Johnson/Cornell Engineering
Advisory Council joint lunch
October 19, 2013
Terrace dining room, Statler Hotel

Members of the Advisory Councils of the Samuel Curtis Johnson Graduate School of Management and the Cornell College of Engineering shared a lunch and a brainstorming session the Friday of each council's fall meeting. Each table, composed of council members from each school plus some faculty and staff, discussed one of the following questions, then presented ideas to the large. Below are the questions and a summary of the presentation to the group.

1. **Entrepreneurship**
   QUESTION—*How can Johnson and Engineering collaborate to strengthen the entrepreneurship programs and activities for graduate students in Ithaca? Are there possible connectors to entrepreneurship at Cornell NYC Tech? (Faculty: George Schneider from Johnson and David Erickson from Engineering)*

   RESPONSE
   - The good news is that there is a lot going on around the Cornell campus already. However, many of these outlets are not made available to the campus at large, or are not yet know. How can we make existing outlets for entrepreneurship more central and better known? How would we push one central Entrepreneurship hub? Website?
   - Stimulate discussions; host topics to bring Engineering and Johnson together
   - Use Ithaca as a base of experimentation.
   - Engineering graduate students develop tech while they are here—licensing is an issue. We could educate grad students on licensing issues, a possible discussion between engineers and MBA students.
   - We tend to think of engineers approaching the business school to learn more; why not think of MBAs approaching the engineering school to learn? What would MBAs learn in the Engineering school—engineering principles and how to apply them to tech startups. *(spokesperson was Todd Zion, Eng. Advisory Council member)*

Engineering, the Johnson School and CALS have been working with Student Agencies on developing a plan for eHub. eHub is the next generation of eLab and PopShop in Collegetown. It will be housed in a new location in Collegetown (10,000 NASF). The colleges will co-fund and provide educational modules for the students.

Some discussions occur through the Kessler Fellows and Kinzelberg Engineering Enterprise programming.

The Downtown Incubator, funded by the state's "Hot Spots" program, as well as STARTUP NY are two examples for collaboration and experimentation.

We've been in discussion with the Johnson School concerning reinvigorating the Business Minor for Engineering MEng and PhD students.

We've had some discussion about developing a general audience "Technology" course that could be taken by non-engineers.

2. **Business and Technology education**
   QUESTION—How can Johnson and Engineering capitalize on their expertise in technology and business to prepare their students for their future career paths? (Faculty: Doug Stayman from Johnson and Matt DeLisa from Engineering)

   RESPONSE
   - What classes at Johnson might Engineering and MBA students both take? Not a survey course, but rather courses that are built around **teams and joint projects**. These would attract engineers as business problems arise, and MBAs as the tech gets hairy.
   - How to start these courses? Look at the three strands of NYC Tech: Healthy Living, Connective Media, and Built Environment. Bring these three idea hubs to Ithaca. (spokesperson was Roger O'Neil, Johnson Advisory Council member)

MEng students already take a number of courses in the Johnson School (check with Yoanna on specifics on this). This has been going on for years. There have been far fewer PhD students taking Johnson School courses. We would like to reinvigorate the Business Minor for PhD students to allow greater participation of those students with the Johnson School.

The Cornell Tech "hubs" do provide some motivation for establishing analogous programming in Ithaca. Recall that all tenure track faculty are members of the same department (straddling two campuses). Thus, Cornell Tech faculty with interests in the three hubs will be members of the Ithaca departments, creating a natural connection between the research in the two locations. For example, as we hire Architects with a focus on technology development in the Built Environment in NYC, we will naturally grow the interest in this technology in Ithaca. These connections are already happening, although the change in Ithaca is naturally slower due to the "inertia" associated with the existing faculty.

3. **Leadership**
   QUESTION—Are there mutually beneficial synergies that can be gained through Johnson and Engineering leadership program collaboration? What are they and how could this be accomplished? (Faculty: Alan Filipowicz from Johnson and Alyssa Aspel from Engineering)

