Managing Inside-Out Open Innovation: The Case of Complex Ventures

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The search for innovation needs to be organizationally separate and outside of the ongoing managerial business. Innovative organizations realize that one cannot simultaneously create the new and take care of what one already has. They realize that maintenance of the present business is far too big a task for the people in it to have much time for creating the new, the different business for tomorrow. They also realize that taking care of tomorrow is far too big and difficult a task to be diluted with concern for today. Both tasks have to be done. But they are different. Innovative organizations, therefore, put the new into separate organizational components concerned with the creation of the new.

(Peter Drucker, 1974: 799)

11.1 INTRODUCTION

Open innovation contains two important processes: an outside-in process that seeks external ideas and technologies in one’s own business; and an inside-out process that allows and enables unused internal ideas to go outside for use in others’ businesses. Both processes can contribute to discovering the “new” that Drucker talks about. In this chapter, we explore the second process, the inside-out process in open innovation.

As we shall see, since Drucker’s advice of a generation ago, many companies have tried to separate their new business endeavors from their current business structures, in an attempt to generate additional business growth. These attempts have generally met with only temporary success. For example, in the 1960s and early 1970s, 25% of the Fortune 500 had a corporate venturing program (Fast, 1978). These were largely disbanded, though, during the
late 1970s. Then in the early 1980s, as the independent venture capital market grew, corporations renewed their interest in corporate venturing. These initiatives were again discontinued after the market downturn in 1987. Then, as the extended bull market of the 1990s gained momentum, corporations again re-introduced corporate venturing activities (Yost, 1994). The crash of the dot-com era witnessed another retreat from corporate venture activities, while the anemic recovery of the economy from the Great Recession of 2008 has also dampened enthusiasm for venturing inside companies.

Yet what is the alternative to external venturing? Over the last 40 years, industrial research has come under increasing pressure to justify its continued funding. While central research labs have discovered numerous important technologies, their owners have found it increasingly difficult to create new businesses from these discoveries. Other companies, with seemingly less investment in basic research activities, have frequently appropriated much of the gain from new innovations that originated in these central labs. Often, even startup companies have been able to commercialize new discoveries ahead of the companies that invested in the early-stage research that led to those discoveries.

Indeed, at least some trends augur for another revival of corporate venturing. Corporations have enormous amounts of cash as of this writing, and are eager to find new growth opportunities to use that cash. It is unlikely that they will return to funding large internal laboratories to conduct industrial research. Instead, it is more likely that they will opt for an increase in inside-out open innovation.

In this chapter, we will recap the experiences of venturing in Exxon, in Xerox, in Lucent, and in British Telecom’s Brightstar, in order to explicate some of the processes involved in inside-out open innovation. These companies nurtured internal R&D labs for many years, but struggled to utilize much of the output from these labs. Venturing becomes an important alternative pathway to market in such instances. Obtaining value from this unutilized R&D output requires inside-out processes that go beyond traditional corporate venturing (where a corporation invests in a startup), to processes that follow a technology from a university into a startup, and from a startup into a larger company and a surrounding ecosystem, with multiple shifts in the business model along the way.

These “pivots” in the business model, and these transitions across different types of organizations, are quite difficult to achieve in a traditional corporate management process, yet must be managed if inside-out processes are to deliver value to the corporation. We further argue that the corporation benefits from a healthy inside-out process, both in its businesses, but also in its relations with internal employees and external ecosystem partners. A particular kind of spin-out venture, which we term a complex spin-out venture, offers some natural advantages to corporations in comparison to traditional venture capital firms. We examine the processes that lead to such complex spin-outs, in companies with significant internal R&D investments.
11.2 PREVIOUS RESEARCH ON CORPORATE VENTURING

The first academic evaluations of new venture organizations in corporations were rather cautious in their assessments. Von Hippel (1973, 1977) reported that when the parent firm had significant prior experience in that market, the new venture was much more likely to succeed (vs. having experience with the technology, which was not associated with better outcomes). He also noted the problems that venture sponsors faced in building and sustaining internal support for new ventures from the top management of the company.

