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**College of Engineering
Engineering College Council
Minutes**

April 20, 2006

Note: The PowerPoint presentations, advance materials, and agenda for the spring 2006 ECC meeting are available on the web at:

www.engineering.cornell.edu/ecc/

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The Engineering College Council (ECC) met in Ithaca on April 19 and 20, 2006. The following ECC members were present:

Elizabeth Altman

Kenneth Arnold

Richard Aubrecht

James Becker

Kenneth Brown,

Jay Carter

Scott Donnelly

Kent Fuchs

James Hauslein

William Hudson

Keith Kennedy

Shaygan Kheradpir

Gretchen Knoell

Christine Maziar

James McCormick,

Venkatesh Narayanamurti

John Neafsey

Armando Olivera

Evelyn Taylor Pearson

Justin Rattner

Rebecca Robertson

Robert Shaw

William Shreve

Roger Strauch

Jan Suwinski

Padmasree Warrior

Meeting Opened

Bill Shreve opened the meeting, introduced Shaygan Keheradpir who was attending his first ECC meeting, and announced the meeting attendance was the best ever. ECC members introduced themselves.

Kent Fuchs reviewed the agenda and introduced the speakers. He announced that the college was in the process of finding a site for the new computer science building and conducting a curriculum transformation review. Both topics will be part of the fall ECC meeting.

Today's meeting is about the college's image and we would like your feedback in the context of our efforts to improve our image and in the context of the capital campaign. You will also see our priorities for the campaign and how we will articulate those priorities. We would like your feedback on that too.

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Biddy Martin, Provost will be here at 9:00 a.m. to speak and she will engage you in a conversation instead of giving a formal presentation. It is your chance to talk about the transition in the presidency and the capital campaign. Provost Martin has been supportive of the college. She is funding the Department of Biomedical Engineering before we fund raise for it (15 faculty) and she is funding faculty lines to grow the faculty.

Bill Hudson asked, “As you add new disciplines are you increasing the undergraduate enrollment cap?”

No we are not asking the Provost to increase our enrollment goal. We don't want to grow that number.

James Becker asked, “Is the graduate body going to grow with the faculty?”

I have set a 3-2-1 goal. Each faculty should graduate 3 undergraduates, 2 MEng students, and 1 PhD student per year. We currently graduate 125 PhDs per year and have about 215 faculty. Our PhD student enrollment needs to grow. We also have about 400 MEng students.

We will then hear from Barbara Cain, who oversees our Communications office. She will talk about our visibility and image.

Then we will set the context for the afternoon breakout groups. The context we will set is the current status of the campaign and how we are organized as a university and a college. Then I will set the context for each of the four breakout groups – faculty excellence, infrastructure, graduate students, and undergraduate students.

There are two executive sessions in this meeting: One in the morning and one in the afternoon. Both sessions are closed.

Changes and Trends in the College

This summer Charlie Van Loan will be stepping down and a new chair will be appointed in Computer Science (Eva Tardos).

Jeff Newman has been hired as the Director of Research and Graduate Studies. Jeff came from Infotonics Tech Center Inc where he was Legal Counsel in 2005 and Director of Intellectual Property and Business Arrangements in 2003-04.

We have opened an ORIE office in NYC to improve our outreach to Wall St. and the Weill Medical School. Several other programs have similar offices.

Jack Neafsey asked, “Can you say a few words about the collaboration between the college and the medical school?”

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We have on-campus vet medicine and agriculture programs but the Weill Medical School is critical to our Department of BME which focuses on human health. They need a medical school. Currently interactions include:

- 1. An educational component – BME graduate students spend a summer in the medical school on rounds*
- 2. The majority of the seven BME faculty also have joint appointments and labs in the medical school and we have medical school faculty with joint appointments in BME*
- 3. The long distance partnership is a challenge but technology helps*

Dick Aubrecht inquired, “What is the scope and magnitude of the energy initiative?”

