Blue Sky Outcomes

Reaffirming Public Higher Education at Maine’s Flagship University

May 2018 • Reflections and Progress
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UMaine for a Renewed Maine

The Blue Sky Project
Blue Sky Vision

The University of Maine aspires to be the most distinctively student centered and community engaged of the American Research Universities.

The Blue Sky Plan provided strategic guidance for the University of Maine from 2012 through 2017. This report summarizes the university’s accomplishments under the plan as well as some lessons learned on the journey. By looking back at what we set out to do in light of what we actually accomplished, we can learn from our experiences. UMaine is a stronger institution today than it was five years ago, and the context within which the university operates has changed significantly in that time. Our hope is that this report will provide a foundation upon which the UMaine community can build a new vision and develop a new set of priorities to guide the institution through the next chapter of its story.
Blue Sky Strategic Plan Assessment
Final Report

Development of the Blue Sky Strategic Plan

The Blue Sky Plan is the 2012–17 strategic plan for the University of Maine. It was developed over the course of the 2011–12 academic year through an intentionally inclusive and consensus-driven process. The work was overseen by a Planning Leadership Team composed of 27 members, including faculty, staff, students, administrators and community members who met weekly to develop the plan. In order to garner the perspectives of the wider community, this group held 30 “listening sessions” regarding a variety of focused topic areas, and a website was created to effectively share information. UMaine community members were encouraged to share their ideas for UMaine’s future. More than 250 ideas were submitted and the Blue Sky Project’s website was visited over 6,600 times. Other constituents participated, including UMaine’s Board of Visitors, the University of Maine Foundation Board, the University of Maine Alumni Association Board, the Pulp & Paper Foundation Board, the 4-H Foundation Board, the Maine Municipal Association and University of Maine System Presidents. Released in 2012, the Blue Sky Plan was organized around the following vision: The University of Maine aspires to be the most distinctively student centered and community engaged of the American Research Universities.

Continued commitment to the strategic plan persisted through a presidential transition. The Blue Sky Plan was developed during the administration of former University of Maine President Paul W. Ferguson, with then Provost Susan J. Hunter. In 2014, Hunter became the university’s 20th president and continued the implementation of UMaine’s five-year strategic plan. “I will focus my efforts in three major areas. The first is continued implementation of the initiatives defined by the Blue Sky Strategic Plan. It became the new operating model of the institution. Strategic plans often end up on the bookshelf; but not this one.” (Hunter, July 2014)
Assessment of the Strategic Plan

As the Blue Sky Plan reached the five-year mark, President Hunter charged Provost Jeffrey Hecker with developing an approach to lead the university in a process of self-reflection and assessment of progress made during the implementation of the Blue Sky Plan. This reflection provides the opportunity to celebrate successes, undergo a realistic appraisal of where we have fallen short and identify lessons learned in the process.

Provost Hecker formed and chaired the Blue Sky Strategic Plan Assessment Steering Committee, with Michael Scott, president of the Faculty Senate, serving as co-chair. Five additional individuals were named to the committee, and each was charged with chairing a Pathway Team composed of faculty, staff, administrators and a UMaine Board of Visitors member (see pages 6–7).

The Steering Committee developed guiding principles for this work, including a commitment to an inclusive process of engaging the UMaine community, and efficiency by mining existing data. The assessment focused on the Blue Sky initiatives, since the context for specific strategies changed over the life of the plan.

In the spring 2017 semester, the Pathway Teams identified sources of relevant data and provided initial thoughts regarding Pathway progress on actions taken and relevant outcomes. Two graduate students, Paul Fink and Kassie Stevens, were hired to work over summer 2017 to aggregate data from existing sources, such as annual reports, and to identify gaps in the data.

In the fall 2017 semester, the Provost hosted six open forums. The goal of the forums was to share information gathered to date and collect additional input. At the initial forum, Provost Hecker and President Hunter provided an overview of the progress made and laid out the plan for the five Pathway Forums. In each Pathway Forum, the Pathway chair presented a summary of actions taken in support of the initiatives outlined in the Pathway, as well as relevant outcomes and impacts, and feedback was collected. A website was created with information related to each Pathway, a video of each forum for those unable to attend, and a portal for the UMaine community to contribute ideas and questions. The Pathway Teams reflected on the discussions at the forums and the feedback gathered through the website, and collected additional information as needed.

The Steering Committee synthesized the information gathered and developed a draft report. Working with the Pathway Teams, the final report was completed in March 2018.
Blue Sky Plan Assessment Steering Committee

Chair  Jeffrey Hecker, Executive Vice President for Academic Affairs and Provost

Co-Chair  Michael Scott, Faculty Senate President

Members  Jake Ward, Vice President for Innovation and Economic Development
              Jeffery Mills, University of Maine Foundation President
              Monique LaRocque, Associate Provost for Lifelong Learning
              Kenda Scheele, Assistant Vice President for Student Life and Senior Associate Dean of Students
              Stewart Harvey, Executive Director of Facilities and Capital Management Services
Pathway Committees

Pathway 1
Jake Ward, Chair, Vice President for Innovation and Economic Development
Ivan Manev, Dean, Maine Business School
Todd Gabe, Professor of Resource Economics and Policy
Jason Bolton, Associate Extension Professor
Jason Charland, Director of Grant Development
Heather Leslie, Director of the Darling Marine Center
Philip Hamilton, Board of Visitors Member

Pathway 2
Jeffery Mills, Chair, University of Maine Foundation President
Claire Strickland, Chief Business Officer
Dana Humphrey, Dean, College of Engineering
Grant Miles, Associate Professor of Management
Jonathan Rubin, Director of the Margaret Chase Smith Policy Center
Sarah Doheny, Director of Student Financial Aid
Nathan Briggs, Board of Visitors Member

Pathway 3
Monique LaRocque, Chair, Associate Provost for Lifelong Learning
Timothy Reagan, Dean, College of Education and Human Development
Larry Lewellen, Vice President for Human Resources
Cindy Isenhour, Assistant Professor of Anthropology
Darren Ranco, Chair, Native American Programs
Lynn Coutts, Senior Associate Director of Athletics
Kathy Olmstead, Board of Visitors Member

Pathway 4
Kenda Scheele, Chair, Assistant Vice President for Student Life and Senior Associate Dean of Students
Emily Haddad, Dean, College of Liberal Arts and Sciences
Mary Mahoney O’Neil, Associate Dean, College of Education and Human Development
Farahad Dastoor, Lecturer in Biological Sciences
Elizabeth Allan, Professor of Higher Education
Silverio Barrera Jr., Associate Director for Events, Office of Undergraduate Admissions
Owen McCarthy, Board of Visitors Member

Pathway 5
Stewart Harvey, Chair, Executive Director of Facilities and Capital Management Services
Fred Servello, Dean, College of Natural Sciences, Forestry, and Agriculture
Jeffrey St. John, Senior Associate Provost for Academic Affairs
Heather Hamlin, Assistant Professor of Aquaculture
Patti Miles, Associate Professor of Operations Management
Tim O’Neil, Board of Visitors Member

II. Assessment
1. Serving Our State: Catalyzing Maine’s Revitalization

The University of Maine will align its innovation, entrepreneurship and community outreach with the priority economic and cultural needs of Maine. Our interconnected research, teaching and service mission will be a primary engine that drives Maine’s future. Our research enterprise will increase UMaine’s stature and footprint, and expand “use-inspired research.” We will focus on targeted growth in arenas promising returns on investment that will ultimately benefit all of our constituencies.

Following this Pathway will ensure that UMaine is a more responsive, adaptive and powerful partner, and will enable critical growth in areas such as business development, sustainable energy development and entrepreneurship, addressing Maine’s STEM (science, technology, engineering, mathematics) needs, regional research and economic development, P–20 education, and health care and social services. We will promote the state’s cultural heritage while affirming the centrality of a liberal arts education at the state’s flagship university in providing critical thinking and communication skills to all professions, while enhancing quality of life for Maine’s citizens.

Enhance our impact on the economic and social fabric of Maine, including strengthening existing campus/private sector partnerships, while increasing our total partnerships 50% by 2017

- Since the inception of the Blue Sky Plan, the University of Maine has seen significant growth in the number of UMaine/private sector partnerships as defined by formal contracted activity. In addition, many more informal partnerships exist.