Fast (1978) conducted another study that attempted to explain the factors that were associated with the success of “new venture divisions” (NVDs). In addition to the issues von Hippel identified above, Fast found a surprising third problem encountered by NVDs inside an organization: the problem of new venture success. Fast found that successful NVDs were often viewed as threatening to established businesses in the parent firm. As the venture realized greater success, it required more resources, and these resources were perceived to diminish the amount of corporate resources available to other businesses in the firm.

Rind (1981) further explored the potential inherent conflicts of interest that can arise between the sponsoring firm and the new venture it is trying to cultivate. He noted that if the venture was serving a market already served by the parent firm, that might constrain the venture’s marketing options so that they didn’t conflict with those of the parent firm. A further issue that Rind identified was the problem of governance: the costs required to manage a new venture successfully would be incurred early in the venture’s life under one NVD manager, while the benefits to those investments, if they indeed occurred, would arise later on under another manager. This could create perverse incentives for new venture managers to avoid costly, risky decisions, because they will incur the costs of those decisions, yet may not be around to receive credit for their subsequent benefits.

A study by Siegel, Siegel, and MacMillan (1988) studied the potential conflict between two frequently cited rationales for new venture businesses. One rationale is strategic: to exploit the potential for additional growth latent in the company. A second rationale is financial: to create additional revenue and profit in the new venture itself. Siegel et al. point out that, to maximize the financial return from the new venture, firms are best advised to provide complete autonomy to the new venture’s managers. However, if the primary motivation for the venture is strategic, then providing this greater autonomy increases the potential likelihood of conflict with the established businesses of the company. Here, the firm may need to intervene, in order to manage the potential conflicts between the new venture and the established business. Such intervention will likely have the effect of lowering the autonomy and hence reducing the financial performance of new ventures.3
Overall, previous studies of corporate venturing activities have reported significant difficulties for the sponsoring companies. There are problems with developing the relevant market experience. There are problems of adverse selection. There are conflicts between the strategic objectives of new ventures, and their financial objectives. There are issues of compensation and internal equity. There are even problems of resource allocation if a new venture actually succeeds.

We turn to four examples of inside-out open innovation, some of which are successes, others of which are failures, to discern some larger patterns in the effective management of the inside-out process.

11.2.1 Exxon’s Natural Experiment in Corporate Venturing

As part of its strategic mission to diversify its businesses away from an exclusive reliance on the petroleum industry in the 1970s, Exxon embarked on a two-fold corporate venturing program. One portion of the program was a series of external financial investments alongside private venture capital funds, to be followed by a second program of internal ventures that were to be started and managed in a special unit inside Exxon. The Exxon strategy was to (1) probe and assess new venture opportunities via external investment, then (2) invest in the most promising of these venture opportunities via internally funded venture organizations.

There were 18 such external investments made under the first program, starting around the year 1975. Exxon invested approximately $12 million in these external startup companies. These performed well financially: of the 18 ventures in which Exxon invested alongside other private investors, three of them were sold to other companies at a profit, and five went public via an initial public offering (IPO). By 1982, Exxon’s investments in these firms were worth $218 million, for an internal rate of return of approximately 51% per annum (assuming all investments were made in 1975, and making no adjustment for inflation). This was an impressive success in financial terms, whether compared to Exxon’s overall rate of return, or to the median return of similar vintage private venture capital funds.

Following through on its strategy, Exxon then initiated 19 internal venture activities, to commercialize the most promising areas identified through its external investment programs. One might have expected the internal programs to fare even better, due to their ability to select areas where significant opportunity had already been demonstrated through the external investment probes.

To the contrary, Exxon’s financial results were virtually non-existent from these internal ventures compared to those from its external investments. None of the 19 entities achieved an external liquidity event (such as the sale of the
company to an outside firm, or an IPO). None of the 19 ever managed to reach a breakeven point, where their revenues were covering their costs. Exxon terminated and wrote off all of the internal ventures.