The energy initiative came out of the strategic planning process as an emerging research area. This was a surprising priority area because the college has not been known as a leader in energy, even though we had all of the components. We knew energy was an important national need and we decided to make it a focus. To develop this area we are using a different approach than we did for BME. We are hiring one or two senior faculty to lead us and help us organize. They will help us decide in what areas we will position ourselves. We have started the fund raising to support the area and a faculty search for a senior position.

The U.S. does not have an energy policy and Cornell is one of the few places with the technical, economic, and geopolitical capability to help create one. Think of this initiative more broadly as developing a total energy policy. We will email you (Dick Aubrecht) the Energy White Paper that was written by a group of faculty led by Sid Leibovich.

The White Paper says that we should develop policy and a business model with an energy focus and an environmental focus. Our leadership will be in the area of energy and environmental impact. The real challenge is, “Will the federal government fund energy?” Funding is left to the DOE and they have not made energy funding a priority.

Jim Hauslein asked Kent to, “Please comment on the USNWR rankings.”

USNWR ranks engineering colleges twice a year. In the spring they release their graduate program rankings and in the summer their undergraduate program rankings. There are also specialty discipline graduate rankings released in the spring. The specialty discipline rankings and the undergraduate rankings are reputational only. We want to be considered in the top five.

Looking at the overall ranking slide, we are tied for 11th. We do generally well in the peer and recruiter rankings and we suggest many ECC members as recruiter rankers. Size is a factor that can hurt us. Total research expenditures and PhDs granted are size dependent.

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Rebecca Robertson noted that undergraduate applications have gone up. She asked, “Is that consistent with our peers?”

Our applications have gone up 33%. We have also gone to a common application.

Jim Hauslein followed up with, “Where does this fall on your radar screen as far as caring about this? Sometimes perception is reality and you have to tackle it. Do you have specific initiatives to improve the ranking?”

We care about the ranking. We have to be in the top 10 and our goal is to be in the top 5. We care about the % of NAE members, and the research funding our faculty bring in which enables us to grow the PhD program and have an impact in the research area.

Shaygan Kheradpir commented that there is a dramatic drop off of freshman going into ECE and queried, “Is this an anomaly in the data?”

Applications by interest show a drop in interest in ECE. This is identical to the national trend in ECE, CS and ME. The data reflects an adjustment. In 2001 enrollment in CS and ECE was too high, now it is too low.

If you look at the graduates by major, the graph looks a lot different. The input is different than the output.

Robert Shaw stated that what got his attention was how the tuition has gone up. He asked, “Are we creating an environment where only the offspring of venture capitalists and CEOs can come to Cornell?”

There is concern that tuition has gone up. There is a huge focus on financial aid. We are needs blind during the admissions process and only provide needs based financial aid – no merit scholarships. A major part of the campaign will be to increase the endowment for financial aid.

Roger Strauch asked, “Has the percentage of people applying and admitted who need financial aid increased?”

James McCormick noted that there is another survey that takes into account what the university is doing for society. In that survey Cornell ranks 3 (or 4). Jim asked, “Why shouldn’t we come up with an objective criterion and focus more on that?” The more I think about this I come down to picking a few of the numbers (NAE, research, PhDs) and secondly the peer reputation.

Jim noted that while Harvard as an institution is highly ranked, the USNWR magazine had a scathing Op-Ed about Harvard. It was an interesting contrast. He wondered if Cornell excelled in certain areas and asked, “How do we rank undergraduate research and project teams for instance?”

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Jack Neafsey added that how recruiters see Cornell students is extraordinarily important. Cornell puts out the best undergraduate students because they are bright and team players. He said that he would rather hire Cornell students because of their attitude toward work.

Jim Hauslein – Quick thumbnail on our Asian partnerships?

Justin Rattner questioned, “Are people getting nominated (for NAE membership) and not selected?”