<table>
<thead>
<tr>
<th>UMaine Commercial Partners</th>
<th>FY12</th>
<th>FY17</th>
<th>% Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Partners</td>
<td>180</td>
<td>389</td>
<td>116%</td>
</tr>
<tr>
<td>Number of Projects</td>
<td>305</td>
<td>557</td>
<td>83%</td>
</tr>
<tr>
<td>Dollar Value of Projects</td>
<td>$3,561,826</td>
<td>$4,973,394</td>
<td>40%</td>
</tr>
</tbody>
</table>
Blue Sky Outcomes

• To build Maine’s entrepreneurial ecosystem, Maine Accelerates Growth was created in 2015 by a statewide team that included the University of Maine, Maine Technology Institute and Maine Center for Entrepreneurial Development. UMaine’s role includes managing the Innovate for Maine Fellows program, hosting the Top Gun Entrepreneurial Accelerator in the Bangor region.

• UMaine is actively engaged with partners statewide, including the University of Maine System campuses, to support company growth. Partners include:
  - Alliance for Maine’s Marine Economy
  - Bangor Region Chamber of Commerce
  - Bangor Target Area Development Corporation
  - Board of Agriculture
  - Eastern Maine Development Corporation
  - Economic Development Council of Maine
  - Educate Maine/Project Login
  - Maine Aquaculture Innovation Center
  - Maine Center for Entrepreneurs
  - Maine Chamber of Commerce
  - Maine Development Foundation
  - Maine Forest Economy Growth Initiative
  - Maine Municipal Association
  - Maine Potato Board
  - Maine Technology Institute
  - Maine Wild Blueberry Commission
  - Portland Region Chamber of Commerce

Continue to match and more closely align UMaine research strengths with the seven Maine Technology Sectors for Economic Development

• In 2013–14, UMaine went through a deliberative process to identify its Signature Areas of Excellence and Emerging Areas of Excellence. Several of the Signature and Emerging Areas align with and support the seven Maine Economic Improvement Fund sectors: Forestry and Agriculture; Aquaculture and Marine; Biotechnology; Composites; Environmental; Information Technology; and Precision Manufacturing.

• The state appropriation for the Maine Economic Improvement Fund (MEIF) FY16–17 increased by $2.65 million per year ($1.8 million per year to UMaine), and supported/expanded research and development in Maine’s seven designated technology sectors.

• In 2016–17 Provost Hecker formed and led the Commercialization Working Group that developed a plan for accelerating the movement of intellectual...
property from laboratory to market, and for working more closely with Maine industries to meet their research and development needs. Key actions to emanate from the Commercialization Working Group included a statewide Commercialization Summit (Jan. 9, 2018), the creation of the Innovation and Economic Development Council, and activation of the University of Maine Research Foundation.

### UMS Grants and Contracts in MEIF Sectors

<table>
<thead>
<tr>
<th>Grants and Contracts Awarded in MEIF Sectors</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquaculture and Marine</td>
<td>7,045,322</td>
<td>9,153,389</td>
<td>15,187,566</td>
<td>12,631,690</td>
<td>21,229,069</td>
</tr>
<tr>
<td>Biotechnology</td>
<td>1,985,295</td>
<td>6,353,450</td>
<td>1,524,204</td>
<td>2,399,487</td>
<td>3,821,390</td>
</tr>
<tr>
<td>Composites</td>
<td>9,230,715</td>
<td>5,135,033</td>
<td>5,247,712</td>
<td>6,974,264</td>
<td>13,504,642</td>
</tr>
<tr>
<td>Cross Sector</td>
<td>2,990,129</td>
<td>4,681,209</td>
<td>1,018,132</td>
<td>507,842</td>
<td>4,274,394</td>
</tr>
<tr>
<td>Environmental Technologies</td>
<td>5,781,658</td>
<td>7,959,264</td>
<td>4,349,651</td>
<td>5,045,536</td>
<td>5,543,121</td>
</tr>
<tr>
<td>Forestry and Agriculture</td>
<td>8,642,424</td>
<td>7,654,060</td>
<td>14,194,009</td>
<td>10,317,799</td>
<td>4,660,014</td>
</tr>
<tr>
<td>Information Technologies</td>
<td>7,422,675</td>
<td>2,520,521</td>
<td>4,473,781</td>
<td>11,497,199</td>
<td>5,292,726</td>
</tr>
<tr>
<td>Precision Manufacturing</td>
<td>1,130,746</td>
<td>1,414,700</td>
<td>780,694</td>
<td>1,009,921</td>
<td>1,009,518</td>
</tr>
<tr>
<td>Total</td>
<td>$44,228,964</td>
<td>$44,871,626</td>
<td>$46,775,749</td>
<td>$50,383,738</td>
<td>$59,334,874</td>
</tr>
</tbody>
</table>

34 percent growth FY13–FY17

- In 2014, the University of Maine System Board of Trustees established the Research Reinvestment Fund to strengthen research and development activities that are tied to Maine businesses and industries that are critical to the future of Maine. UMaine administers and manages these funds, which support research and development activities systemwide.
Align technology and educational programs with Maine’s economic development needs

• **Innovate for Maine Fellows Program** annually supports paid internships. It has placed 162 student fellows representing 29 colleges and universities with 168 Maine businesses focused on solving the company’s innovation challenge.

• **STEM Ambassadors Program** is a Cooperative Extension 4-H youth development program, created to bring trained students to youth programs statewide to engage them in exciting experiential learning STEM activities. In 2014, a grant from the Board of Trustees expanded the program to include students from the other UMS universities. Over 100 UMS students work with more than 1,000 Maine youth each year, enhancing their after-school experiences and exciting them about STEM disciplines.

• **Flagship Internship Program** was developed after a working group reviewed best practices and model internship programs. In spring 2017, an inaugural cohort of 19 students participated in the Flagship Internship with Maine companies, including Poland Spring, Bangor Savings Bank, TRC, Lane Construction Co. and WEX.

• **The Maine Center for Research in STEM Education (RiSE Center)** received a $2 million National Science Foundation grant in 2016 to promote STEM education in rural schools.

Reaffirm and integrate the core goals of a liberal arts education in community/culture with innovation and economic development

• In spring 2012, a $300,000 grant from the Presidential Request for Visions of University Excellence (PRE-VUE) Program provided stimulus funding to develop a center dedicated to supporting and advancing humanities education, scholarship and public engagement. A fundraising campaign culminated with a naming gift to create the Clement and Linda McGillicuddy Humanities Center. The center operates with a core endowment $1.2 million, $200,000 in affiliated endowed funds, and over $200,000 in expendable operating funds — all raised from private donors.
Pathway 1 Findings
Prepare UMaine graduates for Maine's future workplace needs

• Maine's future workforce needs graduates with training in the STEM disciplines, and science, technology, engineering and mathematics education is one of UMaine's Signature Areas of Excellence. Enrollment in STEM undergraduate degree programs has grown 17% over the past five years. In fall 2017, nearly half (47%) of all undergraduate students were enrolled in STEM majors.

• Enrollment in disciplines key to Maine's economic well-being grew significantly over the course of the Blue Sky strategic plan years: Forestry, 28%; Business, 25%; Marine Sciences, 21%; Nursing, 8%; Engineering, 6%.

• The Innovation Engineering minor, and undergraduate and graduate certificates, include tools and methods for creating, communicating, and commercializing meaningfully unique ideas and complements any major or field of study, including the sciences, arts, humanities, business, engineering and education. In the past five years, 34 students earned the innovation engineering minor or certificate and 724 students took at least one innovation engineering course.

• Internships and fellowships highlights include:
  - The creation of an internship office in the Maine Business School, featuring collaborations with nearly 90 employers.
  - Placement of College of Education and Human Development student-teachers in more than 500 classrooms throughout Maine every semester.
  - Development of the SEA (Science for Economic Impact & Application) Fellows Program by UMaine Darling Marine Center director Heather Leslie and University of Maine at Machias professor Brian Beal to catalyze university-industry partnerships related to the state's marine economy and ecosystems on which it depends.

• Career services highlights include:
  - Career-related presentations delivered to 3,899 students in 2015–16 and 5,927 students in 2016–17 through one-on-one appointments, walk-ins and presentations in academic classes, honor societies and student organizations.
  - Organization and hosting of the largest Career Fair in Maine in 2015–16, with 146 organizations attending. That same year, the state's largest Engineering Job Fair featured 96 organizations. In 2016–17, the combined participation broke the previous year's record with 281 employers. In addition to jobs for graduates, 62% of the companies offered internships for current students.
  - Expansion of the Maine Mentor Program to include 30 new mentors, with 106 high-quality matches.
Increase commercialization and the number of small businesses developed as a result of technology spinoffs

Proactive support and visibility for commercialization has increased during the Blue Sky term.

