Preface

This Report of the President’s Blue Ribbon Panel on Research began with a memo (Section I) from Mark Huddleston, President of the University of New Hampshire (UNH) on December 12, 2007. On his way to launching a search for the Vice President for Research (VPR), President Huddleston paused to note that there was “little clarity about either the appropriate structure and function of the Office of the Vice President for Research or the qualifications of the person we could wish to recruit to lead this office.” Since a Search Committee as well as a Research, Scholarship and Creative Activity Strategic Planning Steering Committee (convened by Interim VPR Taylor Eighmy) was already in place at that time, President Huddleston merged the two Committees to form the Blue Ribbon Panel on Research, and asked us to co-chair the Panel.

After the Panel met for its first Retreat on January 17, 2008, President Huddleston appointed a smaller Task Force (also known as the Working Group), consisting of ten members, including a member nominated by the Faculty Senate. The key objective of the Task Force was to carry out the preparatory work for addressing the President’s charge to the Panel, and to return to the larger group for advice and ratification through multiple Retreats, which were held on February 2, April 2, June 5, August 19, and October 21, 2008. In between the Retreats, the Task Force worked intensively, meeting once and sometimes twice a week. During the entire process, members of the Task Force met with administrators, faculty, directors of Centers and Institutes, and the Graduate Student Organization. We solicited input from all faculty members through e-mail (blue.ribbon@unh.edu) and convened open meetings in various Colleges to discuss some of the principal findings and recommendations of the Panel. We also met with the Faculty Senate on October 6, 2008. A first draft of the Report was released to the entire UNH faculty on October 13, 2008, soliciting input through e-mail. The Report was finalized and approved by the Panel (32 endorsements and 2 abstentions), and submitted to President Huddleston on October 31, 2008.

The Report is divided into six Sections. The Preamble (Section III) sets the backdrop. Sections V: Vitality of the Research Mission and VI: Office of the Vice President for Research address the first two questions posed by President Huddleston in his memo. Strategies to address the third question that relates to the integration of research into the overall academic mission permeate the entire Report. In working through these questions, it became apparent to the Panel that if UNH is to achieve greater excellence in its research mission over the next ten years, it must do so through synergistic actions at all levels of administration, colleges, and departments on multiple fronts. In Section IV, the Panel developed a much smaller list of Primary Recommendations, and in the spirit of the Lombardi principles discussed in Section III, defined a set of Metrics.

We are deeply grateful to all the members of the Task Force and the Blue Ribbon Panel for their hard work, commitment, and wisdom, and to many colleagues, too numerous to name, who were not part of the Panel but facilitated its work through their contributions and advice. We would like to single out a few for special mention: David Proulx, who was tireless in his
efforts to provide us with financial models and guidance on the various recommendations; Taylor Eighmy and Tammy Goldberg for providing us with data and several valuable reports and answers to a seemingly endless stream of questions; Bruce Mallory for giving us several opportunities to meet with him and the Dean’s Council to discuss the work of the Panel; Marco Dorfsman and the Faculty Senate Agenda Committee for meeting with us and facilitating communication with the Faculty Senate; and Kimberly Marciano, who handled cheerfully all the logistical challenges of working with a large group and its somewhat peripatetic co-chairs. One of the most gratifying aspects of our work was the discovery that the University community cares deeply about the questions that engaged the Blue Ribbon Panel, and that differences of opinion notwithstanding, the community as a whole is already involved in a broad conversation and ideas for action that hold much promise for the future of UNH.

Amitava Bhattacharjee and Jan Nisbet, Co-Chairs
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Section I. Memo to UNH Faculty and Staff: President M. Huddleston

TO: UNH Faculty and Staff

FROM: Mark W. Huddleston, President

DATE: December 12, 2007

I am writing to you about my intention to delay the search for a new vice president for research. Based on consultation with a wide range of campus constituencies, it has become evident to me that there is little clarity about either the appropriate structure and function of the Office of the Vice President for Research or the qualifications of the person we would wish to recruit to lead this office. Proceeding with the search in these circumstances seems ill-advised.

Time alone will not bring clarity, however. To take advantage of the fact that the Search Committee itself and the recently assembled Research, Scholarship, and Creative Activity Strategic Planning Steering Committee have enlisted some of the best minds on campus when it comes to matters of research and scholarship, I intend to merge these two groups, which already have considerable overlap, and reconstitute them as a Presidential Blue Ribbon Panel on Research. The panel's charge will be to lay the groundwork for a successful vice presidential search next year, and, even more important, the foundation for a robust and enduring research enterprise at UNH, by engaging the larger University community to address three key questions: (1) What does UNH need to do now to ensure the vitality of research, scholarship, and creative activity for the next ten years? (2) What is the right mission and organizational structure for the Office of Research and, by extension, the right qualifications for a vice president for research? (3) How do we ensure that research activities are integrally connected to and supportive of our broader academic mission? While I anticipate that the next vice president for research will wish to conduct his or her own strategic planning exercise, the panel's work will provide the foundation for such an exercise.

I have asked Dr. Jan Nisbet and Dr. Amitava Bhattacharjee to co-chair the panel, which will convene with an initial framing retreat early next year. I will engage a professional facilitator for that meeting and will also invite prominent experts familiar with academic research administration from outside UNH to participate. Following the retreat, Dr. Nisbet and Dr. Bhattacharjee will work with a small task force to undertake further focused analysis and prepare recommendations for timely action, consulting with the broader Blue Ribbon Panel (and others) as they deem necessary. I expect the work of this group to be completed no later than the end of April 2008, positioning us to re-launch the search by the summer of 2008.

I have asked Dr. Taylor Eighmy to extend his term as Interim Vice President. Although he has withdrawn his name as a candidate for the permanent position, I have great confidence in Dr. Eighmy and look forward to working with him to implement the recommendations of the Blue Ribbon Panel and to ensure that we have as favorable an environment as possible to resume the search.
Section II. Members of the Task Force and Blue Ribbon Panel on Research

TASK FORCE

- Amitava Bhattacharjee, Peter Paul Professor, Department of Physics and the Institute for the Study of Earth, Oceans, and Space, Co-Chair
- Thomas Brady, Dean, College of Life Sciences and Agriculture (COLSA)
- Burt Feintuch, Professor, Department of English, and Director, Center for the Humanities
- Kevin Gardner, Director, Environmental Research Group, and Faculty Senate Representative
- Jessie Knapp, President, UNH Graduate Student Organization and Doctoral Student, Department of Zoology
- Glen Miller, Professor, Department of Chemistry and Materials Science Program, and Associate Director, Center for High-Rate Nanomanufacturing
- Shelley Mulligan, Chair, Department of Occupational Therapy, College of Health and Human Services (CHHS)
- Jan Nisbet, Director, Institute on Disability, Co-Chair
- David Pillemer, Samuel Paul Professor, Department of Psychology
- A. R. (Venky) Venkatachalam, Professor of Information Systems, and Chair, Department of Decision Sciences, Whittemore School of Business and Economics (WSBE)

BLUE RIBBON PANEL

- John Aber, Professor, Department of Natural Resources
- Andrew Armstrong, Affiliate Professor, Center for Coastal and Ocean Mapping
- Barbara Arrington, Dean, School of Health and Human Services
- Amitava Bhattacharjee, Peter Paul Professor, Department of Physics and the Institute for the Study of Earth, Oceans, and Space, Co-Chair
- Jefffrey Bolster, Associate Professor, Department of History
- Thomas Brady, Dean, College of Life Sciences and Agriculture (COLSA)
- Janet Campbell, Research Professor and Director, Ocean Process Analysis Laboratory
- Richard Cannon, Vice President of Finance and Administration
- Robert Dalton, Director, Office of Research Partnership and Commercialization
- Mil Duncan, Director, Carsey Institute
• Burt Feintuch, Professor, Department of English, and Director, Center for the Humanities
• Kevin Gardner, Director, Environmental Research Group, and Faculty Senate Representative
• Jennifer Goldberg, Senior Associate Director of Major Gifts, UNH Foundation
• Ned Helms, Institute for Health Policy and Practice
• George Hurtt, Associate Professor of Natural Resources
• Jenna Jambeck, Research Assistant Professor, Environmental Research Group
• Sarah Kenick, Assistant Professor, Department of Chemistry, UNH Manchester
• Brad Kinsey, Associate Professor, Department of Mechanical Engineering
• Anita Klein, Associate Professor, Department of Biological Sciences
• Joseph Klewicki, Dean, College of Engineering and Physical Sciences (CEPS)
• Jessie Knapp, President, UNH Graduate Student Organization and Doctoral Student, Department of Zoology
• Joseph Lugalla, Professor, Acting Chairperson, Department of Anthropology
• Lisa MacFarlane, Professor of English and Interim Vice-Provost of Academic Affairs
• William McDowell, Professor of Water Resources Management, and Director, NH Water Resources Research Center
• Glen Miller, Professor, Department of Chemistry and Materials Science Program, and Associate Director, Center for High-Rate Nanomanufacturing
• Shelley Mulligan, Chair, Department of Occupational Therapy, College of Health and Human Services (CHHS)
• Jan Nisbet, Director, Institute on Disability, Co-Chair
• David Pillemer, Samuel Paul Professor, Department of Psychology
• Harry Richards, Dean, The Graduate School
• Jeffrey Schloss, Extension Professor, Water Quality
• Fred Short, Research Professor, Jackson Estuarine Laboratory
• Roy Torbert, Interim Director, Institute for the Study of Earth, Oceans, and Space (EOS)
• Stephen Trzaskoma, Associate Professor, Department of Languages, Literatures, and Cultures.
• A. R. (Venky) Venkatachalam, Professor of Information Systems, and Chair, Department of Decision Sciences, Whittemore School of Business and Economics (WSBE).
Section III. Preamble

Research is one of the three primary missions of UNH. Here we define the research mission as encompassing the full range of research, scholarship, and creative activity. Under the new classification system introduced by the Carnegie Foundation in 2005 and 2006, UNH is a “Research High” university---the only public university in the state of New Hampshire that is so classified.1

In order to assess research performance, American research universities traditionally rely on certain indicators. These indicators include, but are not limited to, research expenditures, prestigious publications and performances, faculty awards, doctoral theses completed per year, postdoctoral fellows supervised per year, election to fellowship in honor societies, membership in the National Academies, undergraduate median SAT scores, and endowment dollars invested in research. By many of these measures, the growth of research in UNH during the last two decades is impressive. But despite these accomplishments, we are at a critical juncture in our history, facing challenges and uncertainties in an increasingly competitive environment.

At the same time, our current situation provides an opportunity to better integrate our multiple missions—research, teaching, and outreach—as a land-grant, sea-grant, and space-grant university. Research universities assert, correctly, that research and instruction are synergistic and mutually reinforcing activities. Here at UNH, this Report, the ongoing institution-wide strategic planning, the work of the Faculty Senate on general education, and the recently announced review of RCM have converged to allow for a substantive and comprehensive conversation about how best to re-imagine and achieve that alignment as we go forward.

For research universities like UNH that aspire to greater excellence, it is helpful to bear in mind the Lombardi principles:2

“In our study of American Research universities, we have learned some things about improving and changing universities. Some academics find these principles uncomfortable, for their view of academic life imagines a genteel life-

1 In the new classification system, UNH is included under the basic category of “Doctorate-granting Universities” which includes institutions that award at least 20 doctoral degrees per year (excluding doctoral level degrees that qualify recipients for entry into professional practice). This category has three groups: RU/VH (Research Universities (very high research activity)), RU/H (high research activity), and DRU (Doctoral/Research Universities). In the old classification system that was last used in 1994, the category of Doctoral-grant Universities was divided into four groups: Research I and II and Doctoral I and II. UNH was listed as a Research I University.

2 John V. Lombardi, Quality Engines: The Strategic Principles for Competitive Universities in the Twenty-First Century, The Center for Measuring University performance (2001), http://mup.asu.edu/publications.html. John Lombardi was Professor of History and Provost at Johns Hopkins University, President of the University of Florida, and Chancellor at the University of Massachusetts Amherst.
style of academic contemplation, not a competitive marketplace for academic quality and productivity. For universities that choose to improve relative to their peers and relative to the national and international community of scholarship and research, the following principles prove helpful.