There was a period where we were aggressively nominating NAE members. Then for a while we had none. Now the pipeline is ready again and we are being aggressive. You cannot self nominate. We have about 20 people in the nomination process but there is intense competition for membership. Only 70 people in the nation are accepted.

Provost Biddy Martin

Discussion:

Bill Shreve asked, “Do you have any comments about the increase in tuition? Has the percentage of people requiring financial aid changed?”

The cost of tuition is rising at a rate below but close to our peers, but well above the increase in median income. One theory is that as long as we can provide financial aid the higher tuition rates are like a progressive tax to those who can afford to pay and help subsidize those who could not afford the tuition. Is it unsustainable? – It is hard to say. People thought so 20 years ago. The financial aid resources to ensure middle and lower class families can afford an education are critical and will be a key part of the campaign. Those of us in higher education have reached the point where it makes sense to keep tuition rates down as long as we have families that can pay and we can provide financial aid. We have greater diversity than our peers – and, therefore, more Pell grants. Harvard Yale and Princeton provide full grant aid to students in families making less than 40k per year. Their cultures tend to suppress the number of students from poorer backgrounds because they don't see those schools as places where they will feel welcome. Self-help has put a strain on students, hence the emphasis in the campaign on raising scholarships for undergraduates. The percentage of students requiring financial aid has increased slightly in the last year (47-48%) but is relatively constant.

Becky Robertson asked, “How does the increase in the rate of tuition compare to the increase in the cost of education?”

The total cost of an education at Cornell is estimated at \$40-50k per student and with tuition at 30k there is an assumption of subsidy for all students.

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B. Shreve noted that the last campaign focused on financial aid. He queried, “Did that achieve the goals? Is the endowment not growing as fast as estimated? What are the causes?”

The campaign did succeed but there were more deferred gifts and we are getting the gifts more slowly than anticipated. Financial aid is costing more and we are doing more preferential packaging. Even if the campaign had provided more leeway, our competitors have made bold moves in the meantime. Part of the problem is competition.

J. Neasfey commented that in the last campaign financial aid was a priority but the amount raised did not take us to parity with institutions like Princeton whose endowment is seven times the size of ours.

The endowment per student at many of our peers is greater than Cornell's:

Princeton – 7X

Harvard, Yale – 5X

Stanford – 2.5x

MIT – 2x

We won't catch Harvard, Princeton, or Yale.

Becky Robertson stated that they are at the top because of generous giving and good endowment performance.

We had relatively poor endowment performance for several years. When the payout goes down we take a hit on our financial aid budget. This year we will have a 5% increase in our payout. We are doing significantly better.

Roger Strauch queried, “In 5-10 years ahead do you foresee any significant changes to our current business model? Any significant opportunities, risks, or changes?”

The business model for higher education is changing. State and federal support has gone down and states are strapped for funds, therefore, the funding model for research universities is changing. Cornell, as a hybrid institution, has been combining state and private funds for a long time. The opportunity exists to enhance our corporate relations and leverage intellectual property.

Roger followed up by asking, “Will that make a material impact in the 5-10% range?”

I don't think so. There are some people who do think it will have a significant impact. I am skeptical that it would ever become 10% on a stable basis but it is one of the opportunities that we haven't taken advantage of. I don't think we can depend on it heavily in the short term.

Robert. Shaw asked, “How do we do in comparison to others in IP investment?”

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We have that data. We do well with patents and licenses but are in the middle of the pack on investment returns. Some places, such as Wisconsin, have been doing this a long time and can depend on the revenue. They have been able to grow the faculty because of WARF. Stanford and MIT have long standing operations and big hits that yield large returns. Columbia has relied on a few big hits and some of their patents have run out. They have spent over 80M of their return on failed ventures instead of making it part of their endowment. We don't look great when looking at annual returns but that doesn't tell you everything you need to know.

B. Hudson noted that there is always a tug between giving to the infrastructure or to the endowment. We have done well with the infrastructure. "As you look at the demand side how do you see the infrastructure side going? Are we caught up or do we still have a lot to do?"