Why did this happen at Exxon? Chesbrough (2000) identified four factors:

1) Low-powered incentives to Exxon managers.
2) Misallocation of venture financing.
3) Slow decision-making processes inside the corporation.
4) Myopic evaluations of business potential when the venture’s business model differed from that of the parent company.

This last point reflects the influence of the business model of the parent company over the perceived value of a new venture. Exxon’s estimates of new venture potential were biased by its own business model (Chesbrough & Rosenbloom, 2002), causing it to fail to invest in potentially disruptive business models (Christensen & Raynor, 2004).

11.2.2 The Challenges of Managing Inside-out Open Innovation at PARC

In reorganizing to capitalize on its technology, Xerox created a new entity in 1989, headed by Robert Adams that effectively established an internal venture capital fund for managing spin-offs. Adams had created a new business for Xerox out of PARC’s laser technology, which had fostered a multibillion dollar product line within Xerox. He had the support of Xerox’s CEO David Kearns for establishing the new internal structure. It would allow Xerox to exploit Adams’s skills in obtaining value from new PARC technologies by allowing him and his team to scan Xerox’s technology base and identify investment opportunities that might otherwise have been missed. This structure was called Xerox Technology Ventures (XTV).

XTV was given $30 million of initial capital to manage. It was set up formally as a corporate division within Xerox, but Adams negotiated special terms that mimicked many aspects of independent venture capital firms. Eighty percent of the gains of the fund would go to Xerox, while the XTV principals would share the remaining 20% of the gains among themselves. For investments below $2 million, the XTV principals had sole discretion in whether and when to invest. For investments over $2 million, an oversight group called the Management Board (consisting of the XTV principals, the Xerox CEO, CFO, and a senior staff executive) had final authority. This promised a far shorter deliberation process than was typical of the Exxon experience above.

The intention of XTV was to align Xerox’s incentives with those of the spin-offs and to employ venture capital processes to create value for Xerox
technologies whenever those technologies did not fit with Xerox’s own business model. If there were promising technologies within Xerox that were not being utilized in Xerox’s businesses, XTV provided a new path for them to enter the market. If that technology subsequently created significant economic value, XTV’s investment enabled Xerox to participate substantially in the resultant value. As Kearns stated in 1993, “XTV is a hedge against the repeated missteps of the past.”

By 1996, the XTV pool of $30 million committed in 1989 had returned a total of $219 million to Xerox, after fees and profit sharing with the general partners at XTV, according to one calculation. This represented an internal rate of return exceeding 56%. This compared very favorably with the 13.7% average rate of return from independent venture capital funds that were also started in 1989. By any reasonable standard, XTV had been a tremendous financial success for Xerox. XTV’s success occurred not because it created a larger number of spin-offs but because it relied on processes that were more compatible with venture success and bypassed Xerox’s internal processes. At the same time, XTV enabled Xerox to own more of the ventures and thus to reap more of the profit when they succeeded.

Yet, despite this performance, Xerox elected to exercise its right to terminate the fund in 1996. Some senior Xerox managers felt (hearkening back to Siegel, Siegel & MacMillan, 1988) that the autonomy given to Adams compromised the ability to develop strategic synergy between the spin-off technologies and Xerox’s internal businesses. Once the technologies were diverted into startup companies funded by XTV, the spin-offs treated the Xerox businesses just as they would any other potential customer. There were allegations that some of the success of the most profitable XTV companies, Documentum and Document Sciences, came partially at the expense of Xerox products that customers would have bought instead. The rate of return earned by XTV took no account of this potential lost business to Xerox.

