

TASK 2 SUMMARY - Best Practices

Task 2 looked outside Cornell for best practices. The objective was to document best practice experiences of Council Members and others with other universities.

We broke the work into two areas, entrepreneurial work with start-ups, and research collaborations and technology transfer to established companies.

Start-ups

We talked with a venture capitalist who had had several good interactions with universities that had led to mutually beneficial commercial exploitation of university-spawned technology. The examples we discussed were a battery technology company started from the Materials Sciences Program at University of Texas at Austin, a solar power company with products based on technology from MIT in materials and manufacturing, and two superconductor companies which came from MIT and University of Wisconsin-Madison.

Several factors were common to the formation of these start-ups. First and foremost, the agreements went beyond licensing technology to creating partnerships between the university, the lead professor, the venture company, and the start-up. Everyone had an equity stake. This is important because it makes all involved become stake-holders in successfully commercializing the technology. Everyone is working on the same team from the start. The university invests their IP. The VC invests their money. The professor invests time going forward that is critical to the success of the venture. No one gets a return unless the company is successful.

There are also short-term incentives for all involved. These rewards vary. The university may get relief from the cost of pursuing IP protection for the technology. Those costs are picked up by the start-up. The professor may get a consulting contract along with an equity position in the company. He may also get financial support for his research. The start-up gets continuing contact with the research program at the university and possible additional product differentiation or new products from research advances.

The universities involved exhibited flexibility as the partnership progressed. Technology transfer and commercialization are not exact sciences. Schedules slipped. Guaranteed minimum payments could not be made on schedule. University flexibility and reasonableness in licensing made it possible for scarce resources to be invested in getting products out and generating revenue to the ultimate benefit of all parties.

It appeared that these partnerships were launched with a minimum of effort. A start-up has few employees. Every day that is spent negotiating an IP agreement is a day not spent creating a product to sell. The universities involved seemed to understand the value of time and of making the process flow smoothly and predictably.

Technology Transfer to Established Companies

We talked with three multi-national corporate representatives with responsibility for university research. Our discussions ranged from specific exchanges that had gone well, to the well-developed policies and procedures that large companies follow when dealing with universities. The types of interaction vary widely and are targeted to very different goals. Some are short-term and focused on a specific problem or program. More commonly, long term relationships are the goal where trust and open communication can lead to significant benefits.

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Most companies select a few universities as strategic partners. There are too many universities to maintain intimate relationships with them all. Affiliate groups were rarely mentioned as key to university relationships. Probably the number one benefit for corporations is special access to the best and brightest graduates in areas of interest to the corporation. Licensing IP is not a common occurrence, although all had had experiences of licensing IP with universities.

Long-term relationships were highly valued. By partnering with a professor doing research in an area close to the company's interest, company researchers were stimulated by a continuous stream of ideas and innovations related to their work, and research groups had access to students trained in programs parallel to their research interests. These relationships typically started small with gifts to support graduate students. While there are no strings attached to these gifts (and no university overhead), professors who want the support to continue make sure the company gets treated well. If the research becomes mutually more exciting, sponsorship increases and can ultimately lead to formal contracts similar to those coming from the government, albeit with different anticipated outcomes for industry.

The Siemens presentation surveys a wide variety of collaboration models from the more established approaches to innovative models. Most are for limited scope engagements as opposed to long term relationships, but even the short term models can be used to begin to build a lasting relationship. In addition, many of these short term models can be used within a larger strategic partnership with targeted universities.

Lessons:

1. The college should work to be a strategic partner with companies. Focus on building relationships that will last beyond the immediate problem or technology transfer.
2. View the companies as partners and look for mutually beneficial areas for collaboration.
3. Make starting small possible and easy. Provide models for growing the relationship.
4. Be reasonable with licensing. Don't require too much up front when the risk is high.
5. View the benefits to the university broadly, not just as an opportunity for licensing.