UMaine Commercialization Metrics

<table>
<thead>
<tr>
<th>FY Commercialization Metrics</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
</tr>
</thead>
<tbody>
<tr>
<td>License revenue</td>
<td>$121,469</td>
<td>$55,344</td>
<td>$60,295</td>
<td>$90,594</td>
<td>$186,148</td>
</tr>
<tr>
<td>New inventions disclosures</td>
<td>26</td>
<td>11</td>
<td>19</td>
<td>15</td>
<td>26</td>
</tr>
<tr>
<td>U.S. patents issued</td>
<td>16</td>
<td>10</td>
<td>6</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>U.S. provisional patents applications filed</td>
<td>9</td>
<td>13</td>
<td>9</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Nonprovisional U.S. or PCT patent applications</td>
<td>14</td>
<td>11</td>
<td>12</td>
<td>20</td>
<td>7</td>
</tr>
<tr>
<td>Number of new licenses signed</td>
<td>4</td>
<td>8</td>
<td>9</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

- The journey from an investigator’s disclosure of a potential invention through the patenting process to commercial application is a long one. The four-year pattern of near exponential growth in licensing revenue is continuing in fiscal year 2018. At the mid-point of the year licensing revenue surpassed the $500,000 mark.

- The Office of Innovation and Economic Development supports business incubation facilities, including the UpStart Center for Entrepreneurship, Foster Center for Student Innovation, Darling Marine Center and the Center for Cooperative Aquaculture Research. In FY17, Ellsworth, Maine created the Union River Center for Innovation, where UMaine is providing the business support to tenants and affiliates with funding through the Department of Commerce Economic Development Administration. Also in FY17, UMaine provided coaching and counseling to 69 community entrepreneurs, and supported seven tenants and one affiliate company at the UpStart Center.
Blue Sky Outcomes

- In FY17, the Foster Center provided counseling to 78 students and business space for five companies/innovation projects. Successes included Boreal Games, which received a Libra Future Fund and Maine Technology Institute Tech Start grant. In addition, two tenants were finalists in the UMaine Business Challenge, including Boreal Games, which won the second-place prize.

- Former Innovation Center tenants and users had several successes in 2017:
  - Cobbler Technologies, Revolution Research and Tip Whip all received Seed Grants from the Maine Technology Institute. Sea & Reef Aquaculture received an MTI Business Accelerator Grant, and Revolution Research received a $100,000 EPA grant.
  - Tip Whip participated in “Greenlight Maine,” and SCORE named the company an American Small Business Champion.
  - Innovation engineering graduate and tenant in Stillwater Posters, Nate Wildes, opened Flight Deck Brewery in Brunswick, which was recently named the Best Tap Room in Maine by Down East magazine.
  - Flowfold announced a partnership with L.L.Bean to sell an exclusive line of products.
  - VegNews magazine listed Redd Bar among its 50 favorite brands of vegan energy bars. It also raised more than half of a $1.5 million equity investment round.

UMaine-Affiliated Business Incubator Activity.

<table>
<thead>
<tr>
<th>Incubator Location</th>
<th>Tenant Companies at UpStart Center for Entrepreneurship in Orono (formerly the Target Technology Center)</th>
<th>Affiliate Companies at UpStart Center for Entrepreneurship in Orono (formerly the Target Technology Center)</th>
<th>Tenant Companies at UMaine Center for Cooperative Aquaculture Research, Franklin</th>
<th>Tenant Companies at UMaine Darling Marine Center, Walpole</th>
<th>Tenant Companies at Union River Center for Innovation in Ellsworth (est. FY17)</th>
<th>Affiliate Companies at Union River Center for Innovation in Ellsworth (est. FY17)</th>
<th>Student Companies at Foster Center for Student Innovation</th>
<th>Total companies per year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8</td>
<td>7</td>
<td>11</td>
<td>11</td>
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<td>21</td>
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<td>6</td>
<td>3</td>
<td>5</td>
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</tr>
</tbody>
</table>

| Total companies per year | 21 | 15 | 25 | 21 | 25 |
Enhance UMaine organizational support for promoting regional economic impact

- The Office of Innovation and Economic Development formed in 2012 under the leadership of Vice President for Innovation and Economic Development Jake Ward. The unit consists of the Department of Industrial Cooperation, Foster Center for Student Innovation, Economic Development Programs, Technology Commercialization, and business incubation through the Center for Cooperative Aquaculture Research and the UpStart Center for Entrepreneurship.

Use our resources to highlight Maine’s rich cultural heritage, and relate the arts and humanities better to economic development

- The University of Maine Humanities Initiative, funded with a PRE-VUE grant in 2012, developed a strong record of community partnerships and fundraising, culminating in the naming of the privately endowed Clement and Linda McGillicuddy Humanities Center in 2017.
Blue Sky Outcomes

- Fogler Library contributes to cultural and economic development in Maine in a variety of ways:
  - In 2013, library staff members offered a workshop on grant seeking for nonprofits, a session on business research for Penquis Incubator Without Walls, and consulted with the Penobscot Nation and the Hirundo Preserve on grant opportunities.
  - In 2014, the Maine Shared Collection Cooperative worked with 14 public libraries in Maine to analyze their existing print collections. This work allows libraries to discard materials that are duplicated statewide with the knowledge that other libraries have made the commitment to retain those materials.
  - In 2015, reference staff collaborated with an interdisciplinary research team to submit a National Science Foundation grant to study the reuse economy in Maine and its impact on the environment.
  - In 2016, library staff offered the Incubator Without Walls instruction and consultation for small business owners, assisted with 54 patent and trademark consultations with members of the public, and provided consultation service through New Ventures Maine.
  - In 2017, Fogler Library’s Canadian Studies Office served the state by building a strong collection of Canadian materials focusing on economic, historical, cultural, environmental, and business links between Maine and both the Maritime Provinces and Quebec. These links help Maine businesses and government agencies increase trade and cooperation with the state’s neighboring provinces.

- The University of Maine Press published books that celebrate Maine cultural heritage and natural resources, including *The Historical Atlas of Maine, Hearts in Suspension, Plants of Baxter State Park* and *Sedges of Maine*.

- During the course of the Blue Sky plan, the Collins Center for the Arts hired a new executive director and associate director, and strategic planning for the center moved forward. The Collins Center is home to the Bangor Symphony Orchestra and has hosted:
  - Bangor Region Chamber of Commerce’s Business After Hours
  - Maine Music Educators Association’s Maine All State Festival
  - Maine International Conference on the Arts

- In a typical year, more than 14,000 people of all ages visit the University of Maine Museum of Art. UMMA expanded its location in downtown Bangor and now includes 3,800 works. It partners with Maine museums, and art programs and camps to provide support to arts and humanities development statewide. UMMA Director George Kinghorn has served as a panelist for the Maine Arts Commission’s International Conference on the Arts, and has presented professional development sessions for the Chamber of Commerce Building Bridges Program and the Bangor Region Leadership Institute.
Continue to increase support in signature areas, including engineering, environmental and sustainability studies, renewable energy, alternative fuel research, STEM education and literacy

- In 2013–14, Provost Hecker led the UMaine community through a multistage process for defining the university's Signature Areas of Excellence. In the process, criteria were established, and a two-stage proposal-review was used to develop consensus around seven signature areas. These areas of excellence have guided marketing, recruitment and strategic resource allocation, including investment in key faculty positions:
  - Forestry and the Environment
  - Marine Sciences
  - College of Engineering
  - Advanced Materials for Infrastructure and Energy
  - Climate Change
  - STEM Education
  - Honors College

Identify, promote, and invest in key emerging areas, such as biomedical sciences, new media, and the arts and humanities

- Emerging Areas were identified along with UMaine's Signature Areas using the same criteria and processes:
  - Graduate School of Biomedical Science and Engineering
  - Northeastern Americas: Humanities Research and Education
  - Data Science and Engineering
  - Sustainability Solutions and Technologies
  - Aging Research
  - Finance Education
2. Securing Our Future: Ensuring Financial Sustainability

We will take bold and innovative steps to strengthen our financial position efficiently by increasing operating revenues as an offset to operating expenditures. We will revise our organizational structure to support our academic and research agendas effectively and efficiently. This will require us to redesign and define the optimum business model of higher education for a 21st century public research university that strategically grows new operating revenues beyond operating expenditures to ensure fiscal sustainability. We will use data-driven decision making and bold leadership to reshape the size and quality of Maine’s flagship campus enrollment. We will strive to increase the university base budget to fund new campus initiatives, including strategic faculty hires, with clarity and confidence. We will sculpt the optimal balance of in-state, out-of-state and international students at the graduate and undergraduate levels to foster and sustain the most healthy and vibrant university for Maine. We will encourage colleges and other academic units to cooperatively pursue entrepreneurial avenues toward improving financial sustainability. We will enhance our research capacity and output as measured in the core areas of research expenditures, private foundation funding, intellectual property creation and royalty income, and industry-funded research. We will realign our Advancement partners to conduct friend-raising and fundraising in a more strategic and effective manner. This will achieve new revenues that ensure UMaine’s fiscal stability. We will continue to increase transparency and accountability through established benchmarks and metrics. Following this Pathway will enable UMaine to fund the excellence consistent with our vision for engagement and consistent with the strategic directions of the University of Maine System. This will require a commitment to entrepreneurial approaches in institutional budgeting and decision making, and will build the necessary foundation for future investments in key academic areas, including the hiring of new faculty necessary for maintaining excellent teaching, research and outreach activities at UMaine.
As a significant measure to strengthen net revenue, we will establish a new UMaine administrative unit under a new Vice President centered on enrollment management, responsible for the development and implementation of a comprehensive “Maine-sizing the Flagship” Enrollment Management Plan to realistically increase the student body up to 15,000 students by 2017.

