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Corporate Venture Capital at BASF – 15 Years of Connecting Start-ups and BASF

Corporate Venture Capital (CVC) experienced a tremendous expansion in the recent past. In the period between 2004 and 2014, the number of CVCs grew from 180 to over 1,000 with the strongest growth occurring in the period between 2010 and 2014¹. This growth caused a certain level of attention and curiosity about CVCs within the VC and start-up community. In this article, we highlight some of the experiences of BASF Venture Capital in this field, in particular the role of a CVC as a facilitator between two very different types of companies: the start-ups and a large corporation.

BASF Group and BASF Venture Capital GmbH

BASF is the world's leading chemical company, celebrating its 150 year anniversary in 2015 (www.basf.com). Its broad portfolio of chemicals and materials serves a wide range of industries and is arranged into five segments: Chemicals (e.g. petrochemicals, intermediates), Functional Materials and Solutions (e.g. catalysts, plastics), Performance Products (e.g. dispersions, nutrition), Agricultural Solutions and Oil & Gas. Each segment has a number of operating divisions that are responsible for particular parts of the business. In 2014 the BASF Group had sales of EUR 74.3 bn and an EBIT of EUR 7.4 bn. Innovation is an integral part of its strategy: of its around 113,000 employees worldwide, over 10,000 are working in research and development (R&D), with an investment in innovation of EUR 1.9 bn in 2014. Over the years it has built a "Know-How Verbund" that includes more than 600 top universities, research institutes and companies; it currently has about 3,000 research projects with customers and partners. In

¹ The World of Corporate Venturing 2015, Mawsonia



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2014, it filed 1,200 new patents². As part of its innovation efforts, BASF founded in 2001 the BASF Venture Capital GmbH (www.basf-venture-capital.com). BASF VC's investment activity has two objectives: (i) to open a Window on Technology (WoT) for BASF and (ii) to generate risk-adequate financial returns. It has a fund of EUR 175 m and a flat and flexible structure with currently 13 people located in 5 offices worldwide: Ludwigshafen (HQ), Hong Kong, Tokyo, Fremont (Bay Area) and Boston. The investment managers' responsibilities are allocated according to geography (managing local relationships, generating quality deal flow) and their diverse backgrounds, e.g. working with particular divisions or focusing on financial and transactional aspects.

Like most VCs, BASF VC targets minority shareholdings. Opening a WoT shapes its strategic character: BASF VC looks for innovative start-ups working on products and technologies relevant to existing business segments of BASF. Besides, it monitors fields new to BASF and deemed relevant to its future growth (often in collaboration with BASF New Business, www.basf-new-business.com). In general, opening a WoT encompasses one or more of three aspects:

- Facilitation of joint developments between start-ups and BASF;
- Gaining insights into new markets, technologies or business models;
- Identifying potential future M&A targets that are still too early for BASF to acquire.

Over the years, BASF VC has been an active intermediary between start-ups and BASF. When invested in a start-up, BASF VC follows its investments closely and gets actively involved whenever necessary, leveraging on BASF's network and expertise. BASF VC shares its deal flow with the operating and R&D divisions on a need-to-know basis, acting simultaneously as a scout for new products, technologies and trends as well as a facilitator bringing the divisions closer to relevant start-ups. To give an idea of the magnitude of BASF VC's work, in 2014 it

² www.basf.com/en/microsites/factbook-2015.html

found or received information on almost 1000 relevant start-ups; it facilitated about 70 in-depth interactions between start-ups and divisions and performed due diligences on 20 start-ups; it made 3 new direct investments (not including follow-ons).

It is important as a CVC to understand both the needs and driving forces behind start-ups when working with a large corporation and vice-versa. Based on BASF VC's experience, in what follows we elaborate on these points and shortly discuss some concrete cases.

What corporations want from start-ups and CVC's role

It has been our experience that large corporations look for innovations on the outside for various reasons, as for instance

- to compensate for blind spots, as they cannot cover simultaneously all innovation areas relevant to its business;
- to keep a pulse on what is going on in fringe areas that can potentially become important;
- to accelerate internal efforts, as well as building on the results from others that complement internal work.

The open innovation approach often takes the form of a formal R&D collaboration, e.g. as a Joint Development Agreement (JDA), with universities, specialized institutes or other players along the value chain. There is an increased interest in large corporations to work with start-ups, as these generally offer – beyond the points named above – a “can do” entrepreneurial attitude that makes them faster at solving problems.

In this respect The CVC acts not only as a facilitator, but also as a translator. It often helps to bridge cultural differences between large organizations and start-ups, contextualizing and managing expectations of all people involved, since in the vast majority of cases the business plan of an early stage start-up does not materialize as initially hoped for. Besides, it needs to make clear to all

that, if it decides to invest, the CVC can be bound to the start-up for several years – even after the collaboration has ended.

Another critical role of a CVC is to understand the strategy of the different parts of the parent company. This is achieved through regular and transparent discussions between the CVC and the operating and R&D divisions, as

- it increases the chance of good “hits”, that is, the CVC brings relevant start-ups in contact with the right people within the parent company’s organization (increasing also the willingness to collaborate);
- it improves efficiency by saving time for both, the start-ups (if the fit is low, reject the deal; if the fit is high, engage quickly), and for internal partners;
- it raises the CVC’s profile internally and externally as a reliable partner on relevant topics for the parent company.