11.2.3 An Improved Inside-out Innovation Model: Lucent’s New Ventures Group

Lucent created its New Ventures Group (NVG) in 1997 in order to commercialize technologies out of its Bell Laboratories that did not fit with any of Lucent’s established businesses. In addition to capturing value from these technologies, Lucent also wished to speed up the time it took for its technologies to go into its mainstream businesses as well. In contrast to Exxon, Lucent was not interested in unrelated diversification in its growth. In contrast to Xerox, Lucent was not focused on a financial return, but rather focused on additional processes to identify new adjacencies and business opportunities around its core businesses. Chesbrough and Socolof (2000) provide a detailed review of this model.
To manage the cultural change process required for the inside-out model to work, the NVG consciously created what became known internally as “the phantom world.” The phantom world was a “half-way house,” which would enable people and ideas that weren't ready or able to go out directly to obtain pure venture capital to develop their ideas further within Lucent. By being sensitive about the cultural gaps that had to be bridged, and by being sensible about the right mix of risk and reward to offer, the process created a launching pad for ideas to move out of Bell Labs into markets outside of Lucent's traditional business channels.

Prior to spinning out of Lucent in 2001, the NVG had invested in 28 ventures. Most ventures were in the Internet, networking, software, wireless, and digital broadcast spaces, which were of strategic interest to Lucent. While most investments did not achieve liquidity, five ventures that have reached liquidity have brought in an 80% return on invested capital for NVG's fund. The fund thus was successful financially, as was Exxon's and Xerox's. But it also enabled Lucent to accelerate its entry into promising growth markets like optical networking years ahead of when it otherwise would have been able to do so. This strategic benefit was absent from Exxon's and Xerox's earlier experience.

The NVG process also served as an impetus for Bell Labs technologies to move off the shelf. Once the NVG group identified a promising technology within Bell Labs, the Lucent business units had only a limited amount of time to consider whether or not to take over the technology themselves, and fund its further development. In the past, the business units could wait and see whether a technology would become important, and this often delayed the introduction of new technologies to the market. When the NVG served notice that it was interested in commercializing an internal technology, that effectively became a forcing function, accelerating the speed with which technology is moving out of Bell Labs into the market.

The NVG process also provided more rapid feedback on the value of the technology to Lucent. The three instances where Lucent reacquired an NVG venture arose when it became clear that the technologies were too important to Lucent to have them managed independently of the company. This strategic value would not likely have been visible, had the technologies continued to sit on the shelf. The ability to take them to market through new ventures allowed the market to provide a “second opinion” to the earlier judgment of Lucent's business managers, who judged earlier that the technologies were not yet ready for the market.

The NVG operating model also brought in people from outside to help launch new ventures from within Lucent. Managers hired from outside of Lucent received substantial equity options, a commitment to achieve liquidity for that stock, and a pursuit of financial success no matter what the cost or impact is upon the parent companies' business. This commitment was made more credible by NVG's willingness to syndicate its funding of new internal
ventures with external venture capital investors. These external VCs checked the tendency of a large corporate parent like Lucent to manage the venture with the same policies that govern the corporate parent.

11.2.3 BrightStar—Developing a Strategic Venturing model

BrightStar was a corporate incubator formed at the UK-based telecommunications firm BT (formerly British Telecom) in 1999/2000. It was driven by three observations: first, the R&D facility had an international reputation for invention but the business units and investor community failed to see any material benefit from the R&D program in terms of products, services, and value creation; secondly, the company was poor at selecting and driving those technologies out of the labs into the business units, with the latter at times acquiring such products from outside the company; and thirdly, many of its more entrepreneurial managers were leaving BT and creating successful start-ups rather than exploiting those talents and ideas inside the company. This role of attracting and retaining key talent is an under-appreciated benefit of robust inside-out open innovation policies.

Thus Brightstar was conceived to tackle a number of issues simultaneously: monetization of the large pool of under exploited IPR; creation of products and services the new businesses could then sell to and through the parent; and thirdly creating and sustaining a more entrepreneurial process and culture. From its initiation there was as much focus on the strategic goals of supply back into BT and training, education and culture change than simply the creation of value from IP, with these activities being key parts of the strategic story of Brightstar.

