



THE STRATEGIC USE OF CORPORATE-STARTUP ENGAGEMENT

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The Strategic Use Of Corporate-Startup Engagement

by

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Master thesis submitted to Delft University of Technology,
in partial fulfilment of the requirements for the degree of

Master of Science

in Management of Technology.

Faculty of Technology, Policy and Management.

To be defended publicly on Wednesday August 23, 2017 at 3:30 PM.

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PREFACE

With this master thesis I conclude a turbulent yet highly educational and inspiring period of my life in which I had the honour to study at the Delft University of Technology. Over the past years my scientific education, extracurricular activities and working experiences have made me an allround engineer with a strong business sense. It's those challenges that are on the edge of technology and strategy that truly spark my interest.

Besides my scientific education, my master Management of Technology also brought me my own consulting firm. Soon I was immersed in the world of corporate innovation and the startup ecosystem. I saw the potential of corporate-startup collaboration, but often wondered if the maximum impact of the 'elephant dancing with the mouse' was being realised. Surely, resources seemed abundant and the attitude towards startups was very positive. At the same time it however felt as if many corporates had 'no clue' what they were doing or why. Would startup engagement be able to deliver on its promise and become a source of long-term strategic value for corporates? It became my personal mission to answer this question.

With this report I hope to inspire researchers in the field of open innovation to further explore the relation between startup engagement and the strategy domain. I believe scientific theory can provide crucial guidance to modern-day practice. At the same time I direct my attention towards all those involved in the collaboration between corporates and startups. With my thesis I hope to show the importance of connecting startup engagement efforts to the corporate strategy and to spark strategic conversations among corporate innovators.

I also want to use this opportunity to express my sincere thanks to all people that have supported me in this rollercoaster ride called graduation. A few of them I would like to address in particular. Firstly, I want to thank my entire graduation committee for their guidance and constructive feedback. More specifically, Victor, thank you for sharing your scientific perspective and for challenging me on the scope of my research. And Job, thank you for all of the positive energy during our meetings, your mentorship and your valuable industry insights. Secondly, I would like to thank all of my interviewees. Our inspiring conversations in which you openly shared your thoughts and experiences gave me so much insight and energy.

On another note, I would like to thank my co-founders of Stand Out Now. Guys, you can't imagine how thankful I am that I could always count on you as both my business partners and close friends. Also, I want to thank my dear friends Daan, Ilse, Lisanne, Sabine, Alex, and Sophie. I haven't always been fun to be around these past months, but it was great to know that I could always come to you to share both my deepest concerns and ecstatic happiness when I got interesting results. Lastly, I would like to thank my parents for their endless support in all my endeavours. During my past years of studying you allowed me to explore and find my own way with the comfort of knowing that whichever path I would chose, you would be there for me.

"The secret of life, though, is to fall seven times and to get up eight."

Paul Coelho, The Alchemist



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YES! Deft ACTIVITIES

ABBREVIATIONS

AI	Artificial intelligence
API	Application program interface
BTA	Business Technology Analysis
BMM	BioMedical Materials
CEO	Chief executive officer
CCO	Chief commercial officer
COO	Chief operations officer
CSE	Corporate-startup engagement
CV	Corporate venturing
EBA	Emerging Business Area
KPI	Key performance indicator
M&A	Mergers and acquisitions
NTBF	New Technology-Based Firm
PSD2	Payment services directive 2
R&D	Research & Development
TPP	Third-party provider
VR	Virtual reality



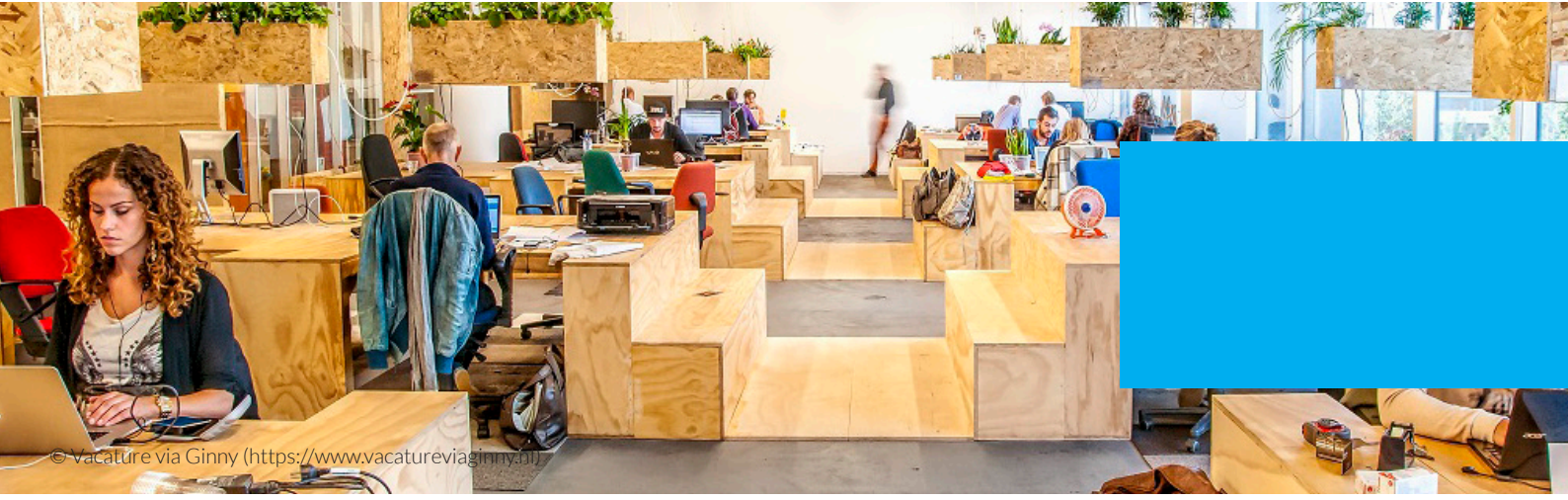
EXECUTIVE SUMMARY

In the face of technological discontinuities and disruption, convergence and increased global competition, established firms need to transform their business models more rapidly, more frequently and more radically than in the past. In line with the open innovation paradigm, which states that firms can and should use both internal and external ideas and paths to market, corporates are now actively engaging with startups to deal with these rapidly changing conditions. Recently, an increase is also witnessed in the types of corporate-startup engagement that are available to corporates to create, interact with, collaborate with, invest in or acquire startups. History however shows that corporate-startup engagement is by no means easy. In the past, many engagement mechanisms such as corporate venturing have been widely adopted and soon abandoned. The lack of setting and pursuing clear objectives and failure to establish a link between startup engagement and overall corporate strategy are considered important reasons for the lack of long-term success. This research aims to contribute to the strategic use of corporate-startup engagement by corporate management by exploring the relation between corporate strategy and the concepts of open innovation, corporate venturing and corporate-startup engagement.

To achieve this research objective a qualitative and theory-developing research has been conducted. The research started with a literature review in which the relation between open innovation and strategy, and between corporate venturing and strategy were assessed. This resulted in a new theoretical framework connecting open innovation (with corporate-startup engagement as its subset), corporate strategy and the innovation ecosystem. Recent and more practice-oriented literature complemented the notions within the new framework.

The theoretical framework was then validated by conducting interviews with 10 Dutch corporates. These subjects were purposefully sampled by means of a desk research. All interview data was transcribed, coded and reported. Thereafter the interview results were mapped on the theoretical model to see which aspects of the theoretical model were also displayed in practice. The research concluded with a discussion on the discrepancies between theory and practice and overview of recommendations to a variety of stakeholders involved in corporate-startup engagement.

The theoretical model that has been developed covers four key strategic notions. It centres around open innovation with corporate-startup engagement as its subset. The first notion is that corporates who strategically engage with startups are likely to display and actively facilitate a continuous reciprocal relation between their open innovation efforts and their corporate strategy. On the one hand they set a strategic vision to drive their engagement efforts. On the other hand these engagement efforts feed the articulation of strategic context which drives the redefinition of corporate strategy. These notions strongly relate to the principle of emergent and autonomous strategy of Mintzberg and Waters respectively Burgelman. Another feedback loop in open innovation and corporate strategy is related to competence building. Articulation of the strategic vision helps firms identify the misfit between their existing resources and capabilities and those required to live up to the vision. This gap drives competence building. At the same time will competence building foster the recognition of strategic context. A third notion in the theoretical framework emphasises the importance of setting clear objectives and differentiation of activities according to their purpose. Fourthly and



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lastly, the theoretical framework points to the strategic practice of not only opening up a firm's invention process - in line with the innovation paradigm - but also their strategy-making process. Firms with an open strategy actively align their strategic vision with their innovation ecosystem and involve their partners in strategy development and the definition of strategic context. The literature review showed that the dynamic, reciprocal and strategic character of the identified relationships was not really addressed in the recent and mostly practice-oriented literature. Especially the recognition of emergent strategies or strategic context based on open innovation efforts was less pronounced in the more recent literature.

In the interview phase of the research the theoretical model was validated with a special focus on two constructs: 1) the reciprocity of startup engagement and corporate strategy, and 2) setting clear strategic objectives and differentiating according to purpose. Firstly, many of the interviewees emphasised the need to view startup engagement in the context of open innovation. This contributes to the validity of the theoretical model with open innovation as its central aspect. Firms within the sample also showed strategic behaviour through the expression of dynamic focus areas, strategic objectives and differentiation of activities according to purpose. Some other practices however showed less strategic behaviour: firms lacked engagement strategies and clear performance metrics. Also the reciprocity between open innovation and corporate strategy can be considered a strategically underdeveloped. Overall, most of the corporates from the interview sample show strategic behaviour *within* their innovation units, but could improve in strategically and reciprocally

lating these internal efforts to corporate strategy, and potentially also to the innovation ecosystem.

The discussion of the theoretical and practical results focused on theorising explanations for the moderate presence of a reciprocal relation between startup engagement and corporate strategy. Potential explanations rest in the overall infancy of the domain, a potential deliberate perspective on strategy-making within the industry, and internal difficulties to reconcile exploitation with exploration. The implications of the theoretical model on different stakeholders in corporate-startup engagement were also discussed. The emergent and open perspective on corporate strategy-making that is suggested within this research, provides a valuable to close the gap between exploration and exploitation. It creates new strategic awareness on how to connect the fast-paced and far-reaching activities of open innovation and venturing units, as well as innovation ecosystems, to the long-term corporate vision.

The research concludes by stating that the developed theoretical framework and insights provide an important first step in making corporate strategies more dynamic and open with respect to open innovation and innovation ecosystems. Researchers are invited to improve, expand, and validate the developed framework and its underlying theoretical notions. With the basic framework in place, other researchers may now operationalise the specific constructs in much more detail. At the same industry professionals to use the framework and insights as an input to spark strategic conversations about startup engagement and its relation to corporate strategy with people from inside and outside of their organisations.

1. INTRODUCTION

This chapter introduces this thesis project on the strategic use of startup engagement. In the first section the research background is described, followed by the problem statement in Section 1.2. Section 1.3 will then give an introduction to the theoretical background of the research. The fourth section presents the scientific and practical contributions and relevance. The chapter ends with the outline of this thesis report. Chapter 2 will zoom in on the research approach including the research objective, research questions, research design and applied methodologies.

1.1 Research background

In the face of discontinuities and disruption, convergence and global competition, established organisations need to transform their business models more rapidly, more frequently and more far-reachingly than in the past (Doz and Kosonen, 2010). Many corporates have already suffered from not being able to keep up with the current pace of change (Arthur D. Little et. al, 2016). In line with the open innovation paradigm of Chesbrough (2003) corporates are actively pursuing external opportunities to enhance their innovative power. In recent years, collaborating with startups has especially become an important part of corporate innovation strategies (Mocker et al., 2015; Weiblen and Chesbrough, 2015; Kohler, 2016; KMPG N.V., 2015; OpenAxel, 2016; Arthur D. Little et. al, 2016; Bannerjee et al., 2015). More than 50% of the Forbes Global 500 companies are engaging with startups (Bonzom and Netessine, 2016).

Startups are no longer viewed by corporations as a threat, but as potential partners and engines of innovation in a time of fast-paced disruption (Mocker et al., 2015; KPMG N.V., 2015; Bonzom and Netessine, 2016; Kohler, 2016; Bannerjee et al., 2015). Engagings with startups can amongst others provide established firms a window on emerging tech-

nologies (Benson and Ziedonis, 2009; Weiblen and Chesbrough, 2015; Birkinshaw et al., 2002), open up new market opportunities (Bonzom and Netessine, 2016; Kohler, 2016), help develop a company's ecosystem (Markham et al., 2005), and facilitate retention of entrepreneurial employees (Campbell et al., 2003; Stringer, 2000).

Along with this increased corporate interest in startups, an increase in the variety of collaborations can be witnessed. Traditional and more equity-focused collaborations such as corporate venture capital and acquisitions are now complemented by more lightweight governance vehicles that enable corporates to engage with large amounts of startups. These new forms of engagement, such as startup programs, hackathons and corporate accelerator programs, are less focused on corporate ownership. Rather they are centred around shared technology and market access (Weiblen and Chesbrough, 2015). Nowadays, it is the collective of startup interactions that matters and helps to transform organisations. In an attempt to capture the extension of the collaboration spectrum beyond equity investments, the term 'corporate-startup engagement' has been recently added to the corporate entrepreneurship vocabulary (Weiblen and Chesbrough, 2015; Bonzom and Netessine, 2016; Kohler, 2016; OpenAxel, 2016).

Zooming in on The Netherlands, corporate-startup engagement is also a hot topic. In January of 2015, the StartupDelta initiative was launched with the ambition to develop and position The Netherlands as one of the top-three attractive startup ecosystems in Europe. Improving the effectiveness of corporate-startup collaboration is deemed crucial in attaining this ambition (StartupDelta, 2016a). In May 2016, the 'Costa' initiative was specifically launched to improve corporate-startup collaboration by facilitating knowledge sharing on startup engagement among the top-level management of renowned Dutch corporates (Sluijters, 2016; StartupDelta, 2016b).

Corporate-startup collaboration is however by no means easy. Historically, many mechanisms like corporate venturing or corporate incubators have been widely adopted and soon abandoned, not being able to justify their value to the core business (Weiblen and Chesbrough, 2015; Campbell et al., 2003; Birkinshaw et al., 2002; Chesbrough, 2002; Morris et al., 2010). Failing to set and pursue clear strategic objectives in startup engagement is deemed one of the key factors compromising long-term success (Chesbrough, 2002; Campbell et al., 2003; Morris et al., 2010; Birkinshaw et al., 2002). Also, corporates have historically struggled to establish the relation between their startup activities and their broader strategy (Covin and Miles, 2007; Birkinshaw et al., 2002).

Two recent Dutch examples of corporate-startup engagement initiatives that were only short-lived are Sanoma Ventures and TMG Startups. After three years of existence the board of Sanoma decided not to pursue the corporate venturing fund any further (Redactie Sprout, 2016). The board of directors of the Telegraaf Media Group already withdrew their support for the corporate incubator TMG startups within one year of its foundation. They explained there was no room for the incubator in the current strategy. (Van Essen, 2015). In both cases the startup initiatives were stopped after a new CEO was appointed.

Scholars and practitioners have thoroughly studied topics such as 'open innovation' and 'corporate venturing' on the one hand and 'strategy' on the other hand, but the coupling of these paradigms is an underdeveloped area in literature (Vanhaverbeke et al., 2017; Covin and Miles, 2007; Vanhaverbeke and Roijakkers, 2013; Vanhaverbeke and Cloudt, 2014). A link to corporate strategy in particular seems virtually absent in literature (Vanhaverbeke and Roijakkers, 2013). This research aims to establish this connection and thereby contributes to the strategic use of corporate-startup engagement by corporates.

1.1.1 Motivation for the research

Besides my scientific education, the master Management of Technology also brought me my own innovation consulting firm: Stand Out Now. This meant that I frequently interacted with both corporate innovation departments and the Dutch innovation ecosystem. Here, I definitely saw the potential of corporate-startup collaboration, but often wondered if the maximum impact of the 'elephant dancing with the mouse' was being realised. On the one hand resources seemed abundant with significant innovation budgets and there was a very positive attitude towards startups. Being intrigued by the drivers and plans behind these immense funds and corporate interest in startups, I often found myself engaging in conversations with corporate representatives. I would ask them for their startup strategy or how they were connecting their startup efforts to their core business. The (lack of) answers made it seem as if many corporate innovators had 'no clue' what they were doing or why.

These experiences made me question whether startup engagement would be able to meet the high expectations and indeed become a source of long-term strategic value for corporates? After an initial literature survey confirmed the scientific relevance of the topic, it became my personal mission to answer this question in my thesis.

1.2 Problem Statement

In this section the theoretical problem statement is firstly introduced. Subsequently, the practical problem statement is discussed.

1.2.1 Theoretical problem statement

Corporate-startup engagement has recently emerged as a new research domain with a wide variety of collaboration opportunities complementing the traditional equity-based models (Weiblen and Chesbrough, 2015). A few consulting reports have been published on this issue (Bannerjee et al., 2015; Mocker et al., 2015; Arthur D. Little et al., 2016; Bonzom and Netessine, 2016), but so far the topic has only been addressed in one scientific paper (Weiblen and Chesbrough, 2015). Scientific theory has been put in catch-up mode and the construct of corporate-startup engagement is underdeveloped. Considering the expansion of corporate-startup engagement efforts beyond the traditional concepts of corporate incubation or corporate venturing, this may also hold for the typologies of for example Chesbrough (2002), Hill and Birkinshaw (2008) and Campbell et al. (2008). These typologies could be outdated and may require an update to better suit modern-day practices.

Secondly, studies on open innovation and corporate venturing have emphasised the importance of linking these two paradigms to (corporate) strategy. Considering the construct of corporate-startup engagement to be a subset of open innovation and an extension of corporate venturing (this will be addressed in more detail in Section 1.3), it is assumed that the emphasis on connecting to corporate strategy is also key to successful corporate-startup engagement. Practice-oriented papers emphasise that corporates should 'be strategic' or 'set clear strategic objectives' but a detailed explanation of what this exactly means is lacking. By exploring the corporate strategic context and building upon the bodies of literature on corporate venturing and open innovation - and specifically their relation to strategy - the aim is to close the knowledge gap between corporate-startup engagement and corporate strategy.

Thirdly, considering the rapid pace of change, it is deemed necessary to validate the theoretical findings on the relation between startup engagement and corporate strategy with up-to-date industry examples. Herein Dutch corporates provide an interesting case group. With the introduction of the StartupDelta initiative many corporates have started with corporate-startup engagement (StartupDelta, 2016a). As part of StartupDelta, the Costa initiative has specifically committed top management of large corporates to startup engagement. One could hypothesise that this C-level involvement may result in a better strategic fit.

Concluding, this research will address the following theoretical knowledge gaps:

1. Expansion of the underdeveloped construct of corporate-startup engagement
2. Establishing a link between startup engagement and corporate strategy
3. Obtaining a recent (and Dutch) industry perspective on the strategic use of startup engagement

1.2.2 Practical problem statement

As was presented in the introduction, more than 50% of the Forbes Global 500 companies are currently engaging with startups (Bonzom and Netessine, 2016). It is however not the first time that corporate-startup collaboration is on the rise. History shows a sinusoidal trend regarding startup engagement. Various hypes in which collaborative mechanisms such as corporate venturing or corporate incubation were massively adopted by corporates, resulted in a hasty retreat during economic downturns (Weiblen and Chesbrough, 2015; Campbell et al., 2003; Birkinshaw et al., 2002; Chesbrough, 2002; Morris et al., 2010). In the Netherlands, the short existence of the TMG incubator and the venture fund of Sanoma are two clear examples of this phenomenon (Van Essen, 2015; Redactie Sprout, 2016).

Corporates seem to struggle to deploy startup engagement mechanisms with long-term viability and justification of value for their organisations. Over and over, corporates failed to set and pursue clear strategic objectives for their startup activities and have shown unable to secure the relation to corporate strategy.

The hypothesis of this thesis is that now again, in fear of becoming obsolete and in a rush to follow the overall industry trend of corporate-startup engagement, corporates may be hastily setting up startup engagement mechanisms without properly thinking them through. Let alone make purposeful decisions about it.

The massive attention given to startups has created a ‘fear-of-missing-out’ among corporates.

Especially in The Netherlands, the massive attention given to startups in response to the Startup-Delta initiative (2016a) has seemed to create a ‘fear-of-missing-out’ among corporates. Without much experience or understanding of the ‘startup world’ many Dutch corporates are now plunging into startup engagement. Potentially, this mixture of inexperience and rush may compromise the strategic use and value of corporate-startup engagement, and thereby its long-term viability. In the face of disruption and increased global competition, it becomes increasingly important for corporates to reap the benefits of startup engagement.

1.3 Theoretical background

In this section the research will firstly be positioned in scientific literature. Thereafter, the theoretical concepts that form its backbone will be introduced.

As explained in the previous sections, this research aims to establish a connection between corporate-startup engagement and corporate strategy. Zooming out, these two concepts are rooted in two core domains of social and organisational science: open innovation and strategy (see Figure 1.1).

In the open innovation domain in Figure 1.1, one can see that corporate-startup engagement is drawn as a subset of open innovation. Engaging with startups is a means to realise open innovation. Figure 1.1 also tries to show how the position of corporate venturing has evolved over time. The concept was already studied well before the open innovation paradigm emerged in 2003, which is visualised by stretching this domain slightly beyond the open innovation domain in Figure 1.1. Nowadays, corporate venturing is however considered mostly a subset of open innovation or may even be deemed one of the types of engagement within the overarching construct of corporate-startup engagement in line with Weiblen and Chesbrough (2015). On the right hand side of Figure 1.1 one sees the notion of ‘strategy’ of which corporate strategy is considered a subset.

This research relates corporate-startup engagement to corporate strategy (the blue frames in Figure 1.1). Herein the theoretical framework will

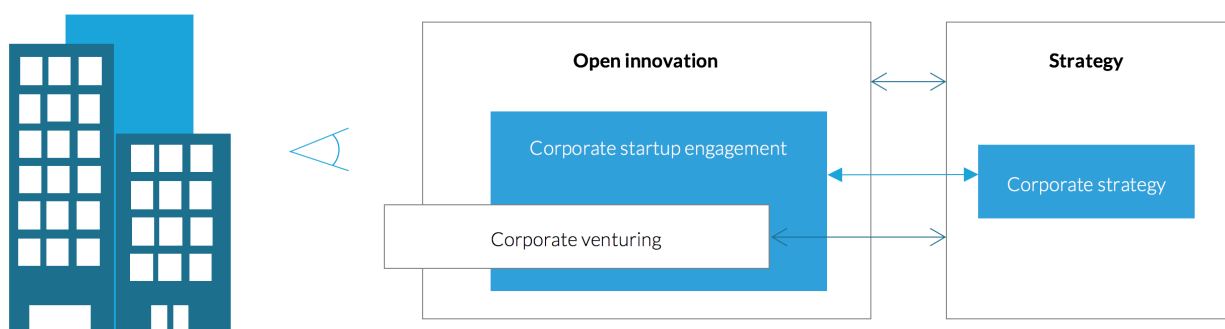


Figure 1.1: Positioning of the research (blue frames represent the focus of the research)

build upon the connections of the associated domains of open innovation and corporate venturing and their relation to strategy (represented by the arrows connecting the white frames).

These concepts will be approached from a corporate perspective with specific attention for corporates' *internal and strategic* considerations regarding startup engagement. Many of the recent papers pay attention to the differences in speed, focus or way of working between corporates and startups, and how these differences may hamper corporate-startup engagement (Arthur D. Little, 2016; Bannerjee et al., 2015; Mocker et al., 2015; OpenAxel, 2016). These papers focus more on what could be called the corporate-startup interface.

In this thesis, a more inward-looking perspective is taken with respect to the corporate. The hypothesis is that besides perfecting the corporate-startup interface, corporates have to pay attention to the strategic alignment between the totality of their startup engagement efforts and their core strategy in order to foster the long-term viability of startup engagement within their organisation. Because of this internally-oriented focus, the startup perspective is considered out-of-scope for this

research. This however does not mean that this research may not provide valuable insights for startups (see Section 8.3.4).

In the following sections the fundamental theoretical concepts on which this study is built will be introduced. Section 1.3.1 elaborates on open innovation, while Section 1.3.2 introduces relevant theories that belong to the strategy domain.

1.3.1 Open innovation

When people talk about innovation, they often refer to technological innovation: “the act of introducing a new device, method or material for application to commercial or practical objectives” (Schilling, 2013, p.1). The economist Schumpeter (1942) was one of the first to point out the fundamental role that innovation plays in the survival of firms competing in the market. His notion of creative destruction describes a process of continuous innovation in which technological novelties destroy old ones. Until this day technological innovation is deemed the most important driver of competitive success in many industries (Schilling, 2013). “Companies that don't innovate, die” (Chesbrough, 2003, p.xxvi).

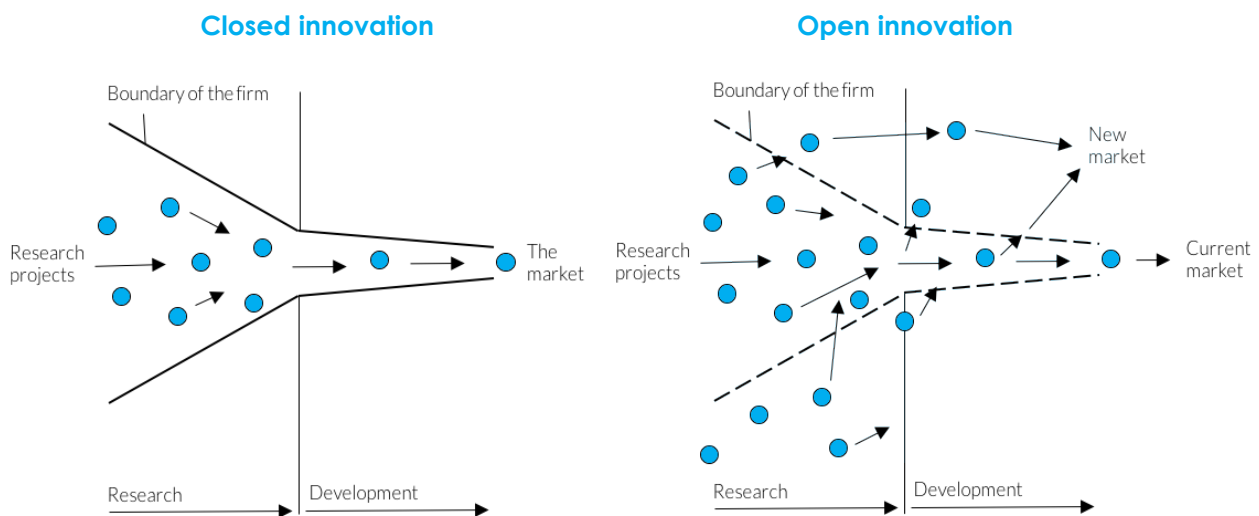


Figure 1.2: The closed and open innovation funnel (Chesbrough, 2003, adj.)

Table 1.1: Contrasting principles of closed and open innovation (Chesbrough, 2003, Table I-1, adj.)

Closed innovation principles	Open innovation principles
The smart people work for us.	Not all the smart people work for us. We need to work with smart people inside and outside our company.
To profit from R&D, we must discover it, develop it, and ship it ourselves.	External R&D can create significant value, internal R&D is needed to claim some portion of that value.
If we discover it ourselves, we will get it to the market first.	We don't have to originate the research the profit from it.
The company that gets an innovation to the market first will win.	Building a better business model is better than getting to market first.
If we create the most & best ideas in the industry, we'll win.	If we make the best use of internal & external ideas, we'll win.
We should control our IP, so that our competitors don't profit from our ideas.	We should profit from others' use of our IP, and we should buy others' IP whenever it advances our own business model.

Many corporates however struggle with innovation. Corporates tend to focus on efficiently executing the activities based on current technologies or their current business model. They engage in incremental innovations, but often refrain from embracing radical innovations that render the routines that contribute to their current success obsolete (Chandy and Tellis, 2000; Chesbrough and Rosenbloom, 2002; Stringer, 2000; Ferrary, 2011; Hill and Rothaermel, 2003). Radical innovations are those innovations that have a high degree of newness and differ from existing products and processes, and are often associated with more uncertainty and risks. They may also be termed breakthrough innovations or disruptive innovations and may have a competence-destroying nature (Schilling, 2013).

On the other end of the spectrum are incremental innovations. These innovations result in only minor changes in existing products or practices (Schilling, 2013). Incremental innovations are mostly concerned with maximising returns from improved performance of existing products or services in attributes that current customers value (Hill and Rothaermel, 2003; Bower and Christensen, 1995). They often have a competence-enhancing nature (Schilling, 2013).

In 2003, Chesbrough stated that innovation in firms was undergoing a fundamental change; a paradigm shift of closed innovation to open innovation (see Figure 1.2 and Table 1.1). In the logic of closed innovation firms believe that successful innovation requires control and self-reliance. Firms with a closed innovation logic have a strong internal focus and believe all ideas and innovations should be generated, developed, built and marketed on their own. In contrast, the open innovation paradigm assumes "that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology" (Chesbrough, 2003, p.xxiv). The logic of open innovation is based on a landscape of abundant knowledge and resources reaching beyond the boundaries of individual firms. Internal and external ideas are combined into architectures and systems whose requirements are defined by a business model. The paradigm assumes that internal ideas can be taken to the market through external channels, e.g. spin-offs.