1) Measuring performance leads to improvement. Absent measurement, politics replaces performance as the institutional criteria.

2) Comparative measurement against the best defines the range of improvement. Measuring against the ordinary leads to acceptance of the ordinary.

3) Faculty performance drives university performance. Measurement of faculty performance against the best leads to improvement.

4) Improvement in faculty performance depends on rewarding measurable high quality and productivity. Absent rewards for measurable performance, politics replace performance.

5) University improvement comes from hiring, promoting, retaining, and rewarding the best faculty.

6) University improvement requires that the institution invest money in measurable performance. Universities that invest in improvement without measuring performance waste money.

7) Universities that match their goals with their measurement of performance and then with their investment of money improve quickly.”

In the process of developing the Blue Ribbon Panel Report, based on our conversations with administrators, faculty (tenure-track, extension, and research), staff, graduate students, and several reports and presentations, we have obtained a composite of the UNH research mission that highlights major accomplishments as well as serious challenges that lie ahead. Part of what we learned is that research in the arts, humanities, and social sciences has not been tracked consistently at UNH. As a result, some of the statistics in this report and some of the assumptions about sponsored research do not reflect the university as a whole, but are weighted heavily towards colleges and departments that receive sponsored research. This disparity is addressed in our recommendations.

RESEARCH CULTURE

Despite the formal classification of UNH as a Research High university, the results of a survey\(^3\) depicted in Figure 1 indicate that nearly 50% of respondents are unsure as to whether UNH is primarily a teaching or a research university. Eighty percent of faculty members believe that UNH is a research university; yet nearly 60% express concern that UNH culture has not caught up with the growth in research. Conversely, one fifth of faculty members believe that sponsored research is a detriment to UNH’s teaching mission. Many respondents claim that the

\(^3\) The survey was carried out by the UNH Survey Center in April/May 2005. It was web-based, and was mailed to all UNH faculty, researchers, and extension educators. The total number of complete surveys returned was 513.
research identity of the university is essentially that of sponsored research, and that unsponsored research is not sufficiently recognized and/or given enough visibility. This leads to tension and distrust between different sectors of the university, with deleterious consequences for the ecology of the research environment and the culture of the university.

At nearly all levels of administration, colleges, and departments, there is frustration at the lack of an overarching strategic vision for the research mission of the university, and of a corresponding prioritization that can guide budgetary allocations. UNH has many examples of great entrepreneurial successes in research in several colleges, centers and institutes, often made possible by the decentralization and flexibility offered by the administrative structure and the financial model; but the research and the educational mission in many sectors of the university suffer from a conspicuous lack of alignment. One is often confronted by the paradoxical situation of pockets of very significant advances in research and accomplishment in some centers and institutes, but with little anchoring in academic departments.

![Figure 1. Survey on Research Culture (UNH Survey Center 2005)](image)

RESEARCH PRODUCTIVITY METRICS

Between 1999 and 2008, grant and contract activity almost doubled. Likewise, facilities and administration cost (F&A) recovery has more than doubled over the same time period. A Report from the OVPR notes: “Although lacking a medical school, the 2005 National Science Foundation (NSF) survey shows that UNH ranks 84th (out of 150) among public universities in research expenditures. It ranks 112th (out of 625) among all universities, and 38th (out of 507)
among all universities and colleges without a medical school.\textsuperscript{4} Despite these impressive successes, there are serious concerns about the stability of the sponsored research base and the depth of grant-writing at UNH when we realize that:

- Earmarks accounted for an all-time high of 48\% of UNH awards in 2005, 39\% in 2006, and 21\% in 2007,
- About 26\% of the tenure-track faculty and 91\% of the research faculty wrote proposals to external sponsors in FY08, and
- Twenty faculty account for 65\% of the award volume. Seven of these are research faculty, who account for about 40\% of the total award volume.

\textbf{Figure 2.} Grants and contracts plus federal financial aid and F&A recovery as a function of time (courtesy, D. Proulx)

As indicated in \textit{Figure 2}, UNH reached an all time high in proposal dollars in FY04, grant award dollars in FY06, and grant expenditures in FY08. Grant proposal dollars are down in FY08 to a level slightly above FY03. The total number of proposals peaked in FY06 with 788 from a low in FY02 of 565. In FY08, the total number of proposals submitted was 742.

The trend suggests a flattening, or even a reversal of the positive trend seen in the last few years, when proposals submitted have been fewer, and awards trail expenditures. The federal government is the largest supporter of sponsored research in UNH. In FY07, the largest source of support was the Department of Commerce ($42M), mostly in the areas of marine and environmental science.

\textsuperscript{4} Taylor Eighmy and Tammy Goldberg, Hold Harmless Review Report, Office of the Vice-President for Research, July 6, 2007
UNH has improved its relationship with the private sector through the Office of Research Partnerships and Economic Development. The Office typically works closely with 30 to 50 faculty members and 150 students per year. In FY2007, royalties grew to $213K based on over 54 active license agreements with external partners. The Office signed 22 new license agreements, filed 20 invention disclosures, and filed for 10 U.S. patents. Through the New Hampshire Innovation Research Center (NHIRC), six projects worth over $400K were awarded to collaborations between faculty and New Hampshire companies to promote technology development. The total number of R&D contracts between UNH and the private sector was 87, which yielded $9.8M in support. Many research-related partnerships with the private sector involve productive relationships between the UNH Interoperability Laboratory (IOL) and its large base of industrial consortium members. There remain many opportunities to explore collaborative R&D with the private sector.

The Blue Ribbon Panel recognizes that the greatest asset of a research university is the excellence of its faculty in research, scholarship, and creative activity, and that sponsored research is not the only measure of success. However, as emphasized above, measures of performance are needed in all disciplines. Sponsored research data are regularly reported but
there appears to be no accessible and integrated database regarding research in the arts, humanities, and social sciences. This gap in data reporting has resulted in faculty in the arts, humanities, and social sciences feeling underappreciated and undervalued, particularly because they have less access to external funds. To help balance the content of this report and upon the request of the Blue Ribbon Panel, the office of the Dean of the College of Liberal Arts (COLA) provided Table 1 as a summary of the scholarly output of COLA faculty during the last two years (2006-08).

COLA has presently 231 tenure-track faculty, 15 research faculty, and 66 lecturers. The precise number of faculty members (both tenure-track and research) who have contributed to this output is not broken down in Table 1. This table illustrates the productivity of faculty, many who conduct their research without external or internal funds.

Table 1. Scholarly Output of COLA Faculty, 2006-08 (Courtesy, K. Fuld and T. Kirkpatrick)

<table>
<thead>
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<th>TYPE</th>
<th>QUANTITY</th>
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<tr>
<td>Journal Articles</td>
<td>492</td>
</tr>
<tr>
<td>Books and Monographs</td>
<td>62</td>
</tr>
<tr>
<td>Edited Volumes</td>
<td>44</td>
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<tr>
<td>Book Chapters</td>
<td>261</td>
</tr>
<tr>
<td>Book Reviews</td>
<td>176</td>
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<tr>
<td>Exhibitions</td>
<td>76</td>
</tr>
<tr>
<td>Performances</td>
<td>498</td>
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<tr>
<td>CDs</td>
<td>13</td>
</tr>
<tr>
<td>Compositions and Commissions</td>
<td>53</td>
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<td>External Fellowships</td>
<td>17</td>
</tr>
<tr>
<td>External/National Awards</td>
<td>31</td>
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BARRIERS TO CONDUCTING RESEARCH

Many barriers to conducting research have been identified by faculty. Time and lack of graduate student support were the two most frequently cited. Nearly 80% of those who responded to the survey identified the lack of availability of time and teaching demands as the primary barrier to research productivity. Over 55% identify lack of graduate student support as the next most serious impediment. Over 40% identify other factors: diminishing chances of success with agencies in a more competitive environment, lack of administrative support and grant-writing experience, lack of sufficient discretionary research funds, and constraints imposed by equipment and facilities. In many departments across campus, facilities are grossly inadequate and are not able to support research, scholarship and creative activity at the level expected of a Research High university.
Out of 44 departments in UNH spanning all Colleges, 39 departments offer graduate programs (master’s and doctoral). The five departments that do not are in COLA (Anthropology, Communication, Geography, Philosophy, and Theatre). The table below gives the total number of graduate degrees conferred by all Colleges by degree types.

Table 2. Graduate Degrees Conferred by all Colleges by Degree Type (Courtesy, H. Richards)

<table>
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<th>2000</th>
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<th>2006</th>
<th>2007</th>
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<tr>
<td>CAGS</td>
<td>7</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>14</td>
<td>4</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Masters</td>
<td>601</td>
<td>600</td>
<td>566</td>
<td>715</td>
<td>704</td>
<td>607</td>
<td>816</td>
<td>806</td>
</tr>
<tr>
<td>PhD</td>
<td>40</td>
<td>55</td>
<td>54</td>
<td>46</td>
<td>63</td>
<td>55</td>
<td>59</td>
<td>48</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>651</strong></td>
<td><strong>660</strong></td>
<td><strong>627</strong></td>
<td><strong>764</strong></td>
<td><strong>781</strong></td>
<td><strong>866</strong></td>
<td><strong>879</strong></td>
<td><strong>860</strong></td>
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The number of doctoral degrees conferred is a measure used by the Carnegie Foundation in classifying research universities. During AY 2000-08, these numbers have varied significantly, with an average of approximately 55 per year. While the production of PhDs may be considered vital in a research university, and while annual production of PhDs is a metric used by external agencies such as the Carnegie Foundation, this measurement is not without its problems. In some disciplines (notably in the arts, humanities, and social sciences) a surfeit of PhDs and the lack of employment opportunities mitigates against producing too many.
From conversations with officers of the Graduate Student Organization (GSO) and graduate students, we gather the impression that graduate students feel that the administration and the faculty are accessible, supportive, and friendly. Many graduate students value greatly their interaction with undergraduate students through their teaching activities. However, these conversations have also brought out a number of serious concerns. Specifically:

- Graduate students feel like second-class citizens of the university compared with undergraduate students.
- Relative to the high cost of living in the Seacoast area, and the general lack of subsidized housing of acceptable quality at the university, stipends are too low. Many graduate students have to rely on family support and burdensome loans to support their education.
- Lack of adequate summer support is disruptive for the education and research activities of graduate students, who often have to seek off-campus employment unrelated to their educational goals to make ends meet.
- Graduate students lack facilities, such as computers, work space, and infrastructure that impair seriously their ability to do research.

Approximately 44% of the doctoral students who entered between the fall of 1999 and the summer of 2004 have completed their Ph.D.s, and 17% remain active. Another 12% completed the master's degree and have left without finishing their doctorates, and 26% have left the university.

We conclude with a bit of historical irony. The last time the UNH research mission was the subject of a dedicated report was in 1989, when Walter Eggers, then Vice President for Academic Affairs, appointed a Commission for Research and Graduate Education (hereafter referred to as the Eggers Commission). The Eggers Commission submitted its Report in two parts: one on research policy, the other on graduate education. Summarizing the status of research and graduate education, the Eggers Commission wrote:

“The University of New Hampshire has changed markedly over the past decade. Since 1979, the number of externally sponsored projects has increased twofold, and their total funding has increased nearly threefold. At the same time, internally funded research and scholarly activity have also increased in scope, although internal funds are sharply limited and their sources are not clearly identified. This growth in research has been accompanied by an increase in the number of graduate programs and by the formation of new Centers and Institutes.

The administration of research and graduate education has also changed over the decade….Indirect costs are returned in part to the principal investigators (15%) and in part to the centers and institutes (40-50%), but relatively little is invested in the research infrastructure at departmental, college, or university levels. For example, research initiation funds for new investigators or new research directions by established investigators are negligible. Department budgets cannot support University research funds
where they compete with faculty for small sums. There is no budget for the
salary of the Associate Vice President for Research, who is responsible for
advancing and supporting the research component of the University’s mission,
and no structural administrative relationship between the offices responsible for
research and graduate education.”

