

Memo

To: Provost Jeffrey Hecker

From: Dana Humphrey, Dean of Engineering *Dana H. Humphrey*

Date: 02/15/19

Re: Response to Strategic Vision and Values memo dated January 4, 2019

Cc: William Davids, Masoud Rais-Rohani, Scott Dunning, Donald Hummels, Hemant Pendse, Capt. Sean Kearns, Mohamad Musavi, John Belding, Colleen Walker

DEAN'S EXECUTIVE SUMMARY

The College of Engineering (COE) is generally supportive of the draft Strategic Vision and Values. We agree that the statements capture strategic values that should guide this University. No additional values were identified, however, some modifications to the three draft values statements are recommended.

Responses were received from the five academic units that comprise the COE as well as Navy ROTC. The nature of the responses varied from detailed edits to the draft statements to an assessment of how the unit contributes to the values to future conditions necessary for the unit to more fully meet the intent of the values. The unit responses to the values are included in the following sections. A summary of themes from the responses is given below.

Fostering Learner Success

The response from Civil and Environmental Engineering (CIE) suggests some beneficial edits to the statement that improves the clarity and force of the statement. I concur with these edits. To effectively implement this value it is necessary to increase investments in our classrooms and laboratories, faculty development, and student extra-curricular activities, as reflected in the statements from Electrical and Computer Engineering (ECE) and Mechanical Engineering (MEE).

Creating and Innovating for Maine and Beyond

The spirit of the draft statement effectively captures the role of the COE as embodied in our mission statement which is to "innovate our future economy". A vibrant graduate program is essential to implementing this vision. This should be included in this statement given that graduate education is a distinctive of the University and graduate education is not mentioned elsewhere in the three vision statements. In addition, the

national and international impact of scholarship performed by faculty, staff, and students should be explicitly included in this statement.

Growing and Stewarding Partnerships

It is difficult to fully capture in words the breadth of partnerships that already exist with the COE and the potential for expanded future partnerships. These partnerships exist in all five COE academic units, Army and Navy ROTC, Process Development Center, Advanced Manufacturing Center, and research centers that our faculty, staff, and students are part of. As captured in the comments from CIE, the statement should be expanded to more clearly include other educational institutions in Maine, such as, K-12, community colleges, and Maine Maritime Academy as well as industry. As reflected in the comments from CBE, the statement should include healthcare. MEE notes the importance of federal partnerships and points out that industrial partnerships extend beyond the borders of our state. Suggested wording, including the comments raised by CIE, CBE, and MEE, is given below.

~~As a public institution,~~†The university partners with ~~public~~ other entities, other state educational institutions, healthcare, and industry inside and outside of Maine in fulfilling its teaching, research, and service/outreach missions. These partnerships leverage the university's and its collaborators' assets to advance the cultural, economic, ~~and~~ civic, educational, and health interests of Maine communities and beyond even when a direct impact on the university's mission is not obvious. In this way, we serve as good stewards of the resources entrusted to us by the people of Maine, and by our many partners in science, industry, education, healthcare, commerce, federal, state and local governments, and the arts.

UNIT REPORTS

Chemical and Biomedical Engineering

CBE faculty reviewed the draft Strategic Vision and Values statements.

Two questions were considered at a faculty meeting and the consensus response is given below:

- How well do these statements capture a strategic value that should guide the university's development?

Yes, these three statements capture guiding strategic values for UMaine.

- Are there additional strategic values that should be considered or alternative ways of articulating the university's strategic values?

No additions needed. CBE department often highlights serving needs of Maine's healthcare in small distant rural communities, and revitalization of Maine's forest products industry.

Civil and Environmental Engineering

In general, the strategic value statements capture the mission of the University of Maine. Below are each draft strategic value statement with suggested changes. The most significant revisions were made to final statement with the objective of specifically naming partnerships with other educational institutions in Maine in addition to state agencies and industry. We need to subtly stress our leadership role as the state flagship.