• The Office of Enrollment Management was created and placed under the direction of the Vice President for Enrollment Management. Key accomplishments in the enrollment management operation include:
  - A complete overhaul of the system for financial aid allocation
  - Development of Flagship Match and Maine Match programs
  - Complete revamping of a multimedia marketing campaign
  - Development of several college-specific enrollment management collaborations to grow applications and increase yield
  - Increased academic partnerships with Maine community colleges to promote college access and affordability
  - Creation of 38 new E&G supported graduate assistantships to support graduate student enrollment
  - Thirteen online graduate degrees and 15 online graduate certificates were brought together under the newly branded UMaineOnline portfolio
  - Creation of fully online MBA, MSW, M.Ed. in instructional technology and M.A. in spatial informatics programs
  - Creation of several bachelor’s to master’s degree pathways to motivate and support UMaine undergraduate students to continue into graduate programs.

• Innovations in Enrollment Management have yielded positive results. Highlights include:
  - Between 2012 and 2017, 116% increase in first-year enrollment from New England states other than Maine, and a 119% increase in first-year students not from New England
  - In fall 2016, 44% of the first-year entering class and 49% of fall 2017 first-year students were from out-of-state.
  - Consecutive years of record first-year enrollment in fall 2016 and fall 2017.
The Division of Lifelong Learning launched a new effort to offer Professional Development Programs at the Hutchinson Center in Belfast, and in Orono through Conferences and Institutes. The 10 new programs included:

- Instructional Technology
- Restorative Practices Workshops for Educators K–12
- Ethical Dimensions of Self-Care in Social Work and Human Services
- Business Writing and Grammar
- Integrative Health Care Workshop
- Mindful Leadership Certificate
- Fundraising Leadership for Nonprofit CEOs
- Tools for Success: Social Media Marketing Workshop
- Grant Writing
- MidCoast Leadership Academy

Net Tuition and Fee Revenue (after scholarships and awards)

Note: In-state tuition rate did not increase over this five-year period.
Improve annual student retention rates by 5%, and four- and six-year graduation rates by 10% by FY17

• In the 2013–14 academic year, a team of faculty, staff and administrators led by Provost Hecker developed the Provost’s Action Plan for Retention and Graduation. The plan outlined a series of actions steps for the next two years.

• The Think 30 initiative launched in summer 2015. It features a campuswide awareness campaign about the importance of obtaining 30 credit hours every calendar year, advisor training, improved year-round scheduling and financial aid incentives. The Think 30 campaign has resulted in a 10% increase in the number of students earning 30 or more credit hours during their first year enrolled at UMaine.

• A fully online Winter Session was created to provide students with the opportunity to earn additional credit hours between semesters. Launched in 2016, Winter Session has proved to be highly popular with 656, 905 and 1140 students earning three or more credits in its first three years, respectively.

The four-year graduation rate for undergraduate students has improved over the past five years

<table>
<thead>
<tr>
<th>Year</th>
<th>Graduation Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>33%</td>
</tr>
<tr>
<td>2010</td>
<td>36%</td>
</tr>
<tr>
<td>2011</td>
<td>38%</td>
</tr>
<tr>
<td>2012</td>
<td>40%</td>
</tr>
<tr>
<td>2013</td>
<td>38%</td>
</tr>
</tbody>
</table>
Work to reduce administrative overhead costs per student full-time equivalent (FTE) by increasing enrollment, becoming more efficient in delivering educational programs at lower costs and reducing administrative costs

- Several operations, including procurement, human resources, information systems and capital project management have been centralized by the University of Maine System, resulting in significant cost savings.

Increase total income from UMaine research and development initiatives

- The total value of UMaine commercial partner projects increased 40% from FY12 to FY17, $3,561,826 and $4,973,394, respectively. The total number of commercial partners more than doubled over this time.

Increase sales and service revenues from the current level of 5.6% of total revenues to 10% of total operating revenues

<table>
<thead>
<tr>
<th></th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales and Services</td>
<td>$17,549,785</td>
<td>$17,822,025</td>
<td>$15,720,058</td>
<td>$16,049,423</td>
<td>$16,266,646</td>
</tr>
<tr>
<td>Total Operating Revenue</td>
<td>$198,709,326</td>
<td>$203,816,497</td>
<td>$201,791,720</td>
<td>$201,209,459</td>
<td>$215,781,838</td>
</tr>
</tbody>
</table>

Create a strong culture of philanthropy and instill our students with the expectation that they can give back to UMaine — their time, their money and their networking capacity — after graduation

- UMaine students participate in Maine Day of Giving events held in conjunction with Maine Day.

- UMaine student leaders, including Senior Skulls and All Maine Women, have been involved in many Advancement events involving UMaine donors, including President’s Club Brunch, University of Maine Foundation Annual Meeting and Stillwater Society Dinner.

- Advancement staff meet with class leadership through council meetings to help select a class giving opportunity, with an emphasis on endowed scholarships.
• Advancement staff created a comprehensive handbook for class councils, which is updated regularly, to facilitate class councils in their fundraising efforts.

• UMaine students who have benefitted from philanthropy in Advancement are highlighted in print and digital communications.

**Grow the percent of private and capital gifts as a percent of total revenues from the current level of 10% to 15% by 2017**

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<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Gifts</td>
<td>$13,695,911</td>
<td>$16,744,680</td>
<td>$16,056,456</td>
<td>$14,989,517</td>
<td>$12,088,864</td>
</tr>
</tbody>
</table>

(These numbers do not include pledged gifts.)
Improve alignment and strategic effort of the Advancement Partners, including the Alumni Association, Office of Development, the University of Maine Foundation, the Pulp & Paper Foundation, and the Maine 4-H Foundation

- The Development Office merged with University of Maine Foundation in FY17 to create an integrated and efficient fundraising operation.

- Fundraising partners — the University of Maine Foundation, Pulp & Paper Foundation, 4-H Foundation — share a database and participate in shared prospect management.

- Advancement events, presidential travel and donor hosting are centrally coordinated by Advancement Events and Presidential Travels committees to optimize resources and reduce confusion.

Prepare for a new and bold comprehensive campaign in conjunction with the University of Maine’s 150th anniversary in 2015

- External donor feasibility study conducted by consulting firm confirmed a goal of at least $200 million.

- Comprehensive campaign was approved by UMS Board of Trustees and launched in October 2017.

- As of February 2018, $134 million has been raised.

- Many improvements to annual giving were made, including the branding of the Alfond Fund and use of iModules.

- Significant gifts made to the campaign include the Gerard S. Cassidy ’80 Capital Markets Training Laboratory, the Stephen E. King Chair in Literature and a $10 million anonymous gift to support the planned Engineering Education and Design Center.
Embracing a Culture of Excellence: Promoting Spirit, Collaboration and Community

We will refresh and reintroduce the unique UMaine brand to our many constituencies on campus and externally across the state, region, nation and the world. Our communication and outreach efforts will be thoughtful, strategic and consistent, and we will recruit key constituencies to help us advance our mission and achieve our vision. We will plan with intent to grow a culture of continuous engagement among our campus citizens and community partners. Our teaching and research enterprise will increase its stature and footprint in expanding the boundaries of knowledge as measured by interdisciplinary collaborations, publications, public dialogue and disciplinary impact. We will continue to strategically and creatively hire world-class faculty who further these boundaries and provide the best possible education to future leaders. We will celebrate and materially reward criteria-based achievement among our faculty and staff by increasing resources for professional development, and creating a structured means for providing training and incentive opportunities. Our plan aims to reward excellence and energize our faculty and staff, who are the key to shaping UMaine’s future and establishing a high-quality workplace. Following this Pathway will result in a more engaged and interactive UMaine campus with our constituencies by creating an effective communication infrastructure to build community and streamline best practices. Also, appropriately rewarding hardworking faculty and staff and promoting morale will help us to recruit and retain the best and brightest employees to advance UMaine.