Chesbrough (2003) already pointed out startups as leading vehicles in the open innovation model, though predominantly in the role of taking knowledge spill-overs to the market. Nowadays, startup engagement is viewed as a key mechanism to tap into the power of startup along the entire open innovation funnel.

Business model

The concept of a business model is at the heart of open innovation (Chesbrough, 2003; Vanhaverbeke and Cloudt, 2014). In short a business model articulates how customer value is created and delivered and which architectures of revenues, cost and profits are associated with value delivery (based upon definitions of Chesbrough and Rosenbloom (2002) and Teece (2010)). Technology and new ideas by itself have no value until they are commercialised via a business model. In line with the open innovation paradigm, internal knowledge that is not supporting a firm's business model will be out-licensed or sold and external knowledge that is advancing the business model will be insourced (Vanhaverbeke and Cloudt, 2014). In the face of technological transitions and increased global competition, current business models are under pressure. Corporates are forced to transform their business models more rapidly, more frequently and more far-reachingly than in the past (Doz and Kosonen, 2010).

1.3.2 Strategy

Though definitions vary in literature, strategy is generally considered the deliberate, conscious set of guidelines that determines decisions into the future (Mintzberg, 1978). Traditionally structure was considered to follow strategy, with Alfred Chandler as its founding father. Since the 1960s various strands of literature have appeared that contribute to the belief that strategy and structure are inter-related; they emphasise structure may need to be reconsidered as strategy is further developed and implemented (Lynch, 2003). These strands of literature

provide the inroads to connecting corporate-startup engagement and corporate strategy (Vanhaverbeke et al., 2017). This section will subsequently introduce the theoretical concepts of emergent strategy, autonomous strategy and open strategy. The section will end with an introduction to corporate strategy.

Emergent strategy

An emergent strategy is a "strategy whose final objective is unclear and whose elements are developed during the course of its life, as the strategy proceeds" (Lynch, 2003, p.51). Lynch (2003) describes how the emergent strategy process is characterised by repeated experimentation, flexibility to respond to market changes, the opportunity to include the culture and politics of an organisation, and a strong consistency with actual practice. Mintzberg and Waters (1985) distinguish between emergent and deliberate strategy by comparing intended strategies with realised strategies (see Figure 1.3). Deliberate strategies are those cases where strategy is realised as intended. Lynch (2003) uses the term prescriptive strategies to describe corporate strategies where the objective has been defined in advance and the main elements have been developed before the execution of the strategy commences.

Emergent strategies on the other hand are patterns or consistencies that are realised despite of, or in the absence of, intentions. Emergent strategies allow for learning, flexibility and openness and enable management to act before everything is well understood. Most firms display a combination of

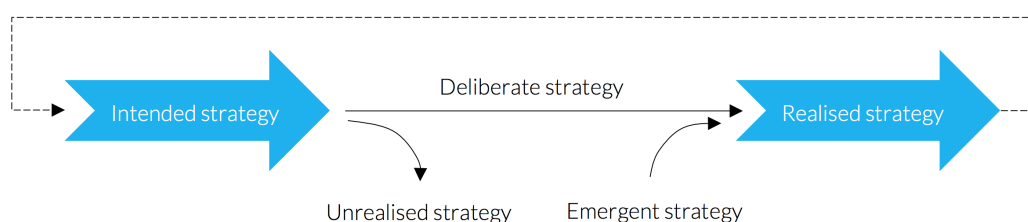


Figure 1.3: Types of strategies and concept of strategic learning (Mintzberg, 1978, adj.)

deliberate and emergent strategies. Lastly, there is the feedback loop that emphasises strategic learning in Figure 1.3. This relates to the phenomenon that through the identification of emergent strategies, intended strategies change.

“Emergent strategies allow for learning, flexibility and openness, and enable management to act before everything is understood.”

Autonomous strategy

In line with the work of Mintzberg and Waters, Burgelman (1983) points out explicit challenges in strategic management that are related to the opposing tendencies in large firms towards stability and change. The model of Burgelman characterises the complex process of balancing exploitation with exploration in the context of corporate strategy.

One the one hand, continuity and coherence in corporate strategy require the institutionalisation of strategic behaviour. This results in induced strategic behaviour that uses the categories provided by the current concepts of strategy to identify opportunities. Corporate strategy guides strategic

behaviour (see arrow 1 in Figure 1.4). Corporate entrepreneurship on the other hand requires autonomous strategic initiatives at the operational and middle level, and experimentation-and-selection approach at the corporate level. Autonomous strategic behaviour introduces new categories for the definition of opportunities. Such autonomous behaviour lead to a redefinition of the corporates’ relevant environment and precedes changes in corporate strategy (via arrow 5 and 8).

In Figure 1.4 structural context determination reflects the efforts of top management to fine-tune the administrative system (e.g. formalisation of positions and relationships or project screening) so as to guide strategic behaviour to fit the current concept of strategy (via arrow 2). Over time the structural context can become more elaborate, resulting in the range of scope of strategic behaviour to become more narrow. A major consequence is that increased selective efficiency of the structural context will decrease the chance of selecting strategic projects that have the potential to force a significant change in the current concept of strategy. Structural context intervenes between strategic behaviour and the current concept of strategy (via arrows 3 and 4).

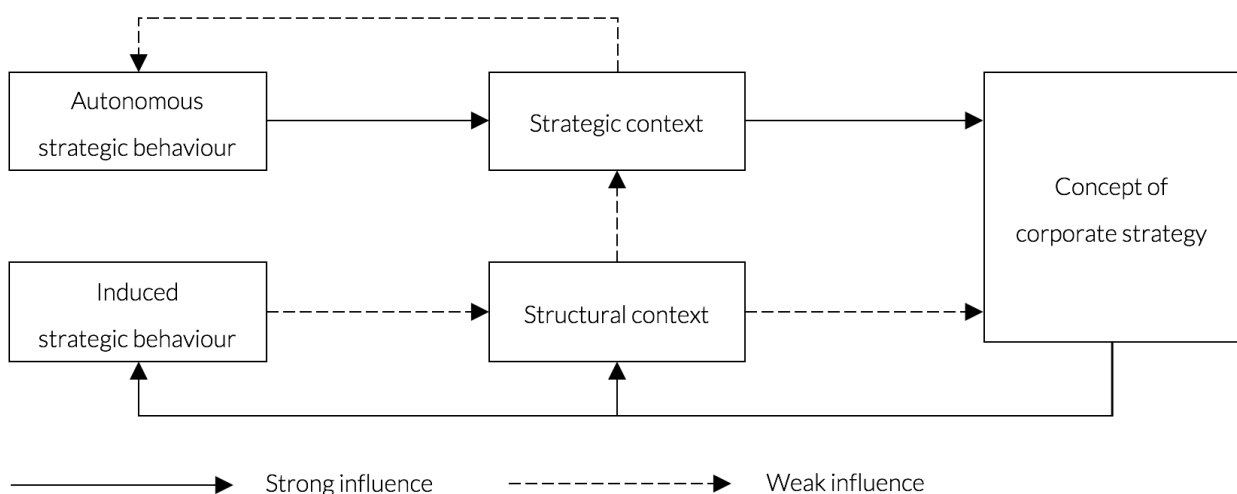


Figure 1.4: A model of the interaction of strategic behaviour, corporate context, and the concept of strategy (Burgelman, 1983, adj.)

Strategic context reflects the efforts of middle managers to link autonomous behaviour to the corporation's concept of strategy by championing and drafting attractive proposals for new business development. Burgelman describes that the intervening effect of structural context on the strategic context is only marginal (see arrow 6). When middle management is successful in activating the process of strategic context determination this may provide guidance for other entrepreneurial efforts at the operational level (see arrow 7).

Open strategy

One of the first to discuss the notion of open strategy were Chesbrough and Appleyard (2007). Here it was defined as the acts of balancing the powerful value creation forces that can be found in creative individuals, innovation communities, and collaborative initiatives with the need to capture value in order to sustain continued participation and support of those initiatives. Whittington et al. (2011) describe open strategy as a strategy process with increased inclusion of and transparency towards stakeholders in- and outside of the firm. Vanhaverbeke et al. (2017) describe how in open strategies, the individual firm strategies are tightly linked to the ecosystem strategy. A corporate's ecosystem can include, for example, service providers of business functions, technology providers, developers of complementary products and services, customers and competitors, or even regulatory agencies. It concerns all firms that affect the way the firm does business (Iansiti and Levien, 2004).

Corporate strategy

Corporate strategy is described as "the identification of the purpose of the organisation and the plan and actions to achieve that purpose" (Lynch, 2003, p.6). It often consists of two main elements: corporate-level strategy and business-level strategy. Corporate-level strategy is concerned with the major strategic direction of the firm; which businesses the organisation is in or should be in. Leadership and culture of the organisation are also very important at this level. At the business-level, the strategy is concerned with creating customer value and the

match between internal capabilities and external relationships. How should an organisation compete, what is its sustainable competitive advantage and how can they innovate (Lynch, 2003)? One could view corporate strategy as a superset of business strategy. A company will have one corporate strategy, but may have several business strategies (Chesbrough and Appleyard, 2007). The distinction between corporate strategy and business strategy is not always very clear.

1.4 Contributions and relevance

This section describes the theoretical and practical contributions and relevance of this research.

1.4.1 Theoretical contributions and relevance

Considering the infancy of the construct of corporate-startup engagement the first contribution is to further develop this construct, including a definition, insights in objectives for engagement and an overview of the types of engagement. This data is part of the research domain (see Chapter 3).

The main theoretical contribution is the development of a new framework that connects open innovation - with corporate-startup engagement and corporate venturing as its subsets - to the strategy domain. The framework represents a first step in theoretical coupling of these two domains and could be viewed as an update to the theory of Burgelman (1983). I hereby respond to calls by a variety of scholars to establish a link between corporate's engagement efforts and strategy (Vanhaverbeke et al., 2017; Vanhaverbeke and Roijakkers, 2013; Vanhaverbeke and Cloudt, 2014; Chesbrough and Appleyard, 2007; Covin and Miles, 2007). By means of an industry analysis I also validate and refine the developed theoretical framework.

The combination of an in-depth theoretical analysis and an industry validation will provide the reader with a deep understanding of the relation between open innovation and corporate strategy and will thereby provide a strong foundation on which future research can build.

1.4.2 Practical contributions and relevance

Corporate-startup engagement is on the rise, but many firms are inexperienced. Moreover, corporates have historically struggled to establish a meaningful connection between their startup efforts and corporate strategy. In a recent article of Fortune, organisational alignment was still pointed out as one of the key factors that obstruct successful startup engagement (Griffith, 2017).

The key contribution of this research is the development of a new framework that addresses the relation between startup engagement and corporate strategy. This framework will provide managers with a deeper understanding and increased awareness of the reciprocity of these two domains will contribute to the strategic use of startups by corporates as engines of innovation and long-term corporate growth. I hope that my research creates awareness at top-level management and will spark strategic conversations about startup engagement and its relation to the overall corporate agenda.

The practical side of this research will also provide a strategic sanity check and a benchmark for innovation and venturing managers and executives. The results of the interviews will give a detailed insight in the strategic practices at Dutch frontrunners in corporate-startup engagement. These results can provide a source of inspiration, may serve as potential wake-up call, or a combination of both.

1.5 Outline of thesis report

The report has five main parts (see Figure 1.5). After this chapter one will first find the research approach in Chapter 2. Here, the research design is discussed as well as the applied research methods.

The two chapters that follow focus on the theoretical study. Chapter 3 will first discuss the research domain: corporates, startups and corporate-startup engagement. This chapter provides the reader with all relevant definitions and contextual information in order to gain familiarity with the topic. This helps the reader to view subsequent chapters in the right perspective. Chapter 4 then presents the theoretical framework in which the findings of the literature review are presented. This chapter discusses among others the why of corporate-startup engagement and the relation between open innovation or corporate venturing and strategy.

Then, the practical side of this research follows. Chapter 5 gives the results of a desk research that has been performed to strategically determine the interview sample. Chapter 6 will then focus on the interviews. Among others, this chapter presents the interview protocol, the approach to analysis of the data and most importantly, the findings.

The last two chapters focus on wrapping up this research. In Chapter 7 the theoretical and practical findings are discussed after which Chapter 8 presents the conclusions and recommendations. The report ends with a bibliography and the appendices.

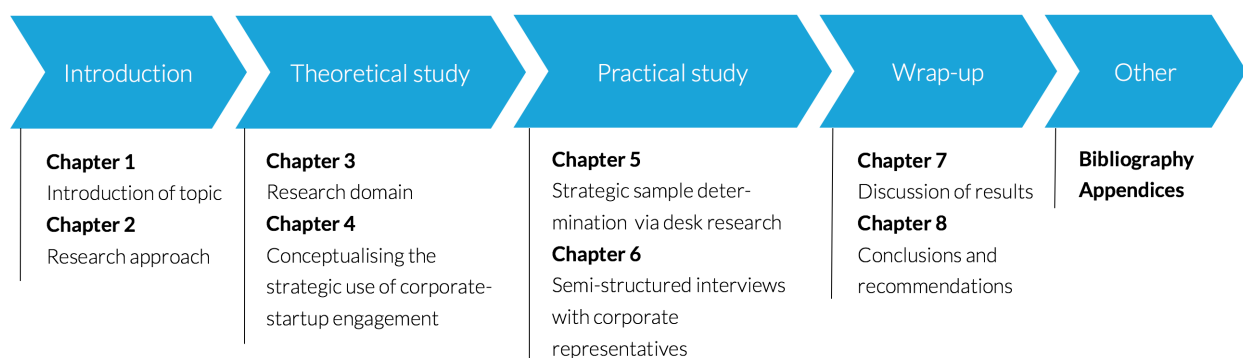


Figure 1.5: Outline of the thesis report



JAMES
STANDOUT NOW

TOMAS
STANDOUT NOW



2. RESEARCH APPROACH

This chapter describes the research approach in detail. In drafting the research approach the research guidelines of Verschuren et al. (2010) and Creswell (2013) have been used. The first section of this chapter will elaborate on the type of research that has been performed. Thereafter, the goal of the research is presented in Section 2.2. This section contains the research objective and research questions. The section that follows presents of the overall research design. Next, the methodological aspects of the data collection and the process of data analysis are presented. Lastly, Section 2.6 takes a closer look at the scientific quality of the research. The chapter ends with a summary.

2.1 Type of research

The research project may be characterised as exploratory and theory-developing (Verschuren et al., 2010). In general, corporate-startup engagement is a very new phenomenon. The body of literature on this concept is very limited (Weiblen and Chesbrough, 2015), and based on the literature survey, it appears that the coupling of corporate-startup engagement and corporate strategy has not yet been specifically addressed. Also for the associated concepts of open innovation and corporate venturing, the links to strategy are underdeveloped (Vanhaverbeke et al., 2017; Covin and Miles, 2007; Vanhaverbeke and Roijackers, 2013; Vanhaverbeke and Clodt, 2014). The coupling of startup engagement efforts and (corporate) strategy could be thus be considered a blind spot in theory. This thesis project explores this new field of research with the final aim of developing a framework that will contribute to the strategic use of corporate-startup engagement. The associated domains of open innovation and corporate venturing, and their relation to strategy, will provide the foundation for the development of this new framework.

The research will also have a strongly qualitative nature. Considering the infancy of the domain and the complexity of the relation under study a qualitative approach is considered most suitable. A qualitative approach allows the development of a holistic picture of the complex relation between corporate-startup engagement and strategy. Qualitative interviews will enable the validation of the theoretical findings with the in-depth perspectives of industry representatives (Creswell, 2013).

One level deeper, this research shows characteristics of grounded theory research with a highly emergent nature (Creswell, 2013; Verschuren et al., 2010). Verschuren et al. (2010, p.187) describe that in grounded theory research the researcher does not start with a detailed theory that is subsequently tested. "Like an explorer, he embarks on a journey."

**"Like an explorer, the
researcher embarks
on a journey."**

In this master thesis project I also started with a very broad question: “will corporate-startup engagement be able to deliver on its promise and become a source of long-term strategic value for corporates?” Based on this question a basic research plan was drafted and a first literature review was executed. As I progressed in the initial literature review, I realised the field was even more in its infancy than I had originally thought. I took a step back and started looking more at the fundamentals, realising that the initial objective was too detailed and advanced for the current state of research in the field. As I conducted interviews with industry professionals I learnt that the goal of the research and theoretical framework required further refinement. This reciprocity between literature and data collection is a typical characteristic of grounded theory research (Creswell, 2013; Verschuren et al., 2010). In grounded theory studies theoretical concepts materialise slowly but surely during the course of the research (Verschuren et al., 2010). The research goals and research questions that are described in the next section therefore can be viewed as the final result of an emergent process.

2.2 Goal of the research

This section describes the purpose of this research. Firstly, the research objective is described. Then, the three research questions to which the answers enable the achievement of the research objective will be presented and explained.

2.2.1 Research objective

The objective of this research is to contribute to the strategic use of corporate-startup engagement by corporate management by exploring the relation between corporate strategy and the concepts of open innovation, corporate venturing and corporate-startup engagement. To further clarify the objective the underlined elements will be shortly elaborated. The relevance of the theoretical concepts that are mentioned in the second part of the research objective has already been explained in Section 1.2.1.

Strategic use. In agreement with Covin and Miles (2007) ‘being strategic’ in an organisational sense is an ambiguous notion with few generally recognised definitions. Generally, papers also stick to emphasising the importance of strategic engagement without clarifying what corporates should do to heed this guidance.

For current purposes, the strategic use of corporate-startup engagement is considered the deliberate and purposeful deployment of startup engagement to create value for the corporate as a whole. Herein it is deemed crucial to connect startup engagement to overall corporate strategy. Please note that a deliberate act of experimentation can still be considered strategic when a clear purpose is defined.

Corporate-startup engagement. The corporate act of creating, interacting with, collaborating with, investing in and/or acquiring startups (see Section 3.2).

Corporate management. This includes board level management and innovation and venturing managers and executives with the mandate to shape the relation between corporate-startup engagement and corporate strategy.

2.2.2 Research questions

Three research questions need to be answered to achieve the research objective. To provide some context, each question is accompanied by a short description on the type of information needed and the applied research methodology. Additional information on the processes of data collection and data analysis is available in Sections 2.4 and 2.5.

1. How can corporates use corporate-startup engagement in a strategic manner?

In this first research question a systematic literature review will be conducted to derive theoretical propositions on the relation between open innova-

tion and strategy, corporate venturing and strategy, and the strategic use of corporate-startup engagement. Since scientific literature on the first two relations is often overlapping, these two relations are addressed in the same subquestion (1a). The answer to the first research question results in a theoretical model on the strategic use of corporate-startup engagement.

(1a) What can we learn from the relation between open innovation and corporate venturing on the one hand and strategy on the other hand?

(1b) What do recent studies on corporate-startup engagement advise regarding its strategic use in corporates?

2. To which extent can corporates be considered strategic in their use of startup engagement?

This question will be focused on checking to which extent the findings from the theoretical framework that has been developed are reflected in practice. To answer this question a set of semi-structured interviews with Dutch corporates that are actively engaging with startups is conducted. These interviews allow the researcher to obtain a deep understanding of how these corporates organise startup engagement and evaluate to which extent they could be considered strategic in their use in relation to the theoretical framework. The strategic sample for the interview phase will be identified based on the results of a desk research on the online reported startup engagement activities of 100 Dutch corporates.

3. Which recommendations can we make on how to improve the strategic use of corporate-startup engagement by comparing theory and practice?

In the last phase the similarities and differences between the theoretical framework and practice are discussed. The answer results in a set of recommendations to improve the strategic use of corporate-startup engagement.

2.3 Research design

This section will outline the research design of this master thesis project. Thereafter, in Section 2.4 and 2.5, the applied data collection methods and the process of data analysis are discussed in more detail.

Figure 2.1 shows the research design. One can see that two data collection methods are applied (dark blue frames). These are preceded by a selected literature review (light blue frame). Figure 2.1 also provides references to the chapters in which specific building blocks of the research project are addressed, as well as notions of which building blocks answer which research (sub)questions.

The project started with a literature review in which four theoretical domains were explored (four blocks in the light blue frame in Figure 2.1). These theoretical domains resulted in three building blocks. These formed the input to development of the theoretical framework and the answer to the first research question (the top right frame in Figure 2.1). The literature that focused on the relation between strategy and corporate venturing (first block in the literature review) and on the relation between open innovation and strategy (second block in the literature review) was collected from scientific databases. As one can see in Figure 2.1 these two blocks are merged into one single building block that feeds into the theoretical framework. This was done because many of the literary sources in these two domains showed overlap.

The second building block of the theoretical framework was drafted from mostly practice-oriented literature on corporate-startup engagement with a focus on extracting all strategic advice regarding its use. The last building block to the theoretical framework is the research domain (Chapter 3). This block covers all contextual information on the research topic and is partially drafted from papers on corporate-startup engagement and partially from other literary sources.

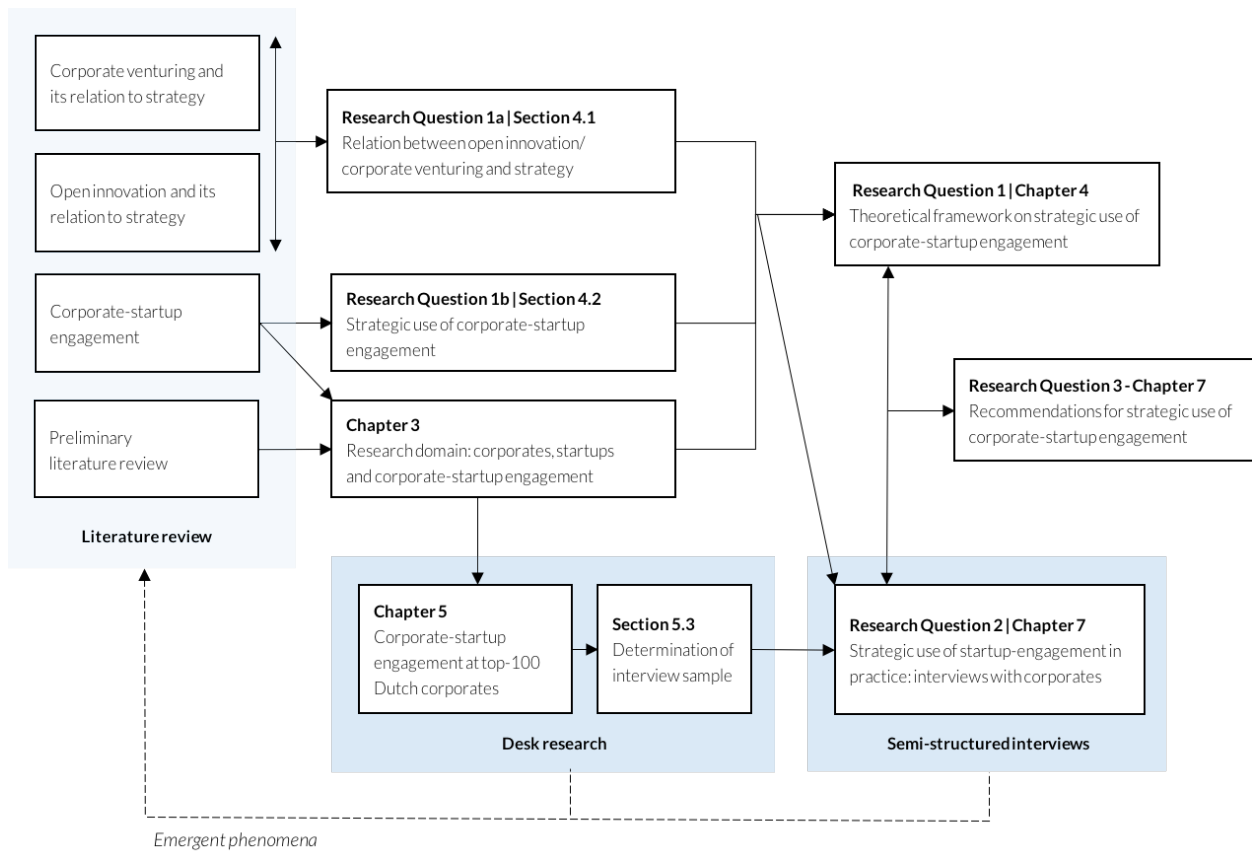


Figure 2.1: Research design

On the lower part of the research design one can see the two data collection methods (dark blue frames). Here, the desk research was executed in support of the interview phase, namely to identify a strategic interview sample. As can be seen in Figure 2.1 the research domain is an input to the desk research. The research domain contains information on among others different types of startup engagement and the Dutch context. Considering that the desk research is focused on the determination of the activity level of Dutch corporates on different types of startup engagement, this information provided a valuable input.

The strategic sample that results from the desk research forms an input to the semi-structured interviews. The three building blocks that are the result of the literature review also feed into the interviews. These theories provided a solid foundation for drafting the interview protocol. The results from the interview phase provide the answer to the second research question: to which extent can

corporates be considered strategic in their use of corporate-startup engagement? In Figure 2.1 one can also see two dotted lines that run from the data collection methods back to the literature review. These dotted lines represent the emergent character of the research (grounded-theory research) with a reciprocal relation between data collection and literature.

With the last step, the frame on the outer right, the third and final research question is answered. In this step the interview results are compared with the theoretical framework to extract key recommendations on how corporates can strategically use corporate-startup engagement.

2.4 Data collection methods

In this section the process of data collection is discussed, including the literature review that preceded the desk research and interviews. It will be explain why these methods were selected and

which steps have been taken. For the desk research and interviews only the overall methodological approach will be described in this chapter. Exact details on the data collection process are presented in Chapter 5 respectively Chapter 6. Through this approach it is ensured that the reader will first get acquainted with the research topic and the theoretical framework. This will enhance the reader's understanding of the data collection process.

2.4.1 Literature review

Scientific and practice-oriented literature has played an important role in this research project. The theoretical framework that is developed has strong roots in associated domains. A thorough literature review enables the positioning of the research in the larger scientific dialogue on the topic, to fill scientific gaps and to extend prior studies (Creswell, 2013). Considering the emergent nature of the research, literature has been reviewed throughout the research: at the start to set the stage and guide the data collection process, and in parallel with the process of data collection and analysis to refine the theoretical framework.

Process description

The guidelines of Creswell (2013) have been used to shape the literature review. At the start of the research a broad synthesis of literature was firstly performed to get a feel for the topic and associated terminology. Most of the literature that was read in this phase became part of the research domain. This process was relatively unstructured since the goal was not to develop a comprehensive overview but to provide context to the research. In this phase a wide range of keywords: corporate-startup engagement, corporate venturing, corporate, startup, start-up, corporate innovation, corporate-startup collaboration, barriers to innovation, startup ecosystem, innovation ecosystem, The Netherlands, inertia, radical innovation, disruptive innovation, objectives. These terms were entered in various combinations in the following online databases: Scopus, Web of Science, JSTOR, Google Scholar and Google Search. Google Scholar and Google

Search were considered valuable complements to the other three databases in searching for literature on corporate-startup engagement in particular. The recent nature of the topic of "corporate-startup engagement" results in a lack of available scientific papers. As the use of Google Search may pose a serious risk to the scientific quality of the research, the reliability of the sources was always reviewed critically. Publications of renowned consulting firms or governmental agencies or articles in high-quality magazines in organisational science (e.g. Harvard Business Review or Forbes) or official news agencies were preferred.

In constructing the theoretical framework (see Chapter 4), a more structured approach was used to identify relevant literature and ensure the scientific quality of the literature study. The same online databases were used, though Google Search was excluded for the first two topics of interest (see Table 2.1). The process that was followed is described below. The systematical approach that was taken ensures that key literature in the selected theoretical domains is included in the research.

1. Identify relevant keywords (an overview of keywords associated with specific parts of the literature review is presented in Table 2.1)¹
2. Execute initial search query based on presence of search terms in the abstract, title and/or keywords of articles and sorted on relevance; in Google Scholar and Google Search the entire content was reviewed
3. Scan the first 20 results and if necessary refine and repeat search query until desired results are obtained
4. Select articles for further review based on reading titles and abstracts of the first 50 results; in Google Search focus was set on the title, text preview and quality of the source
5. Read the abstract, introduction and conclusion of selected articles to determine if the entire article should be read
6. Follow-up on interesting references at the end of selected articles (repeating step 5 and 6)

¹ Sometimes the initial search query was too narrowly defined and resulted in zero results, which required adjustment of the scope of the query.

Table 2.1: Keywords used during the literature review

Area of interest	Databases	Keywords [#]
Relation between open innovation and strategy	Scopus, Web of Science, JSTOR, Google Scholar	Open innovation, strateg*, business strategy, corporate strategy
Relation between corporate venturing and strategy	Scopus, Web of Science, JSTOR, Google Scholar	Corporate venturing, corporate venture capital, strategic, strateg*, business strategy, corporate strategy
Strategic use of corporate-startup engagement	Scopus, Web of Science, JSTOR, Google Scholar, Google Search	Corporate-startup engagement, engage*, collaboration*, corporate, established firm, startup*, start-up*, strateg*

[#] The asterisk sign (*) enables that all words that include the search term are accepted, including e.g. plural forms.