In its initial concept Brightstar was conceived as creating new businesses inside BT in common with many earlier BT attempts at stimulating corporate innovation. However, the management team quickly altered the strategy to spinning such businesses out as a better way to ensure they could operate in an entrepreneurial fashion. It was felt that BT processes and decision making would quash the speed and innovation required and that appropriate culture and decision making would only occur if the company was free of the internal processes.

The model developed was similar to that of New Venture Group in Lucent with the intention to retain a significant stake in the businesses as they grew. Projects that were to be spun out were moved into the Brightstar business unit where they were run as though they were separated businesses. Like the Lucent model this enabled external experienced entrepreneurs to be brought in, for the culture and processes to transition to a suitable point for spinning out, and to market test the business model in the relative safety of BT. The intention was to hold the businesses in this transition state for 6–12 months prior to spinning out with a minority but significant stake.
The BT businesses created were a mix of technology exploitation, new products and internal mission-critical systems that could be offered to third parties if spun out from BT. The latter differentiates the Brightstar model from some other corporate venturing activities. Internal systems that were admired by competitors and companies in the sector were spun out with the intention of reducing the cost of the internal supply (as is typically used to justify an outsource arrangement), but also to capitalize on the value of selling to third parties in order to increase volumes, set standards, and spread fixed development and support costs over more customers. These are clear examples of inside-out open innovation (though the expression was not used by BT at the time). Examples include companies such as Vidus, who were responsible for scheduling BT’s field workforce, and Azure, who ran BT’s interconnect billing system. Both of these companies were successfully exited in due course.

Brightstar also put in place a unique management and governance process in order to avoid accusations that it was operating against BT business unit interests and did not understand the venture world. First, it recruited a blend of managers for the business unit including experienced BT insiders, people who had worked for both BT and start-ups and people employed as contractors with solely start-up and venture experience. Secondly, it created an investment advisory board where all projects were reviewed, which consisted of two external venture capital firms and senior managers from each business unit. This ensured that candidate projects were suitable for venture funding and that early contacts with a champion in the business unit(s) were established.

The Brightstar experience was that spinning out companies that are focused on supply back to the parent still required active and aggressive management of the links back to the business. The business unit often did not share directly in the value created in the start-up and was thus inclined to treat the start-up as an unrelated business rather than part of the BT family. The presence of a champion inside the business unit (via the business unit’s representation on the investment advisory board) helped overcome this tendency.

Brightstar also became a training ground for managers with much of the team working on secondment and temporary placements into the unit. Training courses were devised; the analysis tools used in Brightstar became adopted elsewhere in the company; and involvement in Brightstar itself was frequently cited on CVs. Brightstar managers believed this was as important for BT in creating culture change as the value in the companies themselves. A number of BT managers who spun out were welcomed back if they subsequently chose to leave their companies.

While the model performed well on its strategic and financial goals, by 2003 the model nonetheless was under heavy strain due to the virtual shutdown in the availability of venture capital in Europe in the period 2001–2. Brightstar had revamped the model from the first two years so that it held companies longer in incubation from the desired 6–12 months; however this
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had a negative impact on the business unit’s financial position. The challenging financial environment of 2001–2 led to a mandate for Brightstar to be EBITDA positive—despite creating start-up businesses. Brightstar looked for an alternative financing structure to enable it to continue its mission. It had always been run off the corporate P&L and not developed a stand-alone fund. As a result it was decided to spin-out Brightstar itself out and supply the service back into BT.9 The 2001 Lucent deal provided an ideal template, with the enhancement that BT agreed to a five-year deal to supply venturing and incubation services back into BT with an exclusive access to BT’s technology base to create new ventures. Brightstar thus was bought out from BT and merged with the former Lucent team to create New Venture Partners.

This progression from the early experiments at Exxon to the more recent ones at Lucent and BT show that inside-out open innovation can play a number of important roles in corporate innovation. One role is to generate new options for future businesses. By spinning out projects that do not fit well with the current business model, inside-out venturing processes enable these projects to search more broadly than would be possible internally for alternative business models. Another role is the possibility of financial benefit, should the venture prove successful. Over time, however, this possibility is given less weight, relative to the other roles played. A third role is the attraction and retention of key talent in the organization.