Fostering Learner Success

The university is a community committed to fostering learning opportunities for all of its members. We celebrate ~~the diversity of our community~~ and are committed to creating a safe and respectful environment within which all learners, ~~including those who do not easily fit the traditional definition of "student"~~, can flourish. We create rich learning opportunities in the classroom, laboratory, studio, ~~and field, and communities~~ as well as the ~~spaces-communities~~ within which students live, work, and socialize. We create academic and co-curricular pathways for success and assure that our students are prepared for successful careers and rich lives. Our faculty and staff are life-long learners and we are committed to their professional development over the span of their careers. ~~Our community welcomes learners who do not easily fit the traditional definition of "student" and we are committed to their learning success.~~

Creating and Innovating for Maine and Beyond

At the core of the university's mission is the creation of new knowledge. Fulfillment of this mission takes a wide variety of forms. As Maine's Land and Sea Grant University we are committed to creating knowledge that impacts the social, cultural, and economic well-being of the state. At the same time, the impact of our creativity is not limited to the state's borders. Innovation is present in all aspects of our operation. Our community encompasses designers, builders, makers, and discoverers working in and across a remarkable range of contexts. We champion this work and we apply it in the service of our state, our region, and the world.

Growing and Stewarding Partnerships

~~As a public institution,~~ The university partners with ~~public~~ other entities, ~~other state educational institutions, and industry~~ in fulfilling its teaching, research, and service/outreach missions. These partnerships leverage the university's and its collaborators' assets to advance the cultural, economic, ~~and civic and educational~~ interests of Maine communities even when a direct impact on the university's mission is not obvious. In this way, we serve as good stewards of the resources entrusted to us by the people of Maine, and by our many partners in science, industry, ~~education,~~ commerce, state and local government, and the arts.

Electrical and Computer Engineering

This document summarizes a perspective of the department of Electrical and Computer Engineering on the UMaine Draft Strategic Values circulated in January 2019. A brief ECE perspective follows each of the three draft strategic value statements.

Fostering Learner Success

Draft Statement: *The university is a community committed to fostering learning opportunities for all of its members. We celebrate the diversity of our community and are committed to creating a safe and respectful environment within which all learners can flourish. We create rich learning opportunities in the classroom, laboratory, studio, field, and community as well as the spaces within which students live, work, and socialize. We create academic and co-curricular pathways for success and assure that our students are prepared for successful careers and rich lives. Our faculty and staff are life-long learners and we are committed to their professional development over the span of their careers. Our community welcomes learners who do not easily fit the traditional definition of “student” and we are committed to their learning success.*

ECE enthusiastically supports the sense of inclusion, the development of healthy learning environments, and the commitment to faculty and staff development expressed by the draft statement. While the department has historically been committed to these goals, it has limited resources at the department level (almost exclusively from gift accounts or professorship funds) to support needed renovations to undergraduate laboratory spaces or to support faculty development (including conference travel). A deeper and more meaningful commitment at the University level would be welcomed.

Creating and Innovating for Maine and Beyond

Draft Statement: *At the core of the university’s mission is the creation of new knowledge. Fulfillment of this mission takes a wide variety of forms. As Maine’s Land and Sea Grant University we are committed to creating knowledge that impacts the social, cultural, and economic well-being of the state. At the same time, the impact of our creativity is not limited to the state’s borders. Innovation is present in all aspects of our operation. Our community encompasses designers, builders, makers, and discoverers working in and across a remarkable range of contexts. We champion this work and we apply it in the service of our state, our region, and the world.*

It is critically important that UMaine’s flagship campus continue its commitment to scholarship and establish itself as a center of knowledge and innovation within the state and beyond. World class faculty and facilities can exist here at UMaine provided adequate resources for recruiting and supporting faculty are provided.

While graduate degree programs are not explicitly mentioned in this value statement, from ECE's perspective the promotion of a healthy graduate program is essential to the sense of innovation and creativity that is articulated. The very nature of recruiting new faculty or students at UMaine must be fundamentally different from other system campuses to support this important part of our mission.