2.4.2 Desk research

A desk research was executed to determine the strategic sample for the interview phase. Please note that only the methodological approach is described in this section. The reader is referred to Chapter 5 for more details.

Choice of method and (dis)advantages

Purposeful sampling is important when one aims to develop an in-depth exploration of a central phenomenon (Creswell, 2013; Verschuren et al., 2010). It increases the external validity of the research. The purpose of the interviews was to collect detailed information on the strategic use of corporate-startup engagement. The interview sample should thus contain corporates that are a) actively engaging with startups and b) can share their expertise and experiences on the strategic use of startup engagements and its coupling to corporate strategy.

The assumption was made that corporates who are active on a broad range of the startup engagement spectrum are likely to show strategic behaviour. To identify this sample the startup activities of a larger group of corporates would have to be assessed. A desk research that would analyse the online reported engagement activities of corporates was considered most appropriate for this end. An advantage was that it does not yet require direct contact with research objects whose available time may be limited (Verschuren et al., 2010). Moreover, the desk research could also provide a clear viewpoint on how far the industry had generally progressed

on this topic, which set the stage for the subsequent interviews. Lastly, an advantage of desk research is that it fosters a certain level of objectivity in determination of the strategic sample. Rather than relying on personal experiences or referrals, objective requirements can be set that determine whether or not a corporate qualifies to be part of the strategic sample.

Process description

In the desk research the following steps were taken (more details are presented in Chapter 5):

1. Identification of a sample for the desk research: top-100 Dutch corporates based on annual turnover (anno 2015)
2. Identification of relevant result categories and variables to be collected
3. Development of a search query and the selection of relevant data sources and timeframe
4. Execution of the search query and data collection

A potential risk in the determination of the strategic sample by means of a desk research with secondary data is window dressing. In other words, corporates may report higher levels of startup activity than they practice in reality. Another risk is the presence of outdated data and potential differences in terminology or language. Companies may have failed to update their websites or may report their activities only in Dutch. Chapter 5 will further zoom in on these concerns and explain the measures that have been taken to reduce these risks.

2.4.3 Semi-structured interviews

To gain a deep understanding of the relation between corporate-startup engagement and corporate strategy in practice, semi-structured interviews were conducted. This section focuses on the methodological aspects of this data collection method: the choice for this method, its advantages and disadvantages, a description of the overall process and potential risks. The literature of Creswell (2013) and Harrell and Bradley (2009) provided valuable input to designing the interview phase. Please note that the exact interview sample, a detailed interview protocol and any specific measures that have been taken to ensure quality of the research will be addressed in Chapter 6.

Choice of method and (dis)advantages

Interviews were deemed most appropriate for achieving the objective of this research. Firstly, interviews are not as time-intensive as case studies which enabled a larger sample to be assessed. This in turn enhances the generalisability of the results. Secondly, interviews provide sufficient room for specific context, detailed explanations and personal views. This is a key advantage considering the aim of obtaining an in-depth understanding of the strategic practices of each firm regarding startup engagement. Considering the above, a survey or desk research were considered inappropriate.

A semi-structured set-up of the interviews was chosen. This allowed the researcher to zoom in on the theoretical notions that were developed during the literature review while also leaving sufficient room to pose follow-up questions on any emerging themes during the interviews. The ability to pose follow-up questions or request additional explanations also ensured that given answers were completely understood. From another perspective this approach gave the interviewees the opportunity to elaborate on their views and practices without being constrained by the scope of specific questions. It promoted them to speak freely. A semi-structured approach, relative to an unstructured set-up, also eased cross-interview comparisons as the same themes and questions were generally addressed.

Interviews however also have a number of disadvantages or risks. Firstly, interviews are likely to present filtered information through the eyes of the interviewees. In this specific case it was crucial that corporate representatives were interviewed that have sufficient insight in, and if possible mandate to shape, the relation between startup engagement and corporate strategy in their firm. These may concern innovation managers, innovation and venturing executives or new business development managers. C-level representatives would be a very interesting target group, but are deemed generally rather inaccessible.

Ethical aspects also pose a risk. This thesis is dealing with loaded subjects: strategy, management, disruption of existing business models, cultural change, etc. Considering that startup engagement is a field that is still heavily under development one may expect to encounter struggles and inefficient management practices. Generally people are not inclined to speak about their pains and inefficiencies and the origination of such problems. Personal interests may be involved, which has two implications for the interviews.

Firstly, to foster openness of the interviewees on their processes and experiences it was decided to guarantee anonymity of the results. The interviews have been recorded, but transcripts are not included in this report. Also, all quotes are anonymised. This concerned a decision between promoting openness among interviewees by guaranteeing anonymity versus the ability to trace back information to specific firms or persons in the results of the research at the cost of retrieving less information. Since the aim of this research is to make recommendations on the strategic use of startup engagement within corporates, it is considered important to learn more about these struggles, potential weaknesses and/or pitfalls. Interview participants should feel comfortable to share such information without worrying about the exact wording they use. It was not a goal to assess the performance of specific firm, but rather to identify from a cross-organisational perspective which strategic practices are

already in place and which areas of startup engagement are strategically underdeveloped.

A second ethical implication is that the fact that personal interests are involved may result in window dressing if the interviewee at any point feels threatened by or guilty of stating the truth. In that case interviewees may describe what they feel they should do, rather than what is actually the case. To decrease this risk the researcher has to maintain an objective and positive attitude throughout the interview. The questions should always be open-ended instead of steering. Moreover, an ice-breaker or grand tour question at the start of the interview will help to make the interviewee feel comfortable to share thoughts and experiences freely. Lastly, a face-to-face interview at the office of the corporate representative was always preferred over a telephone or Skype interview. This promoted that the interviewee would feel comfortable.

Process description

To enhance the quality of interviews, researchers should develop an interview protocol. This has to include the following (Creswell, 2013; Harrell and Bradley, 2009):

- A heading with date, place and the name of the interviewer and interviewee
- Introduction of the researcher and research
- Instructions for the interviewer to ensure standard procedures are used
- The research questions and probes:
 - An ice-breaker that stimulates the interviewee to speak freely about the topic
 - A small number open-ended main questions (preferably four or five)
 - A set of probes to follow up on the main questions and ask for more details
 - A possibility to take notes
- A final thank you statement and information on next steps

The detailed interview protocol is presented in Chapter 6 and Appendix B.

In the approach of research subjects from the strategic sample, I always aimed to address those persons within an organisation that had sufficient knowledge on the strategic context of startup engagement to foster the external validity of the research. When I contacted the subjects, as an extra check, I always explicitly asked whether that person was the right person within the organisation to elaborate on the strategic context of startup engagement and if not, if they could introduce me to their responsible colleague(s). This was done to improve the reliability of the interview results; to make sure that interviews were conducted with the right persons on the topic of interest.

In preparation of each interview, a short web search was always performed. This preliminary research was executed to ensure sufficient familiarity with the firm's terminology. It also enabled the formulation of specific probes for every interview. Lastly, to ease data processing and prevent mistakes in interpretation of only personal notes, all interviews were audiotaped. A few notes were always taken during the interview to have a back-up when the audiotape would fail.

2.5 Data analysis and synthesis

This section subsequently discusses the analysis and synthesis of the data that has been collected during the literature review, the desk research, and the semi-structured interviews. The exact details of analysis of the latter two will be discussed in their relevant chapters. In this section, only the overall methodological approach will be addressed. The section ends with a part on the overall synthesis of both the theoretical and practical results.

2.5.1 Literature review

In the literature review the analysis and synthesis phase centers around a theoretical comparison (Verschuren et al., 2010). The data collection process had resulted in identification of the key papers in the three theoretical domains: 1) open innovation and strategy, 2) corporate venturing and strategy and 3) corporate-startup engagement. In the

theoretical comparison, the first two domains were combined into one object of analysis as these papers and underlying theories showed strong overlap.

Upon reading the papers, the relevant passages were marked and notable findings were written in the margins. This process was executed repeatedly with additional comments and/or marking of key sentences within passages. Finally, short summaries of the articles were developed and compared. This resulted in the identification of key themes or propositions. The information from the summaries was subsequently rearranged according to the identified themes. The key themes and propositions that emerged from the theoretical comparison now form the headlines of the (sub)sections of Chapter 4 that presents the theoretical framework.

Once all information was written down in the according sections, another comparison started. Now, the focus was on the relations between the various themes and theoretical notions that had emerged from the literature review. This comparison required zooming out again to a slightly more abstract level. To identify relations, a great number of flow charts and visualisations was drawn. These were repeatedly compared, merged and/or revised, until the point that one holistic picture remained. This process was executed separately for both the relation between open innovation/corporate venturing and strategy, and the strategic use of corporate-startup engagement.

The last step of the literature review (see Section 4.3) concerned the synthesis of the theoretical concepts that had emerged. In this step the similarities and differences between the theoretical model on open innovation/corporate venturing and strategy on the one hand, and the lessons-learned from practice-oriented literature on corporate-startup engagement on the other hand, were discussed.

2.5.2 Desk research

To recapitulate, the desk research concerned an analysis of the startup engagement activity of Dutch corporates to identify the strategic interview sample. The first step in the data analysis was the definition of evaluation criteria. Then, the second step was to match the collected data to these criteria. The 'performance' of each firm would be scored. This resulted in a strategic sample.

After identification of the strategic sample, another important part of the data analysis in the desk research started. This focused on gaining more insight in the characteristics of firms within strategic sample, relative to other firms that were assessed. Various checks were performed to ensure that the chosen evaluation criteria indeed resulted in a representative sample for the purpose of this research. As an example, one of the variables that was collected in the desk research on the startup engagement activity of 100 Dutch corporates was their industry code. During the analysis, it was checked whether specific industries showed a high level of startup engagement activity, and if so, if these industries were sufficiently represented within the strategic sample. These checks improve the external validity of the research. More details on the analysis of the secondary data can be found in Chapter 5.

2.5.3 Semi-structured interviews

The interview data has been processed according to the procedure described by Creswell (2013). Figure 2.2 describes the steps in the analysis process. In the first step all raw audiofiles were transcribed and visuals were digitised. In the next step (step 2) all the interview transcripts were read to get an overall impression on the depth and usability of the information. For each interview five to 10 bullet points were written down with thoughts or notable results. These notes helped to kickstart the third phase in which all data was coded.

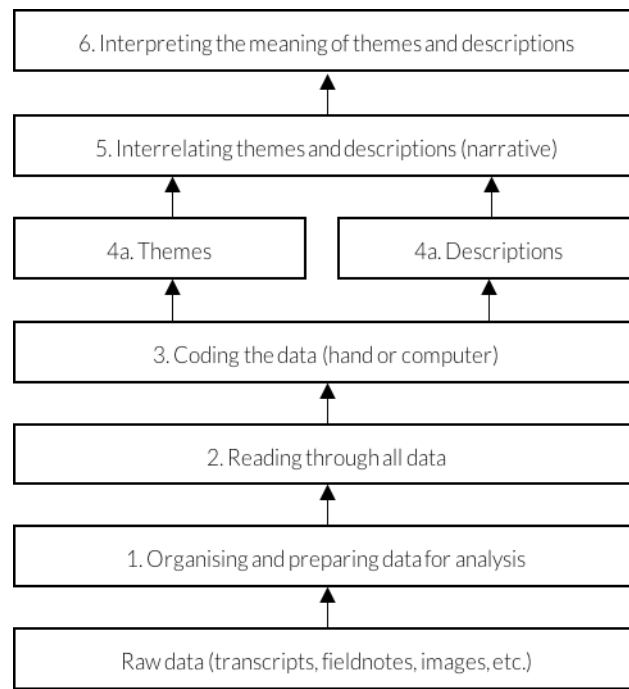


Figure 2.2: Data analysis in qualitative research Creswell (2013, Fig 9.1, adj.)

The software tool Atlas.ti was used for this part of the process. Coding involved bracketing text segments, providing a short description on the findings in that segment and attaching one or more short code-name. In a sense the third and fourth step were combined. The interview were coded one-by-one, starting with the longest transcript. As the analysis progressed, more and more text segments were added to codes and a first picture of the results started to emerge. After all files were coded, the list of codes was checked for doubles and/or potential overlap. Also some overarching themes were added to cluster related codes. By the end of the coding process a much better sense of the importance of segments was developed and the researcher could be much more specific in the selection of text segments. Based upon this notion, all transcripts were reviewed once more to refine text selections. After this process all transcripts (arranged by code) were exported, printed and put in a ring binder. The exact codes that were used in the interview data analysis can be found in Chapter 6.

The researcher then moved towards step 5, while adding more detail to phase 3 and 4. In this phase

the goal was to transform the text segments that belonged to each code into a single narrative or (sub)section in the results section (see Section 6.4). The following approach was used to interrelate the segments that belonged to specific codes and themes. Firstly, key segments were marked on the prints and relevant keywords were written down in the margins of the prints. Thereafter, these findings were clustered often in the form of writing down specific quotes in tables (in Excel or on paper). Frequently, it was tallied how many interviewees confirmed a certain topic or reported certain behaviour. This gave a good insight in the occurrence and thereby importance of specific behaviour or statements.

The results were then translated to English and written down in a narrative, frequently making use of quotes to illustrate specific findings. In some cases the narrative would also be supported with a table or visual. In these narratives, the findings would frequently be coupled to the theoretical foundation of the research. Step 5 ended with the extraction of the key findings from each code or theme. This summary was put in a frame at the top of a correspond-

ing subsection (see Chapter 6). This will guide the reader in the interpretation of the results as the subsequent narrative can be read as the support of the key findings in these intermediate summaries.

The last phase concerned a synthesis of the overall strategic use of corporate-startup engagement by the strategic sample. In this synthesis the researcher reflects on the totality of the interview findings to describe on which aspects the strategic sample was considered to act already rather strategic, which areas were considered critical and deserve immediate attention (considered very important, yet poorly addressed by most firms in the sample), and in which areas there is certainly room for improvement yet are considered less pressing (see Section 6.5). Through this synthesis, the second research question will be answered. It however will also lay the foundation for answering the third and final research question.

Please note that the *collective* status of the interview sample will be assessed and not the performance of individual firms. To exemplify: even if two firm performs excellent on a specific theme but all others fail to address it properly, this theme can still be considered a critical point of attention for the industry.

2.5.4 Discussion of results

The research concludes with a discussion of the theoretical and practical results in which the similarities and discrepancies between the two will be discussed. The synthesis of the interview results provides an important input to this step.

2.6 Scientific quality of the research

Though various measures to promote the scientific quality of the research have already been mentioned in the past sections, this section discusses the overall scientific quality of the research. Two aspects will be particularly addressed: reliability and validity (Creswell, 2013).

2.6.1 Reliability of the research

The reliability of qualitative research strongly depends on the detail in reporting the steps and procedures that the researcher has taken in execution of the research. In the previous sections of this chapter, and in Chapter 5 and 6 as many detail on the procedures as possible has been included. For the literature review the databases and keywords that have been used are reported. Also, the sequence of the search query and the process by which papers were finally selected are described in detail. Also for the desk research on the corporate-startup engagement activity of the top-100 Dutch corporates, the executed search queries are reported in great detail (see Figure 5.1 in Chapter 5). Lastly, for the interview phase the analysis protocol of Creswell (2013) was followed. The codes and themes that were extracted from the transcripts are presented in Table 6.3 in Chapter 6.

To conclude, it can be stated that the researcher has reported the approach to and execution of the literature review, data collection and data analysis in considerable detail. This fosters the replicability and therefore reliability of the research.

2.6.2 Validity of the research

Throughout the research, attention was paid to ensuring the validity of the research. Firstly, grounded theory research is characterised by a process of continuous comparison Verschuren et al. (2010). Besides that such continuous feedback loops enable the researcher to make a holistic picture of a complex situation, they also ensure that the research focuses on the 'right' topics and data sources. This continuous comparison has pushed the validity of the theoretical framework.

Another procedure that contributes to the validity of the research is the execution of a extensive desk research. This enabled purposeful or strategic sampling for the interview phase. The identification of this strategic sample increased the likelihood that interviewees within the sample would indeed be able to provide valuable insights in the strategic use of corporate-startup engagement. This was fur-

ther strengthened by actively checking throughout the interview phase if interviewees had sufficient insight in the strategic considerations of startup engagement practices at their firm. In one case, I learnt during an interview that I was talking with corporate representatives that mostly focused on the operationalisation of startup engagement rather than the strategising process. Though this interview provided valuable insights, a subsequent interview with a business development manager of the same firm was arranged to make sure sufficient insight was gained in the *strategic* considerations of the firm.

A third measure that increases the validity of the research is rooted in the reporting style. Throughout this report a rich, thick description is used to convey the findings (Creswell, 2013). A range of different perspectives is always presented before drawing conclusions. A simple yet good example is found in Section 3.1.1 which presents the definitions of a corporate and a startup, as applied in this report. This section first presents the different perspectives that are currently found, and then concludes with a synthesis. This practice of rich, thick description is even more present in the results of the interviews (see Chapter 6). By using many quotes and by offering many perspectives on a specific theme, the results become more realistic. This adds to the validity of the findings.

Fourthly, specific attention has been paid during the data analysis and synthesis to discrepancies in information. A good example illustrating this measure is found in Section 6.4.5. This section firstly explains the apparent lack of a startup engagement strategy among most of the interviewees, but actively contrasts this statement by describing that most interviewees do consider themselves 'strategic' in their efforts. By presenting contradictory evidence, the account becomes more realistic and more valid (Creswell (2013)).

Lastly, as stated by Creswell (2013) it is also important to account for the personal bias that the researcher brings to the study. Qualitative research always involves the interpretation of findings by the researcher which are shaped by his or her personal background. Personally, I was driven to undertake this research project by personal experiences with some corporate innovation managers that had given me the feeling that 'corporates had no clue what they were doing'. As co-founder of a startup myself I also frequently spoke with other startups. These regularly expressed their frustrations about collaborating with corporates. Lastly, my external supervisor is a co-founder at a company that is specialised in overcoming the difficulties in setting up collaborations between corporates and startups.

My personal experiences and the feedback of my external supervisor based on his experiences may have caused a certain bias towards considering that firms generally are non-strategic in their engagement efforts. Potentially, this could result in a certain degree of confirmation bias where one has the tendency to interpret data in a way that confirms one's personal beliefs. These risks of personal bias would be strongest in the interpretation of the interview data.

Two measures have been taken to counter this bias. Firstly, a rich and thick description was used to convey the interview results (Creswell, 2013). Herein many quotes of interviewees were included to show their choice of words and not my interpretation. Secondly, Also, it was frequently tallied how many interviewees showed a certain behaviour. By creating structure in interviewees' statements and actually counting the amount of supporters of a statement, objectivity in the evaluation of the results was promoted. Rather than combining various statements into one finding in the presentation of the results, the different perspectives and their frequency of expression are given. This will reduce the risk of personal interpretation in describing the interview results.



2.7 Chapter summary

This research aims to contribute to the strategic use of corporate-startup engagement by corporate management by exploring the relation between corporate strategy and the concepts of open innovation, corporate venturing and corporate-startup engagement. This objective will be achieved by answering three research questions. It is an exploratory and qualitative research that develops a new theory for an emerging topic. The research starts with a literature review that results in a theoretical framework. Then, two different data collection methods are used to gather industry data: a desk research and semi-structured interviews with industry repre-

sentatives. Here, the desk research is performed to purposefully and objectively determine a strategic sample for the interview phase. Considering the emergent nature of the research, there has been a reciprocal relation between data collection and literature review throughout the entire process. This continuous comparison enabled the strengthening and refinement of the theoretical framework with any emerging concepts. This chapter has presented the methodological aspects for both the data collection methods and the process of data analysis and synthesis. The chapter ended with an overview of measures that fostered the reliability and validity.

STADSHAVENS ROTTERDAM.

THE INNOVATION DISTRICT



3. RESEARCH DOMAIN

CORPORATES, STARTUPS AND CORPORATE-STARTUP ENGAGEMENT

This chapter will provide the contextual introduction to the research topic. It starts with an introduction to corporates and startups. Their definitions are presented and this section also elaborates on why corporates need startups in pursuit of innovation. Thereafter, Section 3.2 turns the attention to corporate-startup engagement. A definition is given and corporate objectives for engaging with startups will be presented. This section also introduces the various types of startup engagement and zooms in on the Dutch context. The chapter ends with a short summary.

3.1 Corporates and startups

This research revolves around the collaboration between corporates and startups. As an important starting point, this section will present a clear definition of the terms corporate and startup. In literature, papers often immediately start summing up specific characteristics of corporates and startup without clarifying their definition of these concepts. Especially the term corporate is often used - also in relation to concepts such as corporate entrepreneurship, corporate venture capital, etc. - without an accompanying statement of its definition. Also, terminology is frequently interchanged. The terms corporate, large company, established firm and incumbent are alternately used, though do not necessarily have the same meaning. Equally so are startup, small firm, NTBF (New Technology-Based Firm) and new venture or entrant. It is acknowledged that theory associated with the previously mentioned terms may indeed be relevant for this research, though emphasised that the specific applicability needs to be critically reviewed for each source.

3.1.1 Definitions

Blank and Dorf (2012) firstly make a clear distinction between a company and a startup. Herein they define a company as a permanent organisation that is designed to execute a repeatable and scalable business model. A startup on the other hand is a temporary organisation in search of a repeatable and scalable business model (Blank, 2014). This temporary character comes from the fact that as startups mature, they will slowly evolve into companies themselves. Chesbrough, who firstly introduced the concept of open innovation, supports the definitions of Blank (Chesbrough, 2014). I would like to argue that the “permanent” character of a company is questionable in this specific definition, as it is the risk of becoming obsolete that currently forces large companies to engage with startups in the first place.

The definitions of Steve Blank build upon the theory of March (1991) who makes a clear distinction between the process of exploitation (execute) and exploration (search). The explorative nature of a startup is also what sets it apart from a small

company that is focused on execution of a business model. Not every small firm is a startup; equally not every large firm is automatically a corporate (Robehmed, 2013).

Kohler (2016) also adopts the definitions of Blank, with the extension that startups are *innovative and growth-oriented* businesses in search of a repeatable and scalable business model. A focus on rapid growth among startups is also emphasised by Robehmed (2013) and Graham (2012). Robehmed (2013) further refines the discussion by putting forward that it is not necessary for a startup to have a technological orientation. Technical solutions generally provide more opportunities regarding scalability, contributing to the fact that many startups are tech-oriented, but this does not mean that startups must be tech-oriented.

Lastly, literature frequently uses the terms established firm or incumbent in relation to corporates, and new venture or entrant when referring to startups. The only definition associated to one of these terms that was found during the literature review is stated by Chandy and Tellis (2000). They define an incumbent as a firm that “manufactured and sold products belonging to the product category that preceded the radical product innovation”. Their paper however strongly focuses on the effects of incumbency on radical product innovation, which could result in a bias towards product innovation in their definition. Merriam-Webster Dictionary (2016) describes an incumbent as “one that occupies a particular position or place”. One

could say that the use of “permanent organisation” in the definition of Blank and Dorf (2012) is related to the concept of an incumbent or established firm. In line with the reasoning of Robehmed (2013) regarding firm size, one could also argue that for the terms new ventures and entrant the logic does not necessarily work in both directions. Startups are new ventures and entrants, though not every new venture or entrant is by definition also a startup.

In consideration of these different definitions and perspectives, the definitions of corporate and startup that will be used in the remainder of this report are:

Corporate. An established organisation that is designed to execute a repeatable and scalable business model.

Startup. A temporary and growth-oriented organisation in search of a repeatable and scalable business model.

3.1.2 Why corporates need startups

To provide some strategic context, this section aims to give more insight in the underlying ‘why’ of corporate-startup engagement. Literature describes a multitude of barriers that slow down or hinder corporate innovation, which in turn drives the need to collaborate with agile and innovative startups.

Figure 3.1 shows eight key sources of corporate inertia and inability to radically innovate that have been extracted from literature. Most of these sources can be traced back to the inherent friction

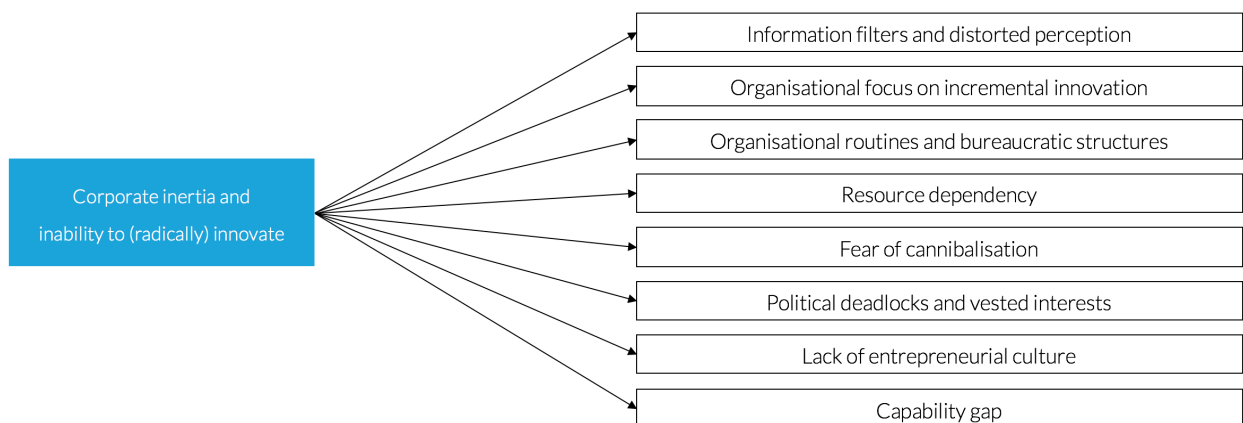


Figure 3.1: Eight sources of corporate inertia and/or inability to radically innovate

between exploration and exploitation as defined by March (1991). March pointed out that organisations face the challenging task to engage in sufficient exploitation to ensure current revenues, while at the same time devoting enough energy and resources to exploration to ensure their future viability (Ferrary, 2011; Hill and Rothaermel, 2003; March, 1991). Corporates thus need to engage with startups because their organisations tend to be focused on advancing their current business rather than exploring new business areas. This focus causes corporate cognition, strategy, structures and capabilities to be geared towards exploitation. The result is inertia and an overall inability to radically innovate.

The remainder of this section will shortly elaborate on each of the sources mentioned in Figure 3.1. Please note that these sources are often intertwined and mutually reinforcing.

Information filters and distorted perception

Firstly, dominant logic may form a cognitive barrier to radical corporate innovation. It can be viewed as an information filter that causes organisational attention to be focused only on data deemed relevant by the dominant logic (Bettis and Prahalad, 1995). It results in a situation where the information that is incorporated in or filtered out of corporate decision-making processes is misleadingly influenced by the success of the established business (Hill and Rothaermel, 2003). Chandy and Tellis (2000) also explicate how cognitive structures of incumbents result in the discardment of information that is not related to core activities. Bettis and Prahalad (1995) even describe the existence of an unlearning curve: to move to a new equilibrium, old logic must be unlearned. Hill and Rothaermel (2003) describe how dominant logic results in a lack of absorptive capacity, which is an organisation's ability to recognise the value of new information, assimilate it, and apply it to commercial end.

Closely related to dominant logic is the concept of distorted perception as described by Rumelt (1995). It includes:

- *Myopia*. A strong organisational focus on only short-term consequences and a rational disbelief in future threats or opportunities.
- *Denial*. The rejection of information contrary to what is desired or believed to be true.
- *Hubris*. Taking an overweening pride in past accomplishments or wrongfully associating past success with factors that bear no causal relationship may result information filtering.

Hill and Rothaermel (2003) also point out macro-cultural homogeneity as another information filter: the shared beliefs about customers, technologies, and the best way to compete.

Focus on incremental innovation

Corporates tend to focus on efficiently carrying out activities based on current technology or their current business model, rather than embracing radical innovations that render the routines that contributed to the current success obsolete (Chandy and Tellis, 2000; Stringer, 2000; Chesbrough and Rosenbloom, 2002).

Hill and Rothaermel (2003) state that incumbents' efforts are strongly geared towards incremental innovations in order to maximise the returns from known technologies, rather than devoting resources to pioneering technologies with uncertain payoff. Firms' efforts tend to center around sustaining technologies that foster improved performance of existing products or services in attributes that current customers value. They tend to avoid disruptive technologies that may lead to worse product performance for mainstream customers, even though it offers a new and/or improved value proposition for non-mainstream customers (Bower and Christensen, 1995; Stringer, 2000).

Organisational routines and bureaucratic structures

The focus on efficiency, incremental and sustaining innovations, and exploitation may also result in the development of bureaucratic structures (Hill and Rothaermel, 2003). Rumelt (1995) also points to embedded routines as a source of process iner-

tia. Valued for their reliability and stability, corporates tend to develop bureaucratic processes and routines that enhance these attributes. In stable environments bureaucratic systems and procedures drive efficiency, but in dynamic environments these core competencies quickly turn into core rigidities (Hill and Rothaermel, 2003). Chandy and Tellis (2000) also emphasise how more layers of administration and formalisation slow down the speed of innovation.

