are also present in other institutions. With this as motivation, creating venues/forums for identifying new areas of interaction or overlap should be included in the overall campus support framework.

Among the doctoral programs currently under development are the following:

- Developmental and Brain Sciences
- Counseling and School Psychology
- Applied Linguistics
- Applied Physics
- Management
- Global Studies
- Transnational, Cultural, and Community Studies

We need a change in philosophy that includes the wisdom and courage to identify, fortify, and grow flagship graduate programs. This includes building on existing strengths, finding promising new initiatives, identifying critical community issues (broadly defined), and growing our external funding profile to support this

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7 To increase graduates, some of our current doctoral programs could graduate more students; but the real growth will come with new doctoral programs.
8 As a point of reference, UMass Boston has 14 doctoral programs while UMass Lowell has 31.
9 This list includes only new programs and not new tracks in existing programs. Only Developmental and Brain Sciences has a complete proposal. It has been approved by all campus governance and is in the President’s Office.
development. Some of this work is already evident in areas such as global studies and developmental and brain sciences.

Programmatic additions should proceed with the clear recognition that doctoral programs are expensive ($500k-$1 million each) and new programs will take 5-10 years or more after they enroll their first students before they are generating significant numbers of new graduates. Thus, the benefits will not be realized for some time. For that reason, we recommend that during 2010-2011, the university begin planning which doctoral programs it will develop in the 2015-2020 time frame.

Building strong postdoctoral programs at the same time as new doctoral programs is another path to enhancing the research profile. When considering this, we need to ask whether state resources should be used for this purpose or whether the resources need to be located in other entities. We should look at post-doctoral programs not only for current and planned doctoral programs but also in areas in which we do not have and do not plan to have doctoral programs. The presence of post-docs in these areas will enhance faculty research and creative activity and strengthen our reputation as a research university.

We should also implement a program that would bring visiting and research faculty to campus on a temporary basis. Such a program would provide an excellent vehicle for bringing more international scholars to the university, stimulate and highlight institutional strengths, and promote collaborative ventures. The research faculty might be housed in the schools and colleges or in the centers and institutes.

Building doctoral programs alone will not allow us to move to the next level of the Carnegie Foundation research classification framework. We must aggressively marshal our resources to do so. For example, structures and incentives should be put in place to encourage existing centers and institutes that have a strong national/international research profile to do more to help train, support, and retain doctoral students.\textsuperscript{10}

We must build programs that foster research opportunities for our undergraduate students. The establishment of an Honors College, or an expanded Honors Program, would serve as a feeder into the undergraduate research experience. Research-apprentice programs are one model.\textsuperscript{11} We already have numerous examples of undergraduate involvement in research on campus which can serve as useful paradigms. Graduate students, especially doctoral students, and post-doctoral scholars are particularly helpful here as mentors and supervisors. In addition, the Honors Program serves as a crucible for curricular innovation that can then extend to the student body at large.

Not all students want, need, or are suited to this type of experience, nor do we or will we in the foreseeable future have the faculty resources to offer individual research

\textsuperscript{10} Centers and institutes are being systematically reviewed by the Provost's Office, and this represents an opportunity to increase these units' commitment to the educational mission of the university.

\textsuperscript{11} Currently there are some REUs from NSF on campus, and more are planned.
opportunities to all undergraduates. We should consider changing the capstone requirement from an unfunded mandate to a program with sufficient resources to provide all graduating students with an integrative experience that might be a course based on a research question, an internship, a service-learning course, or other similar experience.

We should also undertake a critical re-examination of our undergraduate programs of developmental courses in both mathematics and critical reading and writing. We need to look at national trends in terms of types and numbers of courses offered and levels of university credit granted for such courses. We must move to a situation where underprepared students do not find themselves in advanced courses in which they cannot succeed.

Each college with undergraduate educational responsibilities should be encouraged to create learning communities appropriate to its curriculum, as one size does not fit all. Each college should also show how it continually assesses the efficacy of these steps.

Discussion: Infrastructure and Support

If we are to succeed in fully realizing our promise as a public research university, we must better align our infrastructure (physical and human) with student and faculty growth and expectations.

We need to both reexamine how efficiently we use and allocate our current staff to support research and teaching, and look at alternative staffing models. We must also engage in targeted staff hiring to enhance support for research, scholarship, creative activity, and teaching and enhance the service culture of the university. As we build new programs, we must hire the staff to support them and provide the programs with sufficient operations budgets.