Strive for 100% brand awareness of UMaine quality and impact in the state of Maine among all constituencies by clarifying our reputation for excellence in research, teaching and public service

- Marketing and Communications created Brand Standards and a Branding Tool Kit to facilitate branding.

- Two Communicators Summits were conducted.

- UMaine’s web presence — umaine.edu — was redesigned for optimal institutional positioning and marketing.

- The Communicators Network was established.

- UMaine Today magazine was redesigned in print and online.

- UMaine Today videos air on Maine Public television.

- UMaine’s yearlong 150th anniversary observance included branding, pole banners, posters, website and Open University Day as part of Homecoming 2015.
• Display ads in Portland Jetport and Bangor International Airport focus on UMaine’s statewide partnership in economic development and student recruitment.

• Weekly UMaine News alerts are sent to the UMaine community, including Board of Visitor members and legislative representatives

Harness the goodwill, time and talents of our alumni through consistent, strategic communication, outreach and engagement efforts, particularly in the areas of increasing student internship and career networking opportunities.

• The UMaine Alumni Association (UMAA) expanded its publication and distribution of the MAINE Alumni Magazine — online and in print, introduced new digital communications newsletters, and expanded presence on social media.

• In 2016, the Alumni Association revamped its off-campus programming, doubling the number of event attendees over the previous year. It also revamped four major activities: Reunion, Homecoming Weekend, Alumni Achievements Awards program, and the Distinguished Maine Professor Award and annual dinner, resulting in significant increases in attendance over previous years.

• UMAA established a presence on LinkedIn, connecting with more than 15,000 alumni.

• In September 2016, UMAA created two awards: Faculty Excellence Award and Dirigo Award, the latter recognizing an undergraduate who exemplifies the academic and civic ideals of UMaine.

Strengthen the organization for, and reaffirm the campus engagement of, Athletics, promoting our role as the state’s only Division I school.

The Department of Athletics:

• Collaborated with the Division of Marketing and Communications to produce an annual athletics/alumni publication.

• Partnered with a national leader in ticketing and marketing (MG) to better connect the Black Bear brand to UMaine fans.

• Streamlined its fundraising structure under one umbrella — Alfond Fund.

• Restructured its volunteer organization, which is now called The Alfond Fund Ambassadors.
Blue Sky Outcomes

• Created signature events to better involve donors and volunteers, which enhances the experiences of student-athletes, donors, volunteers and fans. The inaugural event was the Alfond Golf Classic held at Belgrade Lakes Golf Club in August 2017.

• Improved UMaine digital presence online with ESPN3 and America East TV.

• Improved the Black Bear brand in southern Maine with events in Portland, such as men’s and women’s ice hockey, football, baseball and softball games.

• Created a student-athlete leadership group called Elite 13. This group will partner with the Student-Athlete Advisory Committee, an NCAA Division I national program. The mission will be to enhance the total student-athlete experiences by advancing opportunity, protecting student-athlete welfare, teaching leadership and championing a positive student-athlete image.

Encourage and value diversity through our uniquely diverse community members by tangible programming of UMaine multicultural groups, including international programs

• The number of students of color enrolled at the University of Maine grew from 1,091 in AY12–13 to 1,422 in AY16–17 — a 30.3% growth.
• The Wabanaki Center and Native American Studies merged into Native American Programs, resulting in broader partnerships between UMaine and tribal communities.

• LGBTQ Services was recognized with the Community Partner Award by Equality Maine for its partnership in co-sponsoring and hosting the spring 2016 Equality Maine Youth Conference.

• Students were celebrated through campuswide events and initiatives, including Coming Out Week, Gay Thanksgiving, Transgender Day of Celebration, Day of Remembrance, Pride Week and Lavender Graduation.

• Diversity Week, organized each year by Multicultural Student Life in the Division of Student Life, focused on educating the campus on diversity and providing a means of celebration in various venues.

• The Office of Multicultural Student Life offers bi-weekly lunchtime programs about current and relevant topics affecting international students.

• The Student Heritage Alliance Council (SHAC) hosted the annual Hunger Banquet.

• Monthly diversity and inclusion training is offered to campus through the Office of Multicultural Student Life. Additionally, Safe Zone training (LGBTQ) are also regularly offered across campus.

• The Office of International Programs conducted outreach to international students, including weekly International Coffee Hours.

• The Franco-American Centre and Franco-American Studies programs merged to form Franco American Programs.

• The ADVANCE Rising Tide Center was created by a $3.2-million, five-year National Science Foundation grant. The center’s primary purpose was recruiting, retaining and supporting the professional development of women faculty in STEM and social and behavioral sciences. In 2016, the center transitioned to become the UMaine Rising Tide Center, with ongoing institutional funding and an expanded mission to include advancement of all women faculty regardless of discipline.

• In 2016, the Provost’s Council on Advancing Women Faculty was created as a permanent committee of the administration to advise the provost on policy and practice matters that support recruitment, retention and advancement of women faculty.

• In summers 2016 and 2017, UMaine hosted young African leaders through the national Mandela Washington Fellowship program. The program empowers young leaders from Sub-Saharan Africa through academic coursework, leadership training and networking opportunities.
Blue Sky Outcomes

Create and sustain a continuous culture of community engagement, consistent with, and as stimulated by, the Blue Sky Project, led by members of the UMaine community through innovative approaches and venues that bring together people from diverse corners of campus to share current projects, best practices and accomplishments

- The Bodwell Center for Service and Volunteerism substantially grew its student community engagement. Volunteer hours for the Welcome Weekend Day of Service, for example, more than doubled from 2012–17. The center worked with 49 student organizations. 5,285 students served 103 local community partners throughout the academic year and logged over 21,000 volunteer hours.

- Black Bear Mentors logged over 2,226 support hours through individual meetings and activity participation with their mentees, and 12 tutors supported 1,728 hours of educational support in 2017.

- UMaine’s Carnegie Community Engagement classification was renewed in 2015.

- Engaged Black Bear initiative launched in 2016. This innovative electronic badging program provides incentive and recognition for students to be engaged in community activities.

- The coordinator of community engagement position was created to manage activities across campus, including the Engaged Black Bear, Flagship Internship program and service-learning courses.

- The number of companies with which UMaine has research and development partnerships increased from 180 in 2012 to 389 in 2017.

- School of Earth and Climate Sciences, and Climate Change Institute faculty collaborated with the Maine Center for Disease Control to develop regional-scale climate models for exploring local climate change and airborne disease vectors in Maine.

- The Department of Electrical and Computer Engineering helped organize the 11th Maine Learning Technology Initiative conference, attended by 1,200 teachers and students.

- UMaine’s NSF-EPSCoR Track III Storm Water Project sponsored 60 high school students and 15 teachers from Bangor, Portland, Auburn and tribal communities for a week of learning and training in STEM fields.

- The College of Education and Human Development partnered with 19 public school districts to improve student learning through the Penobscot River Partnership.
• The Maine Business School and Net Impact, a student group, partnered with several businesses and nonprofits on sustainability-related projects and initiatives.

• The Honors College spearheaded the Sustainable Food Systems Research Collaborative, bringing together faculty, students and community partners to identify and address problems in the food system.

• UMaine Cooperative Extension hosted the first Maine Food Summit, bringing together food producers and processors, nongovernmental organizations, business owners and other community members interested in Maine’s dynamic food system. These partners are influencing the Maine Food Strategy, a collaborative planning effort to make Maine more food independent and reduce food insecurity.

• Cooperative Extension’s 4-H Engaging Youth, Serving Community program continued to create youth-adult partnerships through community projects. In 2017, five teams of 224 young people and 97 adults devoted a combined 8,669 hours toward solving community problems.

• In UMaine’s Senior Companion Program, 121 volunteers helped 469 isolated or homebound seniors remain independent and in their homes. A recent study by the School of Economics showed that the program produces a minimum cost savings of $4.6 million annually.

• Fogler Library Special Collections staff worked with representatives of the Passamaquoddy and Penobscot tribes to develop collaborative plans for preserving tribal histories.