In 1989, the highest administrative officer responsible for research was the Associate Vice
President for Research. This has changed, as have the percentages of indirect cost revenue
sharing. Yet we are struck by the fact that many of the qualitative statements remain as valid
today as they were 20 years ago.
Section IV. Primary Recommendations and Metrics

To excel in teaching and service, UNH must excel in research. As an institution we have made significant advances toward excellence, and now have the opportunity to enter into a new phase, building on the past, that will distinguish us in the state, region, country and world. The following primary recommendations address the organizational, financial, and cultural changes necessary to achieve this prominence.

Primary Recommendations

1) The Office of the Vice President of Research (OVPR) should be restructured so that it represents and promotes the full extent of research, scholarship and creative activity at UNH. A national search should be undertaken to recruit a Vice-President for Research who will be a tenured member of the faculty with strong academic and research backgrounds as well as significant administrative experience. The VPR, with a strong mandate from the President and the university community should provide leadership in developing UNH into an outstanding research university committed to graduate and undergraduate education.

2) The University must institute metrics in all Colleges and Departments to measure faculty performance and take steps to implement the highest standards in hiring, promotion, tenure and merit pay decisions. All faculty members should aspire to achieve excellence in research. Teaching and service responsibilities should be systematically examined and adjusted to enhance research productivity. Faculty teaching loads should be commensurate with the pursuit of research excellence. Typically the expectation is that teaching loads should not exceed four courses per year.

3) The University should act to promote the integration of research in student learning at all levels and across all colleges and academic units. Departments and colleges should integrate research and instruction.

4) The University should commit itself to the development of excellent research-based doctoral programs throughout the University, with special attention to areas of interdisciplinary strength in UNH.

5) The financial model of the University should be changed in order to remove disincentives to research and graduate education.

6) The OVPR, with assistance from the Colleges and the Library, should develop a University-wide database of intellectual contributions and other significant accomplishments in research, scholarship, and creative activity that include, but are not limited to: impact and scholarly significance, peer-reviewed and scholarly publications, performances, exhibitions, grants and contracts, faculty and graduate student awards, fellowships in honor societies, and fund-raising in support of research, scholarship, and creative activity.
7) The University should set research among its highest fundraising priorities as it prepares for the next comprehensive capital campaign. Under the leadership of the University President and the UNH Foundation Board of Directors, the UNH Foundation should dedicate fundraising staff to the research enterprise and, with the full cooperation of the faculty, aggressively pursue new sources of revenue to support the University’s efforts to enhance research productivity and scholarly achievement. The Office of University Communications and Marketing should work with the President, Vice President for Research, Provost, President’s Cabinet, and Deans’ Council to establish research and graduate education as a clear part of UNH’s identity. Private donors should be presented with opportunities to support infrastructure, internal research funds, graduate student fellowships and stipends, and endowed professorships and chairs.

**Metrics**

a) Within two years establish a system to track scholarly production, measure impact, and facilitate institutional comparisons.

b) Increase the level of total research dollars from its present level of approximately $100M per year to the level of $150M per year over the next five years.

c) Increase the number of proposals submitted by 50% over the next five years.

d) Double the number of tenure-track faculty members submitting proposals for external funding in the next five years.

e) Increase fund-raising in support of research, scholarship, and creative activity to double its present level over the next five years.

f) Increase the number of doctoral degrees awarded to 75 per year over the next eight years.

g) Elect two members of the faculty to the American Academy of Arts and Sciences and/or the National Academies (of Science and/or Engineering) over the next five years. Increase the number of external faculty national/international prizes, awards and fellowships by 50% over the next three years.

h) Establish five endowed professorships at the level of the Paul Chairs in Psychology and Space Science, and endowed graduate student fellowships.

i) Increase the number of intellectual property disclosures to 80 in five years; and 130 in ten years.

j) Generate one royalty dollar for every $163 of sponsored research over the next five years.
Section V. Vitality of the Research Mission over the Next Ten Years:
What does the University need to do now?

A. VISION STATEMENT

As New Hampshire’s only public research university, the University of New Hampshire is committed to ongoing development of its full institutional potential for excellence in research, scholarship and creative activity. The University through its land, space and sea grant missions recognizes that faculty members practice their professions in a variety of ways and that the creation of new knowledge, new forms of understanding, and excellence in creative endeavors are, along with teaching and service, at the heart of faculty members’ work. Building on a strong record of accomplishment in many fields, the University intends to create an environment in which research, scholarship, and creative activity flourish, thereby enhancing the education of our students, our institutional development, and our contribution to the world beyond our campus. This is essential to fulfilling our institutional responsibility.

The University will:

1) Foster a research climate and support structure that attracts the best faculty and enables faculty from across the university to engage in research, scholarship, and creative activity of the highest quality.

2) Commit itself to the highest standards in research, scholarship, and creative activity in the tenure and promotion of faculty, necessary for the institution we aspire to be.

3) Provide a world-class learning experience to our undergraduate and graduate students through active engagement in research, scholarship, and creative activity.

4) Foster and support an innovative and entrepreneurial culture among faculty, encouraging interdisciplinary research and engagement in collaborative research partnerships with public and private sector entities.

5) Create a physical infrastructure to advance the institutional mission in research, scholarship, and creative activity.

6) Create financial models to encourage research activity.

7) Create internal funding opportunities for faculty with limited access to sponsored research.

8) Structure faculty workload to enhance opportunities for research, scholarship, and creative activity.

9) Create new knowledge and forms of understanding that will benefit the scholarly community, and disseminate the results and products of its research widely, for the social, cultural, and economic benefit of New Hampshire, the nation, and the world.
B. GUIDING PRINCIPLES

To realize our vision, we articulate the following guiding principles:

• The University recognizes, and celebrates, the diversity of its faculty accomplishments in research, scholarship, and creative activity. No one model of productivity, funding, or approach has priority in the University’s intention to further its institutional excellence. The institution’s primary interest, and its obligation to the broad community, is to create, nurture, and sustain excellence in the many forms of research, scholarship, and creative endeavor practiced by its faculty.

• All faculty (tenure-track, research, and extension) at UNH should be productive and respected researchers, scholars, or artists in their respective disciplines throughout their academic careers. The opportunity to engage in world-class research is critical to the retention and recruitment of excellent faculty.

• Research, scholarship, and creative activities are an indispensable component for all disciplines in their contribution to the mission of UNH, regardless of whether such activities are supported by external sponsors.

• The research infrastructure of UNH should be supported financially and used cost-effectively to advance research, scholarship and creative activities.

• Interdisciplinary research is essential to the growth of the research enterprise and establishing UNH as a nationally prominent research university.

• Integration of graduate education and research is fundamental to the success of a research university, where the culture of research benefits from the interaction of faculty and graduate students. Excellent graduate programs enable the recruitment and retention of excellent faculty.

• Graduate students are invaluable in promoting and sustaining the research and education mission of UNH. It is imperative that their education and research be well supported.

• UNH offers a number of creative and valuable models for undergraduate research, which should be supported and enhanced. Excellence in research enhances undergraduate education through the appropriate and balanced alignment and integration of faculty research strengths with curricula, in departmental majors, across and within colleges, and through general education.

• Research, extension, and clinical faculty members represent a great resource for advancing research and scholarship as well as teaching, including supervision of undergraduate and graduate research. Their contributions to the mission of the University must be valued and recognized throughout the University.

• In view of the highly competitive environment for research funds from federal and state agencies, private foundations, industry, and other sources, a strong entrepreneurial effort, led by administration and faculty, is needed to expand the research base at UNH in fields, departments, centers, and institutes where external
funding opportunities are available. Collaborative and interdisciplinary work can be significant assets in this context.

- The current financial model must be guided by a Strategic Plan, which recognizes the important role of research and graduate education should be made commensurate with the research mission, broadly defined, of the University.
- Communication, public relations, and private fund-raising are essential to a greater and more integrated emphasis on UNH as a research university, a driver of quality and innovation in research, scholarship, and creative endeavors that benefits our undergraduate and graduate students and the broad community—from the local to global—beyond the campus.

C. RECOMMENDATIONS FOR ADMINISTRATION, COLLEGES, AND DEPARTMENTS

Consistent with these guiding principles, the Panel makes the following recommendations. These recommendations are divided into three levels: administration, colleges, and departments.

ADMINISTRATION

The Panel recommends:

1) A national search should be carried out as soon as possible to recruit a Vice President for Research (VPR) who will be a tenured member of the faculty, with strong academic and research background as well as significant administrative experience. (The job description of the VPR is given in Section VI.).

2) The VPR should (a) report directly to the President and serve as a permanent member of the Dean’s Council, led by the Provost, or (b) report directly to the Provost and the Executive Vice President and serve on the Dean’s Council. Both options are discussed in Section VIC, and have proved effective at other Universities. In either case, the VPR should serve in the President’s Cabinet. It is essential that there be a leader and a strong voice for research in the President’s Cabinet where institutional priorities and strategies are discussed and established. The presence of the VPR on the Dean’s Council will enable the VPR to play a pivotal role in fostering the alignment of research with graduate and undergraduate education. The President must choose an organizational model for the OVPR, which will “create an environment in which research, scholarship, and creative activity flourish, thereby enhancing the education of our students, our institutional development, and our contribution to the world beyond our campus.”

3) Promotion and tenure guidelines and decisions should take into account and emphasize the importance of graduate student education and mentorship.

5 The Blue Ribbon Panel expressed a strong preference for option (a).
6 See Section VA, this Report.
4) The Office of the Vice President for Research (OVPR) must be focused and redefined so that it may play a leadership role in the conduct of research, scholarship and creative activity throughout UNH. The charge of the OVPR should be redefined to encompass the mission and broad range of goals enumerated in Section VI. It is imperative that the OVPR serve all faculty members in their research, scholarship, and creative activity.

5) The VPR should develop a Strategic Plan for Research that will identify a few targeted areas of research excellence, commensurate with the Strategic Plan of the University.

6) The VPR, once appointed, should carry out a search for an Associate VPR. The portfolio of the Associate VPR should include the enhancement of research opportunities in the humanities, social sciences, creative arts, and health/human services, the pursuit of foundation and corporate relations with the goal of expanding research funding from sources other than the federal and state government, the facilitation of interdisciplinary partnerships between colleges, centers, and institutes within UNH and other research institutions with complementary strengths, and close collaboration with the Office of Research Partnerships and Commercialization to capitalize on the commercial potential of the UNH research enterprise.

7) There needs to be greater synergism between the OVPR and the Office of the Dean of the Graduate School in the conduct of research and graduate education. The need for such synergism was articulated in the Eggers Commission on Graduate Education in 1992, but remains to be accomplished. As emphasized by the Eggers Commission, “research and graduate education are inseparable”, and “a close working relationship” between the two offices “should be included in the job descriptions of the persons holding these posts.”

8) The VPR should establish the Research Council, composed of the VPR, the Associate VPR, the Dean of the Graduate School, the Library Dean, Associate Deans for Research in all colleges, the Dean of UNHM, the Vice Provost for Academic Affairs, the President of the Graduate Student Organization, the Director of the Hamel Center, the Directors of all University Research Institutes, and with representation from other centers and institutes. This Research Council will seek advice from a Faculty Advisory Committee that will report to the VPR, will be broadly representative of research, scholarship, and creative activity in the university, and consist of faculty members chosen (or elected) from and by the various Colleges to serve on the Committee. The functions of the Research Council and the Faculty Advisory Committee are discussed in greater detail in Section VIC. A visual depiction of the OVPR and the various reporting lines and advisory structures is provided in Section VID.

9) The Administration, in collaboration with colleges and departments, should commit itself to upgrading the physical plant, infrastructure, and other research facilities including equipment and library resources, consistent with a nationally prominent research university.

