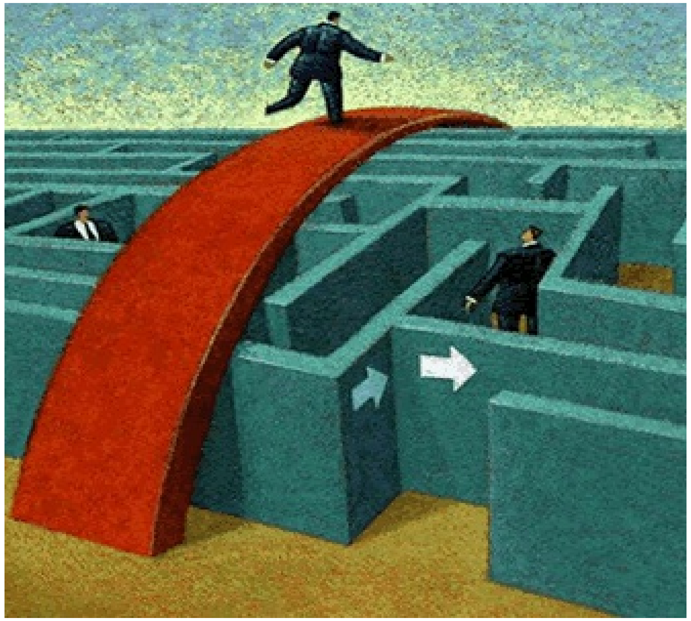
Finding Innovation: New Paradigms



New rules for start-ups to connect with unlikely corporate backers

Fueling innovation is the topic of numerous books because it's not intuitive for established businesses, as the Economist's Shumpeter noted. Corporations succeed through efficiency, predictability and repeatability. There are often cultural clashes between entrepreneurs, who keep irregular work hours and like to "think out side the box", and corporate focus on satisfying a host of stakeholders from stockholders and customers, to sales, technical and other staff. Ironically, as traditional Venture Capital backs away from clean and biotech, mid and large cap companies are finding that these startups hold the key for corporate success. Expanding market opportunity by spending on cleaning up an industrialized process or lowering supply chain costs isn't new. But taking company technical and marketing expertise, and investing it into someone else's good idea, is a trend gaining momentum.

What established companies have to offer is a wealth of market expertise, including the data on what customers are looking for and the experience in selling to risk averse clients. Tie that to technical expertise, which comes with access to high priced equipment, research, labs and seasoned talent, and an idea that might have stayed a dream in an entrepreneur's mind becomes a viable business that can prove the concept and then attract capital from private markets.

Intermediaries, such as Cleantech Group and Lux Research, are helping to broker such deals by working with companies to identify market opportunities that are synergistic to their current business. Deals can lead to a new use for an existing product or material, providing an analysis for the potential in new technologies, or looking at the larger corporate processes to identify savings from low carbon approaches or products. For promising start-ups, consultants can identify potential fruitful partnerships and open doors closed to scientists and engineers.

Corporations stepping up to bat

> "We're basically the on-ramp into this new huge and dynamic market, and we have flexible business models that can range from just being a customer or a sales channel to being a privileged, sales channel with defined exclusive rights."

One example is the alliance between Cleantech Group and Veolia Environment (In the EU, Veolia Environnement). Veolia Environment is a leader in environmental management services, providing water, waste, energy, and transportation management services to local governments and private clients around the globe. They operate on all continents in 74 countries with over 300,000 employees and nearly $50 billion in revenue. They're constantly on the look-out for new technologies that will enhance their brand and increase their ability to meet their client's needs while developing more profitable projects.

> "We partner with young companies to develop operational partnerships that will either enhance the efficiencies of our operations or enrich the offerings to our clients," explains Marie-Anne Brodschii, vice president of innovation at Veolia Environment.

