1 Open Innovation in SMEs

1.1 Why Should Managers of Small Firms Embrace Open Innovation?

"Innovate or die!" is an often-heard statement indicating the urgent need for companies to engage in innovation to survive and grow in a sustainable way. The imperative to innovate is relevant not only for large firms but also for small ones, not only for high-tech ventures but also for small companies in medium- and low-tech industries. If you are a manager of a small firm, you know that there is a flurry of reasons to start innovating: growing and increasingly globalized competition, potentially disrupting technologies, more demanding regulations, newly emerging business models, just to mention a few. Yet, at the same time you feel paralyzed; you are not sure that this is the right way to move forward. You may cling to the opinion that innovation is valuable only for high-tech companies or large firms. Even if you are convinced that innovation is the way forward, your firm doesn't have the necessary resources and in-house expertise to start the innovation journey. Your firm has never been involved in managing innovation projects and you are afraid that initiating these will end up in a commercial failure and financial loss. There are undeniably hundreds of reasons not to embark on the innovation journey.

Let's spend some more time examining the different options that small firm managers have when it comes to changing their fortune through innovation, and why so far only a small minority of them are successful in changing their business that way. Figure 1.1 describes the different pathways that you as a manager of a small firm can follow in order to strategically repositioning your business. After carefully observing small and medium-sized companies for years, I can summarize the best strategy as "Wake up! Open up!" It is a two-tier process. First, small firms have to become aware of the need to change and innovate strategically. They first have to wake up. Once they start the

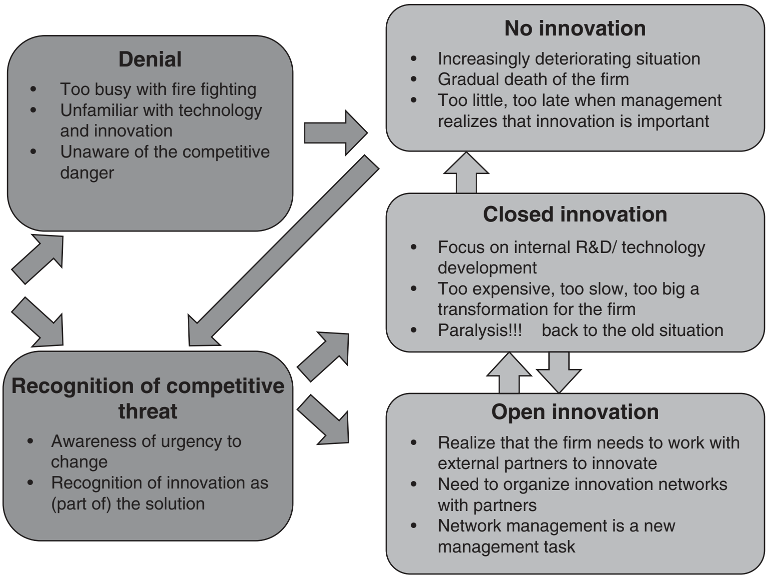

Figure 1.1 The wake-up, open-up imperative.

change process, they still have to develop an open-innovation mind-set where they combine external and internal competencies to strategically reposition the company. In other words, they have to open up.

The first requirement is that managers of small firms recognize the need for a strategic change in their companies. Today, many small companies are confronted with harsh market conditions. The economic crisis that started in 2007 has weakened the financial health of many small and medium-sized firms, especially in industries in which low-cost producers have entered the market and are threatening the survival of incumbents. In addition, new government regulations can change a profitable niche market into a nightmare in just a few months. High-tech startups have cutting-edge technology in-house, but they lack manufacturing capabilities or distribution channels to turn the technology into a successful and profitable business. Value chains are changing and scaling quickly, leaving no viable place for small companies. The growing digitalization and emerging Internet of Things threaten to disrupt existing business models in many industries. Changing market conditions thus force smaller firms to adapt or reinvent their businesses through new technologies or unique value propositions.

Too frequently, managers in small companies are unaware of the changes in their industry and in the broader competitive landscape. Many of them are in a denial mode. There are several reasons for this attitude. Most managers in small companies are hard-working people, busy from early morning to late evening with everyday business problems. They don't make time to reflect on the competitive position of the company and how they can improve it by changing their strategy. Another reason is that most of these managers have no experience with strategy development or business model innovation and thus have difficulties in understanding the need for strategic changes. Furthermore, small companies in traditional industries have no experience in developing new products or services or in investing in research and development. They think of developing new technology as the exclusive domain of universities, high-tech ventures, and big companies.

Denying the need to change leads to a gradually deteriorating situation for the company. The financial situation worsens and the management has to deal with an accumulation of problems leading to a vicious cycle, ending in closure or bankruptcy of the firm. As the situation worsens, some firms may realize that they need to change strategy. However, in most cases these efforts are "too little, too late" and as a consequence small firms have to cease operations anyway.