Two colleges have serious infrastructure needs – engineering and CALS. Engineering suffers from the most serious needs on the endowed side for renovation and demolition and a new building. Engineering wants to grow and is growing. Kent and the chairs have done among the best jobs on campus of understanding that we can't add without making decisions about what we are not going to do. Engineering is growing and the new faculty recruits are extraordinary. Tenure cases are also outstanding. We are not aggressive enough nominating NAE faculty.

There is a significant need to build the endowment for student aid and professorships. The endowment yields budget relief and allows you to add faculty. Recruiting the best faculty over the next decade will mean having the prestige that is associated with professorships. Many applicants for faculty positions ask if they will get an endowed/named professorship.

Most university campaigns can only raise between 8-12% of their goal for facilities. We need to try to do better especially for engineering.

J. Neafsey asked, "Can you say a few words about diversity? In 10-30 years the complexion of this state will be very different."

Diversity is and should be one of our priorities. We just won a \$3.3M grant from the National Science Foundation to help us increase the number of women in Science and Engineering. We are committed, but we are a long way from where we should be. The student body is ahead of the faculty. We have the most immediate work to do at the level of the faculty. We will not be excellent if we are not diverse. Diversity and quality are not a trade off – and those who believe that have missed something crucial.

Zellman Warhaft recently attended one of our deans' meetings to talk about the best diversity practices in engineering. I have been putting increasing stress on it because I don't think we are making enough progress.

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D. Aubrecht commented that a high percentage of faculty will retire in the next 10 years. He asked, "How do you see that changing the character of the university?"

600-750 faculty will be hired in the next 10 years as replacements for retirements. This is a result of increasing the size of the faculty in the 60s. Our challenge is to hire the best faculty in an environment where everyone else is trying to do the same thing. We are not going to attract and keep the best faculty if we don't have the best graduate students and it has been difficult to raise the funds in support of graduate students. This is another emphasis of the campaign.

The ability to hire now, even in advance of retirements, in the areas in which we want to excel is crucial. Physics is doing that well. It requires a vision so that as retirements occur we are not waiting until the competition is at its highest.

B. Hudson asked, "What is the average retirement age?"

The average retirement age is between 65 and 70. There is no mandatory retirement age and it is against the law to pressure people. The departments who are the strongest with the best cultures tend to have the most successful conversations with one another about retirement. There is a peer pressure exerted by serious conversation of faculty committed to the field and wanting to see it grow over time.

The faculty work life study we completed this year surveyed faculty about the conditions of their work life and its relation with nonwork environments. What happens in departments is probably the most critical site in the university. The differences between men's and women's satisfaction is linked to ratings of dept culture.

You have extraordinary leadership in the college. I recently asked for feedback about Kent Fuchs as part of his reappointment process and I have never read responses about any dean that are as glowing and thoughtful as the responses I read about Kent Fuchs. They are heartwarming and unanimous in praise. Kent cares about the functioning of departments.

Jan Suwinski queried, "What are the vision of global relationships and the global footprint of the university in 5-10 years?"

The relations are exciting and strong but they can be diversified. China and India are crucial, but there are other places we need to be if we are to be a model transnational university.

The global footprint is a more difficult subject. The medical college in Qatar is wonderful but a strain. Our relationships will be increased and sustained, but whether we will actually be located all over the world – I am not sure. That is a more complicated question. I worry about programs all over the world that require the presence of our faculty and still allow us to sustain the level of education on campus. Collaborations and exchanges are the exciting opportunities.

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Jim McCormick asked, “Could you embellish the slide about quality of education?”

We would like to be in the top 10 of the National Research Council (NRC) ranking. The NRC graduate field rankings were last done in 1992 and released in 1995. The NRC will survey graduate programs and rank them again this year.