Yet all of this venturing activity occurs in the shadow of private venture capital (Chesbrough, 2000). If corporate venturing is to be sustained over time, it must generate results that are difficult for traditional venture capital processes to obtain. Below, we examine one such result, the complex spin-out.

11.2.4 The Next Level of Inside-out Open Innovation: Constructing Complex Spin-outs

Start-up companies can be afflicted by a well-known problem for venture capitalists: the founder’s death grip. This is the situation that occurs when a founder is unable to let go of control or alter the direction of the company from the founding vision, even in the face of compelling market feedback. In comparison, spin-outs do not seem to suffer this problem. The founding team, although seeing this as their project, have a less proprietary sense of ownership than the pure entrepreneur, since the project was developed in a large organization, with input and approval from multiple sources.

This difference means it is possible to build a spin-out to order rather than launching solely with what was the initial idea. This is particularly true when the spin-out has access to a powerful technology but needs parts from outside the organization to build a complete customer proposition. Through assembling these different parts, corporate venturing can be more than a start-up
funded by an existing company. It can be employed as a tool to achieve new business opportunities for the company that it would not likely have been able to build on its own in a similar time frame within an acceptable budget. We call this process of building a spin-out from multiple sources a *complex spin-out*.

British Telecom (BT), after it spun out Brightstar, proceeded to use this approach to build two complex spin-outs with solutions that ideally suited its needs. It had already spun out Vidus (discussed above), which specialized in field service workforce scheduling for the large enterprise and service provider markets. However, BT’s sales teams realized there was an opportunity to produce a company that offered field service management products to mid-sized enterprises that would complement the existing workforce scheduling offering BT had already taken to market with Vidus. One of the key differentiators that such a service offering would need is the ability to satisfy customers with a much lower cost support process. Although BT had a strong technical team, which could develop the product, there was little experience inside BT for developing such field service management products. It was felt better to look for a solution outside where a more flexible, low cost route to developing and testing the market could be achieved, and then incorporate that into Vidus.

BT identified a product that was a partial solution in a small UK company. At that time the system being sold was mainly as a product sale and it was felt that a SaaS business model and a broader range of product features would be required. It was also felt that taking this small company inside BT would kill the ability to innovate the new products and services needed to find the combination that worked in the market place. BT thus approached its corporate venture funding partner—New Venture Partners (NVP) – to develop the complex spinout opportunity together. As part of its broader vision and strategy, NVP invested in the UK company and looked to strengthen and widen the product set by extending the UK company’s field service management offering into mobile supply chain management products. NVP identified an opportunity to spin-out a non-strategic division from a US company in this sector. This was done and two entities were merged to form Airversent, resulting in an international presence and wider product set for the spin-out. The resulting product and service set was sold through two BT business units in the UK and Europe targeted on its top 21,000 businesses. The company quickly began generating substantial sales across multiple channels of distribution, amounting to tens of millions of pounds annually.¹⁰

An opportunity emerged to strengthen further the spin-out’s offerings to extend to managing, tracking, and storing documents and to gain access to a heavy weight SaaS architecture that had been developed by AirClic. This offered the venture and BT access to further products and extended the size of company that the offerings could address. This interesting combination of spin-outs, VC backed ventures, early stage M&A and venture scouting quickly led to a company with a viable size and market presence, with BT acting as a channel to
market. BT gained access to products and services it would never have specified internally and to quick and flexible testing of those businesses in the market place. Best of all, BT did not have to fund all the development internally and solely bear the risks of failure along the way. Instead, the risks and financing were shared with external investors. Thus, the complex spin-out was in one way an R&D project that didn’t require internal R&D resources to execute.