Other managers understand that their current way of working is not sustainable over time and that a different strategic positioning in the market is mandatory. A change in strategy requires innovations, although not necessarily technology-based ones. Once a manager of a small firm recognizes that innovation is vital to executing the strategy, he or she has to decide how innovations will be established. It's a natural reaction to grow innovation capabilities internally. However, small companies that develop innovations mostly internally will inevitably face numerous problems. A major liability is that they lack the required internal financial resources and technical capabilities. Innovations require significant investments, and internal development may be too slow to counter the changes in the business environment. Or the requested technologies and capabilities to achieve the desired change may be simply too demanding for a small firm.

Small companies therefore have to collaborate with external partners to innovate successfully to develop new sources of income and to reach more profitable positions in the competitive landscape. Open innovation is a logical step to take, once small firms recognize the need to change in response to competitive threats. The advantages of adopting open innovation can be considerable. A small firm can spread the costs and risks of game-changing innovation projects among the innovation partners; it becomes possible to develop new markets and products beyond the capabilities of what a single company can create and develop; and products can be developed and introduced more quickly into the market, allowing the network of innovation partners to capitalize on their joint first-mover advantage. Open innovation also comes with a number of caveats: working with partners implies that the intellectual property (IP) has to be shared by the innovation partners. It should be a win–win situation for all partners involved; if not, the partnerships risk deteriorating into hostile relationships. Working with partners also implies that network management becomes a principal management task in addition to the traditional, in-house management of the firm. Managing a network of partners can be challenging for the management of a small company: it requires a particular way of dealing with partners that is at odds with the internal management processes within the company. Most small-firm managers have no experience with network management and many open innovation initiatives fail because the network of partners is not managed properly.

Small firms can also benefit dramatically by collaborating with large firms: large companies have well-established assets and capabilities that may be crucial for the development of a small firm's technology. Collaboration between a small technology firm and a large company is necessary in certain circumstances to get the technology commercialized. This type of collaboration may generate interesting benefits for the small firm when the large firm is able to introduce the innovative product successfully on the market. But working with large firms creates its own management challenges in terms of balancing the roles in the collaboration, the differences in innovation clock speed, the potential conflict in management styles, and the risk that the small firm's management may be bewildered by the intricacies and complexity of large-firm management.

Large, technology-intensive companies often have long lists of unused patents. This is a side effect of the fact that companies applies for patents early on in the innovation process; much can still go wrong further down in the process. Unused technologies may represent major business opportunities for entrepreneurs who want to develop a new business. However, similar to the case in which a large firm commercializes the technology of a small firm, a startup may experience several challenges to collaborating with the large firm that developed the technology.

"Wake up! Open up!" is a simple, two-step process small firms have to take to create and seize new business opportunities. As mentioned previously, there is first the need to wake up to the idea that a strategic change is vital for long-term growth of the company and that innovations are essential in the creation of major business opportunities. Second, a small-firm manager should realize that starting with innovation requires an open approach in which collaboration with network partners becomes the crux of growth and commercial success. Small-firm managers may not always follow the "Wake up! Open up!" imperative. Some managers will take no action but realize later (and sometimes too late) that a strategic change is necessary. Similarly, managers may first look for a closed innovation approach to make changes in the company and realize later that opening up the innovation process is the only way out. This zigzag management is hard to avoid, given the number of obstacles managers face in making decisions about strategic change and open innovation. However, this book should be a source of inspiration for managers in small companies to avoid painful detours by choosing at the outset to pursue open innovation as the basis for change.

This book is about how ordinary managers in small companies have achieved extraordinary results using open innovation as a pillar in their search for growth and a more profitable competitive position. The good news is that these managers were no different from the majority of small-firm managers, yet they worked their way toward amazing results for their companies. If they can do it, you can do it! There is nothing that stands in your way against doing the same. The case studies developed in this book are currently still exceptions to the rule, but there is no reason to assume that your company cannot be successful in adopting open innovation. Their stories can be yours too. Putting their stories in the spotlight should inspire many managers of small and medium-sized firms around the world to begin their open innovation journey.