We need to enhance our strengths in the humanities and the social sciences while at the same time supporting engineering and the physical sciences. We will do this through:

Academic program review

Funding competition

Success recruiting and retaining faculty

Student success

Jim followed up with the question, “How are you measuring student success and satisfaction?”

We measure student success and satisfaction through:

Senior surveys

Post Grad surveys – We are doing well on these surveys although we have work to do in undergraduate advising, especially premajor advising and mentoring.

Engineering also uses outcomes assessment (ABET)

Roger Strauch remarked that potential donors will ask what the endowment return is and consider, if they can do better, keeping the money and giving annual gifts. He asked, “What were the top subjects on the 9 Provosts groups (Brown and Dartmouth not invited) = MIT, Stanford, Chicago + Ivy League?”

The ones that I can remember are:

- *A decrease in NIH funding - This decrease impacted others more than us. They hired faculty when the NIH funds were increasing and now they are decreasing.*
- *Import Controls and Federal Decisions and the affects of the Patriot Act*
- *The costs of hiring and retaining faculty, both economics and sociology.*

I understand the perspective about your statement about donor’s perceptions of the endowment. Our improved return performance should be reassuring to donors. Building our own endowment for the future is critical. The campaign will be difficult because our peers are also raising money. Cornell relies more heavily on our campaign than others.

I wish I saw a significant new source of revenue or a way to reorganize ourselves that would allow us to decrease tuition. I don’t currently see major transformation underway here or at our peers when it comes to budget models for higher education.

Roger Strauch noted that Deans and college Presidents are spending more time outside the US but funds have not correlated with that time spent.

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Some people think the outsourcing of research at a lower cost in the future will matter but I am not sure expanding our footprint is compelling.

Robert Shaw asked, “Are we trying to get Inge Reichenbach back?”

There is no offer that would get her back. She is too principled to leave Yale so soon. We have outstanding candidates for the position.

College Visibility and Image – Barbara Cain

R. Shaw commented that Cornell and other universities are in intense competition. Our future as a university and a college depends on our ability to out compete everybody else. We need to think carefully about our true strengths and how to counter our weaknesses. When someone says, “No they aren’t joining the faculty.”, or when a donor turns us down, we ought to find out why. The bad news is often the best way of determining how to compete.

Jack Neafsey wanted to know, “Have we developed a proactive plan to reach out to print and electronic media?” You’d like the media to know who they can contact quickly to get a 20 second sound bite. If your faculty is very well known you get a lot of free publicity. Anytime there is a technical event you want Cornell faculty commenting on it. “Do we have a directory and have you developed an out reach plan?”

Kent, Tommy Bruce, and I have discussed this and want to build an expert list. We are also talking about a campaign to highlight nanotechnology.

Jack Neafsey added we need to translate those terms for the media.

Gretchen Knoell suggested that we probably need to hire a public relations firm.

Bill Hudson commented that there is a disconnect in what is learned in high school and the phrases and terms that we use. We need to make an effort to bridge that communication gap.

Jay Carter said that high school CAN ambassadors have not been used well. Every applicant should be personally contacted. Theoretically there were 5000 applicants that Cornell alumni spoke to but we don’t have a system for getting the feedback from those contacts. High school students are intrigued by project work but don’t know anything about it. Think about the possibility of sponsoring a competition at the high school level at Cornell. Many of the kids who applied to MAE did so because of a robotics project at their high school.

Armando Olivera suggested that we think about our targeted audiences including current and prospective faculty, Cornell engineering students, potential undergraduate and graduate students, the alumni, and the public at large. You have to keep the message

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simple. Make sure faculty who reach out have the ability to communicate at a higher level. It is easy to communicate electronically via press releases.

Ken Brown noted that as you look through the ECC Booklet you see outstanding careers. I suspect we have a higher percentage of grads that have had outstanding careers than our peers. We should highlight that. Undergraduates are motivated to go to school because they want to be successful.

