How Corporate Research and Venture Capital can learn from one another

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How Corporate Research and Venture Capital can learn from one another

An on-going relationship between a large corporate research organization and a leading venture capital firm has provided complementary value to both firms

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OVERVIEW:

After carefully evaluating a variety of mechanisms to leverage the world class Venture Capital (VC) firms in the vicinity of Hewlett-Packard's Silicon Valley headquarters, Hewlett-Packard Labs (hpl.hp.com) and the venture capital firm Foundation Capital (www.foundationcapital.com) entered into a strategic relationship. This relationship focused on the unique needs of a large corporate research organization, and was not intended to replace or substitute for on-going relationships between HP's business organizations and the venture capital community. This paper describes the motivation and history of this relationship, and articulates the value the relationship has provided both companies during the last 2+ years. This relationship has enabled both firms to understand more clearly the fundamental differences in their two different innovation models. The paper suggests that other large central research labs can benefit from a similar relationship. It concludes by describing some ways to achieve benefits without actually establishing a formal relationship.

KEY CONCEPTS: venture capital, innovation models, research management, corporate research v. startups.

Previous work

In his book, *Open Innovation,* Henry Chesbrough describes a number of ways that modern companies interact with venture capitalists (1). Venture capital funded "spin outs" are one way of extracting value from corporate research not adopted by the company, and Chesbrough details the many companies "spun out" of Xerox PARC. Chesbrough also described how corporate venture funds can be used to extend the corporate strategy in the start-up community, using the example of Intel Capital. Cisco has systematically acquired venture funded startups as a way of entering new markets (2,3). Panasonic, the consumer electronics arm of Matsushita Electric, has built a facility to incubate early-stage startups that could ultimately provide technology components for new Panasonic products. (4, 5). One of us has proposed a model for representing the types of interactions possible between corporate research and venture capitalists or venture capital funded companies. (6) What has not been described in the literature is the experiences and results of an on-going relationship between a large central research organization and a major venture capital firm. This paper describes such a relationship, and the value that it can provide for both sides of such a relationship.

Typical venture capital relationships with a large corporation

As a large, multinational company, HP has many different types of relationships with venture capitalists and the companies they fund, stretching all over the world. These range from formal programs to informal contacts with ex-HP'ers now active at both venture capital funds and at startups. On the formal side, HP's Strategy and Corporate Development department at headquarters has a program to meet regularly and separately with 10 to 20 large venture capital firms to identify technology trends and possible joint business opportunities. Secondly, HP's businesses make minority equity investments in, and acquisitions of, venture-funded companies to support HP's business strategies. Before such a deal is completed, HP routinely screens up to two dozen potential targets in a particular space. Selected HP Labs technologies that are not adopted by business units are presented to venture capitalists as the basis for potential spinouts. Finally, the HP pension fund invests a small proportion of its assets in venture capital funds.

Hewlett-Packard Labs is a large corporate research organization that comprises about 5% of HP's total R&D spending, an amount equal to $3.5B in HP's fiscal year ending Oct. 31, 2004. In 2002, HP Labs identified a set of unique needs related to its role that were not being met by any existing HP program and so in mid-2002, HP Labs embarked on an initiative to select a venture capital firm that would meet these unique needs.

The specific objectives that HP Labs had for this program were as follows:

- Identify the new innovation areas where VCs were considering new investments, as they receive dozens of business proposals each week.
- Compare the areas of VC investment to HP Labs investment areas, without learning or appearing to learn, confidential or proprietary information.
- Determine if those VC investment areas were leading to major paradigm shifts, such as happened in the late 1990s with the expansion of the internet.
- Gain exposure and knowledge of startups that could be partners, or acquisition targets, for HP businesses
- Take advantage of the fact that HP Labs headquarters location in Palo Alto is in the center of the world's largest aggregation of venture capital firms
- Establish a forum to receive feedback on selected HP Labs projects from experienced venture capitalists

Overall, we were hoping to lay the foundation for a dialogue on technology trends rather than "drill down" to the proprietary solutions pursued by individual companies.

