May 17, 2012 ENAC Discussion Notes and Conclusions

The May 17 ENAC meeting focused on the College of Engineering’s academic peer ranking as a member of the PAC 12, and acknowledged the change in the level of competition (academic as well as athletic) that PAC 12 membership implies. The goal of the meeting was to help establish benchmarks for evaluating future performance and identifying potential obstacles for achieving success. While the College of Engineering has made significant progress in the past decade, we will need to continue to advance in order to approach the upper-range among the PAC 12 engineering programs. We are extremely grateful for all of the ideas, comments and suggestions throughout the day. The following is a summary of the discussion notes and conclusions.

We extend our deepest thanks to all of our speakers and presenters for their substantive contributions. A special thanks to Ted Jacobsen and Mike Soulier for helping with the meeting structure, content and agenda.

Discussion Summary
Overall, members of the ENAC agreed that it was important to change the conversation about the new peers for the College of Engineering, from a local comparison with BYU and USU to a comparison with the PAC 12 schools. We see the opportunity to compete with the PAC 12 schools as a unique opportunity to redefine excellence and what it means to be a high-performing school. Setting specific goals and metrics at the individual faculty and department level was deemed essential for significant advancement. At the same time, members acknowledged that additional funding will be necessary for growth, and that we need to think about building the college endowment levels to the point where we can sustain growth despite changing levels of state and federal funding.

Faculty
- Continue to raise the quality of faculty. This happens three ways: 1) recruit exceptional faculty who will help to advance the strategic objectives of the college; 2) mentor and support them better so that they will develop strong academic careers; and 3) tenure only those faculty who meet the standards for research and effective teaching. The data we collect on the annual Faculty Activity Report can be used to evaluate this goal of improving faculty performance. We can augment that data with information on CAREER Awards, etc.

Students
- Increase selectivity in student recruitment by attracting students who are better prepared to succeed academically. This is important at both the undergraduate and graduate levels. There are many things we can do in close collaboration with the central university recruiting efforts to get more good undergraduates. We will, of course, continue our very successful outreach program. We can track the quality of our undergrads with high-school GPA, ACT and SAT scores. As we reach out to neighboring states more, we should get a higher proportion of top students. The university’s message to students about what courses they have to take in high school should help, too. For graduate student recruiting, the metrics will be GRE scores, particularly on the quantitative material, and undergrad GPA. We are now doing much more to attract top graduate students, but new strategies are needed to achieve our goals for program growth.
Size
- Continue to grow. Growth will be important for the reputation of our College. In a PAC 12 example, Arizona State has passed by the University of Arizona in the ranking of PAC 12 engineering schools. This seems to be almost exclusively because Arizona State has grown so much. The University of Arizona is clearly the better engineering school. We want to continue to improve quality while increasing enrollment in the COE.

Quality
- Improve quality of our programs. There are many ways we can improve the quality. The point was made that we need to create a sense of “scarcity” so that high school students who are interested in engineering see the U as their first choice as they select a university. We must have a culture of continuous improvement; that has certainly been here over the past years, but we cannot rest on past accomplishments. Some of the low-hanging fruit is picked, but we must continue to improve. The metrics are a little softer once we get beyond faculty and student quality.

Brand
- Identify and promote things that differentiate the COE at the U. Some things already in this category are growth in graduates and entrepreneurism. The economics of education are changing. We should look at on-line delivery of courses, including hybrid models. This is a boat we need to catch. Our proposal to the Utah Legislature’s Engineering Initiative includes a lot of this, and we will know shortly what resources are available from the Engineering Initiative. Other areas where we are well-positioned to lead are certificates or degrees with foci on Big Data, Data Center Engineering, and Petroleum Engineering. The question was asked about whether we can differentiate ourselves on diversity, particularly with women students.

Action Items
- Ask each department chair to do the kind of analysis of how their department compares to the other PAC-12 schools that Gianluca did for ECE. The first step toward improvement is awareness of how you compare. The best place to have the discussion would be the retreats that each department holds before school starts in August. Once realistic goals are established, begin to track metrics for performance and report to ENAC.

- Define specific funding needs related to growth, student, faculty and program quality and report to ENAC on funding strategies.

- Define recruitment strategies for recruiting top quality students from around the country who would like to come to Utah for their college experience and market to targeted audiences. Specifically look at PAC 12 regions where tuition is high or seats in engineering programs are few. We have the opportunity to position ourselves as the high-quality, lower cost alternative.

- Continue to engage ENAC members in legislative lobbying and community advocacy.

- Continue to work on programs that encourage diversity in the student population.