Scott Donnelly highlighted that the real issue is how you deliver a marketing campaign. You can target a smaller number of schools and send a human being in with the video. Who is the best target audience? You can't be all things to everyone. Employ the resources including alumni to reach the targeted audience.

Becky Robertson added that the mix of marketing materials will be different depending on your audience. I have heard today Cornell being talked about as a brand for the first time. It is powerful and important. I resonate about Jay's comments about finding brand extenders particularly for young children. Johns Hopkins is interacting with students by the fourth grade and it extends their brand with the students, the teachers and the parents. On the west coast Cornell is not as visible.

Justin Rattner commented "This is great – The brand is good – you are on track." It is still a little swishier than I would like to see. The interdisciplinary theme is emerging but this has a 20th century feel to it not a 21st century feel. The kids don't communicate that way – getting on Web20 vehicles would be good – even having advocates on those sites hyping Cornell. Get proactive in the dialogue of today's youth.

Roger Strauch agreed that we needed to make sure there is an active presence in the blogosphere. He also noted that there is no reference of national industrial leaders saying Cornell is a valuable resource. When it comes to messaging, branding, and sound bites, we do workshops (boot camp) for people we want to present to the press so they can learn how to do the sound bites.

Armando Olivera suggested that we use a focus group to get some feedback. The video has a little too upstate NY feel to it. Think broader, more international.

Keith Kennedy noted that no materials address outreach to industry to increase funding for graduate students.

Jim Hauslein recommended that we determine what we want to accomplish with this public relations initiative. He asked us to consider the question, "Who are the audience, and what is the message?" He also noted that he didn't hear about goals, objectives, and measurements.

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Status of the Engineering Campaign

Venky Narayanamurti asked, “What is the engineering college endowment?”

That is hard to estimate because it is combined with university endowment. We get a revenue stream but it does not fluctuate based on the return on the endowment.

Keith Kennedy stated that Dale Corson said years ago that the engineering college ought to have their own endowment.

Robert Shaw asked, “What is the total university endowment?”

The university endowment is close to \$4 Billion now.

NSF Advance Award

Kent Fuchs announced that Cornell had received an NSF Advance Award to establish a National Center at Cornell. Marjolein van der Meulen and Sheila Hemami led the initiative which started in response to the 1999 MIT Report on the recruitment, retention of faculty. ACEL is a 5 year nonrenewable award and Cornell has committed to continue the programs after the five years of funding runs out.

Cornell is #3 in the country for women with an engineering undergraduate degree. The funding will support a climate initiative to look at both the institutional and local climates and will incorporate surveys and training. It will build on the work life study that Cornell just completed.

ACEL also includes a recruiting initiative with the goal of having 20% women faculty in science and engineering departments. Currently 27 departments at Cornell fall below this goal. The first objective towards achieving this goal is to recruit 15 senior women. The funding will also help us provide women faculty with the tools and skills for promotion and leadership roles. The program includes monitoring and evaluation to assess progress through methods such as interviews of new hires and post/pre tenure reviews comparing the results for men versus women with the goal of determining what helps success and what we can do better.

One of the things that we can do is engage women faculty with the ECC. Christine Maziar is on the advisory board. Many of you have experience with company leadership training.

Breakout Groups Instructions and Results

Kent set the stage for the afternoon breakout groups. He reviewed the breakout group instructions and room assignments.

Faculty Excellence – Liz Altman

- Emphasize grand challenges e.g.
 - Secure the country's and the world's future.
 - Secure our kids' future.
 - We need to develop key messages to attract faculty.

- Identify Key Fields (e.g. Energy, bio, electronics) and link these fields to Cornell leadership. Link our leadership to the need for new faculty.

- Simplify the message of impact and tie it to the bigger picture. Currently the priority list shows only costs and no benefits. Highlight the benefits.