In dynamic environments core competencies quickly turn into core rigidities.

Resource dependence

Another source of inertia is found in resource dependence theory. Though a company might sense the world is changing, it may be difficult to reallocate resources fast enough to capitalise on the opportunity. Strategic commitments to an existent value network of suppliers, customers, etc. for example may act as constraints (Stringer, 2000; Hill and Rothaermel, 2003; Christensen, 2013).

Fear of cannibalisation

Rumelt (1995) writes off organisations' inability to radically innovate to a lack of incentive that follows the direct costs of change. This includes increased risks of organisational failure, the abandonment of sunk costs and a fear of cannibalising current sales. Nijssen et al. (2005) and Chandy and Tellis (1998) even argue that willingness to cannibalise is the key variable in explaining companies' ability to radically innovate. This multidimensional construct describes the extent to which a firm is prepared to reduce the actual or potential value of its 1) investments (e.g. manufacturing equipment), 2) capabilities (e.g. current skills, routines, procedures) and/or 3) sales.

Power and politics

Power and politics also forms part of the explanation. Hill and Rothaermel (2003) describe how an organisation can be viewed as a coalition of various

interest groups competing for control over scarce resources. In times of stability, the organisation settles in a truce. Radical innovation would require a redistribution of power and influence and breaking of the truce, which triggers political behaviour. Rumelt (1995) also describes a set of political deadlocks resulting in inertia. These concern departmental politics, incommensurable beliefs when individuals or groups hold sincere but differing beliefs about the nature of a problem or its solution, and vested interests. Vested interests concern strong emotional or value attachments to products, policies or ways of doing things, and can become a great impediment to change. Freeman and Engel (2007) also point out the contribution of principal/agent problems to organisational inertia.

Lack of entrepreneurial culture

Corporate managers are often incentivised and evaluated based on placing the right bets. This promotes risk-averse behaviour. Corporate decision processes may treat choices more favourably when they fit the timeframe and risk profiles that characterise on-going business (Bower and Christensen, 1995; Freeman and Engel, 2007). This also means that corporate entrepreneurs involved in pushing innovations forward often have to take significant risks, while corporate incentive structures often lack the extraordinary rewards matching this risk exposure (Freeman and Engel, 2007). Moreover, the contributions of individuals get diluted in large corporations, causing innovators to be less able to capture the benefits of their efforts and have fewer incentive to develop and commercialise radical innovations (Chandy and Tellis, 2000). These factors explain a lack of personal commitment among senior managers and corporate equity holders to push radical innovations. This can slow down the innovation process inside corporates (Freeman and Engel, 2007).

Moreover, the above-mentioned factors may all contribute to innovators getting frustrated inside corporations, finally causing them to leave the company (Freeman and Engel, 2007).

Corporate culture can act as a powerful stabilising influence. Radical innovation would destabilise and threaten the 'old way of working' and is often discouraged in corporates (Stringer, 2000).

Capability gap

Finally, according to Rumelt (1995), inertia can also be caused by a capability gap regarding the tasks that need to be performed by an organisation and the capabilities required to perform those tasks.

3.2 Corporate-startup engagement

This section will introduce the concept of corporate-startup engagement in more detail. Firstly, in Section 3.2.1 a definition of the construct will be given, followed by a description of objectives for corporate-startup engagement in the section. Then, an overview of different types of corporate-startup engagement is presented. Section 3.2.4 lastly, elaborates specifically on the Dutch context.

3.2.1 Definition

Corporate-startup engagement has only recently emerged in innovation literature. Among the first, Weiblen and Chesbrough (2015) introduced the concept of 'corporate engagement with startups' to emphasise the variety of ways that are available to corporates nowadays to engage with startups. They describes how traditional equity-based models as corporate venture capital and corporate incubation, are nowadays complemented by lightweight startup programs that enable corporates to engage with large amounts of startups. Since then, the term corporate-startup engagement is used more and more often, though no author - in both scientific and non-scientific resources - appears to have presented a clear definition of the concept yet.

OpenAxel (2016) view corporate-startup engagement as the set of interactions between startups and corporates. Kohler (2016), Bonzom and Netessine (2016), and Arthur D. Little et. al (2016) also do not present a definition, but immediately start summing up the various engagement vehicles that they consider part of the corporate-startup

engagement spectrum (ranging from mergers and acquisitions to events to accelerator programs). Mocker et al. (2015) and Bannerjee et al. (2015) rather use the term corporate-startup collaboration, but do frequently use the term 'engagement' in their paper to describe these collaborations.

In my opinion the term corporate-startup engagement is more suitable than the term corporate-startup collaboration to describe current-day interactions between corporates and startups. The term collaboration tends to point towards more formalised interactions, while the term startup engagement covers collaborations but also the more lightweight interactions such as competitions or events (which may in turn lead to collaborations). I would also like to argue that the powerful message associated with the term engagement is appropriate to this end. It emphasises the need for meaningful and impactful interactions; mutually beneficial to both corporates and startups. Use of the term corporate-startup engagement thereby reflects both the breadth and strategic importance of startup-related activities. The following definition will be used in this report:

Corporate-startup engagement. The corporate act of creating, interacting with, collaborating with, investing in and/or acquiring startups.

Even though this definition has a strong corporate perspective, it does not mean that startups have no role or responsibility in engagement. Corporate-startup engagement clearly is two-way traffic and startups may just as often take the lead in setting up a collaboration as corporates. The specific term corporate-startup engagement is however mainly used in corporate context to refer to the entire set of startup engagement activities that is undertaken by a corporate.

3.2.2 Objectives for corporate-startup engagement

In this section corporate objectives that drive startup engagement are pointed out. These have been extracted from following scientific and non-

Table 3.1: Corporate objectives to engage with startups; last two columns represent presence in corporate venturing (CV) and/or corporate-startup engagement (CSE) literature

Objectives	Sources	CV	CSE
To advance the corporate's ecosystem and boost the development of complementary products and/or services	(Campbell et al., 2003; Chesbrough, 2002; Weiblen and Chesbrough, 2015)		
To exploit a corporate's under-utilised technology and/or spare resources (harvesting)	(Campbell et al., 2003; Chesbrough, 2002; Hill and Birkinshaw, 2008; Weiblen and Chesbrough, 2015)		
To gain strategic insight in and/or access new technologies, markets and business opportunities	(Campbell et al., 2003; Hill and Birkinshaw, 2008; Weiblen and Chesbrough, 2015; Arthur D. Little et. al, 2016; Bannerjee et al., 2015; Mocker et al., 2015)		
To expand to new markets and customer segments	(Chesbrough, 2002; Arthur D. Little et. al, 2016; Bannerjee et al., 2015; Weiblen and Chesbrough, 2015; Bonzom and Netessine, 2016)		
To create a positive financial return	(Campbell et al., 2003; Chesbrough, 2002; Hill and Birkinshaw, 2008; Weiblen and Chesbrough, 2015; Arthur D. Little et. al, 2016)		
To develop back-up technologies and/or alternative business models	(Campbell et al., 2003; Chesbrough, 2002)		
To innovate existing products, services and/or internal processes or solve business problems	(Weiblen and Chesbrough, 2015; Arthur D. Little et. al, 2016; Bannerjee et al., 2015; Mocker et al., 2015; Bonzom and Netessine, 2016)		
To stimulate an entrepreneurial culture and development of innovation capabilities among employees	(Arthur D. Little et. al, 2016; Bannerjee et al., 2015; Mocker et al., 2015; Bonzom and Netessine, 2016)		
To foster an innovation-driven image and reputation	(Arthur D. Little et. al, 2016; Bannerjee et al., 2015; Mocker et al., 2015)		
To attract and/or retain entrepreneurial talent	(Arthur D. Little et. al, 2016; Bannerjee et al., 2015; Mocker et al., 2015)		

scientific literary sources: Campbell et al. (2003), Chesbrough (2002), Hill and Birkinshaw (2008), Weiblen and Chesbrough (2015), Arthur D. Little et. al (2016), Bannerjee et al. (2015), Mocker et al. (2015), and Bonzom and Netessine (2016). The purpose of this section is not to present a comprehensive summary, but to provide a basic insight in the strategic drivers of corporate-startup engagement.

Some of these objectives are extracted from literature that is focused on corporate venturing (Campbell et al., 2003; Chesbrough, 2002; Hill and Birkinshaw, 2008). As corporate venturing is considered

a specific type of corporate-startup engagement (see Section 3.2.3) these objectives are deemed a relevant input in constructing this overview.

An overview of objectives and their literary sources is presented in Table 3.1. Please note that the presented objectives show some overlap and can be mutually reinforcing. For example, an enhanced reputation as innovative corporation will also foster the attainment and attraction of talent. In the overview it also shown whether each objective is mentioned in literature on corporate venturing, on corporate-startup engagement, or in both. One can see that the objective of the development of



Figure 3.2: Overview of how different types of startup engagement serve different strategic corporate objectives (Arthur D. Little et. al, 2016)

back-up technologies and/or new business models is only explicitly mentioned in corporate venturing typologies. The table also shows that recent corporate-startup engagement literature describes a much wider array of objectives than the corporate venturing literature. More recent literature points out various new objectives that do not directly drive innovations such as image enhancement, culture or the attraction of talent. A new category of drivers to engage with startups seems to have surfaced. Figure 3.2 shows that practice-oriented literature even point to these 'indirect' objectives as the primary drivers of specific types of startup engagement.

3.2.3 Types of corporate-startup engagement

This section will provide an insight in the different types of corporate-startup engagement that exist. As was already emphasised in Section 3.2.1 the construct has a very broad nature and overarches a wide variety of activities. Table A.1 in Appendix A presents five views on types of corporate-startup engagement that were extracted from recent practice-oriented literature. Building upon and combining the typologies presented in this appendix, seven main types of startup engagement are defined:

- *Events, competitions and challenges.* Organising or sponsoring engagements with a short duration such as e.g. conferences, hackathons, challenge prizes, etc.

- *Sharing resources and/or knowledge.* Setting up co-working spaces, sharing research facilities and/or offering mentoring programs to support startups with access to resources and/or knowledge
- *Platform-based startup programs.* A lightweight governance program for startups to spur complementary external innovation in order to push an existing corporate innovation (the platform)
- *Outside-in startup programs.* Semi-structured support programs with a limited role of funding that are pursued to interact with large amounts of startups
- *Incubation and acceleration.* Structured support programs that nurture and advance a limited number of startups in the validation and development of an idea to a business proposition in exchange for equity
- *Corporate venturing.* Direct or indirect investments of corporate financial resources in startups for strategic or financial reasons
- *Mergers and acquisitions.* Acqui-hires or buying startups to acquire technology and/or capabilities

Corporate venturing

Since part of the theoretical framework will draft information from the relation between corporate venturing and strategy, this engagement type will be addressed in slightly more detail. Looking at

the domain of corporate venturing, considerable ambiguity exists regarding its definition and scope (Narayanan et al., 2009). Some describe corporate venturing as a purely external activity with taking equity stakes in startups as its predominant feature, while others distinguish between internal and external venturing. Moreover, some include the creation and nurturing of new businesses, while others restrict their definition to investments only.

Kohler (2016) and Weiblen and Chesbrough (2015) view corporate venturing as part of the broader context of corporate-start-up engagement in addition to e.g. startup programs, corporate incubation, corporate hackathons, and mergers and acquisitions. Herein corporate venturing enables corporates to participate in the success of external startups and provides access to non-core markets and capabilities. Weiblen and Chesbrough (2015) explicitly view corporate venturing as a more traditional approach to corporate-startup engagement, whereby influence is predominantly executed through taking equity stakes in promising external start-ups. They however emphasise that corporate venture capital investments not only serve the pursuit of financial returns, but may also support their parent's strategic goals.

In this report, corporate venturing will be considered the direct or indirect investment of financial resources in startups in pursuit of financial and/or strategic objectives.

3.2.4 Corporate-startup engagement in The Netherlands

Corporate-startup engagement is a hot topic in The Netherlands. The Dutch have made corporate-startup collaboration a nationwide topic of interest with the introduction of the StartupDelta initiative by Secretary Kamp of Economic Affairs in 2014 (Rijksoverheid, 2014). StartupDelta is a collaboration of government bodies, knowledge institutes, startups, financiers and businesses that aims to develop and position the startup ecosystem in The Netherlands as one of the top-three attractive startups ecosystems in Europe.

Via a connection to all layers of government, corporations and the main innovation hubs, StartupDelta aims to merge the Dutch startup ecosystem into one single connected hub. They focus on breaking down barriers and improving access to talent, capital, networks, knowledge and markets. Improving the effectiveness of corporate-startup collaboration is deemed crucial in attaining these ambitions. In the area of corporate-startup engagement, StartupDelta's action plan for 2017 focuses on lowering the barriers of corporates as launching customers for startups by raising awareness of the business community and by stimulating business deals by expanding matchmaking concepts (StartupDelta, 2016a).

One of the 'tools' to realise these ambitions is the Costa initiative. In May 2016, the Costa initiative - as a merger of the words 'corporate' and 'startup' - was specifically launched to improve corporate-startup collaboration (Sluijters, 2016; StartupDelta, 2016b). As part of this initiative delegates from top management of renowned corporates in The Netherlands - among which KPN, Shell, AkzoNobel, Eneco, ING and KLM - met a few times a year to share their best and worst practices. Three key themes were governance, startup engagement and corporates in the role of launching customer (Innovation Quarter, 2016).

Another interesting initiative is TekDelta; a joint initiative of Dutch corporates, knowledge institutes and the startup community. It aims to make technological support, corporate expertise and networks accessible for tech startups in a fast, free and startup friendly way (TekDelta, 2016).

In response to these initiatives an increase in Dutch corporates committing themselves to startups is notable over the past few years. For example, in 2015, various large corporates announced to dedicate millions to startup engagement among which: 100 million Euros by Eneco, 35 million Euros by KPN and 5 million Euros by NS (Emerce, 2015a,b; ANP, 2015). Corporate interest in startup engagement has increased, yet many appear to be experimenting without clear objectives.

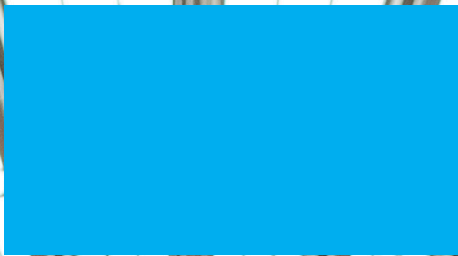


3.3 Chapter summary

Corporate-startup engagement is the corporate act of creating, interacting with, collaborating with, investing in or acquiring startups. In this definition a corporate is an established organisation that is designed to execute a repeatable and scalable business model. A startup on the other hand is a temporary and growth-oriented organisation in search of a repeatable and scalable business model. Collaboration between corporates and startups can be a valuable source of radical innovation for corporates as their cognition, strategies, structures and capabilities tend to be focused on exploitation instead of the exploration.

A multitude of objectives exists for corporates to engage with startups ranging from advancing existing or new business to fostering an entrepreneurial culture or innovative image. As the definition of corporate-startup engagement already displays, the construct covers a wide range of activities. In this research seven different types of engagement are distinguished. When looking at the Dutch context, corporate-startup engagement is definitely a hot topic. Supported by a variety of governmental initiatives a strong increase in corporate interest and startup activity is notable.





4. THEORETICAL FRAMEWORK

CONCEPTUALISING THE STRATEGIC USE OF CORPORATE-STARTUP ENGAGEMENT

This chapter has the purpose of developing a theoretical framework based on an extensive literature review. Firstly, Section 4.1 will describe the relation between open innovation and corporate venturing on the one hand and strategy on the other hand. This section strongly builds on scientific literature. The information in Section 4.2 then focuses on recent and more practice-oriented literature on corporate-startup engagement to identify advice on its strategic use. Lastly, Section 4.3 present a chapter summary.

4.1 Open innovation/corporate venturing and strategy

There is an urgent need to connect both open innovation and corporate venturing to strategy (Vanhaverbeke et al., 2017; Vanhaverbeke and Roijakkers, 2013; Birkinshaw et al., 2002; Schneckenberg, 2015; Vanhaverbeke and Peeters, 2005; Covin and Miles, 2007). The first three subsections of this section will focus on the core themes that arise in describing the relation between open innovation/corporate venturing and strategy, namely the need for: 1) reciprocity, 2) strategic objectives and differentiation according to purpose and 3) open strategy. Thereafter, Section 4.1.4 will present an example (DSM) in which the above three themes are put into practice. The section ends with a synthesis of the findings. This will provide the first part of the answer to the first research question.

4.1.1 Reciprocity of open innovation/corporate venturing and strategy

Literature points towards a reciprocal relation between open innovation and corporate venturing on the one hand and (corporate) strategy on the other hand (Burgelman, 1983; Vanhaverbeke et al., 2017; Vanhaverbeke and Roijakkers, 2013; Covin and Miles, 2007; Birkinshaw et al., 2002; Vanhaverbeke and Peeters, 2005).

In one way corporate strategy may direct open innovation and corporate venturing efforts in an attempt to close the gap what the organisation is and what it intends to be (Vanhaverbeke and Peeters, 2005; Vanhaverbeke and Roijakkers, 2013). Vanhaverbeke and Peeters (2005) describe how a strategic vision drives accompanying competence building by showing the misfit between existing resources and capabilities and those required to live up to its goals. Covin and Miles (2007) describe

how strategy can provide meaningful and purposeful context which can both drive and constrain innovative pursuits. Strategy can specify the direction of innovative activity by identifying domains of potential future competitive advantage. Burgelman (1983) also describes in his strategy-structure model how corporate strategy can guide and induce strategic behavior in firms. Such innovative efforts are fitted to current concept of strategy through the structural context (see Section 1.3.2).

The other way around, open innovation and new competence building can drive and refine the cognition of (future) corporate strategy. Strategy and competences co-evolve (Vanhaverbeke and Peeters, 2005). With each new venture interaction a company learns more about new technologies, applications and new markets, which sharpens the recognition of new strategic opportunities (Vanhaverbeke and Roijakkers, 2013). This principle aligns with the need for identification of strategic context as described in the strategy-structure model of Burgelman (1983) in Section 1.3.2. Strategic context captures relevant changes in the environment.

Covin and Miles (2007) describe how organisations with an reciprocal relation between corporate venturing and strategy are characterised by a high organisational willingness to acknowledge and encourage emergent innovation and opportunity-driven redefinition of corporate strategy. Firms need to retroactively rationalise innovative activity and assess the need for redefinition of corporate strategy. A strategic vision can be considered continuously moving target in innovation (Vanhaverbeke and Roijakkers, 2013).

A strategic vision can be considered a continuously moving target in innovation.

These arguments closely relate to the theory of emergent strategy by Mintzberg and Waters (1985) that has been described in Section 1.3.2. An intended corporate strategy can guide innovation efforts, but as execution of strategy progresses emergent strategies may surface. The process of reconciling intended strategy with emerging concepts results in strategic learning.

Configurations of corporate venturing and business strategy

This section addresses the study of Covin and Miles (2007) on the relation between corporate venturing and business strategy in more detail. In the paper they start out by arguing that many of the struggles of corporates to employ corporate venturing for long-term growth relate to managerial uncertainty on how to operationally link corporate venturing to the firm's overall strategic process and agenda. By performing a study on the potential configurations between corporate venturing and business strategy, Covin and Miles contributed to an increased understanding of how corporate venturing can be used as a strategic tool. Figure 4.1 and Table 4.1 show and describe the five configurations of the corporate venturing - business strategy relationship. In Table 4.1 the configurations are accompanied by the most important lessons-learned from Covin and Miles' field study.

These configuration can be related to the earlier introduced theoretical concepts of emergent and autonomous strategy of Mintzberg and Waters (1985) respectively Burgelman (1983). Model 1 and 3 are closely tied to purely emergent strategies, while model 2 represents a fully deliberate strategy. Model 4 and 5 focus on a mixture of deliberate and emergent strategy and the concept of strategic learning or reciprocity. Equally, for the strategy-structure model of Burgelman (1983), model 1 of Covin and Miles represents the absence of a connection between induced and autonomous entrepreneurial behaviour. Model 2 focuses only the induced component of corporate strategy,

¹ Unfortunately they do not define what they exactly mean with the term 'business strategy'. Based on the contents of the paper it was assumed they referred to corporate strategy.

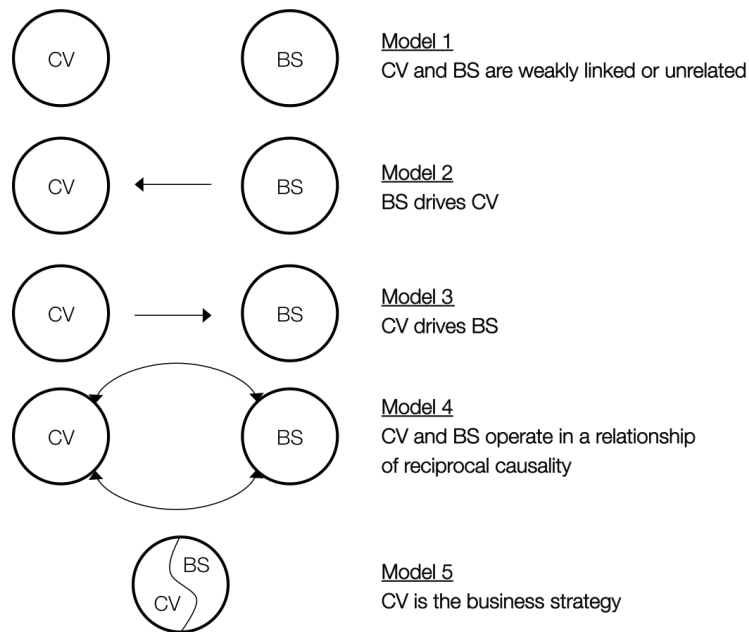


Figure 4.1: Configurations of corporate venturing (CV) and business strategy (BS) (Covin and Miles, 2007, Figure 1, adj.)

while model 3 relies only on the autonomous component for strategic definition of corporate strategy. Model 4 and 5 again focus on the dynamic relation between induced and autonomous behaviour, or structural and strategic context.

Table 4.2 shows nine propositions on strategic use of corporate venturing that Covin and Miles present in their study. Though they emphasise that all five configurations are found to exist in practice, they argue that effective integration of corporate venturing and organisational strategy is vital for long-term corporate renewal (i.e. model 4 and 5). The developed propositions in Table 4.2 underline this argument. Among others, proposition 2, 3 and 4 point to the need for reciprocity of corporate venturing and business strategy. Proposition 5 points to the role of corporate venturing in strategic learning and the recognition of new strategic opportunities. They propose that corporate venturing enables corporates to experiment with new value propositions relating to new strategies and/or markets. The external expertise and technologies that is captured by means of corporate venturing can be subsequently internalised into strategically relevant organisational knowledge.

To conclude it can be said that the findings of Covin and Miles align with findings present earlier in this chapter.

4.1.2 Strategic objectives and differentiation according to purpose

To successfully pursue open innovation or corporate venturing one needs to set and pursue clear objectives (Vanhaverbeke and Roijakkers, 2013; Covin and Miles, 2007; Vanhaverbeke and Peeters, 2005; Campbell et al., 2003; Chesbrough, 2002; Hill and Birkinshaw, 2008).

Vanhaverbeke and Roijakkers (2013) point out that open innovation activities with implications for corporate growth in new areas play a distinctively other role than those with an impact on existing business. Developing new businesses or strengthening existing businesses sets different requirements for open innovation and they need to be organised and managed differently. Initiatives that advance existing businesses are almost automatically conceived within the existing strategic context. Therefore, only the focal business unit or a small group of business units need to be involved. Also, existing business development is geared towards short-term

Table 4.1: Five configurations of the relationship between corporate venturing and business strategy: description and lessons-learnt from practice (Covin and Miles, 2007)

#	Description	Lessons-learnt from practice
1	Corporate venturing activities and business strategy exist as largely independent phenomena within the organisation. Venturing activities show a strong emergent nature (e.g. not induced by business strategy) and are ignored or discouraged by the organisation.	<p>Separating innovation units from those responsible for the corporation's core operations can facilitate the achievement of objectives within each unit, yet can create barriers to innovation transfer and/or may lead to the pursuit of strategically irrelevant innovations.</p> <p>A corporate may support corporate venturing initiatives financially and 'in principle' (e.g. by setting up a venturing unit), but may fail to acknowledge and realise the strategic relevance.</p> <p>Financially-driven corporate venturing without input of corporate management on the scope of investment and strategic relevance is unlikely to result in strategic value.</p>
2	A causal and unidirectional relation exists whereby business strategy drives corporate venturing efforts. Strategy designates specific areas for innovation and venturing within a planned domain and is not responsive to emergent venture initiatives. Organisations may fail to perceive the need for redefinition of corporate strategy.	Support for emergent entrepreneurial initiatives may be contingent upon the executive committee's perception of what supports the current 'concept of strategy'.
3	This model describes purely opportunity-driven and emergent strategy. Business strategy emerges and is continuously redefined in response to venturing initiatives. Corporates may risk diversifying into unrelated domains and the continuous redefinition of strategy may lose any resemblance of strategy over time.	Diversifying into many new strategic directions may result in the erosion of a firm's position in its core business(es).
4	Corporate venturing and business strategy exist in a relationship of reciprocal causality. Strategy provides a meaningful and purposeful context and direction for innovative pursuits. At the same time, there is a high organisational willingness to acknowledge and encourage emergent innovation and opportunity-driven redefinition of corporate strategy.	<p>The presence of informal, two-way and direct communications channels between top management and lower level corporate entrepreneurs facilitate the free flow of unfiltered information.</p> <p>Firms' need to manoeuvre purposefully, yet opportunistically, through markets is best served when all organisational members have a role in tightly linking strategy formation and entrepreneurial processes.</p>
5	A situation in which corporate venturing is core to a firm's definition of strategy. It is an extension of model 4 with the important distinction that organisations operating under model 5 manifest so-called deep entrepreneurship. Entrepreneurship is an important shared value across the entire organisation.	The strategic interests of the corporate are best served when stakeholders from across the organisation regularly interact in the identification and pursuit of entrepreneurial opportunity.

Table 4.2: Nine strategic propositions on the relation between corporate venturing and business strategy (Miles and Covin, 2007)

#	Firms that strategically use corporate venturing (CV) are more likely than their non-strategic counterparts
1	... to set formal CV objectives.
2	... to recognize the role of CV in the realization of strategic intent.
3	... to place a greater weight on “strategic fit” or “strategic logic” than on financial analyses when evaluating corporate venturing initiatives.
4	... to consciously assess the strategic relevance of CV initiatives.
5	... to treat CV as a learning tool.
6	... to facilitate “strategic conversations” within their organizations.
7	... to make external CV investments as complements to internal R&D investments.
8	... to engage in CV as means for appropriating greater value from their existing competencies.
9	... to recognize and exploit the potential of CV initiatives to create new competitive games or new market spaces.

growth targets. In contrast, emerging business initiatives, i.e. the creation of new growth areas, requires active alignment with corporate strategy. Open innovation efforts focused on new business almost by definition reach beyond existing capabilities and drive competence building. Associated goals are long-term, and the involvement of all parts of the firm is required to ensure that relevant knowledge is centralised in one place. Based on these considerations, Vanhaverbeke and Roijakkers pose that open innovation initiatives should be differentiated according to their strategic purpose. Birkinshaw et al. (2002) also emphasises that corporate venturing should always be considered as ‘one’ approach to corporate development along side many others; it is not a stand-alone activity.

Typologies

Typologies can provide a useful tool in the differentiation of activities according to purpose. Few open innovation typologies were found in literature. Phillips (2010) did present one. It has a strong focus on participants in open innovation initiatives. Four applications of open innovation are distinguished by the type of instructions given to participants and the extent of participation (see Figure 4.2). Herein instructions for idea submission can be either very broad or absent (suggestive) or very specific (directed). Regarding participation, specific persons or groups can be invited or an open innovation initiative may be open to everyone. No open innovation typologies were found that distinguish different efforts according to strategic purpose.