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7 The Task Force considered an integrated model in which the offices of the VPR and the Dean of Graduate Studies are combined. In such a structure, the Dean of Graduate Studies would report to the VPR. Although such a model has been employed successfully at some other institutions, the idea has received little support from the Blue Ribbon Panel and the broader academic community at UNH.
10) The Administration should work closely with colleges and the AAUP to develop a system of merit pay that rewards achievements in research, teaching, and service. Merit pay provides a powerful incentive for research, scholarship and creative activity.

11) The Administration should provide strategic leadership in the creation of new schools, centers, or institutes which rely on interdisciplinarity as a guiding principle in enabling and organizing research across traditional college and departmental boundaries.

12) The Administration should charge all external relations units, most importantly the UNH Foundation and University Communications and Marketing, with vigorously advocating UNH’s research strengths, its commitment to graduate education, and our role as a leader of innovation in the state of New Hampshire and the national economy. University and Foundation leadership should collaborate to set aggressive fundraising goals for endowed faculty and graduate student support.

13) The OVPR should establish an internal research fund for the arts, humanities, and social sciences. This fund should increase significantly over the next ten years, seeded by the success of fundraising and sponsored research.

COLLEGES

The Panel recommends:

1) Because the integration of research and education is fundamental to the success of a research university, every college should consider this integration in its strategic planning.

2) Colleges should work with departments to move to a model where the normal teaching load of faculty will not exceed four courses (four credit hours each) per academic year, including undergraduate and graduate course offerings. In such a model, the distinction between undergraduate and graduate faculty should be eliminated. Existing policies articulated in the AAUP contract and other administrative documents grant this authority to colleges and departments, and colleges should facilitate workload assessment and adjustment where this supports excellence in research, scholarship, and creative activity. Faculty members who choose to deviate from the normal model may develop their own portfolio in consultation with their Dean and Department Chair.

3) In order to give the integration of research and graduate studies visibility and importance, an Associate Dean for Research (or equivalent) who is a member of the faculty (tenure-track or research) should be appointed in every College. The responsibilities of the Associate Dean for Research should include providing strong leadership in developing and implementing the strategic plan for research and graduate studies in the College, allocating college-wide research incentive funds, and assist the Dean in identifying research infrastructure needs in the College. The Associate Deans for Research should represent the colleges on the Research Council and the Graduate Council. (Two colleges, CEPS and COLSA, have already established or announced similar positions at the level of 0.5 FTE, with the other 0.5 FTE assigned to the department to which the faculty member belongs.)
4) The Dean of every College should ask all Departments to develop a strategic plan for research and graduate education. Colleges should actively encourage the development of interdisciplinary activities that will enable all departments to have a role in graduate education and research.

5) Colleges should develop guidelines that explicitly recognize the importance of graduate student education and mentorship in promotion and tenure decisions in departments and programs in the Colleges.

6) Faculty productivity must be measured accurately, and in light of appropriate disciplinary standards, in all colleges.

7) In disciplines where external funding is scarce, Colleges should establish stable travel budgets to cover the cost of conference participation and scholarly travel for research active faculty.

8) Faculty members are strongly encouraged to submit a proposal for external funding in the two years prior to a sabbatical leave. Proposals need not include indirect costs or salary replacement. Faculty members who choose not to submit a proposal should provide a justification (e.g., that appropriate external sources of funding are scarce). Final approval of individual sabbatical plans rests with the Deans.

9) Colleges should allocate a fraction of the returns from IDC and graduate tuition revenue to Departments in order to provide a financial incentive at the Department level for research and graduate education.

DEPARTMENTS

The Panel recommends:

1) All Departments should be involved in programs where there is active faculty participation in graduate education and research. Faculty should be encouraged to explore the creation of new graduate programs and opportunities where faculty interest, resources, and market realities are conducive to program development.

2) Departments should develop strategies, in consultation with the Dean and the Associate Dean for Research and Development, to reduce the normal teaching load of research active faculty to a maximum of four courses (four credit hours each) per academic year.

3) Departments should design creative strategies for the distribution of course teaching requirements that would encourage research semesters or buyouts for faculty.

4) Departments should implement a mentoring plan for junior faculty to connect them with successful researchers who can assist them in advancing their research programs.

5) Departments should develop tenure and promotion guidelines that explicitly take into account and emphasize the importance of graduate education and mentorship. They should develop benchmarks for faculty and graduate student publications in scholarly journals and books.
6) Departments should identify and eliminate unnecessary departmental service responsibilities and streamline the departmental committee structure to support increased faculty research.

D. ROLE OF THE RESEARCH FACULTY

Research Faculty members are an integral part of the University’s research mission and as such, the University’s larger academic mission. In many cases, Research Faculty teach courses, advise graduate and undergraduate student researchers, and provide service to the University as well as their professions. Research Faculty members provide loci of research excellence in many different areas, attracting postdoctoral scholars, graduate students, undergraduate students and enhancing the reputation of the University. Research Faculty generated 47% of the total research expenditures over the last 5 years. (Tenure-track faculty generated 43% of research expenditures).

Typically, Research Faculty members are entirely supported on external grants. This fact begs the question of how Research Faculty can be involved in, for example, service to the University or its educational mission. Federal regulations preclude charging grants for activities (such as service and instruction) that do not directly benefit those grants. Financial models do exist that provide support for Research Faculty to participate in the service and teaching mission of the university.

There is no one model for Research Faculty at UNH, and the roles and responsibilities of Research Faculty vary across different academic units. There is a UNH policy on Research Faculty, attached to this Report as Appendix A, but this Policy appears not to be followed uniformly throughout the university. Some Departments feel that some appointments to the rank of Research Faculty were made without their vote, and do not feel committed to such appointments. In some cases, Research Faculty have voting rights within Departments on all issues except tenure, while other departments do not allow Research Faculty to vote and in some cases, they are not even invited to faculty meetings. Some departments do not permit Research Faculty to serve as primary academic advisors for graduate students. Thus, the extents to which Research Faculty are engaged in the academic mission through home departments or programs vary considerably. In many cases Research Faculty members have not been involved in strategic planning, further alienating them and depriving Departments and Colleges of the valuable perspectives of leading researchers in setting future directions.

Research Faculty members do not have formal representation at the University level like other groups on campus (e.g. undergraduate students, graduate students, operating staff, PAT, tenure-track faculty have representation through councils and the faculty senate). There is some concern that developing a separate organization to represent the views and interests of research faculty would further separate them from faculty members that are classified as tenure-track. Being able to more fully and consistently participate in departmental and college level decisions may reduce the need for a separate organization.

Despite the high research performance expected of Research Faculty, there are limited resources made available to them such as access to teaching assistants (in some departments
and programs considered to be in the purview of tenure-track faculty only), funds for cost matching required by many agencies (where state appropriation funds for faculty may be targeted by RCM units, for example), reasonable remuneration for teaching courses, and support for administrative and service loads. Sabbatical leave is also a concept reserved for tenure-track faculty.

The sense of many Research Faculty members at UNH is that a climate exists which overlooks existing Research Faculty for new tenure-track hires in a department, that the process is not completely open, and that they actually are at a disadvantage in competing for these positions. There is a sense that Research Faculty members are viewed as “a bird in the hand,” (that is, as expertise the department already has). Finally, the process for promoting Research Faculty, although articulated in the UNH policy manual, remains inconsistent and under-utilized in many Colleges and Departments. For this reason, some Research Faculty members remain at the level of Assistant Research Professors their entire career.

RECOMMENDATIONS ON RESEARCH FACULTY

Administration

1) To ensure institution-wide commitment to Research Faculty, develop University-level policies that will ensure equitable treatment across Colleges and Departments.

2) Work with the Faculty Senate and the VPR to develop a coherent policy for representation of Research Faculty at the University level. Research Faculty members deserve appropriate representation and should have a role in the governance of the University. This policy should also provide guidance to Colleges and Departments and require the formalization of College and Department policies with respect to Research Faculty rights.

3) Assure that qualified Research Faculty members are fairly considered for tenure-track faculty positions.

4) The VPR and the Provost should be jointly responsible for approval, appointment, and promotion decisions pertaining to Research Faculty.

Colleges

1) Each College should develop a formal policy regarding the voting rights of Research Faculty.

2) College Deans should assure that Research Faculty are included in departmental policy-making and, where appropriate, activities related to teaching and service. The teaching and service responsibilities of Research Faculty should be recognized and appropriately compensated.

3) College Deans should assure that Research Faculty members have the opportunity to progress through faculty ranks in a timely fashion. College Deans should assure that Promotion and Tenure Committees are expanded to include at least two senior Research Faculty members when a Research Faculty member is being considered for promotion.
4) University Research Institutes should follow polices analogous to those of Colleges.

Departments

1) Departments should include Research Faculty in the strategic planning process and should follow the university policy about their voting rights, including those pertaining to the promotion of Research Faculty.

E. ROLE OF CENTERS AND INSTITUTES

Centers and Institutes play a vital role in the advancement of research and graduate education at the UNH. There is no one model for the organization of Centers and Institutes. They:

- Enhance inter-departmental and inter-college interactions and collaborations leading to the development of new ideas and significant multi-investigator awards,
- Lead in promoting strategic initiatives that position the university to advance the institutional research enterprise,
- Play a significant role in transferring science into practice and promoting translational research,
- Play significant roles in ensuring the retention of outstanding faculty as well as attracting new faculty and graduate students to the University,
- Create a mentoring environment for faculty and students that augments and extends beyond that provided by individual Departments and Colleges,
- Provide unique educational opportunities for faculty and students, as well as community members,
- Develop and maintain core facilities or services that promote and support research,
- Assist in communicating the research mission of the university to other colleagues and the public, and
- Build linkages between the university and national, regional, and state organizations.

Historically, it has been relatively easy to create Centers and Institutes. Under university rules, faculty can organize and create a new Center without a bureaucratic approval process. Institutes, however, can only be developed through a more complicated process that requires a certain size and interdisciplinary scope. UNH has over 40 Centers and Institutes; only one, the Institute for the Study of Earth, Oceans and Space is designated as a University Institute with membership on the Dean’s Council.

The OVPR has organized these Centers and Institutes into the following categories:

- Biological and Agricultural Science
- Child, Family and Society
- Economic and Entrepreneurial Centers
- Education, Outreach and the Humanities
- Environmental, Space Science & Technology
- Marine & Estuarine Science and Technology
- Nanotechnology, Structural Biology & Material Science
- Software and Communications Centers

Currently, there are no Centers and Institutes in the performing arts.

Centers and Institutes were associated with 74% of all externally funded research in 2006 and 78% in 2007 according to the Office of Sponsored Research (OSR). Ideally, Centers and Institutes are comprised of a mix of tenure track faculty, research faculty, and graduate students and are closely aligned with academic programs. Given the importance of Centers and Institutes in advancing the research mission of the university, we make the following recommendations.

RECOMMENDATIONS ON CENTERS AND INSTITUTES

Administration

1) The current compilation of Centers and Institutes should be reviewed periodically by the OVPR. Those that are not research active should be disbanded. New Centers and Institutes should be approved with sunset clauses. The OVPR should serve as an incubator of new Centers and Institutes, and with the Office of the Provost, should determine the appropriate location of well-established centers and institutes currently residing in the office. The OVPR historically has played a role in seeding and supporting the growth of new initiatives until they are well established, at which time they migrate to a college or potentially report to more than one. The VPR should initiate a process that will formalize University-wide guidelines for Centers and Institutes.

2) There may be intellectual, financial, operational, and strategic benefits to support the alignment of several of the Centers and Institutes. The OVPR should assess, with the input of the Research Council and Faculty Advisory Council, possible opportunities for alignment. The OVPR should continue to work with faculty across campus and have the funds necessary to strategically support the development of new Centers and Institutes. For example, the Panel notes the absence of a Center/Institute in the performing arts.

