# Strategic Direction - 5

**RESEARCH**

## Recommendations

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Human Resource Requirement</th>
<th>Financial Cost</th>
<th>Time Frame</th>
<th>Complexity of Implementation</th>
<th>Leaders</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1 Request Additional R&amp;D Funds from the State to Support Sponsored Research</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>Chancellor, Gov't. Relations, Presidents, VPRs</td>
<td>3a</td>
</tr>
<tr>
<td>5.2 Strengthen Sponsored Research by Coordinating the Process of Requesting Increased Funding</td>
<td>Medium</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td>VPRs</td>
<td>3b</td>
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<tr>
<td>5.3 Increase Graduate Student Funding</td>
<td>High</td>
<td>High</td>
<td>Medium</td>
<td>Medium</td>
<td>Chancellor, Gov't. Relations, Presidents, Deans of Graduate Students</td>
<td>1</td>
</tr>
<tr>
<td>5.4 Enhance the Graduate Education Experience and Build the System’s Research and Scholarly Capacity</td>
<td>High</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Presidents, Provosts, VPRs, Deans of Graduate Students, Faculty</td>
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*Final Report - Strategic Direction 5*

Strengthen and leverage research throughout the State to ensure greater breadth and depth of research. Develop a greater capacity to use research, scholarship, and creative expression to enhance Maine’s economy.

**Human Resource Requirement**
- **Low** - Little employee investment (1-10 employees)
- **Medium** - Moderate employee investment (10-25 employees)
- **High** - Significant employee investment (More than 25 employees)

**Financial Cost**
- **Low** - Less than $250,000
- **Medium** - $250,000 to $1 million
- **High** - $1 million and above

**Time Frame**
- **Low** - 2007
- **Medium** - 2008-2011
- **High** - 2012 and later

**Complexity of Implementation**
- **Low** - Staff empowered to make decisions
- **Medium** - Chancellor and multi-campus administration involvement
- **High** - Legislature, Board, Chancellor and Presidential involvement

**Leaders**
- Person(s) responsible to lead implementation of recommendation

**Priority**
- Rank in order of importance
**Strategic Direction - 5**

**RESEARCH**

Strengthen and leverage research throughout the State to ensure greater breadth and depth of research. Develop a greater capacity to use research, scholarship, and creative expression to enhance Maine’s economy.

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<td>5.5 Set Greater Incentives for Faculty Research, Scholarship, and Creative Expression</td>
<td>Low - Little employee investment (1-10 employees) Medium - Moderate employee investment (10-25 employees) High - Significant employee investment (More than 25 employees)</td>
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<td>Low - 2007 Medium - 2008-2011 High - 2012 and later</td>
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<td>5</td>
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<td>5.6 Support Faculty in Generating Grants and Contracts</td>
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<td>5.7 Expand Opportunities for Undergraduate Research</td>
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Strategic Direction 5
Research
5.1 ASSESSMENT TEMPLATE

Recommendation

5.1 Request additional R&D funds from the State to support sponsored research

Performance Metric Questions

- What is the growth in MEIF funds from the base year amount of $12 million?
- How many collaborative MEIF-related research projects have been undertaken or are in progress between USM/UMaine and other campuses?
- What new categories of research important to the State's economy outside of the seven categories identified in the MEIF as of 2006 have been sanctioned, has a fund analogous to MEIF been established for these categories, and what level of funds has been appropriated to it?
- How many dollars collected by UMS from the indirect costs recovered by UMaine and USM have been transferred as match to the professional development accounts for scholarship at the other five campuses?

Strengthen and leverage research throughout the State to ensure greater breadth and depth of research. Develop a greater capacity to use research, scholarship, and creative expression to enhance Maine’s economy.
5.2 Strengthen sponsored research by coordinating the process of requesting increased funding

Has USM's Office of Sponsored Programs provided at least one training session annually for the campuses at Augusta and Farmington in order to build grant-seeking and grant-management capacity? Are principal investigators at these campuses satisfied with the consultation available to them through USM's OSP?

Has UMaine's Office of Research and Sponsored Programs provided at least one training session annually for the campuses at Fort Kent, Machias, and Presque Isle in order to build grant-seeking and grant-management capacity? Are principal investigators at these campuses satisfied with the consultation available to them through UMaine's ORSP?

Has a calendar for requests of annual R&D bond and operating funds been established and communicated to all campuses?

Are the various campuses satisfied that the process for coordinating and determining system-wide priorities for R&D bond and operating funds is fair, and that decisions by the UMS have been communicated in a clear and timely fashion?
## Strategic Direction 5

### Research

**5.3 ASSESSMENT TEMPLATE**

- Strengthen and leverage research throughout the State to ensure greater breadth and depth of research. Develop a greater capacity to use research, scholarship, and creative expression to enhance Maine’s economy.