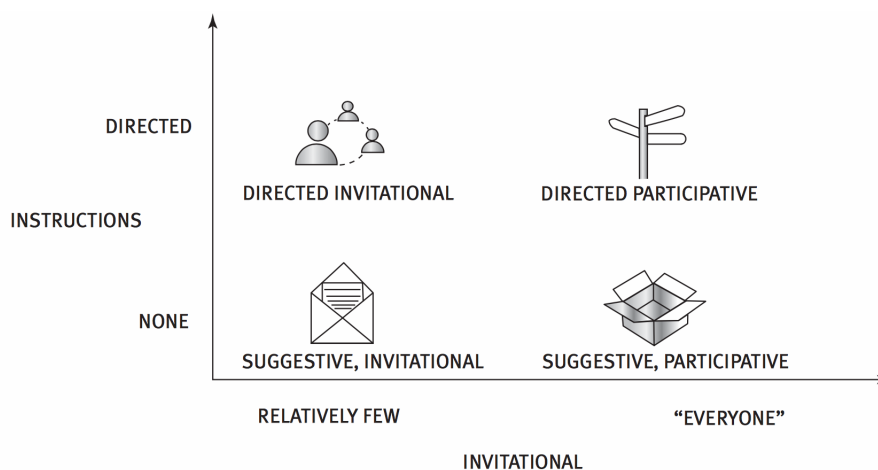


Figure 4.2: Open innovation typology (Phillips, 2010, pag. 177)

Within the corporate venturing domain strategy-oriented typologies do exist. More specifically, Chesbrough (2002), Hill and Birkinshaw (2008) and Campbell et al. (2003) are scholars that have developed corporate venturing typologies based on the strategic purpose of venturing activities. In all three papers the authors emphasise that ambiguous or mixed objectives lead to failure of venture units on the long term. Different venturing models may mutually exist within an organisation, but within each model one should be focused on a single objective. Campbell et al. even define different business and operating models for different types of venturing. For each venturing objective they describe among others the required degree of autonomy from the core business and the required skill set.

Ambiguous or mixed objectives lead to failure of venture units on the long term.

The typologies of Chesbrough, Hill and Birkinshaw and Campbell et al. all discern four main objectives/types of corporate venturing. In Table 4.3 the main characteristics of these typologies have been summarised. The model of Hill and Birkinshaw (2008) seems to align with the argument of Vanhaverbeke and Roijakkers (2013) that was described in Section 4.1.1, namely to pay attention to the difference between exploration and exploitation (or in other words, strengthening the core versus developing new business). The other two models also frequently describe for venturing types whether they advance existing or new business yet they do not explicitly use this as a discerning characteristic.

Interestingly, while Chesbrough (2002) points out the dangers of mixed messages, the category of emergent investments he describes itself seems to contain mixed objectives. Chesbrough describes that emergent investments can foster the growth of both a firm's current and future business de-

pending on the application: leveraging underutilised technology (current business) or e.g. exploring strategic whitespace or developing back-up technologies (future business). In line with Vanhaverbeke and Roijakkers (2013) one could argue that these objectives are distinctively different and may not be reconcilable within one category. Also, Chesbrough describes that emergent venturing focuses on both financial and (underlying) strategic objectives. This also points to the presence of mixed objectives. Based on these insights I would like to argue that the typology of Chesbrough, more specifically the category of emergent investments, may need further refinement.

Another interesting notion is presented by Campbell et al. (2003). They argue that 'new leg venturing' - venturing with the pursuit of significant new growth opportunities for the firm - is not a feasible objective for corporate venturing. This statement contrasts other theories. They describe that they did not find a feasible business model associated with this objective. As a potential reason for the witnessed failure of business units with 'new leg' objectives Campbell et al. points out that venturing units with this objective generally focus low-probability projects in the first place. Also, because these new ventures are often developed within a separate unit, they attract little attention or commitment from the core business. Business cycles of new business development are lengthy, causing managers to draw back before enough resources have been committed. Moreover, as new business units grow they start to compete with the core business. And overall, early-stage venturing is a tough environment.

Covin and Miles (2007, p. 196) did not develop a corporate venturing typology but did look at configurations of the corporate venturing and strategy relationship. They state that firms who "strategically use corporate venturing in relation to their nonstrategic counterparts are more likely to place a greater weight on 'strategic fit' or 'strategic logic'



Table 4.3: Corporate venturing typologies

Model	Type of categorisation	Typology; objective
Chesbrough (2002)	Quadrant with two axis. <i>Corporate investment objective on horizontal axis:</i> either strategic logic (exploit synergies that advance existing business) or financial logic (including strategic options on future business). <i>Operational relatedness on vertical axis:</i> tight or loose.	Driving investments (strategic/tight): advance or sustain current business
		Enabling investments (strategic/loose): complementary strategy of current business
		Emergent investments (financial/tight): provide opportunity to explore potential new business but immediate benefits of financial returns
		Passive investments (financial/loose): purely focused on financial returns
Hill and Birkinshaw (2008)	Quadrant with two axis. <i>Locus of opportunity on horizontal axis:</i> either internal (e.g. R&D or internal knowledge sharing) or external (e.g. acquisitions, alliances, joint ventures). <i>Strategic logic on vertical axis:</i> exploration or exploitation.	Internal explorer (exploration/internal): nurturing and funding of in-house opportunities to be developed towards future sources of growth
		Internal exploiter (exploitation/internal): generate benefits from harvesting or exploiting unutilised resources
		External explorer (exploration/external): investment in startups with growth potential that is anticipated to be of future strategic importance to the corporate
		External exploiter (exploitation/external): generating financial returns through external investments
Campbell et al (2003)	Four corporate venturing business models based on strategic objectives.	Ecosystem venturing: take minority stakes in suppliers, customers and/or third-party-providers to improve prospects of existing businesses
		Innovation venturing: use venturing techniques as a means of performing (part of) an existing function (e.g. R&D)
		Harvest venturing: generate cash from harvesting spare resources and eschew support to existing business and 'new leg' ideas
		Private equity venturing: participate directly in the venture capital/private-equity industry

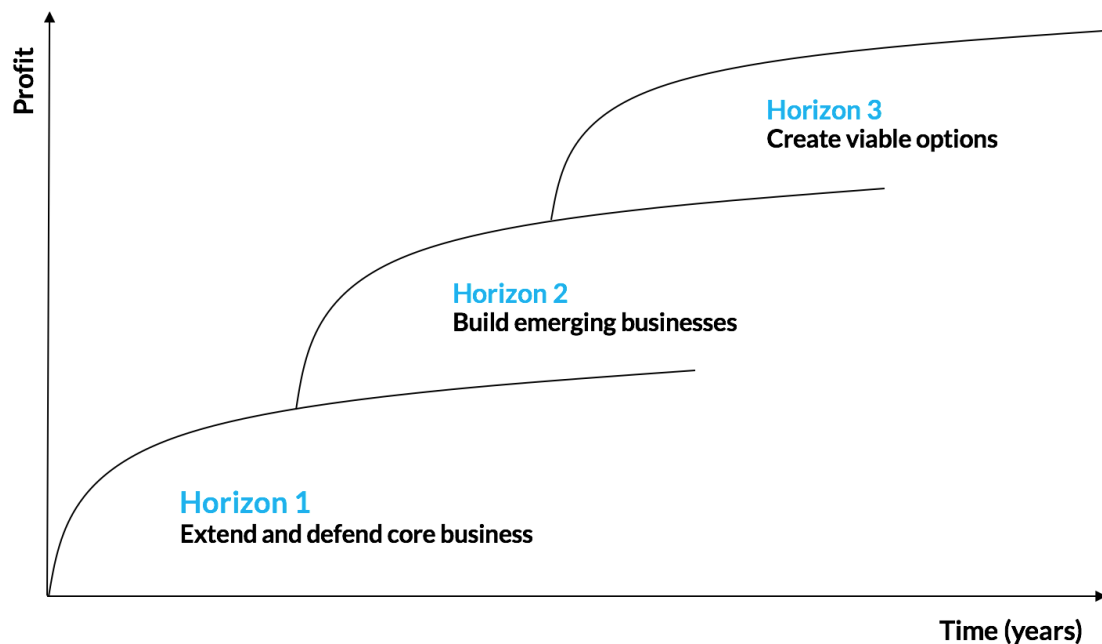


Figure 4.3: The three horizons of growth (Baghai et al., 1999, adj.)

than on financial analyses when evaluating corporate venturing initiatives” (see Table 4.2). Top management has to focus on the strategic importance of ventures within the context of the total corporate portfolio. As such, a financial failure can still be regarded a strategic success.

Covin and Miles (2007) also underline that it is important to set formal objectives for new business initiatives just as they are set for established -businesses. This however does not mean the same objectives are suitable for both types. E.g. whereas short-hurdle rates may be suitable for existing business initiatives, they are generally regarded inappropriate for new venture performance. One should understand and keep in mind what is reasonable to expect as outcome. Moreover, resource allocation has to be in line with objectives.

Lastly, a typology that is not directly associated with open innovation or corporate venturing but also categorises innovation efforts is the Three Horizons model¹. This model was first popularised

by McKinsey & Company (2009) but was already introduced by Baghai et al. in 1999. It emphasises that managers should simultaneously engage in the short-term, medium-term and long-term futures of their firm (see Figure 4.3). The typology categorises innovation efforts in three Horizons (McKinsey & Company, 2009):

- *Horizon 1.* Defending and extending the core businesses that are associated with the company name and that currently provide the greatest profits and cash flow. Here the focus is on improving performance to maximise the remaining value.
- *Horizon 2.* Building emerging businesses by engaging in opportunities, including rising entrepreneurial ventures, that are likely to generate substantial profits in the future but could require considerable investment.
- *Horizon 3.* Creating options for profitable growth down the road by research projects, pilot programs or minority stakes in new business.

¹ The Three Horizons model has been added to the theoretical framework, because the interviews learnt that the innovation horizons were common vocabulary among the interviewees in describing their strategic focus.

Example: differentiation according to purpose at Nokia New Ventures Organisation

Nokia provides an interesting example of differentiation of venturing activities according to strategic purpose (Birkinshaw et al., 2002). The company separated its venturing activities into four types based on their primary business drivers and the future link with Nokia's core business. The four types were finally developed into one New Venture Organisation (NVO), responsible for coordination and which reports directly to the CEO to ensure close alignment with corporate strategy.

A first venturing activity within NVO is a strategic business function called Insight and Foresight. It identifies new opportunities that might advance business development of the existing core based on market and technology developments. The second activity is New Growth Business which is a small team that scouts internal business opportunities with a high likelihood of a future link with the core business. The main driver of this function is to create strategic new businesses. A third activity is the Nokia Early Stage Technology Fund that is focused on creating strategic options. It is a closed fund focused on inside-out ideas that have a possible future link with the core. The fourth and last activity is an outward-looking closed fund called Nokia Venture Partners. It is a venture capital fund in which Nokia is the largest general partners, that operates at arms length to the parent company. The fund invests in ventures that are non-core to Nokia. Financial return is the main driver, yet the investment focus is set on the telecommunications and networking business. This fund gives Nokia an insight in new technologies, market and business models.

This NVO example shows, in line with Chesbrough (2002), Hill and Birkinshaw (2008) and Campbell et al. (2003), that even within the main concept of 'corporate venturing' one can and should differentiate venturing activities according to strategic purpose.

4.1.3 Open strategy and the role of innovation ecosystems

Chesbrough and Appleyard (2007) were one of the first to introduce the term 'open strategy' as a new approach to strategy to make strategic sense of innovation communities, ecosystems and network. Herein they predominantly focus on open strategy in the context of open source software, but emphasise that the concept of open strategy can reach beyond the domain of IT. Whittington et al. (2011) subsequently took the open strategy concept to the next level by showing a need for the strategy process to become more inclusive and transparent.

Open innovation requires organisations to not only open up their invention process, but also their strategising process.

Open innovation requires not only opening up the invention process, but organisations also need to open up their strategising process. In today's turbulent environments firms cannot rely on deliberate top-down strategies anymore (Whittington et al., 2011; Vanhaverbeke et al., 2017). Rather, in the open innovation era, a wide variety of internal and external parties can provide input for strategy-making: employees, startups, research institutes, customers or suppliers. Their experiences and opinions can provide valuable insights on future growth areas, may stimulate the redefinition of current strategic goals or may result in the improvement of strategic routines. Vanhaverbeke et al. (2017) describe how corporates can appoint Strategic Advisory Boards with external experts that can review and contribute to the long-term roadmaps of businesses. Moreover, a joint strategising process can foster increased support of and commitment to a firm's strategic goals (Vanhaverbeke et al., 2017).

Covin and Miles (2007) also argue that organisations who strategically venture facilitate ‘strategic conversations’ within their organisations. They state that effective strategy-making is dependent on the quality of information that flows through the organisation. Widespread participation and an atmosphere in which strategic ideas can be freely championed and contested by anyone with relevant knowledge contribute to the strategic value of venturing initiatives. Opening up of the strategising process to entrepreneurial behaviour and the involvement of middle management in the strategic redefinition of corporate strategy was also emphasised by Burgelman (1983). This model however focused only on the internal corporate perspective.

Building and managing innovation ecosystems is becoming increasingly important (Chesbrough, 2017; Vanhaverbeke and Roijakkers, 2013). In the open innovation era, firms can create a sustainable competitive advantage by means of relational capital. Herein not the relations per se, but their structure and governance are a hard-to-imitate competitive advantage (Vanhaverbeke et al., 2017).

In the open innovation era, firms can create a sustainable competitive advantage by means of relation capital.

While Chesbrough and Appleyard (2007) viewed innovation ecosystems in the context of technology platforms or standards, Vanhaverbeke and Roijakkers (2013) explain that a different type of ecosystem is rising. Specifically, for the development of emerging business areas they describe an innovation ecosystem with many science-based partners and early-stage ventures. Collaborating with these partners that are mostly years ahead of market application and who are still facing significant technological challenges is quite different from ecosystems focused on existing business.

Vanhaverbeke et al. lastly describe how in open innovation and open strategy, firm’s individual strategies are tightly associated to ecosystem strategies. Joint long-term industry roadmaps are the ultimate form of open strategy.

4.1.4 Example: strategic use of open innovation and corporate venturing at DSM

The papers of Vanhaverbeke et al. (2017), Vanhaverbeke and Roijakkers (2013) and Vanhaverbeke and Peeters (2005) all present the approach to open innovation and corporate venturing at DSM as a good example of strategic practice. DSM is a globally operating, science-based organisation that is active in health, nutrition and materials. In this section the key insights from these three papers are presented to provide the reader a practical perspective on the theoretical notions that have been so far presented in Section 4.1. The strategic practices of DSM are also summarised in Table 4.4.

As a start, the firm displays two interesting examples of open strategy. Firstly, DSM has institutionalised formal ‘Corporate Strategy Dialogues’ and ‘Business Strategy Dialogues’. These dialogues facilitate involvement of all levels of the organisation (general management, business groups, corporate R&D, and so on) in the strategy formulation process (Vanhaverbeke and Peeters, 2005). Through these dialogues DSM assures the bottom-up stream of innovative ideas and strategic input. Secondly, DSM actively pursues joint strategising with an ecosystem of innovative partners in their development of emerging business areas. An example is the BioMedical Materials (BMM) program. This is a public-private partnership that was originally set up by DSM to support its ambitions to become a leading player in the biomedical market. Currently, the BMM program has grown to an ecosystem with 28 partners - including the Dutch government, academia and other industry partners - that focus on R&D in the field of biomedical materials and their applications in a clinical environment. Through the BMM program DSM has shaped its know-

¹ DSM is a globally operating, science-based organisation that is active in health, nutrition and materials.

Table 4.4: Summary of strategic practices at DSM

Strategic practice	Explanation	Effect
Corporate/Business Strategy Dialogues	Strategic conversations with all levels of the organisation	Inclusive and transparent decision-making and ensure bottom-up
Public-private partnerships	Building an ecosystem of innovative partners and developing a joint strategy	Actively shape and align knowledge environment and ecosystem development with disciplines relevant to corporate strategy
Corporate Research Board	Board with corporate R&D and mainstream business group directors that discuss new developments and make 'go/kill' decisions on innovative initiatives	Early-on awareness of new technologies and improved absorption and alignment of innovation and core business
Business Technology Analysis	Systematical monitoring and assessment of internal and external developments and their impact on corporate strategy	Determine strategic vision and retroactively recognise the strategic context
Strategic contract	Contract that formalises long-term financial and innovation goals	Attention for both exploitation and exploitation
Emerging Business Areas	Definition of key areas of future growth of the firm that build on existing technological strengths	Create focus in exploration of business opportunities

ledge environment to its own advantage, creating a world-class environment in relevant disciplines Vanhaverbeke et al. (2017). Development and commercialisation of such exploratory business opportunities would be very complex and expensive to solely pursue Vanhaverbeke and Roijakkers (2013). With multiple of such public-partnerships in place, DSM is actively building their ecosystem and aligning ecosystem strategies with their corporate strategy (Vanhaverbeke et al., 2017).

Another interesting practice concerns the appointment of a Corporate Research Board in which both corporate R&D and mainstream business group directors discuss and think about new technological development and business opportunities. The Research Board - in view of corporate strategy - also makes the ultimate 'go/kill' decision for innovative initiatives. This practice increases early-on awareness of new technologies and fosters the absorption and alignment of innovative initiatives by the core business (Vanhaverbeke and Peeters, 2005). This practice is an example of how a reciprocal relation between open innovation and corporate strategy could be realised in practice.

DSM also systematically performs Business Technology Analyses (BTA). These analyses monitor technological developments (internal and external) and continuously assess their implications for corporate strategy. These BTAs foster the recognition and formulation of a strategic vision. And as strategic priorities are pursued the BTAs also update the strategic context (see Section 4.1.1). At DSM the BTAs result in a definition of top strategic priorities and appointment of resource provisions. These are formalised in a 'Strategic Contract' with the Board of Directors. This contract defines long-term performance of DSM in terms of both financial criteria and the pursuit of incremental and radical innovation initiatives that foster sustainable corporate growth. The Strategic Contract ensures top management balance short-term and long-term business performance (Vanhaverbeke and Peeters, 2005). Future growth is directed by definition of so-called 'Emerging Business Areas' (EBAs). These EBAs are business areas that expected to contribute 1,000 million in revenue by 2020. EBAs involve the exploration of new fields that combine the company's existing technical strengths (Vanhaverbeke and Roijakkers, 2013).

These last examples indicate that DSM also sets clear objectives for their open innovation efforts. It is not clear to which extent they differentiate engagement activities according to their role in advancing existing business or developing new business. The explicit formulation of EBAs however does indicate that DSM distinctly addresses new business development as a separate activity from the development of current business.

4.1.5 Synthesis: the relation between open innovation/corporate venturing and strategy

This section will provide the answer subquestion (1a) of this research: what can we learn from the relation between open innovation and corporate venturing on the one hand and strategy on the other hand? The key learnings of this section have been integrated into one holistic framework (see Figure 4.4). The remainder of this section will explain the elements and subsequently the relations displayed in this framework.

In line with the findings of Section 4.1.3, the outline of Figure 4.4 is formed by the innovation ecosystem. Each firm takes on a position within this eco-

system. The boundaries of the firm are displayed by the light blue box. The bright blue boxes represent organisational elements: the core business, the open innovation unit, and the organisations of innovation partners. Considering corporate venturing is a subset of open innovation, the figure only mentions open innovation. To emphasise the outward-looking approach of open innovation departments this box slightly reaches beyond the boundaries of the firm. The white boxes in this figure relate to so-called strategic elements; elements that foster strategic behaviour of the firm.

Next, the displayed relations will be elaborated including the distinction between direct relations and indirect relations that is visible in Figure 4.4. In line with the findings presented in Section 4.1.1 a dynamic and reciprocal relation between corporate strategy and open innovation is shown (loop 1-7-8-2). The core business provides direction and drives open innovation efforts with a strategic vision that follows from the corporate strategy (arrow 1 and 7). In turn, open innovation efforts drive the redefinition of corporate strategy by envisioning the strategic context (arrow 8 and 2). This loop represents the process of strategic learning.

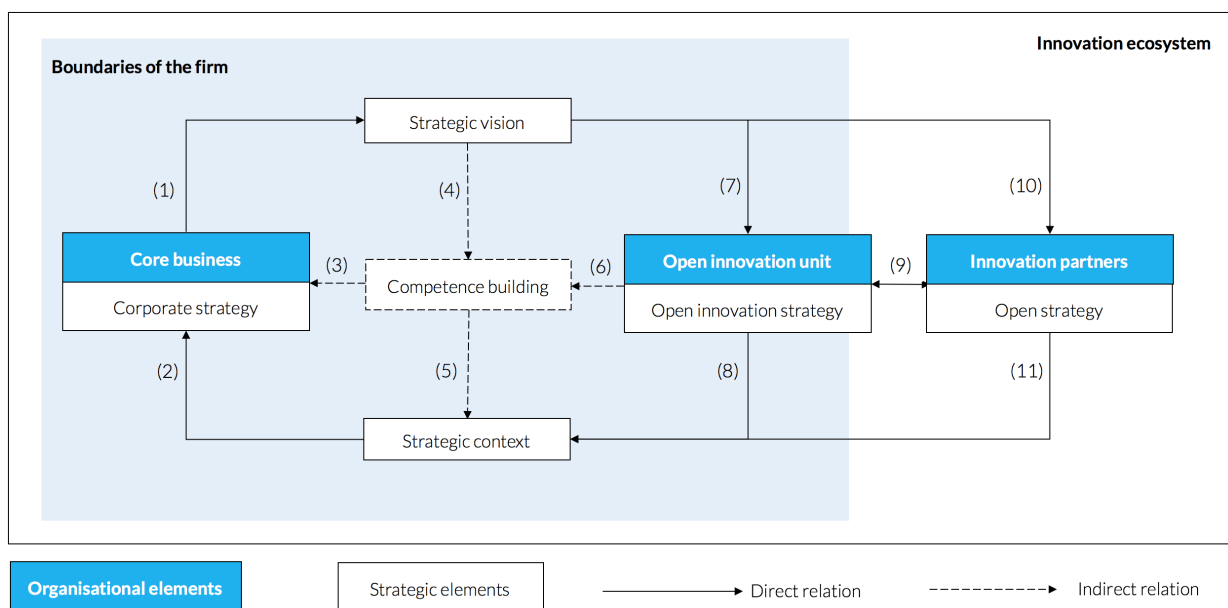


Figure 4.4: Theoretical framework showing the relation between corporate strategy, open innovation and the innovation ecosystem

A loop associated with the reciprocity of corporate strategy and open innovation, which has also been discussed in Section 4.1.1, is related to competence building. It is considered to exist of more indirect relations. As the strategic vision is set, corporates may identify the strategic gap or misfit between their existing resources and capabilities and those required to live up to the vision. This in turn may lead drive competence building (arrow 4). The pursuit of open innovation will expose the organisation to new technologies and capabilities, which can also drive competence building (arrow 6). Through organisational learning and for example involving employees in strategy-making by means of an open strategising process, the new competencies may foster the (re)definition of corporate strategy and the recognition of the new strategic context (arrows 3 and 5).

The importance of setting and pursuing clear strategic objectives as emphasised in Section 4.1.2 is more implicitly included in elements of the framework. The 'strategic vision' may fuel the identification of strategic objectives to guide open innovation efforts. Clear strategic objectives and an engagement approach that differentiates activities according to their strategic purpose, should also be part of the open innovation strategy. In line with the arguments of Section 4.1.2 special attention must go out to the distinction between initiatives that advance existing business and those aimed at developing emerging businesses.

The third and final learning from the theoretical analysis is that corporates who strategically pursue open innovation not only open up their invention process but also their strategising process (see Section 4.1.3). These organisations acknowledge the value of, and actively involve a wide variety of internal and external parties in strategy-making process. These strategic interactions between the firm and its partners within the innovation ecosystem result in the addition of another loop to Figure 4.3 (loop 1-10-11-2). A firm's strategic vision may on one hand drive the selection of innovation partners and

a joint strategising process to collectively shape an ecosystem that fosters mutual growth (arrow 10). At the same time innovation partners can provide valuable input to the firm's own strategic context (arrow 11). The inherent and reciprocal relation between the open innovation unit and innovation partners is represented by arrow 9.

The dynamic approach to strategy that is emphasised in this framework strongly aligns with the notions of emergent strategy and strategic learning by Mintzberg and Waters (1985) as described in Section 1.3.2. An intended strategy may be fueled with emergent strategies during its realisation. The framework also displays elements of the strategy-structure model of Burgelman (1983) that was also described in Section 1.3.2. One could argue this framework adds an outward-looking perspective to the model of Burgelman to update its content to the open innovation era. Lastly, the concept of open strategy as discussed by Chesbrough and Appleyard (2007) and Whittington et al. (2011) is included. By combining these three theories, a comprehensive view on the relation between corporate strategy, open innovation and the innovation ecosystem has been realised.

4.2 Advice on the strategic use of corporate-startup engagement

This section will present the results of an analysis of more recent and predominantly practice-oriented literature on corporate-startup engagement (Weiblen and Chesbrough, 2015; Arthur D. Little et al., 2016; Bannerjee et al., 2015; Mocker et al., 2015; Bonzom and Netessine, 2016). As can be expected, these papers tend to provide rather practical advices that foster the strategic use of startups. The advice has been grouped according to its level of applications: the strategic level, the organisational level or the operational level. Each level is discussed in more detail in the following three sections. If present, the link to the findings of Section 4.1 is also reported.

4.2.1 Strategic level

This section reports the high-level strategic considerations that are advised by literature in deploying corporate-startup engagement. An overview of these advice on a strategic level is presented in Table 4.5. Key findings will be shortly elaborated. In line with the notions of Section 4.1.2 great emphasis is put on setting clear objectives and developing a startup engagement strategy/program that differentiates startup activities according to their purpose. Also here, it is stated that corporates may implement multiple models in parallel to access different kinds of entrepreneurial innovation (Weiblen and Chesbrough, 2015). Bannerjee et al. (2015) add that corporates should focus on real needs, not on PR or corporate social responsibility.

In line with the need for reciprocity expressed in Section 4.1.1, two of the practice-oriented papers emphasise the need to align engagement efforts with core business. Bannerjee et al. (2015) describe how a lack of integration may give rise to silos and rivalry. Weiblen and Chesbrough (2015) explain that a link to corporate strategy is required for startup engagement initiatives to be accepted by shareholders.

In agreement with Section 4.1.3 on open strategy, three papers emphasise the need to open up to partners and clearly position the organisation within this innovation ecosystem. The papers do not pay specifically mention a joint strategising process with ecosystem partners.

Table 4.5: Summary of advice on a strategic level regarding the use of corporate-startup engagement

Strategic practice	Source(s)
Corporates need to set clear objectives for startup engagement activities; why to engage should precede the decision how to engage.	(Weiblen and Chesbrough, 2015; Arthur D. Little et. al, 2016; Bannerjee et al., 2015; Mocker et al., 2015; Bonzom and Netessine, 2016)
Corporates should decide which types of engagement will best deliver on their objectives. Many corporates gradually build up a portfolio of programmes to satisfy multiple objectives.	(Weiblen and Chesbrough, 2015; Arthur D. Little et. al, 2016; Bannerjee et al., 2015; Mocker et al., 2015)
Corporates have to ensure long-term organisational commitment. Defining long-term performance indicators will help to prevent impatience and discontinued programs as strategy or leadership changes.	(Weiblen and Chesbrough, 2015; Arthur D. Little et. al, 2016; Bannerjee et al., 2015; Mocker et al., 2015; Bonzom and Netessine, 2016)
Corporates need to allocate sufficient resources (human and capital) to successfully set up startup engagement programmes. A dedicated financial budget is considered key to efficient decision-making.	(Arthur D. Little et. al, 2016; Bonzom and Netessine, 2016)
Separation of innovation units from the core business may be required to act as a buffer to the risk of overprotection or corporate inertia. Separation however may give rise to new silos and create rivalry.	(Weiblen and Chesbrough, 2015; Bannerjee et al., 2015)
Corporates need to align startup efforts with other innovation activities, broader corporate goals and existing business units. Strategic alignment is especially important for units that are (largely) separated from the parent company.	(Arthur D. Little et. al, 2016; Bannerjee et al., 2015)
Corporates should clearly position themselves in the innovation ecosystem. They should reach out to partners; openness with other players is key.	(Weiblen and Chesbrough, 2015; Mocker et al., 2015; Bonzom and Netessine, 2016)

Table 4.6: Summary of advice on an organisational level regarding the use of corporate-startup engagement

Organisational practice	Source(s)
Board-level commitment is vital. Top management is responsible for strategically aligning business units. Their involvement promotes organisation-wide acceptance and support.	(Bannerjee et al., 2015; Mocker et al., 2015; Arthur D. Little et. al, 2016)
Early-on involvement of and alignment of startup engagement objectives with business owners and business units is crucial to ensure the successful intake of innovations at the parent corporation. Starting with a problem whose pain is felt and across the whole company will help secure buy-in.	(Weiblen and Chesbrough, 2015; Arthur D. Little et. al, 2016; Bannerjee et al., 2015)
Corporates should promote (an) internal champion(s) with decision and budget power that can push innovations and startup initiatives internally. These champions should have the ability to navigate and cut cross corporate structures.	(Weiblen and Chesbrough, 2015; Arthur D. Little et. al, 2016; Bannerjee et al., 2015)

4.2.2 Organisational level

A second group of findings is associated with securing startup engagement on an organisational level. An overview of advice on the organisational level is presented in Table 4.6. Again, some key findings will be addressed in slightly more detail.

In this category, authors strongly point towards the vital role of top management in aligning strategies and promoting organisation-wide acceptance. An interesting perspective is provided by Bannerjee et al. (2015). They explain that the Board of Executives also has to enforce an attitude of mutual respect. Whilst parts of the organisation may become obsolete, innovation teams rely on the existing organisation for capabilities and profits that enable their activities (Bannerjee et al., 2015).

Literature also underlines the importance of facilitating internal buy-in and intake of innovations by other business units. Herein internal champions can play an important role. These are bridge-makers that can handle both the agility of the startup world and have the diplomatic ability to navigate corporate structures.