Currently, there are structures distributed across our campus that support student success. Given the diversity of the UMass Boston student body, we should keep in mind that there can be no single measure of student success. The Retention Committee will be making recommendations for better coordinating existing activities. Beyond this, we will need to make additional investments in student support.

Space is a critical campus-wide problem. Based on past practices, we believe that many of the problems associated with the distribution and use of space will not be solved by the construction of new buildings and the campus should acknowledge this. What the campus desperately needs is an open, deliberative process for assigning and refurbishing existing and new space. Criteria should be clear and the decision-making process should be a collaborative one including both faculty and administration. Decisions must be made in a timely way. Research space must be a priority, and we must have the courage to repurpose research space that is not associated with

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12 The allocation of support staff varies very considerably among the schools and colleges, with FTE-faculty-to-FTE-staff ratios ranging from 1/1 to 6/1. Benchmark data from other research/high universities will be helpful here.
appropriate levels of productivity. While the master planning process helps us here, there is, beyond the Integrated Sciences Complex, too little focus on research space at this point, and we need to make such space much more central to our space decisions.

We face critical issues in teaching and student support space. Discussions of teaching space, current and future (e.g., the General Academic Building) are currently underway. We must increase the variety, technological sophistication, flexibility, and availability of teaching spaces for both undergraduate and graduate courses. We must provide adequate student-support space (advising space and tutoring space, for example) appropriate to the number of undergraduate and graduate students we currently serve and will serve in the future.

In this light, it is important to note that the campus needs student housing, not only for undergraduates but also graduate students, and for short-term research faculty, especially for international faculty. To attract the brightest students for our existing and new graduate programs and to compete with our peers (recognizing that housing costs drive many potential students to other campuses), we must provide student housing.

Information technology is underfunded and lags behind our peers and aspirations. It may be that our current resources are not used as efficiently as necessary. An example of a competitive disadvantage is the campus internet speed – it is remarkably slow compared to other institutions. This directly impacts many forms of research. Further, we need an effective strategy for maintaining and enhancing faculty and staff computing – that is, for computer replacement and day-to-day support for multiple hardware platforms and software. If this is not achievable within a central IT department structure, then campus units need an infusion of resources to support the hiring of personnel and the accrual of resources for this activity. Finally, we must examine the balance of IT support for teaching and research so that both areas are adequately supported.

PRIORITIES FOR 2010-2015

- Create a five-year faculty-building plan that uses innovative approaches to increasing the number and percentage of tenure-stream faculty. To reach our goals, we estimate we should move to between 65 and 70% tenure-stream faculty. Based on fall 2009 figures, our FTE faculty is 56% tenure-stream. Thus at current size we would require a net addition of between 67 and 103 tenure-stream faculty. If the student body grows, we will need additional tenure-stream faculty and additional non-tenure-track faculty as well.
- Decide how much investment will be made in strengthening existing programs and how much in new programs. Disseminate this information and information about the investments widely.
- Build a culture of review and assessment for research, teaching, and student learning.
- Develop a financing plan for more and larger graduate stipends.
• Develop a financing plan for additional tenure-stream faculty, including funding some percentage of these on soft money rather than state funds.
• Adjust faculty workloads to make them more research-friendly.
  o Develop more large classes, while assuring that all undergraduates have a mix of small and large classes.
  o Consider alternative modes of scheduling that may be both more research-friendly and more teaching-friendly (e.g. 4+4, two-day-a-week schedules, more large teaching blocks available)
• Develop learning-community programs in all the undergraduate colleges and assess results on an on-going basis.
• Expand student support in the forms of an expanded reading and writing center and a new math resource center. This support must address the needs of both undergraduate and graduate students.
• Develop new space and redesign existing space for attractive faculty offices, graduate student and post-doctoral fellow offices, and research space suitable for the range of research conducted on this campus.
• Develop coordinated communication of information about available student support services and opportunities.¹³
• Increase the number of professional advisors in a centralized/decentralized mix.
• Make a plan during 2010-2011 for doctoral programs to be developed in 2015-2020. The process for considering possible doctoral programs should be an open and transparent one.
• Develop transparent policies that demonstrate the impact of external funding across the campus.
• Develop policies to support research, scholarship, and creative activity in fields where external funding is not available.
• Build a strong research culture that is highly visible and inclusive.
• Invest in IT to support research.