- The Campaign needs to support the recruitment and retention of new faculty
 - The current list includes meat and potatoes requests – not glitz. These are things that we must do to secure our future.
 - New areas of inquiry will require expanded funding.
 - Start-up Packages are critical and funds for re-tooling and lab updates are also important.
 - Build diversity of seniority. To do this you will have to kill the age bubble. Strategically hire junior and senior faculty so that you don't create a new age bubble.

- Important Considerations
 - Interdisciplinary strength comes from disciplinary strength.
 - Complexity is OK.
 - Diversity – Broaden hiring criteria to consider diverse faculty.
 - Don't lose our attributes and perceived strengths.

Mechanism – Use a Challenge Fund as a catalyst for giving. Harvard has used this approach very successfully. Giving opportunities for named chairs and allowing anonymous donors are other mechanisms to help the campaign.

Undergraduate Students – Jim McCormick

- The priorities list that was provided is not very compelling

- We need to move instruction and the overall educational experience from good to excellent. This elevation in quality should move Cornell to be demonstrably superior in the education received by students and their overall experience

- How to be compelling:
 - Invest in our current strengths – teams, undergraduate research

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- Fill gaps – identify them and fill them in.
- Systematically define best practices and measure our performance versus excellence/world class educational programs.
- Add training and accountability – build on the workshops that have already held (Felder etc.) and follow up with the evaluation tools we currently use. For example, “What do we do with class/teaching evaluations?”
- Fill in the blanks. Relative to other peer group institutions we are indeed the best in _____ and here is the proof to justify that _____.

Robert Shaw asked, “How significant is undergraduate teaching in faculty performance evaluation/tenure?”

Kent replied: It is critical. Every one of the twelve Chairs/Directors tracks the student perspective of teaching through surveys. We archive survey questions 8 and 13 and I meet with the dept chairs and we discuss every faculty member’s teaching and research including the teaching evaluation scores. We use the scores as part of the criteria for setting faculty salaries.

We also have alumni survey instruments where graduates report their perspective of their educational experience and select the best teachers for teaching awards. We also track and reward curriculum development.

At promotion time we survey the students and ask them to write letters for the promotion packet (graduate and undergraduate students). It is a serious part of the package. We also expect the faculty to be the very best in their research area but they have to be exceptional in their teaching too.

Bill Hudson shared the observation that Harvard is #1 in a lot of categories but in the USNWR article they got a scathing review. He stated that he hated to see faculty so focused on research and graduate students that they don’t teach undergraduates. I saw that you wanted to increase the number of TAs does that mean that faculty will teach fewer courses?

TAs don’t teach courses. They help and are part of the educational enterprise. Faculty do the teaching.

Graduate Studies – Dick Aubrecht

- This is a compelling concept.
- Focus on increasing the PhDs/faculty – What will it take to do that? What affects will that have?
- Excellent grad students attract excellent faculty which then positively impacts undergraduate teaching.

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- There needs to be leadership to develop the resources to expand the PhD enrollment. It will take incremental dollars to do that. The government won't fund that.
- Cornell has a history of interdisciplinary studies and a goal to expand that capability to attract good graduate students needs to be part of the message.
- Use effective Communication Methods.
 - The methods used must be different than the undergraduate communication methods.
 - Individualize the communication to be specific to the departmental level. Talk about current students in the department and personalize the students, what they are doing, and why it is important. Use research that is in popular press today to show Cornell's relevance in the world today.
 - Keep in mind communication mechanisms need to focus on MS/PhD alumni. There should be some Trustee leadership focused at the graduate level.
 - Undergraduates have little experience with graduate studies here. Make the graduate program important to undergraduates. Market why graduate education is important and how it ties to the undergraduate education.
 - Communication must be more than mailings. Cornell professors travel a lot and could take current graduate students with them and hold local meetings with graduate alumni and prospective graduate students.
- Communication to prospective graduate students must come from the department. How do we establish that linkage? Over time departments can develop a more constant set of communications. Some have links to professional societies and attend annual meetings. Think of those meetings as opportunities to get graduate student alumni together.
- There should be naming opportunities.
- Approach companies that are hiring PhD students and also approach the company foundations.