3) Centers and Institutes should be more broadly represented on the Dean’s Council. Centers and Institutes do not have a collective voice on campus. Although the Director of EOS is a member of the Dean’s Council because of its University Research Institute designation, other Centers and Institutes have only informal networks to inform University policy and practice.
4) The OVPR should convene Center and Institute Directors at least twice each year to promote interdisciplinary opportunities and hear concerns and recommendations for advancing research.

5) With direction from the President, the OVPR should continue to work closely with the UNH Foundation to have Centers and Institutes as one of the foci of fund-raising.

6) The quality of services offered by the OSR should be improved to meet the research needs of Centers and Institutes. While there are a few Centers and Institutes that seem satisfied with the level of services, there are numerous examples of problems with the execution of proposals and research awards. In some cases, obstacles to efficient and effective execution of proposals and award could be ameliorated by better communication between the administrative staff of the Centers/Institutes and the OSR. Center/Institute staff should have representation on OSR’s Advisory Committee. Additionally, accounting processes at UNH do not serve interdisciplinary multi-faculty research endeavors, making these endeavors difficult from a financial management perspective. Guidelines should be developed by the OVPR to serve such endeavors.

**Faculty**

1) UNH should have a systematic approach to joint hires between Institutes, Centers, Departments and Colleges. Clear pathways should be developed for institutes/centers and departments to develop salary packages. Without a clear mandate, the process for joint strategic hires depends largely on personal relationships rather than the institutional mission.

2) Centers and Institutes lacking academic alignment should work with Deans and departments to develop strategic plans to link the research and academic missions. Centers and Institutes should be involved in the academic mission of the university at all levels including developing graduate level cognates, and advising and mentoring graduate students.

**F. GRADUATE EDUCATION**

Because the health of graduate education is key to a vigorous research environment, careful attention to both the numbers of students and their graduate education is critical. Innovative disciplinary and interdisciplinary curricula must be supported conceptually and financially in order to attract the best graduate students possible. Overall, graduate education requires a champion and a voice across the University. The Graduate School is seen as an important advocate for graduate education and for quality of life issues that impact graduate students.

At the University of New Hampshire there are 44 Departments in six Colleges. Of the 44 Departments, 39 (89%) offer graduate degrees. COLA Departments that do not offer graduate programs are: Anthropology, Communication Studies, Geography, Philosophy, and Theatre. There are 2,400 students enrolled in graduate education programs. At the master’s level, 61%

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8 The Thompson School of Applied Sciences, part of COLSA, offers Associate Degrees and was not included in these percentages.
of the students are enrolled in professional master’s degrees. There are approximately 495 students enrolled in doctoral programs; over 350 of these students are in COLA and CEPS. In 2008, UNH awarded 48 doctoral degrees. This is a smaller cohort than in 2007 when 59 doctoral degrees were conferred. Between 2002 and 2006, the average number of doctoral degrees granted was 55. CHHS is the only college that does not offer a doctoral degree. The Center for Graduate and Professional Studies at UNHM, which offers a broad range of post-baccalaureate programs for professionals, does not offer doctoral programs.

It is clear that UNH must focus greater attention on graduate education, the interactions and relationship between undergraduate and graduate education, the efficiency and effectiveness of the Graduate School in supporting graduate education both financially and programmatically, and the roles of individual colleges in recruitment, retention, and support of graduate education. There is concern that there is unnecessary duplication in the graduate application and counseling processes between the Graduate School and the individual colleges.

Graduate Assistants and Teaching Assistants depend on their stipends for cost of living expenses. Graduate students report that the current stipends are simply not adequate given the high costs associated with living in the Seacoast. If faculty members have external funding, they can set higher stipends to attract high quality students and support their costs of living. Additionally, Deans should work to increase stipend levels to remain competitive.

The facilities available to graduate students for research are not up-to-date, making it difficult to conduct cutting edge research. There is a disparity between the facilities offered to students with assistantships and students without assistantships.

The graduate student population as a whole is dissatisfied with the availability of graduate and family housing at UNH. On more than one occasion, the Graduate Student Organization and Graduate Council have issued statements addressing these issues (see attached), but little progress has been made to alleviate the problem of lack of access and high cost. The 2004 University Campus Master Plan calls for sweeping improvements in the quality and availability of Graduate and Family Housing. It calls for, “[r]enovation and transformation of Woodside apartments from undergraduate to family housing,” (p. 45). It calls for the development of “[f]amily housing at Leawood Orchard Property…” and “a variety of housing types for graduate students, junior faculty members, and families,” (p.45). It cites a specific need “to augment the types and amount of affordable family housing for graduate students, new faculty, and visiting scholars,” pointing out the “broad consensus” that “[t]his is critical for research growth and recruitment,” (p.9). To date, graduate and family housing have not received the same priority as undergraduate housing, and there does not appear to be much progress toward fulfilling the planned housing changes outlined in the Master Plan. Since the adoption of the Master Plan, the number of units for graduate and family housing on campus has actually decreased.

RECOMMENDATIONS ON GRADUATE EDUCATION

1) Graduate student stipends should reflect the cost of living in the Seacoast and should be high enough to remain competitive within the field of study. Base stipends should be allowed to vary between fields of study to remain competitive. Additionally, colleges and
individual investigators should be encouraged to offer stipends higher than the base to increase their competitive edge.

2) Stipends should include support during the summer. Many students leave to work elsewhere during the summer because they cannot support themselves at UNH doing work towards their degrees.

3) Stipends should be sufficiently high that paying mandatory fees should not be a major financial burden.

4) The Graduate Dean should develop a plan, in coordination with the various colleges and the OVPR, to increase graduate student enrollment and enhance the quality of the graduate experience.

5) Graduate students should both be encouraged and mentored to obtain outside funding (through project grants, or special scholarships). This should include the ethical conduct of research.

6) Non-conference travel support should be made available for the purpose of collaborative work, start up projects (investigative travel), and research trips. (See Section VG.) Travel support is available through the Graduate School and some departments, but only for conferences.

7) UNH should focus on improving access to and affordability of graduate student housing.

8) Graduate students should have access to up-to-date facilities and space in which they can conduct high-quality research.

9) The Graduate Student Organization should become the Graduate Student Senate elevating their representation to a similar level as the Undergraduate Student Senate.

10) The President of the Graduate Student Organization should be a member of the Research Council in the OVPR.

11) The Graduate School should work with the President, Provost, and UNH Foundation to place significant emphasis on increasing private support for graduate students, aligned with the Foundation’s current commitment to raise private dollars for undergraduate financial aid and merit scholarships.

G. THE FINANCIAL MODEL

Since July 1, 2001, UNH has adopted the RCM (Responsibility Center Management) model. The earlier model (referred to hereafter as RCM I) underwent a comprehensive five-year review during 2005-06, and a Steering Committee made recommendations for altering RCM I (see http://www.unh.edu/rcm/steeringreport.htm). As a result of the recommendations, a new model (referred to hereafter as RCM II) has been put in place since FY 2007. The recommendations of the Steering Committee covered a wide range of revenue-expense allocations, including state appropriations, undergraduate and graduate net tuition, indirect cost recovery, facilities, academic/general assessments, and library funding, as well as various policy and procedural matters.
RCM II, as implemented since FY 2007, has important consequences for the research mission of the university. It is the opinion of the Blue Ribbon Panel that several features of RCM II do not provide incentives, and in some ways provides many disincentives, for the growth of research and graduate education in the university. In what follows, we address these issues modularly, at various levels of administration, college, and faculty.

OFFICE OF THE VICE-PRESIDENT FOR RESEARCH

Under RCM I, the majority of OVPR support came from the General Assessment Fund (GAF). In addition, the OVPR received 19% of the total Facilities and Administrative costs (F&A) generated. In FY 2003, the F&A support was reduced slightly to 18.5% to help fund the Library. Under RCM II, the F&A portion was reduced to 5%, and replaced with increased GAF allocation to enhance budget stability. The OVPR also received 3% of the total ICR generated to allocate for research and graduate education initiatives. Between 2008 and 2010, the OVPR will award $1,794,770 to seven faculty teams across the University to support graduate education.

Presently, the OVPR has two components: a Service Unit and a Centers Unit, shown in Table 3 with their funding sources:

Table 3. Units of the OVPR and their Funding Sources (courtesy, D. Proulx)

<table>
<thead>
<tr>
<th>SERVICE UNIT</th>
<th>CENTERS UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vice President for Research</td>
<td>Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET)</td>
</tr>
<tr>
<td>Office of Sponsored Programs (OSR)</td>
<td>Marine Program</td>
</tr>
<tr>
<td>Instrumentation Center</td>
<td>Interoperability Laboratory</td>
</tr>
<tr>
<td>Animal Resource Center</td>
<td>Leitzel Center</td>
</tr>
<tr>
<td>Environmental Health and Safety</td>
<td>Sea Grant</td>
</tr>
<tr>
<td>Business Service Center</td>
<td>Atlantic Marine Aquaculture Center</td>
</tr>
<tr>
<td>External Relations</td>
<td>Funding Sources</td>
</tr>
<tr>
<td>Intellectual Property Management</td>
<td>Grants/Indirect cost recovery, sales of services, endowment income/gifts, state appropriation, hold harmless</td>
</tr>
<tr>
<td>Research Support (RISE, Lab Support, IDC Projects)</td>
<td></td>
</tr>
<tr>
<td>Outreach Scholarship</td>
<td></td>
</tr>
</tbody>
</table>

Funding Sources: Indirect Cost Recovery, state appropriations, general assessment
In FY2008, the General Fund budget for the OVPR is approximately $10.8M dollars, with $9.73M for the Service Unit, and $ 1.09M for the Centers Unit. Allocations for the Service Unit include the RISE (Research Initiation and Scientific Equipment) fund, with an allocation of approximately $513K. RISE dollars are used “to contribute to start-up packages for new faculty and cost sharing on major proposals, to provide bridging funds for faculty members between grants, and to replace major equipment and instrumentation that has failed or become obsolete.”

There are no funds allocated for internal competitive proposals in the arts, humanities and social sciences.

At the present time, the only principal senior administrator of the OVPR is the VPR himself. There is no full-time Associate VPR, but the OVPR provides 20% of the support of the Associate Vice President for Research and Outreach Scholarship, with 80% of the support from the Office of the Provost. The OVPR administration presently supports 6 support staff (2 PAT and 4 OS positions).

**Recommendations**

1) The OVPR should be given a permanent allocation to support a full-time Associate VPR with the portfolio described in Section VC.

2) The OVPR should be given a permanent allocation annually for internal, competitive research funding in the arts, humanities and social sciences. Wherever possible, these funds should be used as seed funding for other competitive extramural proposals.

3) RISE funds, with the scope described above, must be enhanced substantially in order for UNH to be competitive in recruiting outstanding faculty, maintaining research programs in a highly competitive environment through fluctuations in the funding cycle, and to provide the faculty with the facilities they need in order to continue producing first-rate research.

4) The OVPR should have a discretionary budget that will support strategic research initiatives.

5) The OVPR should support a staff member who will redesign and maintain the OVPR website as the central and comprehensive source of relevant information at UNH (see Section VIB).

**THE GRADUATE SCHOOL**

The budget of the Graduate School resides in the Academic Affairs unit (Office of the Provost). The FY2008 General Fund budget is approximately $2.6M. The principal administrator of this office is the Dean of the Graduate School. Approximately, $1.7M of the expenditures is in the support of salaries and wages, which supports 2 academic administrators (the Dean and the Associate Dean), and 10.5 support staff positions (4.5 PAT and 6 OS).

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9 Taylor Eighmy, General Assessment Funding Report (September, 2007), Office of the Vice President for Research
**Recommendations**

1) In coordination with the Offices of the Provost, the VPR, the VP for Finance, and the College Deans, the Dean of the Graduate School should develop a financial plan to increase revenues from graduate education and research. It is the sense of the Blue Ribbon Panel that graduate education remains an important potential area of growth for the university. Such a financial plan should include, but not be limited to, incentives needed for faculty to support more graduate students on grants where possible, changes in the way in which graduate education and graduate thesis research (both master’s and doctoral) is presently supported and charged, increase in graduate fellowship support through the capital campaign, and more effective marketing of the graduate programs.

