The University-Industry (U-I) Long-term Partnership Workshop

A select group of 40 people, with about equal representation from corporations and universities, attended the workshop on March 18th, 2014, held at UC Santa Barbara. The overall objectives for this first meeting were learning best practices from existing U-I relationships, establishing a west coast forum for U-I meetings, encouraging new business-to-business, university-to-university, and U-I conversations, and fostering further discussions about individual institution's best practices. The five panel members (Andrew Cockerill of BP, Lou Graziano of Dow, Glenn Fredrickson of UC Santa Barbara & Mitsubishi Chemical, Susan Capello of Intel, and Bill Lucas of the Bernard Gordon-MIT Engineering Leadership Program) each gave formal presentations regarding on-going U-I partnerships, the content of which was used as points of discussion for the breakout groups. In these less formal groups, best practices, key success factors/blockers for instituting long-term partnerships and specific needs for each institution were further discussed.

Why do corporations collaborate with universities? Overall, the depth and breadth at universities, and the ability to entirely "think beyond the box (shareholder)," exceeds that of corporations in certain areas. Other obvious advantages of doing projects at universities are-

1. To maintain/obtain a longer-term research/product roadmap.
2. Ability to discuss/develop ideas across disciplines and across traditional boundaries.
3. For certain projects, well informed and focused faculty/students can be less costly and more time effective than internal staff.
4. Less need for investment in internal long-term infrastructure. Staff and equipment can change on an "as need" basis.
5. Employee pipeline.

Below is a summary of a number of key points from workshop. The acronym that evolved that reflects each of the participant's inputs is **CURE** (Communication, Understanding needs and wants, Return on investment and Excellence in relevant fields):

***C**ommunication-*

1. Develop the right contacts at the company and at the university. Often a key contact at a university is a graduate student or post-doc. It benefits them to be involved and many corporations hope to cultivate these students as future employees.
2. Maintain a consistent plan to discuss research projects, with reasonable review periods to make sure projects are aligned with the corporate funder's business goals and technology needs.
3. Corporate project managers/leadership from companies need to formalize an internal process of taking findings from the university and moving these findings into the corporate development process.
4. University PIs need to network within the company to develop multiple touch points. This will help if the company PI/manager leaves and will help assure more interest in the outcomes of the project.

5. In advance of initiating the research, the university PI needs to agree to the corporation's plan to discuss their research projects, project directions and research findings. Consistent visits by the PI to the corporation are recommended and vice versa.
6. Centers, or a series of parallel efforts taking place at a university for the benefit of industry, should evolve ways of sharing their research projects and outcomes. It is often the fruits of cross-disciplinary discussions that lead to new products or new lines of development.
7. Corporations that have a consistent way of communicating their needs and evaluating the university's research appear to have more success with their university partner.

U*nderstanding the needs/wants of both parties*-
1. Most of the time, proposed research/development projects that are critical to key products being developed by the corporation are NOT good projects to conduct at universities.
2. Because faculty, graduate students and post-docs must publish their research, university researchers (faculty/students) require a certain level of commitment and stability in order to maintain interest in collaborating with a corporation. Short-term projects could hinder students from their primary research.
3. Universities are good places to develop new ideas, to substantiate findings within the corporation, or to conduct more basic research. Pre-competitive research is a good match for the university environment.
4. Corporations generally expect to pay less for certain research/development projects at universities than within their corporation.
5. Research universities require that the PI and their students publish their findings. Publications are the basis of a faculty member's promotion and a graduate student's ability to complete their degree.
6. Corporations may want a university PI to delay a publication in order to develop patent filings. Universities are able to grant reasonable delays to allow time to file a patent application prior to publication, but balancing the competing interests of industry and university is critical.

R*OI/Effectiveness* -
There is a spectrum of corporate-funded long-term relationships with universities. In this workshop, the goals for these relations included: inspiration of open innovation within the corporation; education of a upcoming workforce that would be more prepared/interested in jobs in industry; student recruitment; world-wide new idea generation; specific product development; etc. Understanding the desired outcome(s) for a long-term U-I relationship is critical to its success. Both institutions need to discuss upfront their goals and aspirations and to define success in advance.

E*xcellence in relevant areas*-
Most corporations that are going to fund a long-term partnership choose their university partner based on excellence in research in relevant areas and/or on past relationships.