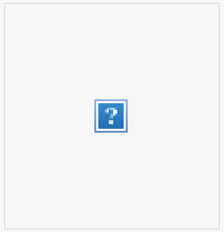
Working with their own business divisions, they develop "shopping lists" of technologies needed to meet their internal needs, and then look for emerging startups in that space. In order to find such companies, they have a three pronged approach: A network of Veolia business and technology experts; an innovation network (Cleantech Group as well as VCs are members); and their Innovation Accelerator (VIA) which is online. Cleantech Group has helped with the marketing, as well as reaching new companies and helping evaluate opportunities.

Veolia Innovation Accelerator

> "The challenges that we face as a world community are huge and growing, and even though we're a huge company and have a large number of fantastic researchers, the size of the challenge is much greater than

Veolia's considerable resources, so we need to actively pursue outside innovation." Dr. Bill Wescott, vice president of innovation in the Americas at Veolia Environment.

VIA provides a framework for developing relationships between Veolia and the entrepreneurial community. As Philippe Martin, VIA champion and Vice President for Research & Innovation commented, their approach is designed for transparency in order to move projects quickly through the pipe line. Veolia has committed to an aggressive schedule, announcing two partnerships by February 2011 and increasing the number every year thereafter. Companies interested in applying look at a four stage process:


Philippe Martin, VP for R&I, Veolia

1. Sniff Test: Veolia determines whether the idea is feasible, that the principles are reputable, and that the idea enters within Veolia's scope of activity. Applicants hear back in one week. As of October of this year, 150 had applied.
2. Paper Study: Companies whose mission is appropriate for Veolia's goals, work with Veolia experts to evaluate the technical and economic concept. This process takes up to four weeks. Of the original 150, 20 are in the vetting process.
3. Go/No Go: Veolia then meets face-to-face with innovators, tour their facilities and determines if there is a business model that works for all involved. This can take up to 5 months, and involves significant contribution from Veolia of legal, marketing and technical expertise and time. The companies that will be selected for final approval come from this group.

> "It just makes sense to partner with others. We are a services company and have a culture of partnering with outsiders," comments Wescott. "In many other companies that also have very strong research capabilities, there's a culture of 'not invented here' and there's competition between internal ideas and outside ideas. Partnering with us is easier and more natural because of our openness to new ideas."

The VIA program was launched for the first time in February 2010 in the United States and April 2010 in Europe. To date, they have received applications in a wide variety of sectors, with about one-third in the water space, one-third in the energy sector, less than one-third in energy, a modest quantity in transportation, and some that fall into a cross-sector mostly populated with IT technologies. They plan to announce four successful VIA partnerships in March 2011 at the Cleantech Forum in San Francisco.

Where's the beef?

The challenge is finding companies that can provide innovation for an existing company, and having the expertise to evaluate those opportunities. Particularly for small and mid cap companies, an on-board group may not have the resources to do the scouting, let alone the evaluation. Even large companies like Veolia look for outside for impartial expertise. For firms like Cleantech Group and Lux, finding new businesses and analyzing technologies is their business.

They have invested in the expertise needed to understand global, national and regional opportunities and challenges, and companies on both sides of the transaction have come to trust them. The Cleantech Group model includes:

- As a research advisory, they often feature startups profiles in reports and white papers which provide visibility for the innovation. Their subscription service provides up to date information for many CEOs and CFOs.
- Hosting regular cleantech-focused conferences provides ample opportunities for green entrepreneurs to present their ideas and network with potential corporate partners and investors.
- Working with corporations on custom research projects often affords the Cleantech Group the opportunity to introduce CEOs to bright innovators. In one example, they helped a sensor technology find 12-14 new opportunities for their technology, and helped finalize some key partnerships that are allowing them to expand into consumer appliances.

Wary entrepreneurs can lose out

> "The solution is more transparency on both sides, but it's not going to come about just from people like me shaking their finger saying, 'Be more transparent!'"


Dr. Michael Holman, Lux Research

Michal Holman, PhD Research Director at Lux Research, focuses on removing barriers to partnerships. He noted that entrepreneurs are notoriously skeptical about large corporations, expecting that such partnerships will lead to being taken over, exploited or—worse case—having their approach sidelined in favor of an existing corporate technology. At the forefront of brokering partnerships, Lux has experience with both entrepreneurs and the Fortune 1000.