   RESPONSE
   - What is leadership? In business, leadership considers relationships: the self, the team. In Engineering, leadership considers the technology: being at the front of advancements.
   - Startups—ideas originating with Engineers who then work with MBAs
   - Collaborating, working in teams
   - Role reversal team—have the engineers present and the MBAs come up with the ideas (this gets some laughs from the audience)
   - In business school have more focus on assessing technology/ in the Engineering school, have more focus on communication and finance skills.
   - Raise awareness/remove barriers to enrolling in courses in the other school
   - Hold socials to enable collaboration
   - Spokesperson Virginia Giddings, engineering AC member, said she was the one engineer at a table with 8 MBAs, "a typical day for me in corporate America." She said engineers not only come up with the ideas but also need to know "how do I SELL my idea?" Being

fluent in FINANCE, the language of business, as an engineer is a key to success. In considering business courses, an engineer needs to learn to articulate her ideas in a way the business world can understand.
(speaking for their respective groups were Virginia Giddings, Engineering Advisory Council member, and Nell Cady-Kruse, Johnson Advisory Council member and daughter of a retired Cornell Engineering professor)

Leadership is often equated with "management." While I think this is an important component of leadership, I do not think it captures it all. Another equally, if not more important aspect of leadership is developing a compelling vision and having the communications skills to get everyone to buy into that vision. Once sold, the execution of the vision indeed involves management (e.g., valuing differences, managing conflict, meeting deadlines, etc.). A strong emphasis in the Engineering Leadership Program (ELP) is placed on self-awareness. ELP attempts to enable individuals to learn about and cultivate their own leadership style.

Teamwork is a big focus of ELP. Assessment tests have been used to determine the strengths and skills of each student so that teams can be assembled with individuals with complementary strengths. In addition, teams are given tips on how to manage conflict and value the diversity of opinions.

Role reversal is an interesting tactic that has not been used to date. This is something worth considering in the future. A related thing that is done is to rotate the team leadership among the members of the team, so that each person has some part of the project for which they are in charge.

4. **Faculty start-ups in Ithaca**
   QUESTION—How can we facilitate faculty and student interaction across Johnson and Engineering to put ideas and classwork into practice, to accelerate business information? (Faculty: Zach Shulman from Johnson/Entrepreneurship@Cornell and Uli Wiesner from Engineering)

   RESPONSE
   - Faculty startups in Ithaca should be looked at from three dimensions:
     - Faculty/PhDs vs. students
     - New York City vs. Ithaca
     - MBA students vs. Engineering students
   - The problem is with the faculty: Which policies prevent faculty from collaborating on projects? What will entice faculty to get out of their offices and classrooms to collaborate on projects?
   - The teaming up of MBAs/Engineers could positively impact entrepreneurship at Ithaca.
   (spokespeople were Rich Marin, Johnson AC member/visiting faculty and Uli Wiesner, Engineer faculty)

   There are natural approaches to starting companies with Cornell IP. It is rare for faculty to take charge of a new company – often the graduate student working on the technology will be the lead in the company. The faculty assumes an advisory or consulting role.

   There are policies that affect how the faculty interacts with companies. For example, it is preferred that students have completed their degree before starting the company to avoid

conflict of interest problems. A second potential issue is with background IP, often also coming from the faculty member's research. The bottom line is Cornell tries to be flexible, but faculty must manage the issues in a proactive manner.

We agree that strengthening ties between engineering and business students could help accelerate commercialization. I think the students that are least connected to the business courses, and student body, are the PhD students.

5. **Academic programs—**
   QUESTION—what are the advantages and market opportunity for a one-year MBA that immediately follows the MEng for students who have work experience (internships, co-ops) during their academic careers; or project and design experience working in a team? (Faculty: Joe Thomas from Johnson and Michael Lipson from Engineering)

   RESPONSE
   - MENG/MBA combined degree—Cornell has a history of this degree; it is not new.
   - One size does not fit all.
   - Does work experience after graduation play a role?
   - Add a possible business component to Engineering PhDs; more PhDs are going into industry now. Not all academic.

   (spokespeople Jim Hauslein and Duane Stiller)

   We have created a planning committee for the MEng degree, chaired by Kathryn Caggiano (ORIE). Their goal is to look at the programming across the college and make recommendations for unifying the degree across the college and improving its quality. We have asked this group to consider this question. They will be reporting back to the college early next fall, and we will share their report with the ECC.

Additional comments:

      Michael Chen—innovators are not necessarily entrepreneurs. Innovators must learn to strategize, communicate their ideas clearly, learn finance, the language of business, and learn to involve the right people.

      Upshaw—There has been a lot of discussion about how engineers should learn business skills; the flipside to that MBAs need to learn how to determine whether or not an idea has business merit or even makes sense.

      Doug Stayman—NY Tech is trying to produce graduates who are literate in both the good ideas and the "get it out there" strategy.