SUSTAINING VENTURE CREATION FROM INDUSTRIAL LABORATORIES

The evolution of Lucent's New Ventures Group into a partnership with private equity capital suppliers offers a new route to corporate innovation.

Henry Chesbrough and Stephen Socolof

OVERVIEW: Lucent's New Ventures Group launched 35 ventures out of Bell Laboratories technologies. Notwithstanding this success, NVG has been forced to change its funding approach. It has now evolved into a partnership with private equity capital suppliers called New Venture Partners. This partnership addresses some structural limits upon a public corporation's ability to support internal venture creation over the business cycle, and offers a new model for sustaining corporate innovation.

In an earlier article, we described an innovative model for creating corporate ventures out of industrial research laboratories at Lucent Technologies (1). Since that article, tremendous changes have occurred in the telecommunications market, within Lucent, and within the venture capital sector overall. These changes have forced this model of creating ventures out of industrial labs to evolve in a somewhat new and different direction. In this article, we briefly review these different forces, detail how they compelled Lucent to spin out its New Ventures Group, and describe the evolution of the model into New Venture Partners.

We believe that this evolution carries with it important implications for industrial innovation, and for the concept of Open Innovation (2). Open Innovation advances the claim that, in a world of widely distributed knowledge, a company must access external technologies for use in its business and allow its technologies to be accessed by other firms’ businesses. Lucent’s New Ventures Group was an example of the latter process, of allowing other firms to access Bell Labs technologies.

Notwithstanding this hypothesis, there appear to be limits in the ability of a publicly-traded company to support the creation of internal ventures over the business cycle. While one can conceive of possible financial instruments to address these limits, they have not been tested by companies, and may not soon be attempted in the current post-Enron accounting and governance climate. Teaming with private equity capital suppliers to sustain the creation of these ventures in challenging times, as well as in good times, may serve as an alternative mechanism to deal with these problems.

The Spinout of Lucent’s NVG

Lucent’s New Ventures Group (NVG) had achieved considerable success following its formation within Lucent back in 1996. In the subsequent six years, 35 ventures had been created out of Bell Labs research projects. As noted in our previous article, each project was initially reviewed by internal Lucent businesses, which had the right of first refusal for a technology nominated to go into a new venture (1). While this might suggest that NVG would be consigned to the "leftovers" that were rejected by the business units, NVG found that many of these technologies held significant commercial potential. In fact, NVG commercialized opportunities that were both
in non-strategic “white spaces” for Lucent, as well as opportunities that represented alternative strategic hedging bets.  

Lucent’s NVG was a financial success. Out of the 35 ventures that NVG launched, there were eight exit events in its portfolio. This rather high success rate translated into a gross internal rate of return for NVG of 46 percent from 1996 through the end of 2001 (based on exits over the period plus the final sale value of the portfolio by Lucent versus every dollar invested both directly in the ventures, as well as in the core team and development of the opportunities). This is a high rate of return, given the communications and IT focus of the portfolio and the significantly negative returns of many venture capital funds during this period. Three of the ventures later were re-acquired by Lucent, reflecting strategic benefits to the organization realized from the NVG program. Despite these returns, Lucent determined that it would be best to spin out the NVG in December 2001. 

This may at first seem odd. Why, given NVG’s success, was it spun out, if it was returning capital at such a high rate and creating strategic benefits as well? The answer lies in Lucent’s corporate situation, and also the issues of housing an internal venture creation program inside a publicly-held corporation. We will consider each in turn.

Lucent’s challenging context

Lucent’s corporate context recently has been extremely challenging. Lucent and other participants in the telecommunications industry have experienced a tremendous downturn in their primary markets. From 2000 to 2001, Lucent’s revenues fell over 26 percent from $28.9 billion to $21.3 billion. In the process, the company reduced headcount over 29,000 people, about 27 percent of its workforce. In this environment, Lucent needed to focus on its very survival, as its cash position deteriorated to the point where its loan covenants were in jeopardy and bankruptcy was a real possibility. 