4.2.3 Operational level

The last category of advice that was extracted from literature is focused on the operational level. These

notions concern rather practical recommendations that may facilitate or support the advice mentioned in Sections 4.2.1 and 4.2.2. These have limited relation to the theoretical results in Section 4.1. Again, the findings have been summarised in a Table (see Table 4.7).

Recent literature firstly argues that corporates should experiment, measure and iterate fast. In relation to measuring, Bannerjee et al. (2015) do emphasise that the impact of startup engagement remains difficult to quantify. This is a challenge in justifying program value to senior management and shareholders.

Agility is also required in corporate processes to successfully engage with startups. Arthur D. Little et. al (2016) argue that corporates should, in line with their corporate strengths, should create repeatable, scalable and efficient processes to engage with startups.

4.2.4 Synthesis: advice on strategic use of corporate-startup engagement

In this section the second part to the first research question (1b) will be answered: what do recent studies on corporates-startup engagement advise regarding its strategic use in corporates? The literature review showed that the advice on strategic use

Table 4.7: Summary of advice on an operational level regarding the use of corporate-startup engagement

Operational practice	Source(s)
Companies need to start small, measure and learn, iterate fast and scale. Monitoring and measuring success is vital to keep track of program performance and design a program that fits organisational requirements. The results need to be fed back into periodic strategic reviews.	(Mocker et al., 2015; Bannerjee et al., 2015)
Corporates be agile in their collaborations with startups (e.g. shortening payment times or adopting flexible approaches to intellectual property). The process of startup collaboration can be (partially) standardised.	(Arthur D. Little et. al, 2016; Bannerjee et al., 2015; Mocker et al., 2015)
Corporates should create a publicly visible, single access point (individual or team) for startups. This access point should know the organisation well and can direct startups towards relevant programmes or business units.	(Bannerjee et al., 2015; Mocker et al., 2015).
Corporates should reach out to partners, openness with other players is key.	(Weiblen and Chesbrough, 2015; Mocker et al., 2015; Bonzom and Netessine, 2016)

of corporate-startup engagement can be divided into three different levels (also see Figure 4.5).

Firstly, firms have to make decisions on the strategic level about the objectives of their engagement efforts, the program set-up that will deliver on these objectives, long-term performance indicators, and resource allocation. Moreover, strategic alignment of engagement efforts with other innovation activities and the core business (units) is key, especially for innovation units that have a large degree of separation from the parent (reciprocity). Lastly, the papers emphasise the need for opening to up and collaborating with the innovation ecosystem. Generally, it can be said that the advice on this level aligns with the theoretical findings of Section 4.1.

On the organisational level board-level commitment and early- on involvement of business owners is considered crucial to align objectives and secure successful intake of innovations at the parent organisation. Internal champions can fulfil the role of bridge-makers between the core business and innovation initiatives. This advice is considered to be supportive of the notions on the strategic level.

Thirdly, literature presents advice on a more operational level. Among others it is recommended that corporates experiment, measure and iterate fast. Agility in procedures is also considered important to make corporates a pleasant collaborative partner for startups.

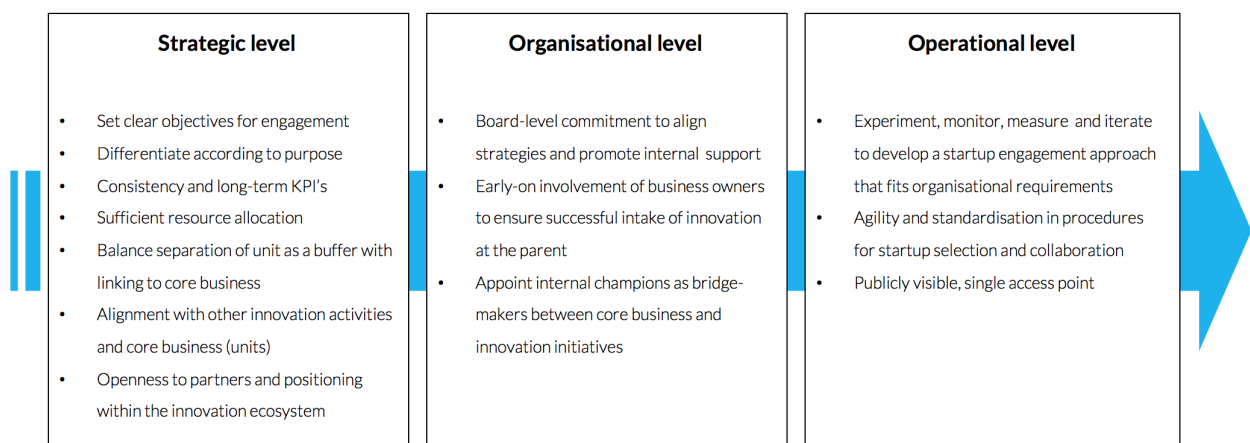


Figure 4.5: Three levels of strategic use of corporate-startup engagement

4.3 Summary: theoretical framework

This section summarises and combines the key findings from Section 4.1 and 4.2.

The literature review on the relation between open innovation/corporate venturing and strategy in Section 4.1 resulted in a new theoretical framework (see Figure 4.4 on page 48). This framework describes the reciprocal relations between corporate strategy, open innovation and the innovation ecosystem. It emphasises the dynamic character of strategy. On one hand corporate strategy drives and guides open innovation and enables one to set clear strategic objectives for open innovation efforts. The other way around, retroactive rationalisation of open innovation may uncover emergent strategies and may drive the recognition of new strategic context, which in turn drives redefinitions of corporate strategy. Corporate strategy can be considered a continuously moving target in innovation. The framework also emphasises the importance of an open and inclusive approach to strategy. This means corporates should involve a variety of internal and external parties from the innovation ecosystem in the strategising process.

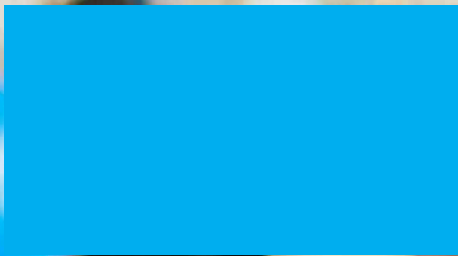
The analysis of more recent and predominantly practice-oriented literature on corporate-startup engagement in Section 4.2 showed that especially advice on the strategic level generally aligned with the theoretical notions from Section 4.1. For example, these papers also emphasised the importance of setting clear objectives, connecting to the core business, and openness towards the innovation ecosystem.

The dynamic, reciprocal and strategic character of these relationships was however not really addressed in Section 4.2. Especially the recognition of emergent strategies or strategic context based on open innovation efforts was less pronounced in the more recent literature. To exemplify, the importance of setting clear objectives was mentioned, but the necessity of *continuous* and *strategic* alignment of these objectives with the core business was less pronounced. As another example, the importance of openness towards the ecosystem was described, yet the value of involving innovation partners parties in the strategy-making process or the possibility of joint ecosystem strategies were not specifically addressed.

In general, the more practice-oriented literature is considered to act as a complement to the scientific literature. While practice-oriented literature tends to present rather narrowly defined recommendations on how to improve the use of corporate-startup engagement, scientific studies tend to maintain at a rather abstract strategic level. Connecting the two provides concrete means to realise the abstract theoretical notions. A good example is the advice of appointing internal champions that act as bridge-makers. Such bridge-makers may foster the reciprocity between startup engagement efforts and the core business that is aimed for in the theoretical framework. These internal champions may also play an important role in an open strategising process. A second example is the emphasis on board-level commitment which may be vital in achieving reciprocity on the strategic level. The literature from Section 4.2 also complements the need for setting clear objectives with the need for setting long-term KPI's.



TRADECAST



5. PRACTICAL STUDY

STRATEGIC SAMPLE DETERMINATION VIA DESK RESEARCH

This chapter describes the first phase of the practical study that has been conducted: the desk research. In this phase the online reported startup engagement activity of the top-100 Dutch companies is researched. The was done to purposefully select a strategic sample for the second phase of the practical study: the semi-structured interviews. Throughout this chapter, an important underlying assumption is that corporates that report activities on a wide range of the engagement spectrum could contribute most to a deeper understanding of the strategic use of startup engagement. This chapter will first present the detailed set-up of the desk research. Thereafter the data analysis and results are presented. The section concludes with the identification of the strategic sample.

5.1 General set-up

The desk research was conducted for the top-100 Dutch corporates (anno 2015) based on the overview of Elsevier and Bureau van Dijk (2016). This list ranks Dutch companies that meet the following requirements based on their annual turnover in 2015:

- Headquartered in The Netherlands
- More than 100 employees
- Not a mailbox firm¹
- Not a subsidiary of a foreign industry peer
- Companies are included if the parent company is not an industry peer; those companies are considered pure investments and independent operation of the company is assumed.

For the top-100 an online search query was executed to develop an overview of the startup engagement activities at these firms (see Figure 5.1). A preliminary exploration showed that communication of startup engagement on corporate webpages was often incomplete. Therefore, the results of corporate websites' search engines were complemented with Google Search results to make sure that a comprehensive overview was obtained.

In the search query various combinations of keywords were used to generate a complete picture and account for differences in terminology and language (see Figure 5.1). For the identification of appropriate keywords input was drawn from Section 3.2.3 which describes different types of startup engagement. Besides English terms, also some Dutch search terms were included to ensure that companies that only report their activities in Dutch were not overlooked.

¹ Firms with a Dutch mailbox to profit from tax advantages.

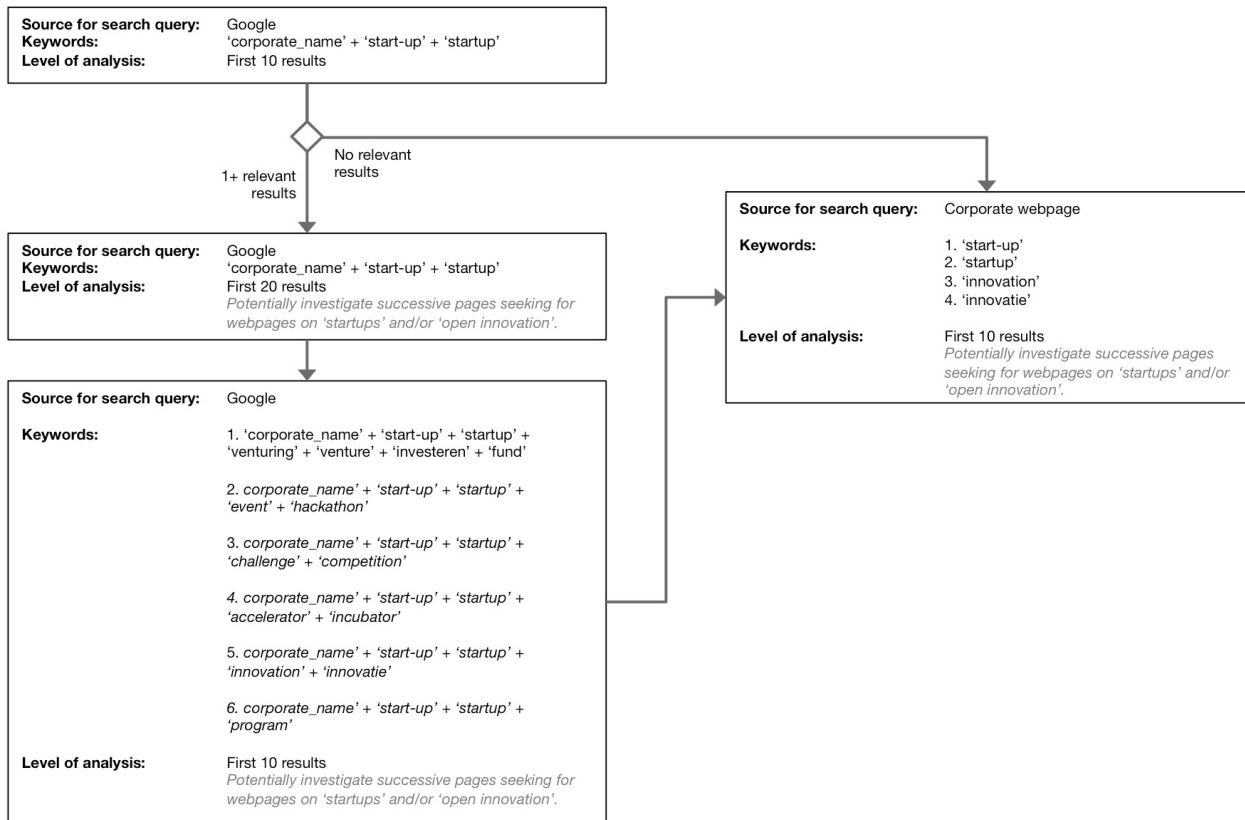


Figure 5.1: Online search query for startup engagement analysis among top-100 Dutch corporates

The desk research has been executed in November of 2016. Any search results with a time stamp prior to 2014 were discarded to ensure an up-to-date overview.

I am aware that the generated overview will be limited to the startup engagement activities that are reported online and would like to refrain myself from stating that this overview is all-inclusive and error-free. However I do believe that with the above-mentioned measures, it will provide a good indication of startup engagement activity among Dutch corporates.

Through the desk research data was collected on a number of variables in three categories: 1) general company details, 2) general indicators of active and/or strategic corporate-startup engagement and 3) activity on the corporate-startup engagement spectrum. These variables and categories will be explained in more detail in the next subsections.

5.1.1 General company details

The first category contains three variables. Its purpose is to give insight in the type of firm under study.

- *Company name.*
- *Annual turnover.* The annual turnover in millions of Euro's in 2015 (Elsevier and Bureau van Dijk, 2016).
- *ICB code and ICB description.* The Industry Classification Benchmark (ICB) is a globally used industry classification taxonomy introduced by FTSE International. It is used to segregate markets into sectors within the macro- economy. Top-down the ICB system defines 10 industries, 19 supersectors, 41 supersectors and 114 subsectors (FTSE International, 2016). In this analysis the focus is on the industry-level. This variable is used to analyse whether certain industries are specifically relevant for the interview phase¹.

¹ A few firms in the top-100 receive no ICB-code due to the diverse nature of their activities/subsidiaries.

5.1.2 General indicators of active and/or strategic corporate-startup engagement

The second category contains three variables which may indicate high levels of activity in startup engagement and potential strategic importance of these activities to the firm.

- *Ranking Europe's Corporate Startup Stars in 2016 (rank)*. A ranking of Europe's 25 most 'startup-friendly' corporates as published by Nesta and the Startup Europe Partnership. These firms are considered frontrunners in setting up mutually-beneficial partnerships with startups (Nesta, 2016).
- *Participation in COSTA (yes/no)*. An initiative launched StartupDelta to promote knowledge sharing on startup collaboration among C-level representatives of renowned Dutch corporates (StartupDelta, 2016c).
- *Corporate-startup engagement landing page (yes/no incl. webpage)*. The presence of a dedicated landing page for startup engagement, mostly providing an overview of the organisation's various startup engagement activities¹.

5.1.3 Activity on the corporate-startup engagement spectrum

The last category contains a range of variables that map a corporate's activity on the startup engagement spectrum. These variables relate to different types of startup engagement. Initially, firm's activities were plotted on all seven types of engagement that were presented in Section 3.2.3. However, in executing the search query considerable ambiguity and overlap between these types quickly surfaced. Corporate's engagement activities were frequently difficult to 'pinpoint' to one specific type.

To reduce complexity, it was decided to focus on five types of engagement in the desk research. In comparison to Section 3.2.3, outside-in and platform-based startup programs have been merged into one category of 'startup programs'. Also, all equity-focused activities were merged into one

variable: corporate venturing and mergers and acquisitions. These five categories are also shown at the top of Table 5.2. It was always tried to pinpoint an activity only to the most appropriate category.

To obtain a general sense of a corporate's activity on the spectrum, the activity of a corporate on each type of engagement (each variable) was graded with 0 (zero), 0.5 or 1. A maximum score of 1 could be obtained for every category. This grading process was executed after the search query for a specific corporate was completed and an overview of that firm's activities was developed..

- If an organisation appeared to be inactive, it received a score of zero.
- Indirect or shared participation through sponsorships or partnering or the reporting of activities that were only partially targeted on startups, were awarded a 0.5 score.
- Direct and/or self-organised startup engagement activities were awarded a score of 1.

Please note that the above-described grading system does not account for the intensity of an organisation's activities in a startup engagement category. With the purpose of this desk research in mind, namely to assess high levels of activity on a broad range of engagement spectrum, the impact of this limitation is however considered to be within acceptable range.

Also, despite the merger of various categories, the categorisation of activities retained some level of ambiguity in some cases. This means that the results of the desk research are prone to the interpretation of the researcher. The same is applicable to deciding upon awarding a 0.5 or 1.0 to a specific activity. As the purpose of the desk research was to obtain a strategic sample rather than draw conclusions on the use of specific startup engagement activities within the industry, I believe that this limitation poses no serious threats to the quality of the subsequent research.

¹ During the search query it was discovered that such landing pages often describe an organisation's open innovation efforts in general.

A few examples will be discussed that will give the reader a more detailed insight in the categorisation and grading process:

- A platform-based startup program also offering access to mentoring and office space is counted only once under the header of 'startup program' and is not accounted for under 'sharing resources and/or knowledge'.
- Participation or sponsorship of a specific program of the accelerator Startupbootcamp is awarded with a 0.5, while an in-house acceleration program is awarded a score of 1.
- A company participating in Startupbootcamp but also running a firm-specific accelerator program receives a score of 1.
- A company organising one event receives the same score of 1 in the 'events, competitions and challenges' category as a company organising multiple events.
- In some cases, such as Unilever's Foundry, a core program covers a variety of startup engagement types. After assessing the entire scope of this core program, relevant categories were graded.

For each corporate the sum of scores on the types of engagement would result in the firm's *corporate-startup engagement score*. This score serves as an indicator of the level of activity of the corporate on a broad range of the startup engagement spectrum.

Corporates were categorised on their engagement-activity level by using a three-level scale:

- *Active*. Organisations were considered to actively pursue startup engagement if their overall score was 2.5 or higher; this score would indicate that a corporate pursued at least three different types of engagement.
- *Moderate*. Organisations were considered to moderately pursue startup engagement if their score was between 2.5 and 0 (zero).
- *Inactive*. Organisations were considered to be inactive in startup engagement if their overall score was 0 (zero).

5.2 Analysis and results

In a separate appendix complementing this report, all data that has been collected during the desk research is presented. This section only presents the key results.

From Figure 5.2 it becomes apparent that in the top-100 of Dutch companies, only 45% pursue (or more accurately: digitally report) startup engagement activities. Looking at only at the top-50, a clear increase is witnessed. In this sample 72% of the corporates are engaging with startups. A total of 13 corporates was considered *active* in startup engagement of which 12 firms are in the top-50.

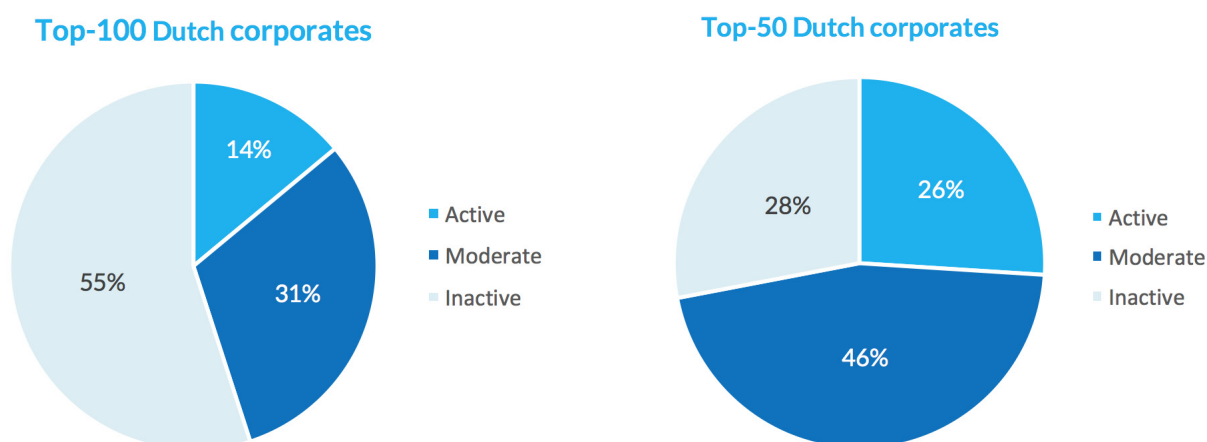


Figure 5.2: Corporate-startup engagement activity of top-100 (left) and top-50 (right) Dutch corporates

CSE activity (per industry) of top-100 Dutch corporates

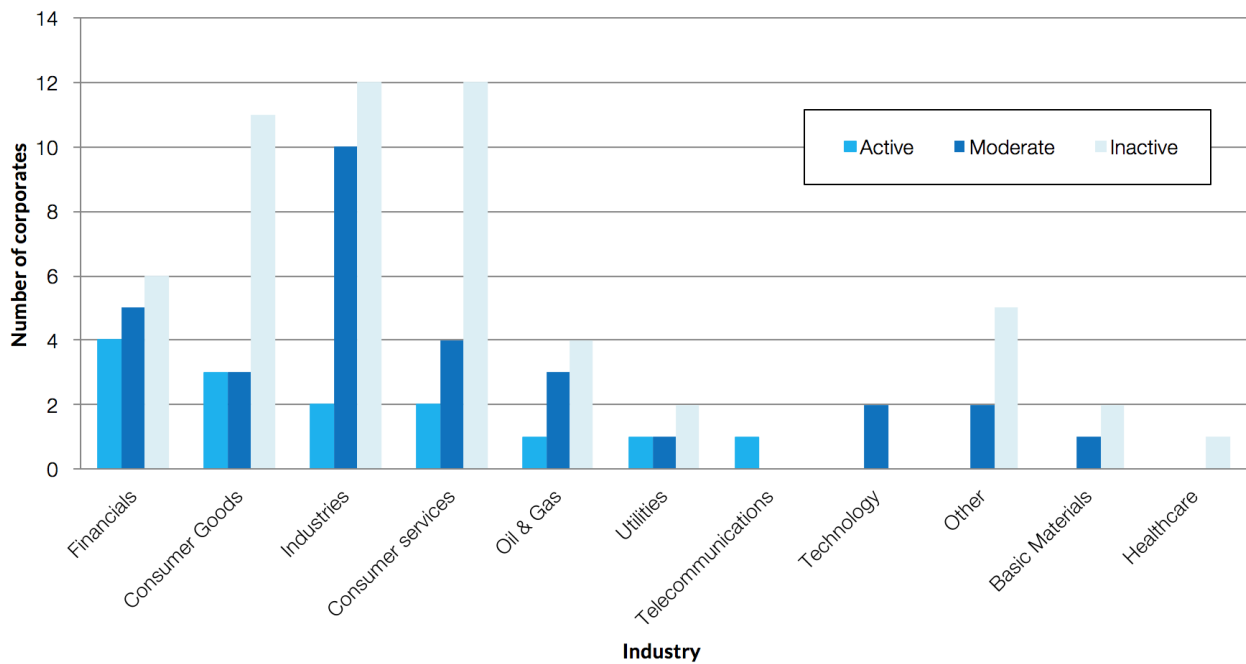


Figure 5.3: Corporate-startup engagement activity per industry of top-100 Dutch corporates ranked on the amount of 'active' corporates in the industry²

Using the general indicators of the strategic use of startup engagement (see Section 5.1.2) the sample of 13 active corporates was assessed in more detail. The following things were notable. In line with expectations, all corporates in the top-100 that obtained a position in the Europe 25 Corporate Startup Stars - KPN, Eneco, Unilever, KLM and Rabobank - also report high levels of startup engagement. Five of the 13 firms were also known to participate in the COSTA initiative at the time of the research¹. Interestingly, the other three COSTA participants only report moderate levels of startup engagement. Lastly, seven out of 13 firms have a dedicated startup landing page.

For the strategic sample selection, it was also checked whether some industries required specific attention. Upon analysis of corporate's engagement levels across different industries (see Figure 5.3), the financials industry contained the most active

corporates. Figure 5.3 also shows that the consumer goods, industries, and consumer services sectors show large contrasts regarding the amount of organisations that are active and inactive. A closer look at the industry-level reveals that the financials sector may indeed be considered a frontrunner in corporate-startup engagement (see Table 5.1) Based on a sample size of 15 companies in this industry, 27% are active in startup engagement and 33% is moderately active.

No statements can be made regarding the telecommunications and utilities sector due to their small representation among the top-100 Dutch companies. In contrast, the industries sector with a sample size of 24 companies could be deemed rather 'passive' in the area of corporate-startup engagement; only 8% digitally reports high levels of engagement; 50% of this industry reports no startup activity.

¹ Currently this number has already grown to nine out of 13 firms (KPN, 2017).

² In this figure, corporates of which the ICB-code was unknown or uncertain are contained in the category 'Other'.

Table 5.1: Startup engagement activity per industry of top-100 Dutch corporates (relative percentages)

Industry	Total	# Active	% Active	# Moderate	% Moderate	# Inactive	% Inactive
Telecommunic.	1	1	100%	0	0%	0	0%
Financials	15	4	27%	5	33%	6	40%
Utilities	4	1	25%	1	25%	2	50%
Cons. goods	17	3	18%	3	18%	11	65%
Oil and gas	8	1	13%	3	38%	4	50%
Cons. services	18	2	11%	4	22%	12	67%
Industries	24	2	8%	10	42%	12	50%
Technology	2	0	0%	2	100%	0	0%
Basic materials	3	0	0%	1	33%	2	67%
Other	7	0	0%	2	29%	5	71%
Healthcare	4	0	0%	0	0%	1	25%

Table 5.2: Strategic sample suitable for continued analysis by means of interviews

Company	Industry (ICB)	Europe corporate startup stars (rank)	COSTA participation (november 2016)	Startup landing page	Events and copetitions	Sharing resources and/or knowledge	Startup programs	Incubation an acceleration	External corporate venturing and/or M&A	Corporate-startup engagement score
Shell	Oil and gas	No	Yes	Yes	1.0	-	1.0	1.0	1.0	4.0
Unilever	Consumer goods	3/25	No	Yes	1.0	1.0	-	1.0	1.0	4.0
ING	Financials	No	Yes	Yes	1.0	-	0.5	1.0	1.0	3.5
IKEA	Consumer goods	No	No	No	1.0	-	-	1.0	1.0	3.0
Achmea	Financials	No	No	No	1.0	1.0	-	0.5	0.5	3.0
Rabobank Groep	Financials	2/25	No	Yes	1.0	1.0	0.5	0.5	-	3.0
Philips Electronics	Industries	No	Yes	+/-	1.0	1.0	1.0	0.5	1.0	4.5
ABN AMRO	Financials	No	No	Yes	1.0	1.0	-	0.5	1.0	3.5
KLM	Consumer services	18/25	Yes	Yes	1.0	-	1.0	-	0.5	2.5
KPN	Telecommunications	9/25	Yes	Yes	1.0	1.0	1.0	0.5	1.0	4.5
NS	Consumer services	No	No	+/-	1.0	0.5	1.0	0.5	0.5	3.5
Eneco	Utilities	14/25	Yes	Yes	1.0	-	1.0	0.5	1.0	3.5
Schiphol	Industries	No	No	No	0.5	1.0	-	0.5	0.5	2.5



5.3 Conclusion: strategic sample

A desk research has been executed to purposefully select a strategic sample for the interview phase. The digitally reported levels of startup engagement activity at the top-100 Dutch companies have been mapped by means of an elaborate search query on Google and corporate webpages. The analysis has resulted in a sample of 13 corporates that are considered 'active' on a broad range of the corporate startup engagement spectrum (see Table 5.2).

In this strategic sample five corporates have been named Europe's Corporate Startup Stars by Nesta (2016), six firms were known to be part of the COSTA initiative at the time of the desk research, and seven have a dedicated startup landing page. All companies within the sample are engaged in three or more types of corporate-startup engagement. The sample contains corporates active in seven different industries. Overall, the sample is considered representative for the purpose of this research.



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6. PRACTICAL STUDY

SEMI-STRUCTURED INTERVIEWS WITH CORPORATE REPRESENTATIVES

In phase two of the practical study a set of semi-structured interviews was conducted with innovation and venturing representatives from firms in the strategic sample. This chapter will first discuss the interview sample (a subset of the strategic sample) and the interview protocol in more detail. The section that follows gives describes the analysis of the results. Thereafter, in Section 6.4, the results of the interview phase are presented. The last section combines all results and discusses the extent to which corporates in the interview sample can be considered strategic in their use of startup engagement. This answers the second subquestion of the overall research.

6.1 Interview sample

In Section 5.3 a strategic sample of 13 corporates was identified as suitable candidates for subsequent analysis by means of interviews. Relevant contact details for 11 subjects of this strategic sample were obtained. In most cases the names of relevant contact persons already surfaced during the desk research. Many of these contact were part my first- or second-degree personal network and could thus be easily approached. In a few cases a LinkedIn search was conducted to identify and approach relevant contacts. In general, it was tried to target senior innovation managers and corporate venturing executives considering the research focus on the strategic level. Unfortunately, relevant contact details for Unilever and IKEA were not obtained.