• Partnering with staff in the College of Education and Human Development, Fogler Library received a $43,000 IMLS grant for a Literacy to Go project to help local libraries and schools encourage early childhood literacy.

• College of Liberal Arts and Sciences and the Office of Sustainability received a Maine Campus Compact Davis Educational Foundation grant to embed service-learning pedagogy into courses on environmental stewardship.

• College of Liberal Arts and Sciences supported the Maine Science Festival where over 4,500 people visited the Virtual Environment and Multimodal Interaction (VEMI) Lab.

• Emera Astronomy Center presented planetarium shows to over 5,500 visitors, including 3,250 children.

• The Expanding Your Horizons program brought middle school girls to campus to learn about careers in STEM disciplines.
Blue Sky Outcomes
• In partnership with collaborators university-wide and across the state, the McGillicuddy Humanities Center hosted an annual Humanities Summit, a public humanities celebration in downtown Bangor, a humanities-themed issue of Maine Policy Review, and two conferences on indigenous languages for academics and practitioners of language revitalization efforts.

Working through the new leadership of the Department of Human Resources, and with our faculty and staff leadership, effectively and efficiently address (needs)

• HealthyU partnered with Cutler Health Center and the New Balance Student Recreation Center to provide various health-improvement workshops and programs, including the Employee WorkFit Program, the Wellness Walk Program, Fitness Hooping Events and the Employee Express Fitness Class.

• The Faculty Fellows Program was created in 2014. Each year, a cohort of mid-career faculty members participate in a series of professional development activities focused on public communication and leadership development. To date, four cohorts comprising 56 faculty have participated.

• New Faculty Orientation was revamped in 2015.

• Provost Hecker created the Chair and Director Training Committee to plan and deliver an annual series of professional development activities for this group of academic leaders.

• The Rising Tide Center offers a robust schedule of professional development opportunities and events designed to support faculty, particularly women and underrepresented faculty.

• The Center for Innovation in Teaching and Learning, created in 2016 to provide workshops, training and individualized consultation, supports faculty teaching, and integrating teaching and research.

• In 2015, the Office of the Vice President of Research and Dean of the Graduate School organized a university-wide Maine Celebrating Scholarship Event to recognize the research and creative achievement of more than 80 faculty members.
PATHWAY

Transforming Lives: Strengthening the UMaine Undergraduate and Graduate Student Experience

We will promote student achievement and success through graduation, career preparation, job placement and cross-cultural enrichment. We will continue to ensure that our students are taught by appropriately qualified faculty and have a productive learning experience in the classroom. We will expand these and similar avenues of opportunity for our undergraduates, with a special emphasis on cutting-edge undergraduate research collaborations with our finest research faculty and graduate students. We will strengthen our signature Honors College, and we will improve the quality and range of student life and learning opportunities, including new resident life strategies. We will enhance the number and quality of Graduate Research Assistantships/Fellowships available for graduate students to enable us to focus on world-class research experiences. The University of Maine will advance an integrative model of excellence for graduate education in the 21st century, and will foster dynamic professional training and development activities through university-wide interdisciplinary research networks. Following this Pathway will attract top students to UMaine and provide them with stellar support and preparation for careers or further academic achievement. It will reinforce UMaine’s academic excellence, expand opportunities for professional success and improve quality of life during their time at UMaine.

Prioritize and support programs to increase student success and job placement

• In 2012, a Presidential Request for Visions of University Excellence Grant (PRE-VUE) grant was awarded to the Center for Undergraduate Research (CUGR). With this support, the center has grown so that, in 2016–17, CUGR and Graduate Student Government, in collaboration with the Office of the Vice President for Research, presented the first combined Student Symposium at the Cross Insurance Center in Bangor. The symposium featured the work of more than 500 graduate and undergraduate students.

• Opened in spring 2017 in the Memorial Union, Hackerspace promotes creativity and cross-disciplinary innovation for individual students and classes. The Hackerspace initiative is a collaborative partnership between the divisions of Lifelong Learning, Academic Affairs, Student Life and other partners.

• Launched in September 2016, the Center for Innovation in Teaching and Learning supports faculty, instructors and graduate teaching assistants in course design, use of classroom technology and learning analytics, in addition to offering colloquia, workshops and presentations.
• Opened in 2015, the TeachLive Avatar Laboratory is a mixed-reality teaching environment that allows education majors and in-service teachers the opportunity to learn, create and test new and innovative teaching techniques without students being present.

• The Gerard S. Cassidy ’80 Capital Markets Training Laboratory opened in 2014. It provides students and faculty with access to global up-to-the-second energy prices, stock and bond values, interest rates and supply chain analyses, supporting real-world teaching-learning opportunities, in addition to providing an ideal facility for portfolio management, and business modeling (commercializing) for new and emerging technologies.

• The Innovative Media Research and Commercialization (IMRC) Center opened in January 2014. The center is a state-of-the-art facility for prototyping products, audio and video production, interactive innovation and out-of-the-box creation. Outfitted with state-of-the-art equipment such as 3-D printers and scanners, computer-controlled machine tools and a plastic vacuum former, the center supports innovation, economic development and student success.
Blue Sky Outcomes

- The Advanced Structures and Composites Center annually employs more than 100 students from all majors. The center provides students with interdisciplinary, experiential learning and the opportunity to become full research partners, inventors and authors.

- The first Flagship Internship Program cohort of 19 students in spring 2017 participated in a week-long, campus-based orientation before engaging in a summer of mentoring, networking and traveling the state.

Make international and/or cross-cultural opportunities central to the undergraduate experience

- Recruitment of international students to UMaine is strong, with new international applicant numbers nearly doubled. The Office of International Programs provides extensive support, including advising, social integration, an orientation course, visa workshops and other programs. Annual events — Culturefest, International Dance Festival, Study Abroad Fair — encourage community engagement.

- The Intensive English Institute earned Commission on English Language accreditation.

- It is now easier for students to take courses abroad that seamlessly transfer to UMaine. Study Abroad destinations — more than 700 — have been organized into themes.
• The Multicultural Center was moved from Hannibal Hamlin Hall to the Memorial Union and renovated. The center, in the Office of Multicultural Student Life, is home to several student organizations and offers annual programs, including Latin American Heritage Month, Native American Heritage Month, Diversity Week, Black History Month and the Dr. Martin Luther King Jr. Breakfast. The center offers Safe Zone training — identifying people and offices supporting marginalized students — as well as tutoring and mentoring for multicultural and LGBTQ students.

• The Bias Response Team was formed in fall 2017. This group serves in an advisory capacity to the Vice President for Student Life to enhance support for students who are victims of bias or hate-related behavior, track/monitor these incidents and recommend appropriate response for the campus community.

Establish outcomes-based, campuswide assessment of academic programs

• The Office of Assessment was created in 2014 to work with academic units to develop methods to assess programs and student outcomes in a systematic, periodic, uniform and iterative way.

Improve and adapt the General Education curriculum to be most responsive to the intellectual development of UMaine students and best prepare them for future careers in any field

• In October 2015, Provost Hecker led a faculty forum focused on foundational educational outcomes in the 21st century. Growing out of this discussion and led by the Office of Assessment, UMaine joined the Multistate Collaborative sponsored by the Association of American Colleges and Universities, and the State Higher Education Executive Officers Association to develop scoring rubrics to evaluate undergraduate student learning outcomes.

• Assessment of the first General Education area — Human Values and Social Contexts: Western Cultural Tradition — is in spring 2018.

• All areas of the General Education curriculum will undergo evaluation over a four-year cycle.

Increase the number of externally funded undergraduate students involved in research

• The position of director of grant development was created to support faculty grant-seeking activities that could include funding to involve undergraduates in research.
Blue Sky Outcomes

• The Center for Undergraduate Research (CUGR) grew 53% after its first year and continues to grow.

• Grants funded by NSF and USDA involve unique research opportunities for undergraduates.

Continue to develop the unique quality of the Honors College as an unparalleled “value added” UMaine undergraduate experience

• The Honors College’s Idea Network of Biomedical Research program and the Sustainable Food Systems Research Collaborative connect Honors students to business, public service organizations and other social change agents.

• The Phage Genomics Project — an Honors College, Mount Desert Island Biological Laboratory, The Jackson Laboratory, Department of Molecular and Biomedical Sciences collaboration — serves as a model to bring public and private partners together to enhance the undergraduate research experience, and may expand metacognitive aspects of education with existing lab research.