Growing and Stewarding Partnerships

***Draft Statement:** As a public institution, the university partners with other entities in fulfilling its teaching, research, and service/outreach missions. These partnerships leverage the university's and its collaborators' assets to advance the cultural, economic, and civic interests of Maine communities even when a direct impact on the university's mission is not obvious. In this way, we serve as good stewards of the resources entrusted to us by the people of Maine, and by our many partners in science, industry, commerce, state and local government, and the arts.*

ECE could be in a unique position to contribute to the economic development of the state through partnerships with Maine companies, research organizations, and educational institutions. Unfortunately from ECE's perspective, this institutional value statement rings fairly hollow. For example, in the past ten years, there have been dramatic investments nationwide in renewable energy, electric vehicles, energy storage, and electrification of the transportation grid. In this time the College of Engineering has seen dramatic growth — while the department of Electrical and Computer Engineering has actually been reduced by one faculty member. Start-up and established companies in Maine working in the above areas simply do not have the expertise within the state boundaries to support innovation and collaboration. They must go out of state to develop meaningful relationships with university scholars. Over this period, UMaine priorities related to development or establishment of resources and capabilities have been almost entirely driven by tuition revenue, largely ignoring the needs of industry or potential contributions to economic development.

Mechanical Engineering

The mechanical engineering faculty had the opportunity to read the January 4th memo from Provost Hecker and reflect on the three draft strategic value statements.

The faculty are generally supportive of the values as stated. However, the statements appear to be somewhat generic in various places and may not fully capture the unique aspects of higher education at the University of Maine.

In *Fostering Learner Success*, our commitment to “create rich learning opportunities” and “pathways for success” require (a) funding in support of

students participating in extra-curricular activities in conjunction with student organizations or national competitions, (b) funding in support of professional development activities by students, faculty, and staff, and (c) significant improvements in classrooms and laboratory facilities.

In *Creating and Innovating for Maine and Beyond*, many UMaine faculty also contribute to or lead research in several areas with national or international scope and impact that do not appear to be reflected in this paragraph.

“Innovation is present” is something we are aspiring to achieve. In some cases, we have not kept up with the latest technologies or approaches for an institution of our size and significance.

The *Growing and Stewarding Partnerships* statement needs to reflect many significant partnerships and collaborations with industry and federal entities outside of the state.

School of Engineering Technology

I [Scott Dunning, Director SET] shared the information request we received from Provost Hecker to our faculty in the School of Engineering Technology. I received some input from multiple faculty members and am happy to share it with you.

1. How well do these statements capture a strategic value that should guide the university’s development?

It isn’t clear if the statements are talking about external development (seeking funding) or internal development (allocation of resources to achieve a goal)? If they are referring to external development, we believe the statements contain a reasonable focus on benefits to the state. We believe that we should also include a focus on strengths of UMaine that are unique as compared to our peer institutions. The statement could be improved by including application of knowledge to support the state benefits.

If we are referring to internal development, we will want programs and departments to consider and articulate clearly the ways in which their graduates add value to the state economy and richness of life.

2. Are there additional strategic values that should be considered or alternative ways of articulating the university’s strategic values?

We do not have any suggestions for additional values to include.

Navy ROTC

As discussed yesterday, here are a few bullets on things that Navy ROTC are on working that pertain to UMaine strategic goals:

- NJROTC Pathways to Engineering program: This program has gone from concept to fruition in just a few months due to the exemplary collaboration of multiple UMaine stakeholders (COE, Admissions, Budget, Provost/Front Office).
- Outreach: Our Staff and Midshipmen are planning for the annual Zimmerman Fitness Challenge event which will be held here on campus in April. The event is open to all students and the general public and works to honor the memory of UMaine alumni, 1stLt James Zimmerman (killed in action while fighting in Afghanistan in 2010) as well as raise awareness of military service and the importance of Teamwork and fitness.
- The Naval Science staff and I [Capt. Sean Kearns] are working with Mohamad [Musavi] and others on some proposals to promote STEM initiatives both here at UMaine and in secondary education in the region.