Jan Suwinski added that we should tie the message to the overall goal of getting into the top 5. Show people benchmark data about what we do to support graduate students to make people realize where we stand competitively versus other programs competing for the top spots.

It would be helpful to get data on graduate alumni giving to inform the campaign strategy. 13% of our undergraduates are foreigners. 50% of our graduate students are international. Different backgrounds influence philanthropy. We need to customize our communications and communicate more with our graduate students.

Bob Shaw asked, Do we do anything akin to ROTC – If we pay for your education you owe us? Tithing? Do we have any cases where corporations fund the grad work and

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expect a commitment? Do faculty grad advisors leverage their relationship with previous students?

Marsha Pickens answered, that we have some focused initiatives with faculty advisors. The Les Eastman fellowship, and those funded by Bill Sears, Henry Saks, and Bill McGuire are good examples. It is the advisor even more than the department that alumni are loyal to.

Infrastructure – James Becker

- Raising funds to rehabilitate buildings is not a good draw. We need to create a unifying vision and put the facilities issues in the context of the larger vision.
- The infrastructure goals need to be tied to excellence – faculty, students, work done, facilities.
- The new facilities’ – life sciences, CS, physical sciences – arguments are easy although they are still tough campaigns. They fit neatly into the emerging and enabling research themes.
- We have a traditional 1950s quad . Could we create a theme that didn’t focus on the buildings deficits? If we state the vision right, it will focus on how we reposition the quad for the future. The key is the idea for the replacement of Carpenter Hall with a building that supports multidisciplinary approaches, team teaching, and team space. This building is the symbol of educational excellence and connects to the other facilities.

If you could create real connectivity (physical) that would be great. Perhaps a teaching center which would allow you to convert some of the teaching spaces in the older buildings.

- Mechanisms – People want to be associated with excellence and winning – part of being in the top five. Develop that theme.
- Renovations have had cascading effects. Show how facilities directly impact the ability to engage students in research. This leads to naming opportunities.
- Work with the development office to create effective dialogue at a human scale.

Ken Arnold added that Carpenter Hall was our main topic but it is listed as not likely to be a campaign priority. It will be harder to raise funds for the other buildings if there isn’t some way to integrate the Carpenter Hall replacement into the transformation of the quad.

Ken Brown agreed that the physical facility and improvement of teaching go together.

Bill Shreve summarized that building a vision for excellence and leadership around the six research areas will lead to:

5/10/06

- Excellent faculty
- Excellent grad students
- Excellent teaching
- The need for excellent facilities
- A tie to the global impact engineering can have

Bill Hudson restated that we are moving from a 1950s to a 21st century infrastructure.

Becky Robertson summarized the campaign case statement as three statements:

- Excellent students
- Excellent faculty
- Excellent facilities

She recommended that we would be better off with one priority as a primary focus and then under that a means to the end. It would be more powerful.

Bill Hudson noted that there are some holes that need to be filled in. He asked, “Are you going to take Carpenter down? Where will you put the library, the computing center. How will you present the quad?”

Padmasree Warrior commented that the current agenda seems to be more bottom up then top down. Show the vision and get a clearer message.

Gretchen Knoell suggested that one way to frame a compelling message was to tie it to grade school changes. Education has changed at the grade school level. It is more conversational. The message of change will resonate to alumni who have already participated in changes to the grade school approach.

Keith Kennedy asked John Neasfey, who has been on ECC for 20 years, “Are you hearing new things or are we rehashing old things?” John responded saying we have made remarkable progress. Years ago the emphasis on excellence in teaching was not anywhere near where it is today. What is new is thinking about how facilities coordinate with the program, curriculum, and teams to build a total package rather than thinking of teaching in an instructional box. The major themes haven’t changed – the methods to get there have.