What start-ups want from large corporations and CVC’s role

In the vast majority of cases, start-ups are resource-strapped entities: short on cash and/or market expertise and/or people to execute. It is fair to say that the best connections and updated market views are available from the operators along the value chain (often some of the most interesting VCs are themselves former operators), making a collaboration with a large company attractive beyond having a large customer/partner. It opens the possibility to learn first-hand how a start-up can solve relevant problems, how the markets it addresses work, what the trends are that long-standing market operators see before others, and so on. In other words, and using a bit of analogy, the start-up provides the “fresh blood” and energy that can shake a market; the big corporate provides the vast resources, experience and knowledge that can place a new product and a technology within complex value chains.

Naturally, this only works if the “chemistry” between the two sides matches perfectly. What start-ups need to be clear about is that corporate strategy sometimes changes, that means the faster a collaboration bears fruit, the higher the chance of success for both parties in the end.

From our experience, the CVC can be an attractive partner to start-ups for several reasons. The prominent value proposition of a CVC is that it can help start-ups to find the right internal champions for their projects and to navigate the corporate structures as the two companies engage with each other. Beyond that, it can help to provide continuity when there are internal personnel changes. If invested, it acts as a strong endorsement to the start-up when discussing with customers and other potential investors. The only potential downside occurs when engaging a competitor of the CVC's parent company; however, it has been our experience that this is rarely an issue provided the CVC has good governance practices in place (firewalls between the CVC and the parent company, a clear understanding of what can be discussed internally and what cannot, etc.).

Case study: Slips Technologies (www.slipstechnologies.com)

Slippery Liquid-Infused Porous Surfaces (in short SLIPS) is a set of technologies that transform the surface of any solid material into a microscopically thin and ultra-smooth immobilized “sea” of lubricant. The resulting liquid over-layer interface is a robust and self-healing super-slippery surface that is highly repellent to virtually all fluids and biological fouling agents. Materials including metals, plastics, glass and ceramics can be SLIPS-enabled cost-effectively and with simple manufacturing techniques, thus allowing SLIPS to be used for a broad range of applications and industries. The technology was invented at the lab of Dr. Joanna Aizenberg at the John A. Paulson School of Engineering and Applied Sciences and the Wyss Institute for Biologically Inspired Engineering, both at Harvard University.

SLIPS Technologies, Inc. (Cambridge, Massachusetts, USA) commercializes this technology. BASF VC invested in the company's Series A financing (overall USD 3 million, of which BASF VC invested USD 1.5 million). The funds are being used to establish commercial traction and to develop a portfolio of materials and coatings for customer applications including spray-on SLIPS for viscous material release in manufacturing, SLIPS marine

fouling release paints, SLIPS anti-fouling medical materials, SLIPS coatings for container emptying, and SLIPS ice-release films. Alongside the investment, BASF VC facilitated the setup of a joint development agreement between SLIPS Technologies and a BASF operating division to develop SLIPS-coated thermoplastics, with primary focus on thermoplastic polyurethanes (TPUs). After a year of joint development, there are already some interim positive results.

Case study: SmartKem (www.smartkem.com)

SmartKem Ltd. (UK) supplies formulations of high performance organic semiconductor materials for flexible electronics. These formulations are processed at room temperature onto plastic films that make up flexible transistors. Those transistors can be used e.g. to drive flexible displays, thus enabling bendable mobile devices such as tablets, smartphones and wearable devices. SmartKem's business model focuses on delivering the right formulations as well as expertise in application engineering and technology transfer to their customers who are large OEM and electronics manufacturers.

In 2014, BASF VC invested in SmartKem's Series A. The company has used the proceeds to build up the necessary infrastructure and start commercialization of its tru-FLEXTM® technology. The technologies and portfolios of both SmartKem and BASF have complementary aspects; moreover, BASF has a long experience on bringing technologies from an early stage to commercialization, leading to collaboration to help speed up the market penetration of flexible organic electronics. In this case, BASF VC has been supporting the company in their prioritization of the infrastructure needed to commercialize their products, drawing on experience from BASF's core chemical business.

Conclusion

CVCs work at the interface between large corporations and start-ups, and BASF VC is no exception. For us it is fundamental to understand the constraints of both sides and their motivations. Overall, it has been our experience that the role of BASF VC in the interaction between start-ups and BASF is a very positive one.

For the divisions it is good to have colleagues around who understand both the “corporate world” and the “start-up world” and who can facilitate the interaction between them. In particular, it is critical – for the reasons discussed above – to understand the strategy of the different divisions and proactively support their implementation by bringing relevant and exciting start-ups together with the right people within the corporation.

For the start-ups, the CVC can help navigating the complexities of a large company and – if invested – it acts as an endorsement to its product and technology, particularly important in discussions with customers as well as other investors.

For the CVC, the information generated by an interaction between the start-up and the parent company provides further insights into the potential of the start-up. This helps making better-informed decisions on investments and leads to fruitful discussions with partners in the market. This has a positive impact on the CVC’s profile and its reputation.

Given all these aspects, it is not surprising that many corporations have been setting up CVC units in recent years, which is a welcome trend stimulating innovation in various industries!

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