¹³ A similar recommendation will come from the Retention Committee.
Appendix 1: Research Areas Identified by the Deans

We asked for feedback from the academic deans about current and potential areas of research strength, as well as those areas which provide required synergies. The responses ranged a good deal in their levels of specificity about areas and about the required resources.14

Overall, the needed resources cited mirror the recommendations of our report:

• hiring additional research-focused tenure stream faculty;
• providing adequate research space and equipment;
• providing sufficient IT infrastructure and support;
• graduate stipends;
• startup funds;
• support staff, including grant managers;
• operating dollars; earmarks; corporation and foundation support; grant funding; and
• faculty development in the areas of research and grantsmanship.

With one exception, most units indicated that they did not have sufficient resources to underwrite their research ambitions.

Responses from the deans ranged from brief to quite detailed. Some focused on existing or emerging centers and/or degree programs, others on areas of research. Some responses included all possible areas while others focused on priorities. A number of the areas are the same as those identified in the Batelle report. It is clear that there are a number of synergies. Some examples are:

• developmental sciences and related research in learning and student success;
• health research, interventions, and policy, especially addressing health disparities;
• sustainability in a variety of areas ranging from the environment to social entrepreneurship;
• computational sciences; and
• applied ethics.

An edited version of the questions posed to the deans and their responses is found below. While a good deal of detail has been edited out of the list, this list includes all the areas identified.

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14 Responses received from CLA, CSM, CNHS, CEHD, CM, and MGS.
1) What are current areas of research strength that would be more productive with further investments?
- developmental and brain sciences
- Developmental Sciences Research Center—joint CSM, CLA undertaking
- applied linguistics
- historical archeology
- applied economics. MA
- MFA in creative writing
- research on stem learning at all levels
- research about factors that contribute to academic and social success of undergraduate and graduate students
- research about fostering academic success of English language learners at all age levels
- global studies
- health policy research and consulting center (MGS and CNHS)
- prevention and management of obesity and its co-morbid conditions
- biobehavioral interventions designed to prevent and control cancer
- prevention and management of chronic and life-threatening conditions.
- behavioral interventions designed to promote healthy behaviors
- disparities in access to preventive, therapeutic, and end-of-life care.
- biological systems and technology
- computational sciences
- environmental sciences
- STEM education

2) What areas are not now areas of research strength, but are fields or interdisciplinary areas that will be important in the future?
- applied ethics
- history; public history and archives tracks
- Atlantic studies
- survey research methods
- applied sociology
- communication studies
- research about effects of integrated wrap-around services for children and their families derived from intensive community partnerships
- research about relationships between modes of teacher preparation and students’ learning outcomes
- how targeted counseling/psychological/mental health interventions are associated with learning outcomes of students in high-needs schools
- effects of dual-enrollment opportunities on college success of participating high school students
• effects of developmental/remedial education on college success
• role of family/culture in progress of students identified as having special needs and assigned to individualized education programs (IEPS)
• interaction of cognitive impairment and substance abuse affecting learning outcomes of adolescents.
• environmental management and clean energy
• entrepreneurship and innovation
• social entrepreneurship and non-profit management
• business ethics, governance
• corporate political strategy
• regional economic development and business clusters, especially in clean tech, cultural industries, health care, and bio tech
• international business, global value chains, regional competitiveness; business strategy between the local and global
• cross-cultural management, diversity
• services marketing
• information security and computer forensics
• business intelligence and data-mining
• supply chain management
• service operations and risk management
• operational excellence
• equity and compensation
• risk management and insurance
• e-commerce, e-government
• basic and biobehavioral content and methods in existing programs of research including (but not limited to) prevention and management of obesity and its co-morbidities.
• engineering
• Center for Personalized Cancer Therapy
• Collaborative Institute on Oceans, Climate, and Security (CIOCS)

3) Are there areas that, while not identified as future research foci, are nonetheless complementary to the areas in #1 or #2 and thus need to be strengthened.
• quantitative research methods
• humanities
• health care
• entrepreneurship
• social networks and the media
• corporate governance
• business analytics (statistics research for healthcare, bio-technology/genes, cloud computing, and large data sets)
• green IT, accounting, and finance
• regulatory issues in accounting and finance
• international accounting and finance
• financial literacy
• risk management
• tourism and hospitality
• real estate
• actuarial science
• physics and mathematics.