A similar complex spin-out model was used to create a governance, compliance, and risk management software for corporate enterprise software customers—Neohapsis. This involved BT identifying an internal need as well as a market opportunity. New Venture Partners, the above-mentioned VC firm, managed the spin-out from a US company of the key product, licensed additional technology from GE, added some BT technology and deployed the solution within BT as its first customer. Subsequently a further merger occurred to add a professional services arm to the product strategy. This is another facet of complex spin-outs: the opportunity to engage with the corporation as a customer for the technology. As a customer BT is able to influence the new venture to produce an offering to its specifications, and is only committed to purchasing the result if those specifications are met. Relatedly, a large corporation could utilize a spin-out to become a supplier to a newly created customer, so that the further work needed to sell into the market is borne by the customer, not BT. Whether as a customer or as a supplier, these complex spin-outs create options for BT, where the company has the right, but not the necessity, to take a further action later in time.

Deals such as these—integrating multiple corporations’ technology and executing early stage roll ups—occur more easily in spin-outs than in pure VC-backed start-ups. The venture capitalists are probably more adept at the small scale deals that are needed than corporate M&A departments, and the corporations often possess in their product lines and R&D facilities the missing pieces (that often lack any clear internal path to market on their own) needed to quickly build a winning proposition. New Venture Partners in the last few years has carried a number of such complex spin-outs and it may be that companies “built to order” represent a new wave of innovation strategy. It is worth noting that in both the quoted cases the parent—BT—had strategic sales channel or internal needs that drove the model. The availability of these inside-out ventures allowed BT to increase its utilization of these strategic resources, or what David Teece would term “complementary assets” (Teece, 1986).

### 11.2.5 The Cultural Benefits of Complex Spin-outs

This chapter has focused on the strategic reasons for using inside-out open innovation processes as a method of innovating. It has also covered many of the operational reasons that such models can fail. However, in the BT model there
was as much focus on the wider implications for creating more focus inside the R&D department on commercial exploitation and in creating an entrepreneurial mindset, as there was on financial exploitation of under-utilized assets. Incubators such as those created at Philips also provide this wider cultural environment.

At an operational level it is important in such vehicles to consider the cultural impact of the management style and processes used. For instance, the rate of rejection of ideas for new companies should substantially exceed the number of businesses created, typically in a ratio >100:1, much higher than occurs in many internal project management systems. This means most of the time the venturing team will be turning down proposals. The way they are rejected and the advice given on rejection will be critical in creating an innovative culture. In a similar manner the decision-making process needs to be transparent and fast.

If done well these processes lead to wider benefits. At BT there was a steady stream of managers looking for secondment to the Brightstar incubator as it was perceived as having value in training and career development. People sometimes were seconded into the businesses or supported the venturing team. This led to a wider dissemination of the innovative processes and culture than the simple spin-out of companies would suggest. Unlike scouting technology or innovations outside the parent organization, inside-out innovation has the potential to change the culture and processes internally to support a more innovative environment and make the organization more open to new ideas from both inside and outside the main operating culture.

CONCLUSION

Like other aspects of open innovation, managing inside-out open innovation requires a mindset change in the way innovation is managed, seeing it as part of an ecosystem rather than something controlled solely from inside the corporation. Opening up the venture creation process to other start-up technologies and strategic partners requires different skills and insights to manage innovation beyond those of a traditional VC. It is linked much more deeply to the culture inside the parent organization and thus has much more potential to create, drive and reward business model innovation in the parent than does traditional venture capital. The concept of inside-out open innovation processes, to search for alternative business models, and spinning out complex ventures and technologies as a strategy for creating multiple innovation options, thus deserves to be much more widely used and appreciated.

Freedom from the “entrepreneurs death grip” also allows such complex spin-outs to carry out early stage M&A; with the company built like a jigsaw
puzzle out of pieces sourced not just from the parent but other organizations as well. These “built to order” companies need much more operational and market insight from their investors than many venture-backed companies do. These are the conditions best suited to the complex spin-out model.