2) Funds should be allocated to support graduate student travel to attend professional meetings or workshops where they may present their research and learn new methodologies. These funds should be allocated on a competitive basis, with special consideration given to graduate students who are not supported by grants.

**Allocations and Assessments**

As mentioned above, RCM II has institutionalized methods of resource allocation and assessments that have substantial impact on the research and graduate education mission of the university. While some of the methods have not changed between RCM II and RCM I, others have. The Blue Ribbon Panel notes that in preparing the final slate of recommendations that were finally implemented, the Steering Committee did not always concur with the recommendations of the various subcommittees. In making some of the recommendations below, the Panel has taken into account the original recommendations of various subcommittees (see [http://www.unh.edu/rcm/rcmopenforum.html](http://www.unh.edu/rcm/rcmopenforum.html)). The Panel also recognizes that in RCM I as well as RCM II, financial incentives have existed mostly at the level of RCM units and PI’s, and not Departments.

**Recommendations**

**Allocations**

1) The Blue Ribbon Panel recognizes the importance of the ICR to PIs and recommends that some percentage of the ICR be returned. The Panel also recommends that the Administration explore different progressive models that would redistribute a certain percentage of the ICR to a strategic research fund that would serve as a stimulus to the overall UNH research mission.

2) The University should recognize the very different nature of courses at various levels (200 through 900) and develop a credit-hour weighting system that provides greater incentives for courses that promote graduate/doctoral research. The current weighting formulae are biased in favor of undergraduate teaching, and do not reflect the importance of the actual time devoted to the research mission of the University.
3) Colleges and Departments should develop plans collaboratively to examine the viability of reduced course-loads for research-active faculty. Workload analyses carried out by the Blue Ribbon Panel show that such plans are financially feasible. An example of a workload analysis is presented in Appendix B. This example is meant to be illustrative, and should not be construed as a recommendation.

4) The state appropriation allocation should be returned to 100% on faculty salaries paid from sources other than E&G funds (Education and General funds), as it was under RCM I. Under RCM II, Research Faculty members receive only half of the state appropriation as tenure track faculty members. Given the importance of research faculty to the overall mission of UNH, this discrepancy should be corrected.

5) The RCM unit should continue to receive the same level of state appropriation dollars when faculty members provide their own salary support through grants and contracts successfully. This is an important incentive for conducting sponsored research. In RCM II, the state appropriation is reduced when faculty are successful in covering part or all of their salary through grants and contracts.

Assessments

We recommend reversal of the single general assessment. In reverting to separate assessments, and in order to advance faculty and graduate student research, the RCM academic assessment should not be applied to grant and contract funds, whether in Colleges, centers, or Institutes. At the present time, under RCM II there is a single general assessment that combines both sources. This is a major change between RCM I and II, and it was adopted by the Steering Committee against the recommendation of the Research Subcommittee. If the combined assessment is retained, grant funds should be removed from the assessment base for all RCM units. In addition, the assessment on research from agencies such as US Department of Agriculture, U.S. Department of Education, state of NH and from Foundations, should not be taxed at a level higher than the IDC allowed by those entities.

Research Faculty Compensation and Buy-Out Policy

An equitable policy should be developed for the use of research or adjunct faculty to teach in academic programs and for tenure-track faculty to buy out of teaching.

FINANCIAL RESOURCES FOR PROPOSED INVESTMENTS

The Blue Ribbon Panel has made a number of recommendations for financial investment in research and graduate education. While we do not have specific solutions for every recommendation, we articulate below a few ideas that might provide financial resources for the proposed investments:

a) Associate VPR: The Panel recommends that the position of the Associate VPR, presently funded at 80% level by the Office of the Provost and at 20% level by the OVPR, be converted to a full-time position in the OVPR.
b) *Expansion of the Research Funding Base:* The Panel recommends that in coordination with the Research Council and through the implementation of incentives, the Colleges and the Departments make a concerted effort to increase the depth of grant-writing by faculty. It is the sense of the Panel that there is significant potential for growing a broader and deeper culture of grant-writing in UNH, and that the faculty have a significant responsibility in contributing to the financial health of the research mission of the University to the fullest extent possible.

c) *Cost-Effective Use of Research Space and Facilities:* The Panel recommends that the OVPR, in collaboration with the Office of the Vice President for Finance and Administration and the Colleges, assess the use and cost-effectiveness of existing research space and facilities, and identify ways in which these resources can be used more effectively. It is the sense of the Panel that all existing research space and facilities are not being used optimally, and that they represent a potential source of revenue that can be used to expand the financial base of the research enterprise through strategic grant-writing and incentives to faculty who are able to garner more grants but are hamstrung by lack of access to space and facilities.

d) *Increase Foundation Activity Underpinning Research:* The Panel recommends that the UNH Foundation feature research, scholarship, and creative activity prominently in its fund-raising activities, encouraging donors to invest in endowed chairs, graduate fellowships, infrastructure, and start-up funds.

e) *Increase in Graduate Education and Research:* See Recommendation 1 under the section entitled “The Graduate School” on page 32.
Section VI. Office of the Vice-President for Research (OVPR)

A. MISSION STATEMENT

The mission of the OVPR is to provide academic and administrative leadership and stewardship for research, scholarship, and creative activity at the University of New Hampshire by supporting, growing, nurturing, and enabling such activity, by promoting its dissemination and application to the public and private sectors in the state of New Hampshire and the nation, and by overseeing its ethical and regulatory compliance, and by exercising fiduciary responsibility.

B. GOALS

The following are the principal goals of the OVPR:

- **Promoting Excellence in Research**: To create an environment that advances the research, scholarship, and creative activity for faculty (tenure-track, research, clinical, and extension), research staff, and graduate students, and to foster interdisciplinary research partnerships and collaborations.

- **Enhancing Undergraduate Research and Education**: To assist in creating an environment that supports the integration and dissemination of research activities into undergraduate curricula in order to encourage lifelong learning and engaged citizenship.

- **Engagement and Partnership with the Public and Private Sectors**: To enhance partnerships with public constituencies (including business and corporations), and stimulate the use of University research for the benefit of local, state, and national economies and the public good.

- **Communication and Celebration of Research in the University and the Public Sphere**: To engage in the collective celebration of research across the University and the public sphere through events, interactions, and publications.

- **Fiduciary Stewardship and Compliance and Ethical Conduct in Research**: To put in place systems and policies related to fiduciary stewardship, ethical and regulatory compliance in order to support the research mission of the University.

PROMOTING EXCELLENCE IN RESEARCH

**Recommendations**

1) Establish the Research Council, recommended in Section VC. The Research Council should:
a. Assist in the development of strategic plans for research in all Colleges, and identify new opportunities for external funding of research and the support of graduate students. Areas in which there is significant potential for growth in research funding in UNH should be identified and incentives should be provided through the Office of the Provost as well as the Colleges to enable the growth and development of research programs in these areas.

b. Promote, coordinate, and support interdisciplinary and collaborative projects, across departmental and collegiate boundaries, involving partnership with Centers and Institutes where possible.

2) Develop a plan for better integration of graduate education and research, the growth of the funding base for graduate research assistantships and fellowships and invigoration of the Graduate Research Conference.

3) Identify critical areas of interdisciplinary research in Centers and Institutes that need to be anchored in and aligned with the educational mission of Departments and Colleges.

4) Establish the Faculty Advisory Committee. This Committee should be composed of faculty members (tenure-track and research) with broad representation from throughout the university, and provide advice to the VPR on the distribution of discretionary internal funds and decisions on strategic research initiatives (such as the selection of research teams for external funding competitions or the pursuit of earmarks), based on the principles of peer review, the track-records of proposing personnel, and fairness. A visual depiction of the OVPR and the various reporting lines and advisory structures is provided in Section VIC.

5) Allocate internal funds available for seeding and nurturing research, scholarship, and creative activity in the arts, humanities, and social sciences. These internal funds should be awarded annually, based on the recommendations of the Faculty Advisory Committee.

6) In coordination with the Office of the Provost and the Offices of the Deans, the OVPR should remove the barriers that constrain faculty, research staff and graduate students in applying and procuring external funds. For example, the guidelines for indirect costs are not uniform across all external funding agencies, and one assessment formula may not fit all grant activity. We recommend the establishment of a flexible structure and financial formula (under the RCM model) that will facilitate and encourage faculty, research staff, and graduate students to apply and procure external funds from diverse funding sources.

7) Conduct an assessment of the status of research facilities and infrastructure in order to be responsive to the needs of the university community engaged in research, scholarship, and creative activity. Develop plans for the maintenance and improvement of facilities and infrastructure, and in coordination with the Offices of the President and the Provost, identify financial resources needed to implement these plans.
ENHANCING UNDERGRADUATE RESEARCH AND EDUCATION

Strong research programs enhance undergraduate education. Faculty research affects how and what we teach, to whom, and at what levels and venues: it shapes not only the content of our courses but also, through research on cognition and pedagogy, enhances teaching and learning. Student engagement in research, scholarship and creative activity enriches the UNH educational experience. Developing and maintaining a broad and distinguished program of undergraduate research will enhance the reputation of UNH, expand the opportunities available to our graduates, and elevate the quality of students who choose to attend the university.

Recommendations

1) Build and strengthen connections between the OVPR and undergraduate research and education.

2) The Director of the Hamel Center for Undergraduate Research should be a permanent member of the OVPR Research Council. This will ensure that undergraduate research is a prominent part the OVPR agenda.

3) The Undergraduate Research Conference should continue to be the responsibility of the OVPR. Although other undergraduate research programs are administered by the Hamel Center, we do not recommend relocating the Undergraduate Research Conference to the Hamel Center. The continuing presence of the Undergraduate Research Conference in the OVPR ensures an active organizational investment in and connection to undergraduate research programs.

4) The OVPR and the Research Council should promote the inclusion of undergraduate students in faculty research and scholarly activities, and encourage faculty to include support for undergraduates in external grant applications.

5) Create additional opportunities for undergraduates to participate in research and creative activities in collaboration with the Hamel Center and the Honors Program, and recognize these activities in visible forums such as the Undergraduate Research Conference.

6) Support the rapid growth of the highly successful Undergraduate Research Conference to increase the level of student participation.

7) Identify departments or programs whose dilapidated facilities and equipment are unable to support education-driven research conducted by undergraduates. Develop plans for the maintenance and improvement of facilities and infrastructure, and in coordination with the Offices of the President and the Provost, identify financial resources needed to implement these plans.

8) Work with the University Foundation to obtain additional support for undergraduate programs and fellowships that promote research, scholarship, and creative activities.

9) Work with general education reform to integrate and align the research mission with the educational mission. Encourage departments and colleges to develop and offer signature general education courses that foreground and make visible the research
strengths of the UNH faculty; and to coordinate capstone experiences for undergraduates with graduate education where appropriate.

ENGAGEMENT AND PARTNERSHIP WITH THE PUBLIC AND PRIVATE SECTORS

Public Sector

As a land-grant university, UNH is charged with serving the public. The mission statement includes language about its service to the region: “From its main Durham campus and its college in Manchester, the University serves New Hampshire and the region through continuing education, cooperative extension, cultural outreach, economic development activities, and applied research.” UNH’s relationships with the public sector are dispersed across colleges, centers and institutes, and administrative units which are loosely organized under the category “Outreach and Engagement” which is the purview of the Vice Provost of Research and Outreach Scholarship, a position originally housed in the Office of the Vice President for Research and Public Service. The Office of the Associate Vice President for Research and Outreach Scholarship now reports (80%) to the Provost and Executive Vice President and (20%) to the Vice President for Research. The office seeks to strategically link and integrate the engagement mission into the academic and research enterprises.

There is no coordinated strategy to elucidate and bring together the state’s and university research interests. Overall, UNH has a highly dispersed, uncoordinated strategy to interact with the public sector. The Office of Sponsored Research (OSR), rather than the Vice Provost of Outreach and Engagement, is often the face of the university in many state agencies. Relationships with state agencies are idiosyncratic and depend on the interests and personalities of faculty members and the Deans.