• The Servant Heart Collaborative is a program created through private donation to explore issues of community development in Sierra Leone. Local workers identify issues that Honors College students can help resolve. Current projects include creating an online test platform for middle and high school students to complete Sierra Leone National Exams, and working in child refugee centers to develop trauma-sensitive education programs.
• The Honors College is a partner on a recently awarded USDA grant that explores beekeeping and maple syrup production challenges and opportunities, and marketing for small- and medium-size beekeeping and maple syrup producers in the state.

• The College of Natural Sciences, Forestry, and Agriculture-Honors Preceptor of Genomics position was created in 2016. Modeled on the successful College of Liberal Arts and Sciences-Honors Preceptor positions, this jointly appointed faculty line serves the Honors College and the Department of Molecular and Biomedical Sciences. This position grew the number of base-funded full-time faculty members with full- or half-time appointments in Honors to seven.

**Explore new opportunities to enhance the undergraduate and graduate residential life and community experience**

• UMaine hosted the first systemwide Residence Life Summit in 2016, which brought together professional residence life staff to discuss common issues, explore opportunities to collaborate, and options for improvement in the delivery of programs and services.

• In 2013, the Second Year Program was launched and Residence Life added the academic support coordinator role (graduate assistantship) to the First and Second Year Student Center to assist first- and second-year students academically.

• The First and Second Year Student Center, renamed the First Year and Transfer Student Center, was moved to the Memorial Union to accommodate its expanded scope.
Specialized training is now required of all Residence Life staff in the following areas: addressing mental health concerns, gatekeeper suicide prevention, self-care and boundaries, conflict resolution, Title IX, and “Behind Closed Doors” — role playing student issues/problems.

The Office of Sexual Assault and Violence Prevention was created in 2013. The office takes in and manages complaints, offers educational, awareness and prevention programs, accommodates students (academic, residential, etc.), assists students needing to go to court, and provides advocates for students engaged in the student conduct process.

In 2015, Residence Life refocused its departmental programmatic approach to specific, measurable learning outcomes with an accompanying assessment regiment. This was the first step toward development of a residential curriculum for 2016, with full implementation in 2017.

In 2015, Green Living Learning Community (LLC) and Leave Your Print LLC launched.
• Student Life hired additional staff in 2015 and 2016 to serve the growing number of students in the LGBTQ and multicultural/international student communities.

• In 2014, the Student Wellness Resource Center launched its peer coaching program called Live Well. The program, which is free to students, includes consultation on life skills, personal habits and health.

**Enhance e-learning quality through curricular innovation, technological advancement and 24/7 support services**

• The Center for Innovation in Teaching and Learning opened in 2016 to support faculty members and graduate students who wish to learn about, experiment with, assess and adopt new approaches to teaching and learning.

• UMaine Online was created in 2016 and now offers courses year-round with summer and winter sessions.

• Division of Lifelong Learning introduced Winter Session in 2016. Part of the Think 30 initiative, Winter Session features a select group of high-demand undergraduate courses taught online.

• All of the graduate programs in the College of Education and Human Development are offered online, in the evenings, and on weekends to accommodate working professionals.

• Students can access nearly 100,000 online periodicals through Fogler Library, with more than 400 licensed indexes and databases.

• Cooperative Extension is realizing significant success in disseminating information as a result of prioritizing technology delivery in recent years. Extension’s 60 websites received nearly 2.5 million page views in 2014. The online catalog now contains more than 70 publications, each with embedded educational videos.

• Hackerspace has developed workshops and training sessions to help students become familiar with technology in order to facilitate cross-disciplinary collaboration and innovation.

• The Center for Innovation in Teaching and Learning is working with the Writing Center to develop an online tutor resource. This resource will be managed through an iterative software so that student progress can be tracked and monitored.

• The Center for Innovation in Teaching and Learning is developing a dashboard for faculty that can extract academic progress data from Blackboard to be used to flag struggling students.
Blue Sky Outcomes

Increase the number of graduate students funded by assistantships and fellowships

- The number of university-supported graduate assistantships has increased by 38 positions, representing a 17% increase. Seven of these graduate fellowships were funded through reallocation of central funds; 22 were funded through the Research Reinvestment Fund; and nine were funded through the shared Teaching Assistant pool. Additional assistantships come from externally supported positions (grants and contracts), TA positions created due to increased undergraduate enrollment, and positions outside of academic units (e.g., Student Life, Auxiliary Services, Athletics, etc.).

Develop Graduate Certificate Programs that enhance the graduate experience and align with demands of the 21st century workplace

- New graduate certificates include Instructional Design, English as a Second Language, Aerospace Engineering, Autism Spectrum Disorders, Interdisciplinary Climate Studies, and Teacher Consultant in Writing.
We will restore the dream of the land-grant mission by revitalizing the brick-and-mortar and technology infrastructure critical to our flagship campus. We will ensure funding toward ongoing campus improvement and beautification as we renew pride and renew a culture of stewardship at UMaine. Consistent with the goals of our strategic planning, we will review, revise and expand the campus master plan to align the optimum use of historic buildings with the need for new construction in support of the academic, research and outreach mission, including close monitoring of ongoing capital construction projects to ensure on-time and on-budget progress. We will incorporate long-term planning for our off-campus locations. We will build state-of-the-art technology infrastructure for both on- and off-campus use, and we will work to ensure sound site and utility infrastructure. Following this Pathway will signal that we value our work and our institution with its 368 campus buildings and structures on 8,313 acres at close to $1 billion in infrastructure and real estate. This will affirm our responsibility to maintaining and preserving our physical environment as a place of learning and discovery.

Revitalize the brick-and-mortar infrastructures critical to fulfilling UMaine’s flagship mission and key to our fiscal stewardship of our facilities to result in increased net capital asset value. Incorporate the Total Cost of Ownership (TCO) approach to our management of UMaine’s asset portfolio

- Total Cost of Ownership (TCO) is an optimal standard for measuring the sustainability of the sum of all investments in a given asset, while considering the capacity to afford that asset relative to its role in fulfilling the mission of the institution. TCO refers to the sum of the one-time costs of asset construction or acquisition and disposal, the annual costs of maintaining and operating, and the periodic recapitalization costs of the asset expressed in terms of dollars per gross square foot (GSF). The TCO model is a cradle-to-grave analysis of asset management that employs a cost framework to inform the University of Maine’s strategic investment strategy. UMaine has committed to pursue and achieve sustainable TCO practices in four areas: asset acquisition, daily maintenance, periodic maintenance and utility costs.
Total Cost of Ownership has two benefits for the institution: it helps us ensure that we can afford any new structures we build or acquire, and it helps us better understand our funding sources for our facilities management.

**Life Cycle Components**

1. **Acquisition Costs**: Buy, Build, Lease
   - Source of Funds: Gifts, Endowment, Bonds

2. **Daily Maintenance Costs**: Cleaning, Trash, Grounds
   - Source of Funds: Annual Operating and Maintenance Budget

3. **Periodic Maintenance Costs**: Corrective, Preventive, Predictive
   - Source of Funds: Capital Reserves, Gifts, Funded Depreciation

4. **Utility Costs**: Electricity, Gas, Water, Sewer
   - Source of Funds: Annual Utility Budget

5. **Capital Renewal Costs**: HVAC, Water, Electric, Gas, Sewer
   - Source of Funds: Capital Reserves, Gifts, Funded Depreciation

**Total Cost of Ownership**

A Holistic View of Asset Management
Develop an Asset Investment strategy that addresses where, what and how we invest

• In 2012, the University of Maine partnered with Sightlines LLC to perform an integrated facilities plan (IFP) for the Orono campus. The IFP created a comprehensive facilities condition assessment database, which establishes a Net Asset Value (NAV) metric for each building and serves as a capital asset planning tool for UMaine. It entails the assessment and identification of campus building needs, and the assignment of preliminary budgetary values for renewal costs. The completed IFP includes 80% of the total square footage of E&G and auxiliary facilities on campus. This data is updated annually.

• In early 2013, UMaine partnered with Sightlines LLC to perform a classroom assessment study for 110 classrooms on the Orono campus. The study complemented the campus IFP study and provided an additional layer of detail with respect to the technology and indoor environmental quality needs of campus classrooms.

Ensure a comprehensive, aligned and programmatic framework for facilities and asset management

• In 2014, the university implemented a comprehensive Space Planning and Management Policy that applies to all faculty, staff, students and commercial tenants. It has been established to ensure best practices and support our reduction in square footage and increase in space use rates and net asset value.