This downturn necessarily altered Lucent’s view of NVG and its portfolio companies. By construction, NVG companies were pursuing opportunities that Lucent’s internal businesses decided were not critical to its business. Lucent needed to conserve cash and manage expenses; the company’s quest for survival meant that less strategic activities of every kind had to be curtailed, including those of NVG.

At the same time, the downturn in the telecommunications market combined with another force: the decline of the venture capital industry. The amount of money raised in venture capital went from $76 billion in 2000 to just $30 billion in 2001. Worse, returns for many funds raised in 1999 and 2000 were negative, and many limited partners were demanding a partial return of their capital. This VC retreat meant that even deserving technology ventures would have to struggle to raise additional funds. Programs like NVG needed to provide cash to sustain their best ventures until conditions improved for another round of financing. This meant that NVG would need additional capital for its portfolio to weather the storm in the venture capital market. Lucent was hardly in a position to provide this support, since it was fighting for its own life and needed to conserve every dollar of cash to that end.

Limits to public company support

The other issue, though, for NVG within Lucent, transcends Lucent’s precarious financial condition, and raises questions for any program seeking to create internal ventures out of an internal corporate research laboratory. An internal venture creation program involves financing and supporting a portfolio of startup ventures. These startups require lumpy cash infusions, which are difficult to forecast. They only create value in a financial sense when a portfolio company reaches a liquidity event, and these are even more difficult to forecast. As NVG grew its portfolio, the portfolio’s cash needs increased, while NVG’s ability to predict whether and when liquidity events would occur remained very limited.

This pattern of lumpy cash requirements and uncertain liquidity events poses financial challenges for a publicly-held corporation. The public corporation must manage its business to both quarterly and annual targets for revenues and earnings. The uncertainty of cash inflows and outflows can cause difficulties in meeting the company’s financial targets. Even the positive news of a liquidity event at an attractive return may earn the company little credit, as it was not forecast in advance, and the company cannot predict when the next event might occur (and how much of a gain might be then realized). Further, Wall Street tends to discount non-operating earnings in determining valuation. Ironically, these problems intensify with the improved performance of the venture portfolio, since larger ventures can lead to bigger surprises. 

One can, at least in theory, imagine a number of financial engineering mechanisms that might resolve these issues. Volatility in a portfolio of investments can be hedged or offset with other investments, provided that one can find reliable indices for the underlying sources of volatility. In the case of privately-owned ventures, these are highly illiquid and harder to hedge. Even here, though, if value is being created within the portfolio over time, there might be a way to convert that value into a more reliable and predictable stream of cash flows for the corporation. One possible device might be to create a tracking stock, which follows a basket of ventures within a portfolio. Such a device would require extensive disclosure of the
portfolio and its performance, and is typically applied to mature businesses with predictable cash flows. These characteristics are lacking in early-stage technology ventures. And even in those mature contexts, tracking stocks have had liquidity problems of their own.

Another instrument might be an Innovation Bond (2). This bond would be issued to the corporation launching the ventures, giving the corporation a steady stream of payments contracted for in advance. The bond issuer would likely be a private equity holder, who would take on the risks of managing the portfolio of ventures for value creation and absorb the volatility and illiquidity of the portfolio (3). The idea is that private equity markets may be more capable of coping with these risks than publicly-held corporations. Transferring these risks from the public corporation to a private investor also avoids situations where the corporation is forced to choose between the strategic goals of the corporation and the goals of the venture (4). However, it must be noted that, in this post-Enron environment, any financially unconventional instruments designed to transfer risks out of the public corporation are regarded with extreme skepticism.

Of course, Lucent could have chosen simply to wind down the NVG program by cutting off any further funding of the portfolio companies and eliminating the team. Many companies did abandon corporate venture capital programs during this period (5). Yet Lucent recognized a better way to both optimize the current and future value realization from the existing portfolio as well as to preserve the capability of the NVG team and process, which were valued for their ability to create new ventures from the labs in the future. These considerations caused Lucent and the NVG team to seek a path other than termination.