The state of NH funds UNH to conduct research on a variety of topics. To conduct this research, UNH must compete with the private sector for these public sector grants and contracts. Many state agencies require a competitive bidding process for research grants and contracts and are not able to directly engage UNH. At other land grant universities, state agencies are able to make “interdepartmental transfers” in order to secure necessary research support.

Private Sector

In addition to interacting with the public sector, increasingly universities are entering into partnerships with the private sector to advance the research interests of university faculty as well as the business and industry. These relationships are potential sources of research dollars for the university and provide access to capital and proprietary research tools, and an opportunity to bring findings to the marketplace. Concerns have been raised about the influence of these private sector partnerships on basic research, open exchange of scientific information, and the discouragement of technology development that has public benefit but not commercial viability. Despite these concerns, like the vast majority of Research High

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10 Pew Initiative on Food and Biotechnology, 2003.
universities, UNH has created the Office of Research Partnership and Commercialization (ORPC) to advance its relationship with the commercial sectors.

The ORPC integrates three initiatives: intellectual property management, the New Hampshire Innovation Research Center (NHIRC), and New Hampshire EPSCoR. Integration of these previously independent initiatives by one office represents a unique strategic advantage for UNH and the state of New Hampshire through the acceleration of research and technology-based economic development. Within UNH, the ORPC identifies potential research partnerships and fosters those collaborations both strategically and administratively and facilitates transfer of university research results to the public by bringing scientists and the business community together in relationships of mutual advantage.

The ORPC manages UNH’s intellectual property assets to enhance the university’s research initiatives. It is responsible for pursuing intellectual property protection (patents, trademarks, and copyrights), material transfer agreements, license agreements, inter-institutional agreements, confidentiality and nondisclosure agreements, negotiation of intellectual property terms for industry sponsored research agreements, and Bayh-Dole Act compliance. The ORPC also provides support for investigators pursuing Small Business Technology Transfer and Small Business Innovation Research (STTR/SBIR) awards, federal grants that fund joint ventures between small businesses and nonprofit research institutions for innovative research and development.

Despite these impressive gains in royalties and invention disclosures, UNH is not capitalizing sufficiently the federal funding it receives, and needs additional support in order to expand ORPC growth.

Recommendations

Public Sector

1) The OVPR and the Office of the Provost should cooperatively develop a coherent university organizational structure charged with relationships with the public sector.

2) The positions of the Vice Provost for Engagement and Outreach Scholarship and associated staff should serve the mission of the Office of the Vice President for Research and be brought into alignment.

3) UNH should develop a strategic plan to systematically engage the state level Executive Agencies with faculty to improve research opportunities that serve New Hampshire’s policy-makers.

4) The OVPR should work with NH officials to allow budget transfer authority between state departments and UNH in order to advance research on a variety of state policies and practices.

Private Sector

1) The OVPR should create a New Hampshire and/or Regional Roundtable that brings the private and public sectors together with university leaders and faculty
to create collaborative opportunities related to research and workforce development.

2) Maintain the number of patent and invention disclosures submitted by faculty at a level commensurate with UNH’s research expenditures (1/$2.5 million is the national average). Increase financial commitments and prioritization on the protection and commercialization of UNH’s intellectual property assets to create new and sustainable sources of long-term revenue for individuals and the institution. University leaders and principal investigators must communicate the importance of this paradigm shift.

3) Encourage UNH biomedical principle investigators and administrators to develop and endorse multi-institutional partnerships in order to increase funding from the National Institutes of Health. Institutional partnerships such as those with Dartmouth Medical School should be encouraged.

4) Increase awareness of the University’s technical capabilities and understanding of how industry has benefited by partnering with UNH. Create a marketing plan that aligns with OVPR, the colleges, and the Institutes and Centers.

5) Develop promotion and tenure and faculty annual report guidelines that recognize development and prosecution of intellectual property.

6) Coordinate the activities of the ORPC and those of the public sector strategic plans.

COMMUNICATION AND CELEBRATION OF RESEARCH IN THE UNIVERSITY AND THE PUBLIC SPHERE

Communication about, and celebration of, research is a strategic endeavor central to the university’s research culture. This endeavor has a number of goals:

• Articulating the importance and benefits of research as part of the institutional mission to all constituencies, including but not limited to administrators, faculty, students, legislators, alumni, industry and business enterprises, the public at large, and the media.

• Raising the profile of our institution as a significant creator of new knowledge for stakeholders in the state, the region, the nation, and the world, and making visible the unique strength that distinguishes UNH as a research university from other regional educational institutions.

• Enhancing transparency and thus building trust in the University community about the processes that set priorities, promote, and reward excellence in research.

• Adding recognition and value to the achievements of students and faculty members, thereby helping create an institutional culture of excellence encouraged both by public acknowledgment and by incentive.

• Furthering our institutional identity as one in which undergraduate and graduate students have substantive research opportunities.
• Supporting a collegial and collaborative university culture where faculty members reach out to one another and seek opportunities to develop interdisciplinary research endeavors.
• Working with the Library, Colleges, Departments, and Institutes and Centers to improve their strategies for communicating research to their various constituencies.

UNH communicates about, and celebrates, research in a number of venues. Various university publications feature research, from the UNH Magazine to newsletters from a range of units. Library exhibitions, website articles, UNH Today, and press releases feature faculty research accomplishments. But no central strategy exists for these goals, and no office or program has overall responsibility for this work. The present UNH website for the Vice President for Research, for example, is a hodgepodge of information which appears to grow by unsystematic accretion.

In that context, we recommend that the VPR work consultatively with the Provost and University Communications and Marketing, taking the lead in developing a strategic plan for communicating about, and celebrating, research accomplishments at UNH.

Recommendations

1) Create an ongoing university-wide repository of data about faculty intellectual contributions and publishing an annual list of faculty publications and other significant accomplishments in research, scholarship, and creative endeavor. The Working Group notes the existence of software tools, such as Digital Measures, that facilitate such efforts as well as the UNH Library Dean’s efforts to develop an Institutional Repository

2) Create major campus events. These should include an annual dinner and a series of lectures celebrating research accomplishments such as the publication of books, obtaining patents, large research grants, national awards, and membership on national and international bodies.

3) Create a bi-annual outreach-oriented, research magazine designed for wide readership, and a quarterly newsletter that will feature outstanding accomplishments in research by faculty, graduate and undergraduate students, significant milestones, as well as providing links to other such newsletters and publications by other research units. The goal of these publications is to articulate why research is critical to the recruitment and retention of high-quality faculty members and students, why it enhances the educational experience of students at all levels and prepares them better for success in their careers, adds to the quality of the work force at state and national levels, and how UNH-based intellectual property can generate new jobs and wealth, representing a valuable asset for the citizenry.

4) Redesign the OVPR website as the central and comprehensive source of research-relevant information at UNH. The website should feature the mission, goals, and strategic plan of the OVPR; services provided by the OVPR; guidelines, policies, and forms pertaining to research; announcements of new opportunities, links to all center and institute websites; and a complete catalog of links to research-relevant publications
throughout UNH. In coordination with the Office of University Communications and Marketing, the OVPR website should highlight contemporary accomplishments in research, scholarship, and creative endeavor at UNH.

5) The guidelines and policies communicated by the VPR, and made available on the OVPR website, should make transparent the processes that determine matters such as the distribution of internal and faculty start-up funds, decisions on strategic research initiatives (such as the selection of research teams for external funding competitions or the pursuit of earmarks), based on the principles of peer review, the track-records of proposing personnel, and fair governance practices.

FIDUCIARY STEWARDSHIP AND COMPLIANCE AND ETHICAL CONDUCT IN RESEARCH

Activities to ensure fiduciary stewardship and compliance and ethical conduct in research primarily fall under the OSR, under the VPR. The VPR is the “institutional official” designated by the UNH president with responsibility for fiduciary stewardship of all grants and contracts, the Institutional Review Board for the Protection of Human Subjects (IRB), Institutional Animal Care and Use Committee (IACUC), and Environmental Health and Safety Committees (OEH&S) (see http://www.unh.edu/ehs/safety-committee-roster.htm). The VPR is also responsible for the Export Controls & Embargoes Committee and has established a Responsible Conduct of Research (RCR) Advisory Committee. OSR and OEH&S staff members provide administrative support to these committees. Compliance is a shared responsibility making training and education in the ethical conduct of research essential.

The current mission of OSR is as follows: “OSR works in partnership with University faculty and staff to facilitate their sponsored research, scholarly, creative, service and outreach activities; promote accountability and compliance; and serve as steward for externally-sponsored programs.” (OSR Strategic Plan, 2006-2010). OSR is responsible for essential functions related to oversight and support of both funded and non-funded research activities, compliance, and the management of externally funded programs including a variety of grants and contracts for research and other scholarly and outreach activities. The main areas addressed by OSR related to compliance include: a) Openness, access and participation in research and scholarly activity; b) Misconduct related to engagement in scholarly activity; c) Ownership and management of research data; d) Policies related to intellectual property; e) Policies addressing financial conflict of interest; f) Protection of human subjects; and g) Care and use of animals. OSR also works closely with the offices of Environmental Health and Safety, and Intellectual Property. It is essential that systems are in place related to ethical and regulatory compliance in order to support the research mission of the University. It is important to note that ethical and regulatory compliance transcends almost all aspects of University life including support of the academic mission of the university. Therefore the issue of compliance is broad and complex, and oversight, management and administration of compliance requires careful consideration in order to be efficient, and effective, involving the office of the Provost as well as the OVPR.

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Recommendations

1) OSR should be renamed the Office of Research Administration, and continue in its present form under the OVPR, and have representation on the Research Council lead by the VPR. VPR would represent issues of concern of the OSR as appropriate at the Dean’s Council in order to promote integration of the UNH academic and research missions.

2) OSR should streamline its services to focus its efforts and resources primarily on: a) the delivery of services to assist in the management and support of grants and contracts; and b) fiduciary oversight and compliance related to all scholarly activities that may be associated with the service/outreach, research and teaching missions of the institution, including both sponsored (externally funded) and non-funded activities.

3) Individual units/colleges should take on more responsibility for the management of grants and contracts including training, writing, financial management, reporting, indirect cost management etc. Oversight of such activities will occur through collaborations amongst the Associate Deans for Research, grants specialists and OSR staff.

4) The responsibilities of BSCs and OSR related to financial management and compliance issues for sponsored programs needs to be clarified to maximize efficiency. However, it is essential that some flexibility in roles across colleges be maintained, as individual colleges have different service needs related to sponsored programs, which will be identified by the college Associate Deans for research. Some of the goals identified in OSR’s Strategic Plan address this issue including promoting excellent customer service and satisfaction with OSR, enhancing communication with project directors, and establishing Electronic Research Administration.

5) OSR should continue close working relationships with other offices involved in compliance and regulatory functions such as Environmental Health and Safety, and Intellectual Property. Current systems in place such as the Internal Review Board for the protection of human subjects, export controls, and the handling of animals for both research and instructional purposes should continue in their present form.

C. STRUCTURE OF THE OVPR

There are two organizational options for the OVPR. The differences in the two options proposed relate to reporting relationships. In option A, the VPR reports directly to the President and is a member of the President’s Cabinet. In option B, the VPR reports to the Provost and Executive Vice President and also is a member of the President’s Cabinet. These two models are presented are shown below. (For reference purposes, the current organizational charts of the Vice Provost and Executive Vice President; and the Office of the Vice President for Research are presented in Appendix C.) Regardless of what model is ultimately adopted, the VPR should have high levels of input into university academic policy-making. Both options contain several changes and additions which include:

1) The Research Council
2) The Faculty Advisory Committee

3) Associate VPR (100% commitment to the OVPR). The Associate OVPR will have direct responsibility for the following functions/roles:

   a. Office of Research Partnership and Economic Development. This office deals with intellectual property management, administration of NH Innovation Research Grant and EPSCoR, and economic development. Besides managing the commercialization of UNH-based innovations, this office is expected to identify and/or create opportunities for state, regional, and national economic development and job creation using UNH-based research, scholarship, and creative activities. The office will link UNH research activities with firms from NH and around the world to stimulate economic development through innovation and entrepreneurial activities. This office will also establish and manage UNH’s Technology Park to facilitate high-technology development and growth to benefit NH economy.

   b. Legislative Affairs (added under Associate VPR). This role will assist the VPR in identifying new strategic areas and opportunities for research.

   c. Communication and Celebration (added under Associate VPR). A newly created Communication and Celebration function communicate with our stakeholders as well as celebrate/recognize UNH research accomplishments across the campus.