In a recent Lux Research presentation "Open Innovation and It's Discontents", Dr. Holman noted that the barriers include:

- Corporations are reluctant to share closely-guarded market secrets that would inform innovation development
- Startups often fail to involve corporations early enough, resulting in developments that are incompatible with the larger business' needs
- There are miscommunications about the value of technology, applications and markets, as well as business models between corporations and startups
- Startups are suspicious that corporations will steal their ideas

He goes on to note that Lux sees a much broader set of alliances than in the past. Not just startups, angels and VCs, but now the mix includes universities, corporations, technology developers, and end users. He sees a flow—from idea to proof of concept, prototype and commercialization—with many handoff points that need to be clarified. At each stage there are advantages to various alliances, but the participants need to know the current and future expectations. The relationships go beyond the dollars, including such things as resources that are only available in Universities like Nano labs; knowledge of the challenges of getting to scale from developers; regulatory barriers along with existing governmental relationships in legal and corporate offices; and innovative financial structures from syndication partners and others. These ancillary benefits, which may be worth more than an "A" round or "B" round, can be difficult to quantify but must be taken into account for the relationship to work well. He notes that misunderstandings and misconceptions can slow down progress and even derail entire projects. Homan has seen several models that seem to work well:

- Corporate venture capital: Businesses can set up their own venture capital arms to invest in cleantech startups. This allows for earlier collaboration. The corporation, as an investor, wants to see a return on their capital. As a result, they are incented to success, whether that be a licensing the technology, acquisition at a later state, spinning the company off, or even an IPO as an exit strategy.
- Government funds: In some cases, governments are either funding early-stage research or providing incentives, such as New Market Tax Credits, that promote cooperation. The government support spreads risk, ensuring that the corporation isn't the sole investor. The European Union has used this approach with success.
- Corporate-VC Funded R&D: Startups can get early stage funding from private equity, while corporations provide the expensive technical and market research and development to get to commercialization. This approach is a less expensive way to promote innovation that housing in-house R&D, and has been used successfully by startups like Codexis.

Is VC funding for cleantech dead?

> "Venture capital is going to continue to be very difficult for companies developing cleantech to come by." Dr. Holman, Lux Research


Sheeraz Haji, President, Veolia Environmental

The consensus seems to be not dead but changing. VCs can look to a company like GE or Johnson Controls as a bellweather on new technologies. Since corporations have the customer experience—they know where the new opportunities lie and what customers are really looking for—they can help VCs understand their value proposition as well as feel more comfortable that a new technology will is likely a sound investment.

Sheeraz Haji, President of CleanTech Group, noted that there is continued innovation in financing. For new areas, like energy efficiency, financing can have many players s spread out over a 10-15 year timeline. He believes the market hasn't yet seen or crafted all the models that will evolve in the coming years. He added that investors in pension funds would love to be in these markets if there were instruments they could understand and trust. As a result, he feels there is a growing need for standardized term sheets to get financing flowing. He concluded,

> "There's no shortage of complexity. The trick is learning how to manage and integrate a deluge of data" in order to separate the good, the bad and the downright fraudulent.

Rather than being attached to the romantic VC model with a magnificent IPO at the end of the road, cleantech startups should look at longer term, more solid models. Holman fears that we'll witness a lot of very disappointing returns for venture capital that has invested in energy and environment applications. As a result VCs might exit the market without the support of the relationships that both Lux and Cleantech Group facilitate.

> "VCs have a herd mentality. You see that as they get into the cleantech market, and you'll see that as they get out," Holman added.

Since the new innovation–from nanotechnology, water, transportation and energy–are coming from the clean tech sector, these new paradigms not only point a way out of our stalled economy, they also provide a smooth pathway for bridging potentially clashing cultures in a union that can bear fruits for all parties.

Maryruth Belsey Priebe,
senior editor
With A. Tana Kantor

Trackbacks

The Green Economy Wave says:
March 17, 2011 at 10:34 am

[...] Other THE GREEN ECONOMY talks with Bill Wescott [...]

Speak Your Mind

You must be logged in to post a comment.