All contacts were sent a personalised e-mail between November 29 and December 5 requesting a recorded face-to-face interview in December of 2016. A short description of the research purpose and the interview set-up were added as an attach-

ment to this e-mail. The findings of the online search query that was executed to determine the strategic sample (see Chapter 5) were also attached in the form of a white-paper. This file explained why the firm was part of the strategic sample and sharing this knowledge might also create goodwill. Lastly, in each of the messages it was explicitly asked whether that person was the right person within the organisation to elaborate on the *strategic* context of startup engagement and if not, if they could introduce me to their responsible colleague(s).

A 100% response rate was achieved for the personalised e-mail requests. In eight cases the contacted person identified as the right person and an interview was immediately scheduled in December of 2016. In two cases the initial contact introduced me to another contact within the specific organisation. With these persons, interviews were then also scheduled in December. In one case the interview could not be scheduled in December of 2016 (Shell). This resulted in exclusion of this subject from the sample due to time limitations.

Table 6.1 shows an overview of the 11 interviews that have been conducted in December of 2016. Each with a duration between 45 and 60 minutes. To guarantee the anonymity of the interviewees no names or functions are included in this table. The interviewees covered positions such as: (senior) innovation manager, fund manager, startup liaison, innovation lead, (new) business development manager, and director of innovation and/or venturing.

As can be seen in Table 6.1 two interviews were conducted in the case of Rabobank. The interviewees (dual interview) of the first interview with the Rabobank had a more operational role. To gain sufficient insight in the strategic considerations on startup engagement a second interview with a strategic representative was scheduled. All interviews were conducted in Dutch. Nine interviews were face-to-face and two via a virtual medium.

Table 6.1: Overview of conducted interviews in December of 2016

Company	Date (2016)	Type	Location	Duration
NS	December 9	Face-to-face	NS headquarters, Utrecht	45 min.
KPN	December 13	Face-to-face	KPN Toren op Zuid, Rotterdam	45 min.
ING	December 15	Face-to-face	ING Innovation Studio, Amsterdam	60 min.
ABN AMRO	December 15	Face-to-face	ABN AMRO Innovation Centre, Amsterdam	60 min.
Rabobank Groep	December 16	Virtual	24sessions ¹	60 min.
Eneco	December 16	Face-to-face	Eneco headquarters, Rotterdam	45 min.
Philips Electronics	December 20	Face-to-face	Philips headquarters, Amsterdam	60 min.
Achmea	December 21	Face-to-face	Achmea Conference Centre, Zeist	45 min.
Rabobank Groep	December 21	Face-to-face	B.Amsterdam, Amsterdam	60 min.
KLM	December 22	Face-to-face	KLM headquarters, Amstelveen	45 min.
Schiphol Group	December 28	Virtual	Skype	45 min.

¹ 24sessions is a startup that supplies virtual meeting software to among others the Rabobank.

6.2 Interview questions and protocol

The interviews were conducted in a semi-structured manner (see Section 2.4 for more explanation on why semi-structured interviews were used). The literature of Harrell and Bradley (2009) and Creswell (2013) were very helpful in drafting the interview questions and protocol.

The interviews focused on two constructs from the theoretical framework in Chapter 4: the reciprocity of corporate strategy and corporate-startup engagement (see the blue loop in Figure 6.1) and the need for strategic objectives and differentiation according to purpose. Insights in the second construct are considered to also support a better understanding of the first construct. This focus was chosen as the relation between startup engage-

ment (i.e. open innovation) and corporate strategy is considered the fundament of the framework. Validation of the two other relations in the theoretical framework - competence building and connecting to the innovation ecosystem - within the same interviews was considered unfeasible. This would likely compromise the depth of understanding that could be achieved on the other two topics of interest. Considering time limitations of the research two interviews per subject was however not regarded a possibility. Of course, due to the semi-structured set-up, the two other aspects of the theoretical framework could still be touched upon. These topics were however not specifically questioned during the interviews.

Each interview covered five parts: an introduction, general questions, questions on strategy, questions

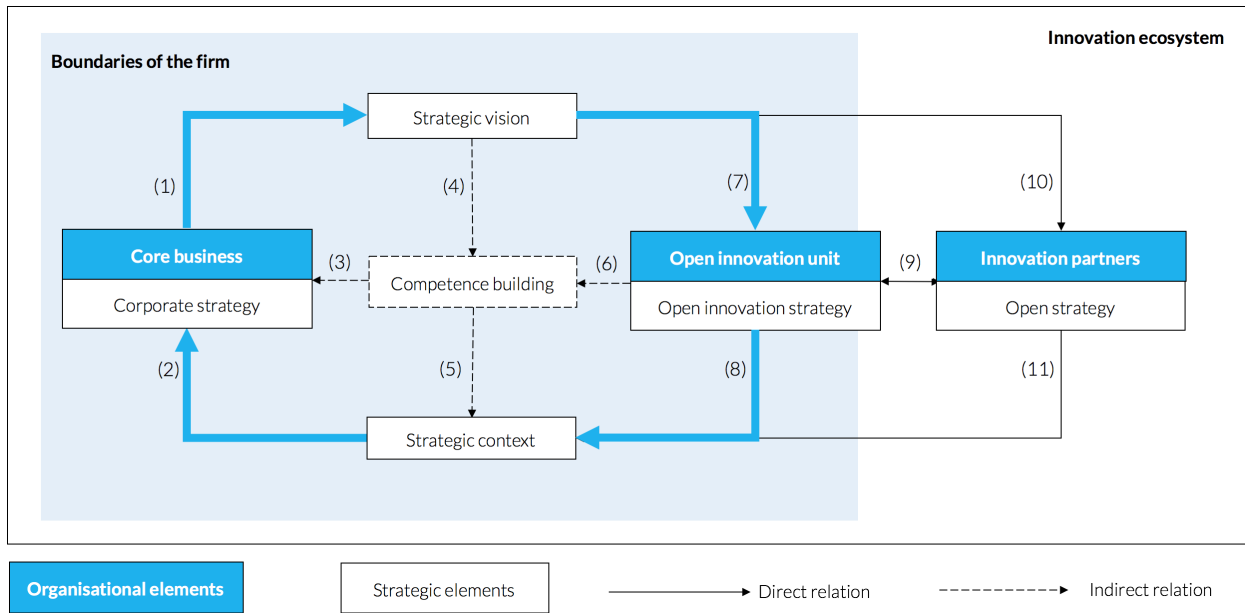


Figure 6.1: Focus of the interviews within theoretical framework

on structures and processes, and a wrap-up (see Figure 6.2). The overview of questions to guide the interview is found in Table 6.2. A detailed interview protocol (Dutch) can also be found in Appendix B. The operationalisation of the two constructs under study by means of the interview questions is shown in Table 6.3. Here, questions 1 and 8 are not addressed as they concern more general or contextual questions without a specific relation to one of the constructs. In the remainder of this section all parts of the interview will be explained in more detail.

Every interview started with a short introduction in which I introduced myself and my association with the Delft University of Technology. Also, the purpose of the research was explained and the general set-up of the interview was described. The

request was done to record the interview and the approach to data analysis was explained. Herein, it was emphasised that the interviewee could speak freely as data and quotes would be anonymised and the transcripts would not be include in the report. The reader is referred to Section 2.4.3 for the considerations that led to the decision to guarantee anonymity to all interviewees.

Next the general theme served mostly as an ice-breaker and provided some contextual information to the interviewer. The questions in this theme are 'grand tour' questions which encouraged the respondents to speak freely about startup engagement at their firm (Harrell and Bradley, 2009). These type of questions typically result in a narrative.

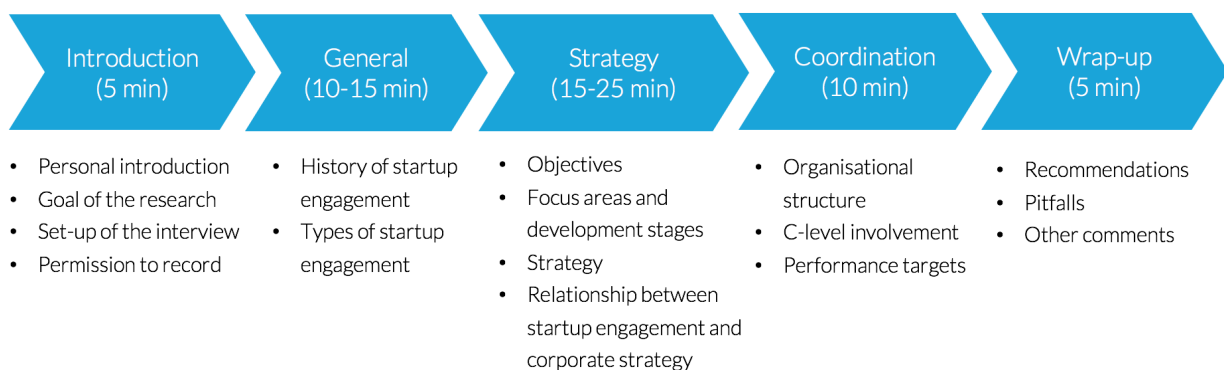


Figure 6.2: Set-up of the interview

Table 6.2: Themes and questions for the semi-structured interviews

General	
1.	When did your company start to actively engage with startups? <i>Probe:</i> Why did your company start to engage with startups? <i>Probe:</i> Can you describe in which ways your company currently engages with startups? <i>Probe:</i> Do you have a physical overview of your activities?
Strategy	
2.	What are your company's objectives for startup engagement? <i>Probe:</i> Do you have different objectives for different types of startup engagement? If so, could you elaborate on the differences?
3.	Are strategic focus areas defined for your company's startup engagement? <i>Probe:</i> Are you familiar with the Three Horizons model? If so, can you describe how this model relates to your company's startup engagement? ¹ <i>Probe:</i> To which extent does your company focus its startup engagement on startups in a specific stage? Does this focus differ for types of startup engagement?
4.	Does your company have a startup engagement strategy? If so, could you elaborate? <i>Probe:</i> Do you consider your firm strategic in its use of startup engagement? Why or why not?
5.	Can you explain the relation between startup engagement and corporate strategy in your firm? ²
Structures and processes	
6.	Can you describe how startup engagement is coordinated in your company? <i>Probe:</i> To which extent are your company's startup engagement activities aligned? <i>Probe:</i> Can you describe and draw the position of startup engagement within your organisational structure? ³ <i>Probe:</i> Which people and departments are involved?
7.	To which extent does your company have concrete and measurable performance targets for startup engagement? <i>Probe:</i> How does your company measure and determine if startup engagement efforts are successful?
Wrap-up	
8.	What would you, based upon your knowledge and experience, recommend to other companies regarding the strategic use of startup engagement in their organisations? <i>Probe:</i> If you could go back in time with your current knowledge and experience, would you have done things differently regarding the use of startup engagement in your company? If so, what and why?

¹ This question was added later on, after the first two interviewees specifically referred to this model.

² In this question I first explained the adjusted model of Covin and Miles (2007) as shown in Figure B.1 in Appendix B. This use of a visual model supported a concrete discussion on the alignment of corporate-startup engagement and corporate strategy.

³ The request to also draw the structure was added after the first interview to gain a better insight on the involvement between various departments in startup engagement.

Table 6.3: Operationalisation of constructs in the interviews and reference to section in which the corresponding interview results are addressed (question numbers refer to Table 6.2)

Construct	Ques.	Operationalisation of the construct in interview	Results section
Reciprocity of startup engagement and corporate strategy	Q2	Identify the objectives that drive startup engagement to gain insight in their potential relation to corporate strategy	Section 6.4.3
	Q3	Check for the presence of a strategic vision that may guide startup engagement efforts : e.g. strategic focus areas and/or innovation horizons	Section 6.4.4
	Q4	Gain insight in whether startup engagement efforts have a more deliberate or emergent nature as an indicator of reciprocity between corporate strategy and startup engagement: is there a strategy, is execution considered strategic?	Section 6.4.5
	Q5	Detailed insight in relation between corporate-startup engagement and corporates strategy	Section 6.4.6
	Q6	Explore the organisational relation between startup engagement and corporate strategy to gain insight in whether and/or how reciprocity may be established	Section 6.4.7
	Q7	Assess the presence of performance targets for startup engagement and their potential relation to corporate strategy: e.g. how will its value be justified to the core business?	Section 6.4.8
	Strategic objectives and differentiation according to purpose	Q2	Identify objectives for startup engagement and differentiation of activities according to purpose
Q3		Uncover potential differentiation of startup engagement efforts based on strategic focus/horizons/development stages	Section 6.4.4
Q4		Check operationalisation of strategic objectives in a strategy	Section 6.4.6

After the introduction and general questions, the strategy theme focused on identifying the presence of a reciprocal relation between startup engagement and corporate strategy, and the presence of strategic objectives and/or differentiation according to purpose. In question 5 (see Table 6.2) a variant to the relational model of Covin and Miles (2007) - see Section 4.1.1 - was used as a tool to facilitate a concrete discussion on the extent of reciprocity (see Figure B.1 in Appendix B).

The next theme then discussed two more operational indicators of reciprocity. It focused on the structures and/or processes that may hamper or foster the reciprocity between corporate-startup engagement and corporate strategy.

Every interview ended with two questions that would uncover key recommendations and experienced pitfalls in the strategic use of startup engagement. Lastly, participants were thanked for their input and explained that each would receive a copy of the final results.

6.3 Analysis

All interviews have been recorded and transcribed. The transcripts were imported in Atlas.ti and were subsequently coded. The general coding process is described in Section 2.4. Table 6.4 shows the coding scheme that resulted after a few runs of code optimisation, reading through the data again, and categorising of codes in themes. The coding scheme

Table 6.4: Themes, codes and amount of quotations per code of interview transcripts

Theme	Code	Quotations	Results section
Open innovation	Startups as means. vs end	13	Section 6.4.1
Startup engagement: general set-up	Startup engagement activities	77	Section 6.4.2
	Overview of activities and contacts	26	
	Mutual alignment of activities	8	
Startup engagement: objectives	Objectives for startup engagement	84	Section 6.4.3
	Culture change	23	
	Differentiation of objectives	10	
	Ecosystem	24	
Strategic vision	Strategic focus areas	48	Section 6.4.4
	Make-or-buy decision	4	
	Three Horizons model	17	
	Development stage	15	
Existence of engagement strategy	Overall strategic considerations	120	Section 6.4.5
	Startup engagement strategy	26	
	Core-satellite and platform thinking	5	
	Being strategic	35	
	Experimentation	18	
Reciprocity	Overall strategic considerations	120	Section 6.4.6
	Relation to corporate strategy	14	
Coordination of startup engagement	Organisational structure	80	Section 6.4.7
	Structured or opportunistic	48	
	Investment board	18	
	Involvement of the board	22	
	Single point of entry	6	
	Internal support	28	
Performance targets	Targets and measurements	46	Section 6.4.8
	Overview of activities and contacts	26	
Recommendations, challenges and pitfalls	Recommendations	23	
	Expressed challenges and pitfalls	24	
	Five years back in time	14	

also forms the general outline for the results section (see Section 6.4). Only the last row with recommendations, challenges and pitfalls is not explicitly addressed in a separate subsection. These quotations are rather used throughout the results section to support findings presented in the other segments.

6.4 Results

The interviews showed that in most of these firms corporate-startup engagement has seriously been pursued only since a few years. Many interviewees express how they have been or still are “experimenting” with startup engagement. The fact that

the results show many different approaches and views also confirms this.

This section will present the key findings from the interview phase. The findings are clustered according to specific themes which have been explained in Section 6.2. Every subsection starts with a summary of the key findings (blue box) which will subsequently be supported with interview data. Many quotes are used to point out the exact wording of the interviewees and thereby promote a sense of objectivity in the presentation of the results. In line with the reasoning of Section 2.5 all data has been anonymised.

6.4.1 Startup engagement in the context of open innovation

Corporates that strategically engage with startups may view startup engagement in the wider context of open innovation. Startups are one of many means to innovation as an end. To create internal support it may be useful for corporates to initially focus on startups as a topic (end) and shift towards startups in the context of a topic (means to an end) as the firm reaches a certain degree of maturity in startup engagement.

Six of the interviewees emphasised the necessity to view startups in the context of open innovation. The innovation and venturing managers of three firms in particular felt a need to repeatedly state during the interview that “it is not just about startups”. They expressed that startup engagement should always be considered a means to an end and that startups are not necessarily the best means. One manager stated that “innovation is what matters most” and that “its origin is of less importance”. He underlined that companies should evaluate thoroughly whether startups will help to achieve a specific goal or whether other means may be more suitable. Three other interviewees were less firm in their statements, but also explained that their companies focus on open innovation and that startup engagement is a means to achieve this end. The other five corporate representatives did not specifically address the concept of open innovation during the interview. The emphasis on open innovation confirms the validity of the theoretical framework with the overarching construct of open innovation (and not corporate-startup engagement) as one of its core elements.

Startups should be considered a means to an end.

One of the innovation managers described how he felt that his firm had reached a certain stage of maturity which enabled them to view startups in

the proper context by now. “Initially, we focused on startups as a topic in itself to load the topic within the organisation but recently we shifted towards viewing startups in the context of a topic.” “With startups as a topic we could create awareness of startups as a valuable business tool to foster innovation and business development.” He believed it was a necessary first step to initially have startup engagement as a goal in itself to convince others of the power of startups and create internal support for startup collaborations. In a rather conservative business environment, there was a lot of resistance which had to be overcome first.

6.4.2 Startup engagement: activities, overview and mutual alignment

Many of the interviewed corporates engage in a wide range of startup activities, but an overview of these efforts is often incomplete or absent. Internal alignment of engagement activities mostly resides in informal referrals or conversations. Various interviewees expressed that they are currently consolidating their efforts to reduce complexity and increase their overview. In the descriptions of corporate-startup engagement activities a strong presence of the innovation ecosystem was witnessed with many interviewees reporting ties with other parties in the innovation ecosystem.

At the start of each interview, interviewees were asked to describe their engagement activities. This was done to encourage respondents to speak freely. Later on, it was also asked to which extent they had a clear overview of these activities. As the research focuses on the strategic relation between startup engagement and corporate strategy and not so much on which types of engagement are practiced, it is not considered relevant to sum up all activities that were described. A few things are worth noting though.

Firstly, most of our interviewees described that they “do a lot” and emphasised that they “are con-

tinuously experimenting”. Herein numerous collaborations with or ties to other ecosystem partners were mentioned. Many firms for example take part in external acceleration or incubation programs. At two firms startup engagement was related a specific technology platform. One of the interviewees described to have built “an ecosystem of 200 partners” around the platform.

In describing their engagement activities the interviewees generally started storytelling without much structure. Often new initiatives kept popping up during their explanation. The apparent lack of overview was confirmed by comparing results from a quick web search that had been conducted prior to every interview with the described engagement activities during the interview. Numerous initiatives and collaborations that were reported online were initially not pointed out by our interviewees. In some cases a few initiatives that were reported online were no longer pursued. When asked if they had a ‘concrete’ overview of their startup engagement activities or contacts many of the corporate managers and venturing executives had to admit that such overviews were absent or incomplete. Six firms expressed that they had no clear overview of their engagement activities with startups and three reported to lack a database of their contacts with startups. One interviewee at a firm who dedicates significant resources to innovation and venturing expressed that he was “really frustrated by the fact that they had no overview” and that he would “occasionally make overviews” but that these were “far from complete”.

He also explained that they once “tried to build a CRM system” but that this effort had failed. Another innovation manager expressed that currently the firm’s “engagement activities were so wide and complex, that no one in the firm would be able to paint the whole picture”. He however emphasised that they are working very hard to consolidate activities and create a better overview, including the use of one CRM system across departments.

The interviews also showed that internal alignment of engagement activities was mostly done via informal referrals. Three interviewees described how they frequently “passed on relevant things that came by to other colleagues”. The representative of another firm explained that all investment funds do have a clear and aligned scope, but that their overall engagement efforts do not (yet) form a streamlined funnel. “It could very well be that certain startups in which we invest may also provide valuable input to our research departments but have never met each other.” He pointed out that various engagement and innovation efforts used to belong to different branches, which only came together at the Board of Executives. They are now consolidating their efforts to enhance alignment. Another manager expressed that their engagement efforts have been derived from the needs of different disciplines and business units, but that there is no collective meeting to align and identify points of mutual reinforcement.

6.4.3 Objectives of startup engagement

An overarching objective of startup engagement that emerged during the interviews is that of acceleration; startups are viewed as catalysts of innovation or change. The interviews also indicate that innovation managers may have to ‘juggle’ much more objectives in reality than specific ‘on paper’. Three key objectives for startup engagement that were expressed are: to gain strategic insight, to developing new business models, and to innovate the existing business. Contrasting opinions existed on the extent of cultural change that can be realised via startup engagement. In comparison to the objectives from literature, new objectives also emerged. Two examples are learning objectives and ecosystem-related objectives. Lastly, interviewees expressed that they often have one or two key objectives per activity.

This section will discuss the extent to which the startup engagement objectives that we retrieved from literature (see Section 3.2.2) are also expressed by industry experts. Moreover, the strategic character of the objectives is assessed to identify potential reciprocity between corporate strategy and startup engagement.

It is emphasised that the mentioned objectives often did not one-on-one corresponded to the objectives in Section 3.2.2. Interviewees described objectives in a broader context, in different wording or covered only parts of different objectives. This makes that it was not possible to simply tick boxes and that the interpretation of the researcher plays a role in connecting the objectives expressed in practice to the theoretical ones. The information in this section therefore should be viewed as a general impression rather than an accurate count of theoretical objectives in practice.

Amount and type of objectives

A first notable result is that corporates generally view startups as catalysts of innovation or change. "Startups are able to develop matching propositions much faster." In ten out of eleven responses on the question what the firm's objectives for startup engagement were, respondents mentioned the term "to accelerate". The acceleration of innovation may be considered an overarching objective.

A second notable result is that in response to a direct question on what were the firm's objectives for startup engagement (question 2 in Table 6.2 on page 66) generally two or three objectives were mentioned, but that in the answers to other questions of the interview various other objectives surfaced. This could indicate that managers may have a small set of objectives defined 'on paper' yet have to juggle more objectives in reality. In five cases the amount of objectives that was expressed - both explicitly in response to question 2 and implicitly in answers to other questions - reached seven up to nine (this includes various 'new' objectives that surfaced which will be ex-

plained in more detail later in this section). A specific example is given to further clarify this finding. One manager for example did not mention "cultural change" as an objective of their engagement efforts in response to the direct question (question 2 of Table 6.2). However, later on in the interview he stated that "culture as an objective overarches everything, it is hugely important." This ambiguity on what are key objectives of startup engagement can increase the risk of mixed objectives and mixed messages. This in turn can compromise the success of startup engagement on the long run (see Section 4.1.2, page 42).

In the direct responses to the question on the firm's engagement objectives, gaining a strategic insight in new technologies and business opportunities, and developing new business models were mentioned most often (by five firms). With four mentions innovating the existing business followed. The other objectives were only mentioned once or twice. Exploiting spare resources or harvesting was not mentioned by any of our experts in relation to corporate-startup engagement. One innovation manager emphasised that their startup engagement activities focus on "the outside-in retrieval of innovation rather than pushing their own innovations outward".

When taking into account both explicit and implicitly mentioned objectives (including *all* objectives expressed throughout the interview) the findings are similar. Gaining a strategic insight and innovating existing business were both mentioned by nine out of ten firms. The development of new business models was expressed seven times. The other objectives in Table 3.2 were mentioned a maximum of four times. Again, harvesting was not mentioned by any of the interviewees.

Key objectives are: 1) gaining strategic insight, 2) developing new business models and 3) innovating existing business.

These findings indicate that startup engagement is most predominantly pursued to strategically advance current or develop new business, and that other objectives are secondary. In line with the theory in Section 4.1.2 a distinction seems to be made between existing and new business development. It can also be argued that the importance that is given to more 'indirect' objectives such as image enhancement by more practice-oriented literature (see page 32/33) is not reflected in confirmed. The fact that the most frequently expressed objectives tend to have a strategic nature supports the need for reciprocity between startup engagement and corporate strategy that was emphasised in the theoretical framework.

Different views on culture change as objective

Quite some contrasting opinions existed among interviewees regarding the extent of cultural change that can be realised through corporate-startup engagement. In two cases cultural change was an important objective of startup engagement. One manager said that "culture as an objective over-arches everything, it is hugely important." The other interviewee described that they stimulate culture change in a number of ways and that "startups can give a good example and be a source of inspiration". Two others firmly stated that they do not engage with startups to realise a culture change, though both acknowledged it can have a positive effect. One of them said: "you must not think that startups are the holy grail and that suddenly the whole organisation become more entrepreneurial; it is just not the case." All of the others emphasised the "happy marriage" between startup engagement and organisational entrepreneurship, but explained that for their companies it is not an explicit goal of startup engagement but rather an implicit benefit.

"You must not think that startups are the holy grail and that suddenly the whole organisation become more entrepreneurial."

Surfacing of new objectives

Besides the objectives expressed in Section 3.2.2 a range of new objectives surfaced in the interviews. Two were expressed by multiple interviews: learning objectives, to be part of the ecosystem. Each will be addressed in slightly more detail.

To learn about/from startups, their way of working and cultural differences

Five innovation managers pointed out learning objectives, which mostly centred around learning from the way of working of startups. One said "startups can learn us to work more efficiently and faster." Another stated that "at the start we were really focused on learning from startups". "They learned us to quickly establish and validate customer needs". Lastly, an innovation manager expressed that they "learned to speak the same language" and "have learnt how a startup community works". These learning objectives can be related to the concept of competence building through open innovation that was addressed in the theoretical framework.

"Startups can learn us to work more efficiently and faster."

To be part of the innovation ecosystem

All of our interviewees repeatedly emphasised objectives associated to being part of and being present in the startup or innovation ecosystem. The representatives of five firms pointed out the objective of being visible or present in the startup or innovation ecosystem as *the*, or one of the, key objectives of some of their engagement activities such as events, participation in independent accelerator programs or partnerships with incubators. In a way this objective has some overlap with the earlier objective of image and reputation enhancement (see Table 3.1 on page 32) though its scope is considered rather different. The surfacing of this objective is very much in line with the concept of open strategy and importance of the innovation ecosystem as addressed in Section 4.1.3.

One candidate described that they “actively make use of the existing ecosystem” for two reasons: 1) a limited capacity at their own firm and 2) to build upon the developed skills and the network of established parties. At another firm a corporate liaison manager was “100% responsible for positioning the firm within the ecosystem.” One innovation manager expressed that the external vision of their innovation and venturing department was to “have a broad visibility and build a wide network within the startup ecosystem with considerably low investments.” This interviewee explained that his firm aims to be an active contributor to the ecosystem, yet does not officially or financially commit to any specific parties. It is a matter of “give and take” and firms have to “give something back to the system”.

It is notable that the objectives mentioned in this category are not really focused on *strategic* engagement with the ecosystem yet. Most firms seem to focus on “being present” within the existing ecosystem. Only two firms explained they were actively shaping ecosystems around their technology platforms. The concept of open strategy and joint strategising processes that are proposed in the theoretical framework (see Section 4.1.3) may provide an important next step in deepening the relationships of corporates with their partners and increasing the extraction of strategic value from ecosystems.

A joint strategising process may increase the extraction of strategic value from the innovation ecosystem.

Other new objectives

In addition to these two new objectives that were expressed by multiple interviewees, a few other new objectives surfaced that were expressed only once or twice. These other new objectives are:

- To access new products and/or services much cheaper than from established firms
- To improve the startup product and/or service proposition
- To stimulate innovation at own customers as a means to create additional customer value
- To promote the use of API's

The first objective points to a cost benefit that may drive startup engagement. The second one was pointed out by two banks within the interview sample. Startups with a relatively high-risk financial profile represent a new customer segment with specific needs. In yet another perspective, startup engagement was undertaken as a means to provide additional customer value to existing clients. The firm's startup network contributed to an increased value proposition with which they could differentiate from competitors. The fourth objective is considered a specific variant to the objective of developing complementary products and/or services as mentioned in Section 3.2.2.

Differentiation according to purpose

When asked if different startup engagement activities served different purposes, most interviewees confirmed this was the case. From their subsequent explanations it followed that often there are one or two key objectives for every activity, but that in the background various other objectives play a role too. In line with this observation, one manager described that the “hierarchy of objectives is different for every activity”. “Corporate culture is a goal for every activity, though more important for the one activity than the other”. Another innovation manager emphasised that there is always a strategic rationale behind their activities, “we never do something to just boost our image”.

“The hierarchy of objectives is different for every activity.”

6.4.4 Strategic focus

Most subjects had defined strategic focus areas for their engagement efforts. Two types of focus areas emerged: 1) emerging business areas that focus on generating new revenue streams and 2) innovation themes that focus on specific technology trends. In general strategic focus areas were considered to have a dynamic nature. The extent of the relation between focus areas and corporate strategy was not always clear, especially for innovation themes. The Horizon Model also was common vocabulary in describing strategic focus, though its terminology proved very ambiguous. Analysis of the applied horizons did show that interviewees emphasise the distinction between startups as suppliers of incremental innovation in horizon 1 or 2 and startups as a partner in radical innovation in horizon 2 or 3. Corporates are generally active on a wide spectrum of startup development stages, with a specific development focus for some activities.