Selecting a Venture Capital firm

Early in our process, we decided that it would be better to have an excellent relationship with a single firm rather than infrequent meetings with a number of different firms. We therefore decided to establish a relationship with just one firm. This then created the positive dilemma of having to choose just one firm from among the large number of outstanding venture capital firms in the Bay Area.

Given the objectives they we established, we conducted interviews with a subset of venture capital firms that emphasize early stage investments and that took a "hands-on" role in the management of their portfolio companies. While that may appear to be a fairly broad set of parameters, we discovered that it is not. Many venture capital firms either implicitly or explicitly shy away from "early stage" investments, given the high level of technical risk. Instead, they focus on relatively mature technologies, and focus on the level of execution risk in the business plans and management teams they decide to fund.

Initially, we were particularly interested, perhaps erroneously, in the number of incoming business plans and business proposals. We believed at the time that the number of plans was somehow related to the value that HP Labs would derive from the on-going relationship. As we visited firms, we asked them to provide a detailed answer to the question: "Where do new ideas and business plans come from?" Below are summaries of the answers from 4 different successful Silicon Valley venture capital firms (This is a subset of the firms that were actually interviewed):

VC #1

- Incoming deal flow of 35 - 40 per week from law firms, banks, fund investors, friends (80% are referred from these sources)
- Create 1 page summary of most incoming proposals for evaluation

- Meet with people from 1 out of 10 plans
- Have funded "unsolicited" plans
- Normal funding rate: 2 deals per Partner per year

VC #2

- Only invest in plans that come from known people
- Use executives from previously successful startups to incubate new businesses
- Harvest new trends and opportunities from many sources (e.g. UC Berkeley, Stanford)

VC#3

- Need to have thought about the idea before the entrepreneur walks in the door:
- "the business plan crystallizes an idea we were already considering."
- Have “entrepreneurs in residence” to nurture plans
- For “unsolicited biz plans”, hit “delete” with no response unless the author is known

VC#4

- Host new biz incubation in their offices
- Each Partner evaluates ~100 business plans per year and invests in ~2 per year
- Do screen and evaluate some unsolicited business plans but have “never funded a deal that came in cold”

It was evident that each firm has different approaches toward identifying opportunities. We noticed that even within a VC firm, the styles and interests of individual Partners are quite distinct; no one is an expert at everything. In general, we were impressed by the diversity of approaches and investment philosophies even among firms that would often co-invest in some of the same start-up opportunities. This diversity extended into many differing operating philosophies.   One of the firms we interviewed observed that venture capital has many characteristics of a "boutique business" with each firm using different approaches and investing in different types of new business opportunities and our interviews supported this observation.

Re-evaluating selection criteria

As a result of our interview process, we decided to modify our initial criteria for selecting a firm for an on-going relationship. In particular, we placed greater emphasis on our ability to foster an open interchange of ideas and opinions between our management team and the General Partners. Thus we assessed the level of interaction and the insights we obtained during our preliminary meetings with the General Partners and how well the technology backgrounds of the General Partners matched the focus areas of our research. We also decided to place increased importance on the number of companies in the VC's portfolio that were in technology and business areas related to our research areas. Foundation Capital (www.foundationcap.com) emerged as the venture capital firm best meeting our criteria.

Results of first two years of interactions with Foundation Capital

Foundation Capital and HP Labs started meeting together about every 3 months since late 2002. The meetings are scheduled well in advance so that most of the key HP Labs executives and Foundation Capital General Partners can attend. We alternate between the Foundation Capital facility in Menlo Park, CA and the HP Labs headquarters in Palo Alto, CA. When at HP Labs, we present a set of HP Labs projects. Energetic feedback on the projects is provided in real time by the Partners in a style that is stimulating to our researchers. When at Foundation Capital, some of the companies they have funded present business and product strategies. As is customary in the world of venture capital, we operate without "Non-Disclosure Agreements."   This requires some care in the selection of topics for discussion.