Creating a New Structure for NVG

Once it became clear that NVG would need to find a different path, they began to search for new sources of capital to support the portfolio and team. The capital sources would need to be patient for capital appreciation, since liquidity events were always unpredictable and were likely to occur some ways into the future in the current financial climate. Finally, NVG wanted capital sources that valued the processes and capabilities that NVG had created, so that new ventures could be initiated as well as supporting the existing ones.

There were several potential advantages to restructuring the NVG model outside of Lucent. In the future, one laboratory may not be able to provide enough deal flow to warrant maintaining the team and capability at a critical mass. If NVG could identify other industrial laboratories with underutilized projects, it could spread the costs of its team across more projects and increase its deal flow beyond what a single laboratory could provide.

After a couple months of searching for potential capital sources, undergoing due diligence and negotiating agreements, NVG closed a transaction with an investor group led by Coller Capital. Based in London, United Kingdom, Coller Capital is one of the world’s largest secondary funds, specializing in investing in portfolios being divested by corporate and financial institutions. In this transaction, which occurred in December 2001, Lucent transferred its interest in the NVG portfolio into a limited partnership fund and then sold 80 percent of its interest in the portfolio to the Coller-led group for $100 million, retaining the other 20 percent upside potential in the portfolio. The NVG team, renamed New Venture Partners (NVP), became the general partner of the fund and now manages the portfolio for these investors with a carried interest compensation structure based on the success of the portfolio.

In effect, this transaction did transfer the financial risks of the NVG portfolio from a public company to a group of private equity investors, as noted by the Innovation Bond concept above. However, Lucent received a one-time payment and retained a 20 percent upside, instead of a stream of payments over time.

Finding additional partners

With the Coller-led investment, NVP began to pursue additional industrial laboratories to search for venture creation opportunities. While this search continues, a major milestone occurred in February 2003, when NVP announced its corporate partnership with British Telecom (BT). Like Lucent, BT is a major participant in the telecommunications market and also possesses some excellent internal laboratory research facilities. BT’s business context differs somewhat from that of Lucent; because BT is primarily a service provider, many of its research initiatives address new product or service opportunities for which BT would more likely be a customer than a supplier.

BT even had an internal venture creation and incubation program of its own, BrightStar. But BrightStar experi-
The risks of the BrightStar venture portfolio were largely transferred from a public company to a private investor.

Sustaining Venture Creation—A Long-Term Game

Companies with significant internal research and development capabilities are searching for mechanisms to create more value out of their R&D investment. Crafting spin-off technology ventures out of unutilized R&D projects is one vehicle for stimulating more rapid commercialization of R&D (1,2). Lucent’s and BT’s experience illustrate a growing realization within corporations, however, that creating new ventures out of internal technology must be managed for the long term if it is to be sustained through down phases in the corporate or industry life cycle. It takes time to develop the venture creation expertise in the portfolio management team, and returns from these activities will be lumpy and difficult to predict. Absent careful financial planning and management, companies may vacillate, entering into venture creation when times are good, only to abandon it whenever times turn bad.

Partnering with external private equity specialists provides corporations with an alternative to this start-stop behavior toward corporate venture investing over the life cycle. By transferring most of the risk and a governance of these ventures to private equity players, corporations can continue to enjoy alternative paths to market for their technologies in good times and in bad, without having to deal with the headaches and surprises that such an illiquid portfolio of ventures entails.

The long-term performance of creating public company technology ventures with private equity financing remains to be seen. However, in a related area of corporate venture capital, the stop-start cycle of corporate behavior has also been observed (4,5). Most of the corporate investment programs that have endured through the recent downturn in venture capital have been ones that were managed by outside professional investors. This combination may prove to be more sustainable in creating technology ventures out of corporate laboratories as well.

References and Notes
3. In contrast to a tracking stock, which would be distributed to the public, the Innovation Bond moves the financial risks of a venture portfolio from the public market into the private equity market. The financial risks remain, of course. The bond issue would price these risks into the bond, since it too has no easy way of hedging these risks in secondary markets. The corporation would likely get only a discounted value of its portfolio in the Bond, as a result.