• To ensure best practices, two working groups have been established to plan and manage the assignment and renovation of space:
  - Space Management Committee: This committee includes representatives from Facilities Management, Academic Affairs, Research, Student Life, Auxiliary Services and other units. The committee meets four times a year to review information about space assignments and reassignments, planned renovations, space constraints and related aspects of space management.
  - Classroom Paint and Polish Committee: This committee meets monthly, November through March, to review and prioritize classroom renovation projects requested by academic deans. Varying funding sources are applied to this work each year. Renovations are typically undertaken jointly by Facilities Management and Information Technology. The Classroom Paint and Polish Committee facilitated approximately $400,000 in improvements in over 60 classrooms on the Orono campus and at the Darling Marine Center in 2016 and 2017.
Continue to build annual budgeted investments to fully fund appropriate levels of maintenance and renewal in campus upkeep and beautification

• The university annually funds a depreciation budget and a maintenance budget for E&G and auxiliaries. Funding depreciation at 100% is a long-term goal of the University of Maine System and the University of Maine.

Employ progressive capital construction delivery methods that result in reduced overhead, decreased time to delivery and increased asset value, completing capital projects on time and on budget

• The Pathway 5 Implementation Team reviewed several capital construction delivery methods. Capital construction at the University of Maine is accomplished through the collaboration of the university, the designer and the contractor. The most common avenue is the Design-Bid-Build approach, in which the owner develops a conceptual plan for a potential project based on user needs and program requirements. Standard procurement and contracting requirements (“front end”) documents are provided to the designer (architect and/or engineer) for the creation of specifications and drawings for the work. Bids are publicly solicited from general contractors based on these documents. A public bid opening is conducted and a construction contract agreement is awarded to the lowest responsive and responsible bidder.

Develop a long-term plan to restore and use buildings effectively in the campus Historic District

• The university created the University of Maine Historic Preservation Master Plan in 2007. In early 2014, UMaine engaged an architect to renew the campus Tier 1 Historic District Restoration Plan by creating design guidelines for each Tier 1 building. At the direction of the Pathway 5 Implementation Team, the guidelines incorporate prospective general uses for the spaces within the buildings, and inventory the optimal purpose and usage of each building.
Adopt and implement a five-year Information Technology Plan to ensure a robust and leading-edge technology infrastructure that supports the multifaceted mission of the university. Working in collaboration with the University of Maine System, review and implement, as appropriate, primary and strategic initiatives from the university-wide IT Strategic Plan

- The campus IT Strategic Plan, completed in spring 2012, is in the implementation phase. Components of the plan that have been started include:
  - Establishing an IT governance structure for UMaine (completed)
  - Establishing a residence hall wireless service (completed)
  - Upgrading the campus wireless network (ongoing)
  - Installing Voice over IP (VoIP) throughout campus, and at the Hutchinson Center and Darling Marine Center (completed)
  - Developing a computer replacement program (ongoing)
  - Upgrading campus buildings to Cat6 wiring (ongoing)

Continue to implement sustainability initiatives to meet the established goals of the University of Maine’s American College & University Presidents’ Climate Commitment

- In 2013, the university drafted an Energy and Utility Management Plan governing careful management of energy and utility services, including development, implementation and maintenance of a comprehensive program of prudent energy and utility management, encompassing energy, utilities, infrastructure and environmental sustainability.

- In 2016, the university implemented a request for proposal process for a broadly scoped energy solution for the Orono campus for the purpose of negotiating a long-term agreement that will result in the implementation of energy solutions that best meet the following four general goals:
  - Consistent with UMaine’s 2007 Climate Leadership Commitment (formerly ACUPCC), reduce its net Greenhouse Gas Emissions to zero metric tons by 2040 through the use of renewable energy, purchased offsets, efficiency improvements and other emissions reduction strategies.
  - Minimize costs associated with energy, including the costs of maintenance and operation of UMaine’s energy and utility infrastructure, which includes district steam heating and electrical distribution.
  - Provide an overall delivered energy cost structure that is predictable and stable into the future.
  - Proposed energy solutions that are robust, safe and reliable while also providing improvements to the UMaine steam and electrical distribution infrastructure.
• The Office of Sustainability has led the campus in a number of sustainable initiatives that include a 10-year reduction of 19% in campus carbon emissions, diverting food waste from landfills, sourcing food locally, initiating a zero-waste protocol for major campus events and the founding of *Spire: The Maine Journal of Conservation and Sustainability.*
Blue Sky Outcomes
Reflections and Considerations

Assessment of the Blue Sky Strategic Plan reveals much to celebrate. With the plan as a guide, the University of Maine community achieved several significant milestones and successfully navigated the unchartered waters that are higher education in the United States. The university established a solid foundation for continued success as it moves into its next chapter under new leadership. Among the accomplishments achieved under the Blue Sky plan, the following areas are particularly noteworthy:

Identity — There is a clearer understanding at the university, in the state and nationally, about who we are as an institution. Several initiatives contributed to this clarity. The identification of UMaine’s Signature and Emerging Areas of Excellence communicated clearly our areas of strength, where we will invest and how we can best serve the people of Maine. Through our public statements and, more importantly, our actions, we have embraced our role as the flagship campus of the University of Maine System. Ownership and celebration of this role have proven particularly important as the University of Maine System advances the One University initiative. Finally, consistency in the way the UMaine brand is presented and promoted has helped to communicate the breadth and depth of UMaine’s integration into the economic, cultural and civic fabric of the state.

Enrollment and Student Success — Ensuring that an adequate quantity of well-prepared students choose to study at the University of Maine may be the most important task we face as an institution. The past few years have seen unprecedented successes in this regard, with the last two first-year classes being the largest in UMaine’s history and with indicators of student preparedness on the rise. Over the course of the Blue Sky years, we have modernized our enrollment management operations, revamped our marketing strategies, and overhauled the way we use financial aid to recruit and retain students. As important, we have heightened our attention to student success, and are supporting students’ movement toward timely completion of their degrees in new and innovative ways.
Research and Economic Development — The University of Maine is Maine’s only research university and, therefore, we have special responsibilities to the state. In the past five years, we have grown the number of partnerships we have with Maine companies, developed improved processes to support funded research, such as the return of a portion of indirect costs recovery to principal investigators, and embraced innovation and economic development as core functions of the university. Our improved financial standing has allowed for strategic faculty investments that are essential for continued research growth. We have reversed a more than decade-long trend of faculty shrinkage with three years of faculty growth. The quality of faculty that we have hired, along with the systems we put in place to support their success, bodes well for UMaine’s future.
The Blue Sky Strategic Plan was developed through an inclusive and consensus-driven process. The successes achieved under the plan can be attributed to the open way in which the plan was built, and, more importantly, the transparent manner in which the plan was implemented. The manner in which the Signature and Emerging Areas were developed, the frequent public presentations and discussions about the university’s budget, and the development of a shared commitment to the success of the enrollment operations are three examples of sharing of responsibility for the institution’s strategic directions. A hallmark of UMaine’s operations under the Blue Sky Plan has been an integration of ownership for key initiatives across units. Whether it be enrollment, branding, advancement of Signature Areas or fundraising, responsibility for success did not lie with a single organizational unit. Rather, the campus embraced these and other initiatives, and, together, supported their success.

The process of assessing the Blue Sky Plan has yielded many important lessons that can guide future strategic planning. These lessons are discerned not only from the achievements under the plan, but also from the limitations discovered in its assessment. First among these lessons is the importance of clarity in defining strategic goals and benchmarks. To advance toward a goal, an institution must understand its starting point. Establishment of clearly defined baselines will facilitate understanding of the strengths and weaknesses of strategic initiatives. A second lesson is that attention to the implementation of a strategic plan is as important as attention to its creation. A strength of the Blue Sky Plan is that key elements of it continue to guide strategic decision making five years after its publication. A weakness is that regular assessment of progress toward strategic goals did not occur consistently across areas. A third lesson is that for a strategic plan to be useful, it must be a living document — subject to change as contexts evolve. Portions of the Blue Sky Plan became irrelevant; for example, because of unforeseen actions by the University of Maine System. Building in mechanisms for modification will strengthen future plans.

The University of Maine has evolved since the inception of the Blue Sky Strategic Plan. Much of that evolution was guided by the plan, but other aspects were shaped by events that could not have been foreseen in 2012. As examples, the University of Maine at Machias is now a regional campus of UMaine and the Maine Business School will integrate University of Southern Maine faculty members into its graduate faculty to offer its MBA in Portland and Orono, and online. Looking to the future, collaborations of this sort will undoubtedly feature prominently. There are great opportunities associated with this direction, and equally great challenges. Fortunately, the progress that we have made over the past five years provides a solid foundation for maximizing the opportunities and managing the risks that lie ahead.
PSYCHED FOR THE FUTURE
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