Other companies have inaugurated such novel venturing processes, where the search for the business model is explicitly part of the mission. Microsoft’s IP Ventures operation in Mountain View, CA, for example, places Microsoft technology and IP into external start-up companies and then sees what happens in those firms. In Europe, Microsoft also works with Enterprise Ireland and Sitra in Finland to use its technologies to spur new business models for its technologies in small and medium enterprises (SMEs) (Gutierrez, 2008).

Large corporations are missing an innovation opportunity to use the commercially oriented, large scale R&D facilities they have to generate business opportunities, and then test and qualify them in a venture-like manner by creating multiple spin-out companies. For those spin-outs that succeed, the corporation has the option of re-acquiring the successful new product lines. This would enable them to create flourishing innovation eco-systems around their R&D facilities, speed up the metabolic rate of innovation inside their labs, and be ideally positioned to exploit the resulting disruptive businesses. The key skills will be in portfolio management and looking at the ecosystem for the options that the parent corporation is creating for its future. Equally, vital corporate resources like distribution channels, manufacturing capabilities and support networks can sustain competitive advantage for nascent spin-outs, without burdening the R&D budget.

There is a further, more human, business rationale for enabling greater external use of inside-out open innovation. Companies that forbid inside-out processes are likely to frustrate many of the R&D staff, because many of the ideas these people work on are never deployed in the market. It is reportedly quite common for a pharmaceutical researcher to never see one of her projects ship into the market, over a 30-year career, because the attrition rate of compounds is so high. This is an enormous waste of human talent, and must take a toll on any person’s initiative. Companies that embrace inside-out open innovation allow other pathways for internal ideas to get into the market. These other pathways allow the market to provide feedback on those ideas, and lets researchers see their ideas in action in the wider world, even if those ideas do not make it into the company’s own products. That also provides new sources of feedback for the researcher on how to improve upon those ideas, and some of those improvements might one day make it into the company’s own products.

The converse of this model is the internal control and management prevalent in many corporations, a mentality that probably stops any open innovation occurring by any model. In the future it is likely that companies that cannot or will not spin out complex ventures as part of their strategy will either be crippled in their innovation strategy or find themselves with a company culture that is not supportive of innovation.
Spinning out is not an optional way to dispose of unwanted assets; it is the future of new business creation and business model innovation for truly innovative companies. Complex ventures represent one example of how greater use of inside-out open innovation processes can revitalize corporate innovation.

More research is needed to uncover other ways in which inside-out open innovation can contribute to growth and to innovation. Chesbrough and Garman (2009) make the case that inside-out processes can increase corporate flexibility in economic downturns. Chesbrough and Chen (2013) consider the use of inside-out processes to recover previously abandoned compounds in pharmaceutical drug development. Chesbrough and Ghafele (Chapter 10—this volume) discuss new ways of managing IP to stimulate greater exploitation of technologies not utilized by the company that discovered the technologies originally. But these are just initial inquiries that only hint at the ways in which inside-out processes can contribute to innovation.

NOTES

1. Block and MacMillan (1993: 13) think the cycle historically has run about every ten years.
3. This is a specific instance of a more general problem. See Williamson, 1985, Chapter Six, for a seminal discussion of “the problem of selective intervention,” or why a large company cannot do everything a small company can do, and more.
4. This section closely follows Sykes’ (1986) first hand account of this experience.
6. Lerner (Xerox Technology Ventures, Harvard Business School case #295-127, Exhibit 5) provides the general terms of the XTV structure and the calculated financial returns shown here.
7. See Chesbrough and Socolof (2000) for a more complete description of Lucent’s New Ventures Group. This section draws heavily from that paper.
8. This is a cash-on-cash return, and excludes markups taken on private companies in subsequent rounds.
9. As we will discuss below, Brightstar itself became a complex spin-out venture of BT as a result of this process.
10. One challenge in complex spin-outs can be quantifying their financial impact after the fact. When we probed for the results of Vidus and Texert, we learned that their financials were co-mingled with those of their partners and distribution channels, making a precise valuation problematic. While a result of tens of millions of pounds in annual sales is brilliant performance for a start-up, it is a very small amount of revenue to a company the size of BT.