Differences between Corporate Research and Venture Capital Approaches

After our first several meetings, it became evident that the business value creation approaches of our two organizations were quite a bit different. These differences are summarized in Figure 1.

Benefits received from the relationship

We have a continuing relationship with Foundation Capital, so this paper is just a description of the first 2 years of interactions. Nevertheless, it is worthwhile to articulate the benefits we have already achieved from this relationship.

Corporate R&D

- Longer term view of revenues and profits
- Develop technologies with significant risk
- Have “assets” from on-going business to leverage: Products, customers, channels
- Favor proposals to rapidly increase current business revenues with technology breakthroughs
- Look for opportunities that will positively impact $80B company

Venture Capital

- Goal is a monetizing event within 3 – 5 years from initial investment
- Business model and market risks usually larger than technology risks
- No “assets” from an on-going business, so business model can adapt
- Entertain wide range of technologies and business models
- IPO possible for company with positive cash flow and revenues between $50M - $100M

Figure 1: Goals and Tactics of Corporate R&D vs. Venture Capital

Benefits to HP Labs and HP

1. Several of the projects that we presented to Foundation Capital have undergone substantial redirection based on comments made during the presentation to Foundation Capital.   Foundation Capital Partners often had relevant expertise based on knowledge of companies developing similar technologies or addressing similar customer needs.   When we showed them a new remote conferencing technology, they described some failed startups in the video conferencing business and the hurdles for new technology adoption. We ultimately decided to redirect the HPL research that was demonstrated to them. On several occasions, the Partners were able to provide introductions to the people involved in these related ventures. In one instance, the Partners alerted us to some important intellectual property ownership issues that we had not yet identified.

2. HP has acquired one Foundation Capital funded company and several others established OEM relationships with HP Business Units. It is possible, however, that these relationships would have ultimately occurred without the HP Labs - Foundation Capital partnership, given HP's robust business-united focused VC engagement processes.

3. HP Labs is more selective about making investments in new technologies that will result in new HP businesses and places more focus on new opportunities that leverage a significant HP competency or corporate asset. This is because we have experienced first hand how effectively startups can assemble world class management teams and approach new markets with an intense focus that it is not possible in a large organization with established partners and business relationships.

4. HP Labs has been able to propose more focused market entry strategies for several of our new technologies.   We found as we presented new technologies to the Foundation General Partners, they immediately discussed market entry strategies and very quickly gravitated to an identifiable market segment both under-served by current technology and likely to become early adopters. A good example of this was a new storage technology developed by HP Labs. The Foundation Partners suggested that this technology be sold initially for data intensive media applications where all of the features of

expensive storage arrays were not required. This would allow earlier market entry since the initial product would not require the full feature set of the pre-existing technology. Time and again we have been simply astounded by the proficiency of the Foundation Capital Partners at postulating new business models and market entry strategies. On several occasions, they spontaneously suggested new product and market paths for our technology that we had not considered.

5. Presentations of Foundation Capital portfolio companies have enhanced our understanding of startups in businesses areas of interest to HP, and startups using familiar technologies to address new markets. As the relationship has evolved, Foundation Capital has developed an almost uncanny ability to identify new companies that are of great interest to us.

6. The majority of researchers that have presented to Foundation Capital have been energized by the interaction and challenged by the new perspectives that were presented to them.

Benefits to Foundation Capital

1. The Foundation Capital Partners harvest new ideas from a broad group of thought leaders including universities and principals from companies that they have funded. The HP Labs management team has exposure to a broad range of information technologies and thus has become another source of ideas and information for Foundation Capital.