We note that:

- Research Computing Center and Environmental Health and Safety are added under service units directly reporting to VPR.
- Several units (currently reporting to VPR) including the Energy Task Force, CICEET/AMAC, Instrumentation Center, Interoperability Lab, and Marine Program have been temporarily removed. The basic principle of this reorganization is that the OVPR is the incubator for new Centers and Institutes which will move out of the OVPR after they mature.
- The Office of Sponsored Research (OSR) has been renamed the Office of Research Administration.
Organizational Structure Option A
Office of the Vice President for Research, Scholarship & Creative Activities
Organizational Structure Option B
Office of the Vice President for Research, Scholarship & Creative Activities
D. JOB DESCRIPTION OF THE VPR

As the visionary for scholarship and research across the University, the VPR is the senior research officer, leading the Office of the Vice President for Research. He or she has a prominent leadership role in encouraging investment in research infrastructure, and in establishing and assisting the UNH community meet its research mission. The individual must demonstrate a deep commitment to all research-related endeavors and creative activity supporting the mission of institution and will play a visionary role in leading UNH’s research enhancement efforts. This includes fostering excellence in research and scholarship across all disciplines, and working closely with the Office of the Provost, President, the Dean’s Council, and other UNH leaders to promote the integration of UNH’s research mission with its teaching and service/outreach missions. The VPR will have an established record of outstanding scholarship, demonstrated success in managing major research initiatives, a collaborative working style that fosters effective engagement with academic, state and federal governmental agencies, and other non-profit and for profit organizations. The VPR will be appointed in a tenure-track position in an academic department.

The VPR oversees policies and activities in support of faculty research programs, in promoting major grant, institute and research center activities, and in assuring compliance with federal research regulations. He or she will work towards enhancing facilities for research activity and creativity, including laboratory space, state of the art equipment, and centers for the arts, library and other resources. The office includes an Associate Vice President for Research, Office of Research and Sponsored Programs, Environmental Health and Safety, Office of Research Partnerships and Commercialization, including NH EPSCoR. Developing programs such as the Marine Program, and Cooperative Institute for Coastal and Estuarine Environmental Technology report to the VPR, as does the Research Computing Center, Interoperability Lab, University Instrumentation Center, and Federal Relations and Project Development.

Specific responsibilities of the Vice President for Research include:

- Leading efforts for research enhancement, which involves a range of duties. In coordination with the Office of the Provost, President, Research Council, and the Dean’s Council, the OVPR will make decisions regarding strategic investments in research. In addition to managing a stable allocation of funds to support the office and staff of the VPR, the OVPR will support the initiation of faculty research through seed money, matching grants, and start-up funds, and disperse funds for the development of state of the art research facilities, laboratory space and equipment, as well as for strategic hires.

- Actively pursuing foundation and philanthropic relations in coordination with the UNH Foundation with the goal of expanding private research funding from sources in addition to those from federal and state government.

- Engaging and partnering with the public and private sectors, and fostering relationships with federal and state agencies and legislators for the promotion of the research enterprise. The VPR will also provide oversight of the Office of
Research Partnerships and Commercialization to capitalize on the commercial potential of the research enterprise.

- The VPR will enhance research opportunities across all disciplines, and develop an infrastructure that allows UNH to be competitive for external research funding. The VPR will facilitate interdisciplinary partnerships between colleges, centers, and institutes within and outside UNH. He or she will work towards enhancing facilities for all research activity, scholarship and creative activity, including laboratory space, state of the art equipment and technology, centers for the arts, library, and other facilities for the arts, physical, social, and health sciences, and the humanities.

- Being responsible with the Provost for the approval, appointment, and promotion decisions of Research Faculty, who are viewed as integral to the University’s research mission and as such, the University’s larger academic mission.

- Assuring compliance and ethical conduct in research which include oversight of the Office of Research and Sponsored Programs, Office of Research Partnerships and Commercialization, and Environmental Health and Safety. This includes developing and overseeing policies that a) assure openness, access and participation of faculty in research and scholarly activity; b) handle misconduct related to engagement in scholarly activity; and c) address financial conflict of interest and intellectual property. The VPR acts as the institutional official for the University’s Institutional Board for the Protection of Human Subjects in Research, Institutional Animal Care and Use Committee, and Environmental Health and Safety Committees.

- Ensuring that effective fiduciary policies, structures, technologies, and practices are in place to efficiently and effectively manage research dollars.

- Promoting and celebrating research in undergraduate education, including working with the Undergraduate Research Conference; with centers such as Hamel Center that support undergraduate research; and with research centers that create, disseminate, and apply research on cognition and pedagogy.

- Integrating and improving the quality of research in Graduate Education in coordination with the Dean of the Graduate School. This includes involvement in decisions regarding the development, or enhancement of doctoral and masters programs, and the integration of graduate research conducted through the Centers and Institutes. This involves close collaboration with the Dean of the Graduate School, Center and Institute Directors, and active participation on the Dean’s Council. Specific areas may also include participation in policy making regarding the dispersal of funds for graduate student support, recruitment of graduate students, oversight of standards and processes for thesis and dissertation completion, and supporting the graduate student research conference.
• Leading efforts related to the celebration and communication of UNH research accomplishments and activities throughout the University, community, state and nation.

• Advocating for and assisting in the development of university policies including a financial model that rewards faculty productivity and excellence in the area of research, scholarship, and creative activity, and provides incentives for faculty mentorship of graduate student research. This includes making decisions on policy and budget matters of importance to the university, and participation in strategic planning efforts in cooperation with the President, other Vice Presidents, Deans, and other administrative officers.

• Developing and implementing a university-wide system for measuring and monitoring the state of the UNH research enterprise, productivity, and reputation for excellence in research, scholarship and creative activity.
Appendix A: UNH Policy on Research Faculty

Appointment of Research Faculty

8.1 Definition: Research Faculty (Research Assistant Professor, Research Associate Professor, Research Professor) are those who have research as their principal assignment. Research faculty are typically supported by a variety of mechanisms (internal and external sources); however, the majority of salary support is derived from grant and contract funds obtained by the research faculty member. Research Faculty members are not eligible for tenure.

8.2 Appointment Procedure. Affirmative Action policies are followed in appointing Research Faculty. Unless the person to be appointed is either a prominent scientist who will be the project director of the external grant or contract, or already an employee of the University, advertising and competitive selection is required.

8.2.1 Appointments may be full-time or part-time and are normally made to an existing department. They require the approval of the faculty in that department in accordance with their bylaws and the concurrence of the appropriate dean(s) and the Vice President for Research and Public Service. Such individuals are granted academic rank within the department or program by the President upon recommendation of the Provost and Executive Vice President.

8.2.2 When recommending an appointment, the following materials are to be forwarded to the Provost and Executive Vice President:

8.2.2.1 A letter signed by the department chairperson (or other unit director in the event that the appointment is not proposed within an academic department) indicating that a majority of the faculty in the department agree that the candidate meets the criteria outlined below and favor the appointment at the rank specified;

8.2.2.2 Specific recommendations by the appropriate college dean(s) and the Vice President for Research and Public Service; and

8.2.3 Appointments are renewed annually for Research Assistant Professors and may be renewed up to five years for senior faculty. They may be renewed only if continued external funding is assured.

8.3 Criteria

8.3.1 The three ranks of Research Assistant Professor, Research Associate Professor, and Research Professor parallel their tenure-track counterparts. However, research is the primary focus of the candidate.

8.3.1.1 A Research Assistant Professor shall have completed formal advanced study appropriate to his/her field and shall have demonstrated success in carrying out externally funded research, be capable of advising graduate students, and provide some service to the University and profession.

8.3.1.2 A Research Associate Professor shall have completed formal advanced study, had several years of successful research experience, and have shown clear evidence of his/her ability to conceive and perform independent research and to obtain external funding for his/her
research, supported and advised graduate students, and provide some service to the University and profession.

8.3.1.3 A Research Professor shall have a background of successful research, marked by maturity and experience that has earned him/her a national/international reputation in the field. The candidate will have supported and advised graduate students and provided some service to the University and profession.

8.4 Responsibilities and Privileges

8.4.1 Research Faculty may fulfill some teaching and/or service responsibilities. However, research must remain the principal duty of the faculty member. Research Faculty may serve as directors of graduate student research and may serve on thesis committees.

8.4.2 Research Faculty are not eligible for service in the Faculty Senate, nor are they eligible for sabbatical leave or tenure. Voting rights of Research Faculty within a department or program are determined by the bylaws of the department, institute, or center. Research Faculty otherwise have ordinary faculty privileges (library, parking, etc.). They are eligible for benefits in keeping with established Board of Trustees policy.

8.4.3 Annual written reviews are prepared by the department chairperson, program director, institute or center director who also makes the initial recommendation for salary adjustment. Promotion recommendations for Research Faculty follow University Promotion and Tenure policy except that evaluation of the candidate is limited to accomplishments in research and scholarly activity. An appropriate format for promotion recommendations is provided by the Provost and Executive Vice President in consultation with the Vice President for Research and Public Service.
Appendix B: Faculty Workload/Research Analysis

What is the impact of reducing course load of 5 to 4 and replacing with research/graduate activity?

- Used data from CHHS, WSBE and COLA
- Used current RCM formulas
- College A Profile:
  - 65 TT faculty
  - 50 NTT faculty
  - $17.4 million net tuition generated
  - $5 million in external funding ($4 million from research institutes)
  - $600k in F&A recovery ($500k from research institutes)

Assumptions

1. 1 course for 65 TT faculty equals $1.96 million in net tuition that needs to be covered to accommodate workload shift to research.
2. Assumes 5 courses per TT faculty and 25 students per course for a total of 125 students per TT faculty
3. Non Institute Tenure Track faculty generate $1 million in external research which generates $100k in F&A recovery for College A.
4. Doubling research activity does not cover incremental instructional expenses.
5. Assuming 4 credits and 25 students per course, College A would need to cover 58 courses to generate the $1.96 million.
6. At the department level (assuming 10 departments) this equates to 6 courses.

Options:

- Hire 15 additional TT faculty: $1.3 million in salary and fringe benefits (does not include space, equipment, travel, etc).
- Hire 58 adjunct faculty: $260k.
- Hire combination of TT faculty, adjunct faculty, clinical faculty and lecturers: $800k.
- Or – increase class size to an average of 31 students which will cover full $1.96 million.

Possible Strategies

1. Increasing class size from 25 to 31 will not increase costs and generate same level of net tuition revenue.
2. Increase graduate net tuition generated by 10% by increasing price and enrollment. Total $ = $390k
3. Put five graduate assistants on grant funding = Total $ = $100k
4. Ten course buyouts charged to grants. Total $ = $114k
5. Increase current use gifts. Total $ = $100k

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11 Developed by David Proulx, UNH Assistant Vice President for Finance and Budget Planning
6. Raise significant endowment funds. ($5 million) Total $ = $200k
7. Increase indirect cost recovery from increased grant activity. Total = $30k

Some other considerations:
   a) In addition to direct instructional costs, indirect costs must be considered (space, BSC, admin support, etc).
   b) Quality of service must be considered.
   c) Some classes, programs have class size and student/faculty ratios that limit ability to increase class size.
   d) Each department may have a different strategy to achieve the goal.
Appendix C: Current Organizational Charts for the Office of the Vice President for Research; and the Office of the Provost and the Executive Vice President