### Recommendation

- **5.3 Increase graduate student funding**

### Performance Metric Questions

- At what percentage of the median compensation for assistantships at peer institutions are graduate teaching and research assistantships in the University of Maine System, considering Masters and Doctoral students separately?

- By what number have institutionally funded graduate assistantships at U Maine and USM grown since school year 2005-2006?

- By what number have externally funded graduate research assistantships at U Maine and USM grown since school year 2005-2006?

- By what number have graduate assistantships in professional masters programs grown since school year 2005-2006?

- What is the growth at U Maine and USM in endowed and/or named graduate scholarships, compared with school year 2005-2006?
In the appointment and reappointment of graduate faculty, does each school, department or other units sponsoring graduate degree programs have clear, written criteria that recognize and reward strong faculty performance in graduate research, scholarship and education?

What has been the growth in on-line, full-text literature available to faculty and students engaged in graduate research and education, compared with such availability as of school year 2005-2006?

At what rate are analytical instrumentation and cyber infrastructure being upgraded and replaced, as benchmarked against state-of-the art equipment and facilities in the respective scientific fields in which the System's campuses are engaged in graduate education?

At what level have "graduate venture capital funds" been provided to the Graduate Schools at U Maine and USM to cover basic administrative and instructional costs of interdisciplinary courses and programs needed to fill emerging areas of state and national need?

How many collaborative graduate education programs are being offered between campuses with such programs in place and campuses that want to provide access to graduate education but don't have capacity to do so on their own?

In the appointment and reappointment of graduate faculty, does each school, department or other units sponsoring graduate degree programs have clear, written criteria that recognize and reward strong faculty performance in graduate research, scholarship and education?

What has been the growth in on-line, full-text literature available to faculty and students engaged in graduate research and education, compared with such availability as of school year 2005-2006?

At what rate are analytical instrumentation and cyber infrastructure being upgraded and replaced, as benchmarked against state-of-the art equipment and facilities in the respective scientific fields in which the System's campuses are engaged in graduate education?

Performance Metric Questions

Recall

5.4 Set greater incentives for faculty research, scholarship, and creative expression

Strategic Direction 5
Research

5.4 ASSESSMENT TEMPLATE

Strengthen and leverage research throughout the State to ensure greater breadth and depth of research. Develop a greater capacity to use research, scholarship, and creative expression to enhance Maine’s economy.
Strategic Direction 5
Research
5.5 ASSESSMENT TEMPLATE

▶ Strengthen and leverage research throughout the State to ensure greater breadth and depth of research. Develop a greater capacity to use research, scholarship, and creative expression to enhance Maine’s economy.

Recommendation
5.5 Set greater incentives for faculty research, scholarship, and creative expression

Performance Metric Questions

▶ What has been the increase in endowed Professorships and Professors, systemwide and at each campus, based on excellence in research compared with school year 2005-2006?

▶ What percentage of indirect costs above an established baseline is being returned to faculty and their Department or Center?

▶ How many faculty have received Post-Tenure Review salary increments as a result of scholarly success?

▶ At each campus, what is the dollar value of incentives, and the number awarded, for non-faculty with advanced degrees wishing to engage in research?
What is the satisfaction level among principal investigators with their ability to hire research personnel in a timely way and to easily access and analyze progress on post-award budgets?

How many administrative staff involved in the support of research grants and programs have received salary incentives for outstanding service?

Performance Metric Questions

- What percentage of faculty, by campus, have access to true broadband?
- What is the satisfaction level among principal investigators that their digital library needs are being met? (NOTE: See also Recommendation 5.4 concerning access to full-text digital library resources.)
- What is the satisfaction level among principal investigators with their ability to hire research personnel in a timely way and to easily access and analyze progress on post-award budgets?
- How many administrative staff involved in the support of research grants and programs have received salary incentives for outstanding service?
Strategic Direction 5
Research
5.7 ASSESSMENT TEMPLATE

Strengthen and leverage research throughout the State to ensure greater breadth and depth of research. Develop a greater capacity to use research, scholarship, and creative expression to enhance Maine’s economy.

Recommendation

5.7 Expand opportunities for undergraduate research

Performance Metric Questions

- What is the increase in number of Research Experience for Undergraduates (REU) proposals to NSF compared with 2006-2007? What is the funding success rate?

- By campus, what is the number of undergraduate students participating in one-on-one independent study courses with faculty related to the faculty member's area of scholarship or research?

- What percentage of undergraduate students have access to up-to-date equipment and software, provided system-wide, in their scholarly activities?