1.2 Why Is Open Innovation Different in Small versus Large Companies?

Open innovation has been studied mainly in large, multinational enterprises. Most of them have large internal research and development (R&D) departments and well-oiled management systems for (open) innovation projects. Chesbrough originally defined the concept of open innovation using case studies of large, technology savvy firms.[1] Well-illustrated examples are Procter & Gamble, Philips, IBM, Clorox, Lego, Unilever, GSK, Johnson & Johnson, and many others.[2] In contrast, though the literature about open innovation in small firms is growing quickly, it is still underdeveloped and fragmented.[3] Although little is known about open innovation in small companies, a number of interesting findings deserve mention.[4] Small firms can, for instance, achieve greater benefits from open innovation than larger firms because they are less bureaucratic, more willing to take risks, and more agile in reacting to changing environments. Using open innovation allows small firms to keep up with market developments and to meet customer demand, which eventually results in increased growth, better financial results, or increased market share. Many small firms believe open innovation is also necessary to meet ever-changing customer demands and to prevent the firm from being outperformed by competitors or new entrants. Motives related to control, focus, costs, and capacity are less important.[5] Small companies are gradually adopting open innovation as a part of their business activities, but too many of them still fear to take the leap.[6]

There is as yet no accurate understanding of how SMEs benefit from open innovation and how they can best organize and manage open innovation to be successful. In this book, I provide a simple and practical framework (see Section 1.3) showing how SME managers can start and advance with open innovation in their companies. Essential in that framework is making open innovation activities always part of a broader strategic change initiative in small firms. Focusing on open innovation in isolation from these strategic objectives makes no sense. Therefore, I start with a broad strategic perspective to correctly position the role of open innovation in small firms.

I also observed during my research for this book that open innovation is applicable to small firms in both low-tech and high-tech industries. Therefore, I investigated how these practices are managed in small firms in a variety of industries ranging from textile chemicals and bicycle parts to biotech and industries relying on photonics. Open innovation in small companies is not only about new technology development: technology may be crucial in open innovation, but several firms have been very successful in using open innovation without relying on technology as a value driver.

I deliberately focus on the organizing and management of open innovation to make the book a guideline for small-firm managers: the management lessons described in the chapters that follow are based on more than thirty in-depth interviews with managers who successfully developed open innovation strategies within their companies. As I progressed with the interviews, I realized that open innovation in small companies has its own characteristics and can scarcely be compared with the existing literature on open innovation. The lessons learned from open innovation in large firms are not readily transferable to SMEs. Although there are some commonalities, the differences are so substantial that managers need a specific framework to manage open innovation in small firms successfully.

So, why can't we transfer lessons from large firms to small ones? Let me provide some reasons why managers in small companies should not follow the open innovation guidelines designed for large firms. First, small firms don't have a portfolio of innovation projects, so there is no need to frame their innovation activities into a closed or open innovation funnel (which is the most popular visualization tool in open innovation publications). Second, studying open innovation in small firms makes sense only within the broader framework of a strategy or business model (innovation). Open innovation is a well-developed business practice in large firms where people are held accountable for its results. This is not the case in small firms, where open innovation is a direct consequence of strategic changes in the company. Open innovation in small firms makes sense only when it is integrated as part of a firm's efforts to grow and to become more competitive. Third, open innovation in small firms is managed by the entrepreneur or founder, not by a VP Open Innovation or an Open Innovation Manager. Open innovation and entrepreneurship are two sides of the same coin in small firms: developing open innovation is an integral part of entrepreneurship in these companies. This also requires integration of the entrepreneurship and the open innovation literature. Fourth, open innovation in small companies takes the shape of networks, which are managed differently compared to how large companies manage their network of innovation partners. Personal relationships, trust, speedy decision-making, and informal communication are characteristics of the relations between small firms and their innovation partners. This is quite different from the governance of open innovation in large firms.

These four differences in open innovation between large and small companies indicate that the investigation of open innovation in the latter will be substantially different from that in the former and that management guidelines for large firms should not be used as a blueprint for small firms. On the contrary, it is crucial for open innovation professionals to unlearn the open innovation framework that was originally developed for large firms and adopt a different framework for small companies (see Section 1.3). The chapters that follow highlight specific elements of that framework and I use examples from the different small companies to illustrate how managers should take action to manage open innovation effectively.

1.3 Modeling Open Innovation in SMEs

In-depth interviews with managers of small firms that have successfully implemented open innovation lead to fascinating and unexpected insights. How do small firms benefit from open innovation? How do they set up and manage relations with their innovation partners? The stories managers told me were hardly comparable with the cases we know from textbook examples in large companies. Open innovation in small firms requires its own framework. It is necessary to unlearn the guidelines developed in the extant literature about how to manage open innovation, as they are based on case studies of large companies. Large companies introduce open innovation programs and are looking for measurable benefits by switching from closed to open innovation. In contrast, small firms are not interested in open innovation as such. Instead, they engage in open innovation as a consequence of their search for major changes to seize new business opportunities and boost profitability. Their limited financial and human resources and the lack of internal technological capabilities press them to look for external innovation sources. This search for external knowledge, in turn, entails a new role for small company leaders: a network of partners has to be managed, which is the most difficult part, as most managers have experience with management only within their own companies.