2. As has been described above, Foundation Capital often invites management teams from startups to present to HP Labs. Frequently the HP attendees provide comments and feedback on these startup company presentations. When these startups are Foundation Capital portfolio companies, it is often possible for HP Labs to identify other groups in HP who would be interested in purchasing their products, or becoming one of their business partners. Of course it is possible that such discussions with HP business units might lead to a deeper relationship such as an equity investment or an acquisition.

3. HP Labs describes to Foundation Capital those research areas where HP is making significant investments. The Foundation Capital Partners have often observed that in the process of pursuing large business opportunities, large companies often "open up" smaller new businesses that then become attractive new opportunities for startups.

4. HP Labs has been able to provide specialized technical expertise on a limited basis to Foundation Capital portfolio companies and the Foundation Capital General Partners. This expertise has to be for Foundation Capital portfolio companies that are addressing markets where HP does not participate to avoid conflicts of interest and to allow HP Labs to innovate and file for patents based solely on HP ideas and inventions.

5. HP Labs has exposed Foundation Capital to some leading research in several emerging areas which could be used to set a context for identifying areas for funding startups.

Should your research organization establish a relationship with a venture capital firm?

Our experience to date has been very positive, and this relationship is continuing. We would recommend other organizations to consider a similar arrangement. For research organizations in this situation, we would propose that they address the following questions:

1. Does your firm already have an existing program to match startups with on-going business units, as business partners, technology suppliers, or acquisition targets? If not, the establishment of such a program to connect startups to business units would be a higher priority than a program to connect a venture capital firm with a centralized research organization..

2. Will your senior management team commit the time necessary to establish and maintain a program that is focused on establishing personal relationships? Consider a implementing a program like this only if your team is willing to commit to quarterly meetings lasting 2 -3 hours per meeting.

If you decide to move forward, I would propose the following steps:

1. Clearly establish your objectives for the program.

2. Interview a number of VC firms to identify those firms that will best accomplish your objectives

3. Clearly understand the value that your company and the VC firm will derive from the relationship.

What benefits can be captured without a strategic relationship?

By adopting some new management practices, it may be possible for a corporate research organization to accomplish a subset of the benefits of a strategic relationship like the one described above without forming a relationship. These practices may be of interest to organizations that have not, or are not in a position, to form a strategic relationship with a venture capital firm. Based on our experiences to date, we would propose the following management practices:

1. Understand how the business opportunities enabled by the technology development in your organization will leverage the assets and competencies of your organization. Existing corporate assets can help magnify the potential of an opportunity enabled by a new technology. Researchers need to understand that the barriers are higher to enter a new business without significant corporate synergies. Venture capital funded startups pursue such new business opportunities very effectively.

2. For the research areas in your organization, monitor and evaluate startup activity that is utilizing similar technologies or is addressing similar customer requirements. Public information about startups that are searching for new customers is often easily available. When companies are identified that are developing technologies similar to those under development in your own firm, or are addressing the same set of customer's requirements, a comparison of approaches often provides new insights.

3. When researchers talk about the new business opportunities that are created by their research, make sure that they can clearly identify the set of customers who will benefit the most from a new technology and what value those customers would place on the technology. These customers are likely targets for any entry strategy, and the requirements of these customers can be used to focus the development of the technology.

4. Establish expectations in your organization that the 3 topics described above be covered in research reviews and research reports.

Conclusion

This paper has described a unique partnership between a large central research organization and a leading Venture Capital investment firm. Although this partnership was motivated by our desire to refocus existing research into new areas, we also learned some important lessons about how to manage our own research programs more effectively. These lessons were not anticipated when we established the initial relationship. As the global business environment changes and technology continues to advance, we expect our relationship with Foundation Capital will be exploring new areas. For example, our research organization has expanded internationally, and it will be interesting to monitor international expansion of venture capital. As services become a more significant component of our company's revenues, it will be interesting to discuss the entry of venture funded firms into service businesses we expect discussions of these and other issues will continue to provide unanticipated but valuable insights for both of our companies.

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