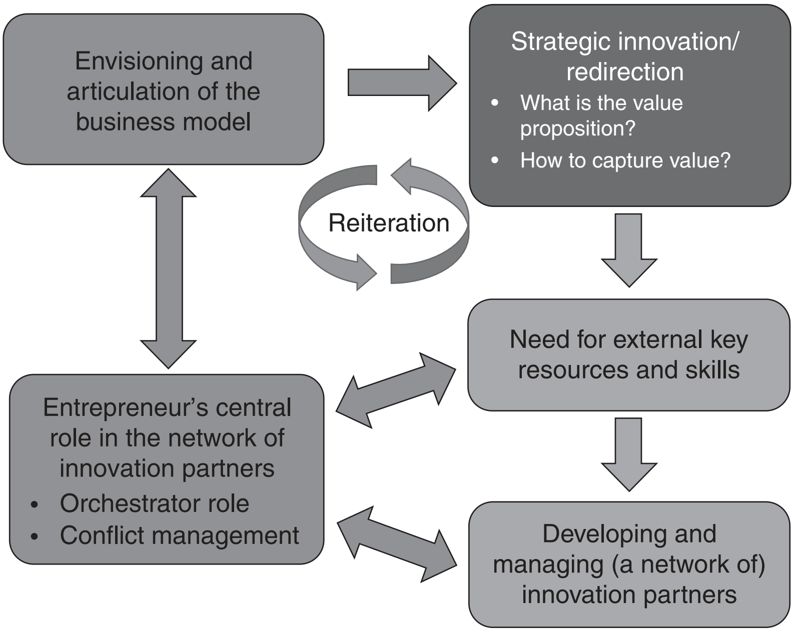

Figure 1.2 A framework to understand open innovation in SMEs.

Figure 1.2 presents a simple framework for how open innovation in small companies should be understood. This framework has several building blocks linking distinctive research areas: open innovation in small firms can be understood only by combining entrepreneurship (the two blocks on the left), strategy and business model innovation (the top block on the right) and open innovation activities (the two blocks at the bottom right). There is also a sequence moving from the upper left corner to the bottom right corner of the figure.

I already mentioned in Figure 1.1 that the open innovation journey usually starts when managers in small companies recognize that a strategic change is required. The first step in that process is the recognition of the need to search for new business opportunities. Here, the small-firm manager takes on the role of an entrepreneur envisioning the first entrepreneurial insight for a new product or business model (the block at the upper left corner). The entrepreneur is firmly convinced that this entrepreneurial insight is valuable but initially is not well articulated. Take, for instance, the Quilts of Denmark case (Case Study 7), in which where the two founders were convinced that "providing a healthy sleep" could be an interesting value proposition, but at the start of their venture they had no idea exactly what a healthy sleep was, and no clue on how quilts could be instrumental in guaranteeing a healthy sleep. The same holds for DNA Interactif Fashion (Case Study 3): the founders, Dirk Ghekiere and Huub Fijen, were firmly convinced that there was a major business opportunity in offering a virtual and more effective shopping solution for fashion goods. Yet, it took them more than five years to develop a successful business model after pivoting the original idea many times.[7] Those entrepreneurial insights where not just opinions; these entrepreneurs were deeply convinced that their idea was right based on years of experience in the business and the information they had gathered about (business) trends and new technologies. Entrepreneurs also defend this initial insight vigorously. It is passion driven, it's part of their personality, part of their own experiential learning. The business idea is part of the entrepreneurs' personal convictions, which in turn will act as a breakwater against the many "waves of setbacks."

The entrepreneur also plays a key role in further articulating this initial entrepreneurial insight by creating a business model and formulating strategies to create value.[8] The initial entrepreneurial insight is only a business idea and requires further refinement to set up a successful business model innovation (block at the upper right corner in Figure 1.2). A new business idea contains a series of untested assumptions, as Steve Blank would phrase it.[9] Those assumptions have to be tested by getting in touch with potential customers. The odds are that one or more of the assumptions will be wrong. If this is the case, then assumptions have to be changed and tested again. Blank also uses the term "pivot," which can be a change in any of the different dimensions of a small firm's business model. Examples are changes in customer segments, channels, revenue model/pricing, resources, activities, costs, partners, and customer acquisition.[10] Articulating the business model is thus a reiterating process that may take time. When small firms envision a radically new approach for their business, they need to go through different cycles of testing and pivoting the assumptions to get a viable proposition and business model.

It is a widespread misunderstanding that technology development is the source of value creation. Chesbrough showed that business models are crucial for unlocking the latent value of new or existing technologies.[11] Technology per se has no economic value; the economic value