Presence of strategic focus areas

The interviewees of eight out of ten firms to have defined clear focus areas for their startup engagement efforts. A few things are worth noting.

Two distinction types of strategic focus emerged. Some interviewees expressed to focus startup engagement efforts around emerging business areas. These concerned 'large' new business areas or revenue streams, i.e. not a product or service but rather a new business unit for the firm. This type of focus areas tend to be embedded in a firm's overall strategic vision and corresponds to the EBAs of DSM that were described in Section 4.1.4. Most of the interviewees however described that their firm's engagement efforts centered around innovation themes. Such themes generally represented

(technological) trends that could impact existing business areas and/or could become important for the firm in the (near) future. To illustrate: emerging business areas may concern areas as "smart home" or "smart mobility" while innovation themes relate to trends such as "blockchain" or "open banking/PSD2"¹. Emerging business areas represent the concrete application of technological trends to the firm's sector. An emerging business area may include multiple innovation themes that collectively result in a new business opportunity. Interviewees generally described between three and eight focus areas. The two firms with a dedicated business unit for innovation and venturing both focused predominantly on emerging business areas, while others were more geared towards innovation themes.

Two types of strategic focus areas are 1) emerging business areas that result in significant new revenue streams and 2) innovation themes that reflect (technological) trends.

Determination of strategic focus areas

A great variety was observed with respect to how strategic focus areas were determined. One innovation manager explained that the corporate's strategic roadmap drives the determination of their focus areas for engaging with startups. "Our direction is determined from strategic gaps. It is not so interesting what our corporate strategy is, rather where the strategic gaps are." He explained that for each strategic gap they determine to which extent they are able to fill the gap on their own or whether startups can support them in achieving their objectives. Soon specific accelerator programs would be started around such strategic gaps. "The question is whether you want to source new technologies or capabilities from startups or do you want to develop these capabilities in-house". In that sense "stra-

¹ PSD2 is a directive that aims to drive increased competition, innovation and transparency at European banks, while also enhancing the security of Internet payments and account access. At the core of PSD2 is the opening of banks' API's to third-party providers (TPPs) (Accenture, 2016)

tegit decisions in corporate-startup engagement often come down to a make-or-buy decision". This approach strongly aligns with the concept of a strategic vision (and gap) from the theoretical framework that guide engagement efforts and competence building (see Section 4.1.5). It was not clear to which extent engagement efforts also actively drive redefinitions of corporate strategy at this firm.

"It is not so interesting what our corporate strategy is, rather where the strategic gaps are."

In another case the innovation themes were determined yearly by a group of +/- 20 management team members, among others based on input from the innovation and venturing team. And in a third case, a corporate had developed an innovation radar based on IBM Watson that continuously monitors the relevance of specific themes.

One innovation director explained how his company visualised their strategic focus in a matrix. This matrix had functional priorities that reflect the corporate's strategy on the horizontal axis and so-called "technology verticals" (e.g. AI or VR) on the vertical axis. The identification of these verticals was mostly based on internal research of the team. The executive explained that plotting startups on this matrix also enhanced the likelihood of "startups finding a proper business owner internally." Such a matrix may provide a practical way to achieve the reciprocity between open innovation (strategic context; technology verticals) and corporate strategy (strategic vision; functional axis) as described in the theoretical framework in Chapter 4. From another perspective it could also enable the combination of emerging business areas with innovation themes.

Dynamic nature of strategic focus areas

Most respondents emphasised the dynamic character of their focus areas. They explained that

the strategic areas were defined to provide direction but were not considered strict guidelines. A startup outside of the focus areas could still be interesting. In line with the theoretical framework (see Section 4.1.5) these statements point towards the presence of a strategic vision to guide innovative efforts while leaving some room for recognising new strategic context. It is however not exactly clear to which extent the strategic vision or strategic context actively relate to the corporate strategy. Especially for innovation themes the link towards corporates strategy may only be marginal.

Application of strategic focus areas

A few applications of the focus areas were also described. Various interviewees explained that engagement activities could have a very specific focus. Events may be organised around specific themes or pressing business challenges. These activities resemble the directed, participative approach of the open innovation typology that was discussed in Section 4.1.2. This behaviour also points to the presence of differentiation of activities according to strategic purpose.

One manager explained how his team develops detailed search profiles based on the strategic focus areas. Together with a partner in sourcing, they then actively search and scout startups that fit that specific profile. A second interviewee's vision strongly aligned with this approach. He explained that he would really like to move from the firm's current reactive approach to sourcing to a more proactive attitude. "I want to actively source on specific problem areas instead of just flinging the doors wide open and shouting out I want to collaborate with everyone." Currently, this was not always the case yet.

"I want to proactively source on specific problem areas instead of just flinging the doors wide open."

Perception of the three horizons of growth

The three horizons of growth were also common vocabulary among interviewees in describing their strategic focus. The reader is referred to Section 4.1.2 for an introduction to the Three Horizons model. To shortly recapitulate, the model describes three innovation horizons. Horizon 1 is focused on defending and extending the core business, horizon 2 innovations focus on building emerging business and horizon 3 concerns building viable options for the future.

Though all interviewees were familiar with the model, the interviews showed that the applied scope for each horizon differed significantly. Appendix C shows the large variations in the interpretation of the innovation horizons. This also makes the results difficult to compare. In line with these observations, three interviewees already emphasised the considerable semantics involved with the application of the Three Horizons model. One stated: “nobody is able to explain properly what horizon 2 or 3 exactly is”. Another interviewee also said he was “a bit weary with respect to the Three Horizons” due to the considerable ambiguity.

Upon reviewing Table C.1 in Appendix C it can be noted that the most important distinction made is between incremental innovations in the current business domain (Horizon 1 and 2) and exploration and development of radical innovations beyond the current business domain (Horizon 2 and 3). One interviewee also stated that “in principle it is just a separation between incremental and radical innovation.” Most interviewees explained that the ‘business’ is mostly responsible for horizon 1 (and optionally 2) innovations. In this horizon, startups may fulfil a role as supplier of innovative products and/or services. For most firms corporate-startup engagement however focuses on startups’ as partner in exploring and developing new technologies or business models and developing radical innovations in horizon 2 and 3. One manager emphasised that “startups that are brought in as suppliers in horizon 1 are a completely different type of startups from those with which they collaborate in ho-

zizon 2 and 3.” The horizon 1 startups are generally connect to the core business. One corporate representative did express a pitfall associated with internal referrals. She stated how she had once discovered that she “had to pursue 60% of the startups that been connected to internal colleagues again.”

Besides uncovering the existence of considerable ambiguity on the terminology, this section uncovered that the interviewees emphasise the difference between startups as suppliers of incremental innovation in horizon 1 (and 2) and as a partner and catalyst of radical innovation in horizon (2 and) 3. This observation aligns with the need for a clear distinction between advancing existing and developing new business that was emphasised in Section 4.1.2.

There is a difference between startups as suppliers of incremental innovation and startups as partners and catalysts of radical innovation.

Focus on startup development stages

Lastly, interviewees were asked if they focused on startups in specific development stages (see Appendix D for more explanation on startup development stages). In response to this question most firms started explaining their development focus in relation to different types of engagement activities. Two firms explained they did not have a specific focus and that all startups, even those without a working prototype, could be interesting.

Generally this question showed that many corporates are active on a large part of the development spectrum with a specific development focus for different types of engagement activities. Accelerator or startup programs were mostly focused on early-stage startups while corporate venturing or investment activities were generally focused on startups - or scaleups - in an expansion stage. In one case the corporate’s innovation fund was contrastingly targets at startups that require seed funding. One interviewee explained that initially she “helped

everyone” but that now she “assesses whether the startup has a working prototype, and preferably paying customers.” One manager stated that his corporate very consciously decides not to focus on early-stage startups anymore. They focus on “Series A and B even more than Startup stage”.

6.4.5 Existence of a corporate startup engagement strategy

The interviewees of only two firms expressed they had a corporate-startup engagement strategy. Both described a similar concept of a core-satellite strategy involving the creation of (startup) satellites in strategic growth areas of the firm, that operate at a distance to the core. The other interviewees expressed they lacked strategies. They often blamed the dynamic and experimental nature of startup engagement. Interestingly, despite the lack of strategy, most firms do consider themselves strategic in their engagement with startups. It may be that the current perception of strategy by the industry strongly resembles that of a deliberate strategy, and that they do not consider their current acts of experimentation and finding their way a form of strategy. Some cases showed characteristics of autonomous entrepreneurial behaviour and retro-active strategising.

All respondents were asked whether they had a corporate-startup engagement strategy and if so, if they could explain this strategy. On this question only two corporates positively confirmed that they had a clear strategy.

Core-satellite strategy

Both described a similar strategic concept: a core-satellite strategy. Herein they considered their core business or firm to be the “core” or the so-called “mothership”. Around this core they are now creating satellite companies, which may be startups, that operate at a distance from the core and which can stand on their own two feet. The satellite firms are connected to the firm’s strategic areas of growth or customer touch points. One interviewee explained how “the satellites will help to tilt the mothership”.

“The satellites will help to tilt the mothership.”

One of the two managers also stated that each satellite could, in turn, have its own connections to other startups. The principles of the core-satellite strategy are visualised in Figure 6.3. This strategy may be considered a way of attaining reciprocity between startup engagement and corporate strategy while keeping sufficient distance to safeguard the ‘satellites’ from the corporate ‘hug of death’.

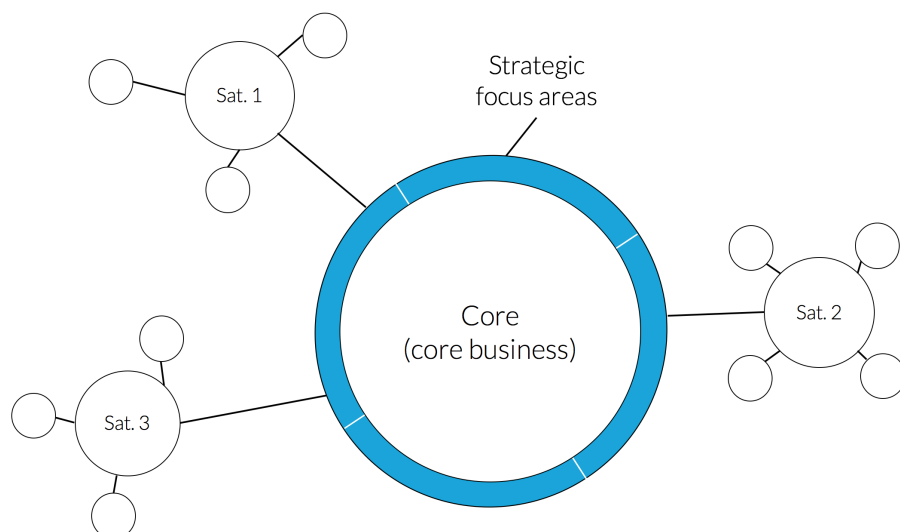


Figure 6.3: Core-satellite strategy in corporate-startup engagement

When asked about the formal relation to the core and the extent of ownership of their current satellites, one interviewee explained that this strongly varied depending on the origination of the idea and the development phase. This manager considered scaling up the satellites the key challenge in pursuit of their core-satellite strategy. When connecting a satellite to the core, the startup has to be ready to serve millions of customers, which is an inherent problem considering its startup-stage. They were now working on “a specific sales operating model for products and services of startups to improve the implementation and scaling of startup innovations across our entire firm, nationally and internationally.”

The innovation manager of another firm - who described that his firm lacked a startup engagement strategy - did describe that his firm was slowly moving towards platform-thinking in open innovation. He explained that, in line with the core-satellite strategy, platform-thinking would open up their organisation and allow for various initiatives/entities to exist side-by-side.

Absence of strategy

The interviewees of eight firms, though often after some contemplating, stated they do not (really) have a strategy to guide their startup engagement efforts. One manager stated: “I miss having a shared vision or strategy every day”. “Everybody has a personal vision, but we do not have one as a firm.” He explained that the lack of strategy sometimes resulted in “collaborations with parties for which hasn’t been thought through whether these parties complement their portfolio”. Another interviewee explained that their plan “more or less stopped at the moment we started our activities; everything after that has originated organically”. “There never has been a plan since, because we did not have the time anymore.” He said that he felt that one does “need a rough plan that you detail along the way.” These statements point towards the theory of emergent strategy (see Section 1.3.2). Another firm that lacked a strategy explained they do have

an open innovation strategy, but not a strategy for corporate-startup engagement in particular (yet). Interviewees of two other firms explained they were developing strategies right now. One of them explained that in the past startup engagement efforts could have much freedom but that with “the growth that is now taking place in the startup ecosystem, and its strategic importance, they could no longer organise it in that way.” The other respondent explained that they first had to learn and experiment, before they were able to make a proper strategy. This interviewee emphasised the need for a “collective strategy, but with sufficient room for individual needs”.

“I miss having a shared vision or strategy every day. Everybody has a personal vision, but we do not have one as a firm.”

Interestingly, six interview candidates (of which only two claimed to have an engagement strategy) confirmed that their firm was ‘strategic’ in its pursuit of corporate start-up engagement. Most of them however did state there is certainly room for improvement. One interviewee expressed that “the CEO is not yet obliging us to do more startup experiments, but we are definitely heading in the right direction.” Another manager stated that initially they focused on “helping startups” and “being present” but that recently the “strategic value” has become more important. One innovation manager preferred the term “tactical” over strategic as the second would in his eyes imply “topdown and very structured activities that support long term goals”. He explained that they have a rather short-term view, which also reduces the extent of structure and strategy.

Perception of strategy

Considering the clear strategic focus (see Section 6.4.4) of many firms that argued to have no real strategy, one could argue that the current percep-

tion of strategy by our respondents is mostly that of a 'deliberate strategy' (Mintzberg and Waters, 1985). Various statements of interviewees that said they did not have a strategy confirm this thought. One interviewee emphasised twice that the initial plan for their innovation initiative was "not a strategy" since "a strategy would imply that you know where you want to be in X years, and at my firm that is still under development." Three managers consider strategy-making more of an "old-school" practice and emphasised their firm's "agile" or "lean" approach to startup engagement. In this context one interviewee said: "we are currently not formalising what we want to get out of startups in five years". Another interviewee described that they had "invested half a year in organisational design at the start and really thought their innovation and venturing activities through" and that they "had a strategy". At the moment, especially for their new business development activities, they did not have a strategy anymore. Their current approach resembles "a lean startup approach in which they are continuously learning, challenging and adjusting" but "always with an underlying vision".

There are signs that indicate that the industry has a rather deliberate perspective on strategy.

Experimenting and autonomous entrepreneurial behaviour

Corporate-startup engagement and experimenting are inherently connected according to many of the interviewees. When asked for recommendations to other firms the representatives of five out of ten firms advised to start small and run various experiments. One stated that "you first have to learn what startup engagement entails and what it means for your organisation." Another manager also advised "to keep it small until you understand how it works. "The journey itself is valuable."

At various firms entrepreneurial acts are observed that resemble the principle of autonomous behaviour of Burgelman (1983). One interviewee described how he had set up a "multidisciplinary innovation platform" that overarched departments one year ago. This team now executes the firm's innovation strategy. Another interviewee described how she had just "started running" and "experimenting with new initiatives" when she was appointed the task of startup engagement. She explained that she is now retro-actively developing a strategy based on all of the lessons-learned. At a third firm, two years ago, the board of executives gave a small team the possibility to experiment with startups without defining "specific objectives or clear KPI's". They purely focused on learning about startups and the startup ecosystem. Currently, this firm pursues a wide variety of startup engagement activities and has an innovation and venturing department with significant resources. Looking back, the innovation manager stated he believed that a top-down strategy for startup engagement would have given results "much slower than when a lot of startup activities are initiated from the bottom-up." He felt that their initial lack of strategy really opened up possibilities for initiatives to unfold. "Some people would have never pushed through the board of executives had allocated a strategy and capacity."

These three examples represent a form of autonomous entrepreneurial behaviour within the corporates. Various interviewees initiated new plans and had to fight for it. These plans are now slowly materialising into serious attention for startup engagement from the core business. Reflecting on the model of Burgelman (see Section 1.3.2), the third interviewee argued that a lack of structural context has promoted significant autonomous entrepreneurial behaviour within his firm. At the same time this same candidate also expressed to "miss having a shared vision or strategy every day" and that it is good "to start structuring such initiatives once established". These statements points towards retro-active strategising based on strategic context (Burgelman, 1983).

6.4.6 Reciprocity of the relation between corporate-startup engagement and corporate strategy

All interviewees agreed that a reciprocal relation between corporate-startup engagement is most desirable. This is however currently certainly not always the case. In four cases, the interviewees currently regarded startup engagement and corporate strategy, especially in a formal sense, two completely separate entities within their firm that only came together at board level. In other cases the corporate representatives described a certain degree of reciprocity between the two domains which was mostly realised through informal ties. In general, few structures and processes were described that actively facilitate strategic conversations and alignment between startup engagement and the overall corporate agenda.

In questioning the reciprocity of startup engagement and corporate strategy at firms in our strategic sample, inspiration was drawn from the configurational model of Covin and Miles (2007) that was described in Section 4.1.1. In the configurations of Covin and Miles, corporate venturing was replaced by corporate-startup engagement (see Figure B.1 in Appendix B). After shortly explaining each configuration to interviewees, they were asked to point out which model was most applicable to their case, and explain why they regarded that specific configuration most representative for their specific case.

As an important starting point, interviewees of all ten firms regarded a reciprocal relation as described by model 4 and 5 (see Figure B.1 in Appendix B) to be the most desirable configuration of the relation between startup engagement and corporate strategy¹. In practice, the interviews show that this not yet always achieved.

“Running and changing the business are two different things.”

Interviewees of four firms described that currently, especially in a formal sense, they regarded corporate-startup engagement and corporate strategy at their firms two separate entities. They pointed towards model 1. One manager explained that “running the business and changing the business were two different things” at his firm. He expressed that the “business was just doing their own thing”. Another manager described that on an informal level the interactions in his organisation approach model 4, with both sides listening to each other, but that formally the two still are separate entities. He explained that “corporate strategy, and innovation and venturing on a formal level only meet at the board of executives, as both department report directly to the board”.

“Corporate strategy and innovation and venturing on a formal level only meet at the board of executives.”

One corporate representative described that he felt that throughout his organisation one could probably encounter the application of all of the configurations. He explained that previously, every “business unit could do whatever they wanted without any coherence or mutual alignment”. With the arrival of a new board and a new strategy this was no longer considered a feasible approach. As a result they were now consolidating and centralising their startup engagement efforts. Currently, he thought that especially model 2 was frequently deployed with his organisation as many startup initiatives centered around strategic themes. He emphasised that the firm absolutely wants to move towards model 4, where innovation and strategy departments continuously monitor each other and interact, but that they “are not there yet”.

¹ In the interviews the discussion predominantly centred around the first four models of Covin and Miles (2007). Model 4 and 5 both represented the existence of a reciprocal relation between corporate-startup engagement and corporate strategy. The distinction between these two models maybe was insufficiently clear. This will also be addressed in Section 8.2 on limitations of this research.

The five others interviewees deemed model 4 the most appropriate model to describe the relation between startup engagement and corporate strategy in their firms. One innovation manager made the sidenote that the lines of model 4 were still dashed in their case to emphasise that reciprocity was still fragile. It was stated that “the strategy-makers are not weekly visitors anymore, but initially the strategy department was actively involved”. “Now we sometimes do consults, but certainly not always.” The five interviewees that pointed towards model 4 generally expressed that their activities and strategic focus were guided by corporate strategy and that they tried to actively involve other business units in their startup initiatives. These links do seem rather informal and no examples of corporate strategy being redefined by startup engagement efforts were described. Moreover, it is emphasised that there is a difference between involving other business units in initiatives and actively aligning on a strategic level.

“The strategy-makers are not weekly visitors anymore, but initially the strategy department was very involved.”

As an example of informal ties, one of the innovation executives explained how they have “an unofficial internal council of vice presidents with limited mandate” with which they discuss the validity of their plans. In another interview a manager pointed out weekly “share-and-learn sessions” with innovation representatives from various business units and the CEO of the organisation. In these meetings they would discuss experiences, plans and align their efforts. This however means that the task of reconciling existing business with innovation efforts would rest only at the CEO. None of the interviewees described formal processes that were focused on continuously reflecting on the relation between startup engagement efforts and corporate strategy.

6.4.7 Coordination of corporate-startup engagement

A great variety was observed in the internal coordination of startup engagement activities. Firstly, five different organisational configurations were described. Most often, startup engagement belonged to a dedicated innovation and venturing business unit or department. In seven cases interviewees described that a separate investment board was appointed to decide on investment activities. Interviewees also expressed that top level commitment is of vital importance to the success of startup engagement. One or two members of the board were involved in all cases, but there was no consistency observed on the function that member(s) fulfill(ed) in the board. Many interviewees also described that internal support for startup engagement is still a key challenge. Three firms report to have a single access point for startups that acts as a gateway to the rest of the firm.

Position of corporate-startup engagement within the organisation

The interviewees were asked to describe and draw the position of startup engagement within the organisation. This also resulted in an explanation of which people and departments were involved. This process provided insight in how reciprocity was operationalised within the organisation.

Often this question resulted in somewhat chaotic pictures. Upon analysis, five different configurations was identified; the amount of firms that displayed this configuration is mentioned in between brackets:

1. Separate business unit dedicated to innovation and venturing (2x)
2. Innovation and venturing as a dedicated department (staffing function) that overarches business units (4x)

3. Innovation and venturing as part of an other staffing function (2x)
4. Innovation and venturing as a department (staffing function), new business development teams/managers at business units, and startup representatives at local affiliates (1x)
5. New business development managers/team at every business unit (1x)

These configurations are visualised and described in more detail in Appendix E. Generally, startup engagement was organised within a single department or business unit. In two cases the responsibility rested at various people and/or departments throughout the organisation. One of the interviewees with this spread responsibility stated that the firm's activities currently showed a level of "well-meant proliferation" and that they were now "actively bringing back responsibility to a central point". This well-meant proliferation could be a sign of autonomous behaviour as described in the model of Burgelman (1983) in Section 1.3.2. Various people have initiated startup engagement activities and through consolidation these are now retroactively embedded in the organisational strategy.

Allocated resources

The amount of human resources allocated to startup engagement (i.e. innovation and venturing) differed considerably across the interviewed subjects. In both cases with a dedicated innovation and venturing business unit and in case 4 with responsibility spread throughout the organisation (see top of this page), considerable resources were associated with startup engagement (both financial and human resources). These business units housed various teams that were responsible for e.g. scouting startups, developing emerging business areas, corporate venturing, etc. Three out of the four cases with a dedicated venturing department and case 4 (see the enumeration at the top of this page) also allocated significant resources.

In contrast, in the fourth case of a dedicated innovation and venturing department a team of only three persons was responsible for all activities. In the remaining configurations (configurations 3 and 5 at the top-left of this page) the amount of people involved with startup engagement was small. One interviewee even stated to be "on his own". He was solely responsible for strategy, internal alignment, scouting startups, preparing investments, connecting relevant startups to the core business, organising events, connecting to the innovation ecosystem, etc. The interviewee described that the lack of organisational capacity made it impossible to work on strategy or to maintain a proper overview of activities and results besides managing all of the other activities. Surprisingly, this interviewee managed an investment fund of millions of Euro's. One could argue it is striking that the team of the interviewee was not expanded considering the available financial resources.

In one case a single person was responsible for strategy, scouting startups, preparing investments, organising events, etc.

An interesting side note in relation to the reciprocity of corporate strategy and startup engagement is that two firms explained that their engagement efforts had originated under the header of the corporate strategy department. Yet both disconnected from this department as plans further crystallised. In one case a separate business unit was set up. In the other case the engagement efforts were transferred to another unit that focuses on innovation.

Investment board or committee

In seven cases interviewees described the existence of an investment board/committee when asked to describe their organisational structure. These boards were mostly responsible for the eva-

luation of corporate venturing investments, and in many cases the CFO³ of the organisation was seated in this board.

In one case, an innovation manager explained that they were setting up an investment board whose responsibility would be to evaluate all investments concerning startup engagement. Besides evaluation of mergers, acquisitions or limited partnerships, the board would also decide on the 'internal funding' of specific types of startup engagement (presented in batches). The interviewee explained that this set-up should result in "money being better spent, in a more balanced way, and more in line with corporate strategy". This approach could provide a meaningful way of relating corporate strategy and startup engagement on a financial level.

In another interview, a manager explained that their investment board also seated all the directors of their existing business units. This could result in a degree of reciprocity between startup engagement and the core business. The involvement of business owners was also emphasised in the theoretical framework in Section 4.2.2. One could argue however that if business unit owners are only involved in go/no go decisions on investments, this does not necessarily result in strategic alignment.

Involvement of top management

When analysing the involvement of top management it became clear that in at least eight out of ten cases the innovation or venturing department and/or startup engagement representatives report directly to one or two members of the Board of Executives¹. Interestingly, the interviews showed a great variety in the roles that the involved board-level members fulfil within the board. In three cases the responsibility for innovation and venturing belonged to the CEO, in three cases to the COO (all three banks within the

interview sample) and in two other cases to the CCO^{1,2}. In the cases where board members were involved, the CFO always complemented another board member on the venturing aspect³.

These findings align with the importance of top-level commitment that was already underlined in Section 4.2.2. One interviewee emphasised that ownership from top management was crucial. "You have to have ambassadors in the board of executives if you want to get anything done in a corporate environment." Another respondent stated that one board member has been a 'champion' of startup engagement from day one and has really taken along other board members in this train of thought. The principle of internal champions was also mentioned in Section 4.2.2. At another firm an interviewee how awareness of startup engagement was growing on a board level, but that there was nobody on that level that is "actively asking why the firm is not collaborating more intensely with startups or what the result is of current startup collaborations."

"You have to have ambassadors in the board of executives if you want to get anything done in a corporate environment."

Lastly, one innovation manager pointed to the necessity of strong leadership in internal communication to prevent a cultural hype around a department of innovation and venturing. Top management should emphasise "the value of both current and new business models throughout the organisation" since the "whole business is earning money for one tiny team to experiment with new business models." The need for an attitude of mutual respect between the core business and innovation units was also emphasised in Section 4.2.2 that covered advice on the organisational level.

¹ In two other cases the involvement of top management was not addressed in detail during the interview.

² CEO = Chief Executive Officer, COO = Chief Operations Officer, CCO = Chief Commercial Officer

³ CEO = Chief Executive Officer, COO = Chief Operations Officer, C

Internal support

Eight out of ten interviewees described internal support was one of the key challenges in their startup engagement efforts. Examples underline the difficulties that are experienced by interviewees in pursuing startup engagement within their organisations. One said: “in my first year people would knock me down like ‘a little seal’ and laugh at me if I would arrive with a story about the value of serendipity.” “That is why we initially focused on startups as a topic itself instead of startups in the context of a topic.” Another manager stated how “the biggest challenge was getting everyone aboard”. “We should have put everyone on ‘receiving’ modus earlier on, including creating space in their budgets and roadmaps for startup interactions”. “I still encounter lots of colleagues that feel startup engagement is not necessary.”

“In my first year people would knock me down like ‘a little seal’ and laugh at me if I would arrive with a story about serendipity.”

Respondents also explained the relevance of internal support in countering corporate inertia in corporate-startup collaborations. “You have to make sure that all layers and departments of your organisation are engaged to ensure you can offer sufficient organisational speed to startups.”

These expressed challenges confirm the importance of engaging the organisational level as expressed in the theoretical framework (see Section 4.2.2.).

Single access point

In line with the advice expressed in Section 4.2.3, three firms reported to have a publicly visible access point for startups. Two used the term “startup liaison” and one firm has startup ambassadors at various local affiliates. These persons speak the language of startups and act as the gateway to the rest of the firm. One of these firms was actively building “a unified front-end” towards startups.

At most firms the innovation and venturing department fulfills a role as gateway to the rest of the organisation, sometimes supported with innovation ambassadors across the firm. One interviewee stated that they had an internal innovation community with innovation enthusiasts “to spread know-ledge” and another explained that they had a virtual startup team of people that could dedicate one or two days a months to support startup engagement. Such innovation communities align with the need for internal champions that was expressed in Section 4.2.2.

6.4.8 Targets and performance

The degree and type of performance targets that was expressed by interviewees differed to great extent. Both firms with a dedicated innovation and venturing unit with considerable resources reported strict financial KPI's. The urgency to achieve results at these firms seemed high. At other firms different types of targets existed: e.g. revenue targets for new business units, frequency or exposure targets for events, financial targets for investments. Multiple interviewees however also expressed that it was not really clear how they would evaluate the success of their efforts. Opinions differed on whether the amount of startup contacted/seen is a suitable measure.

This section zooms in on performance targets and performance evaluation. Firstly, the firms with a separate business unit dedicated to innovation and venturing describe that their units have to comply with “strict financial KPI's”. Both emphasise the need for achieving traction and results *fast*. It appears the sense of urgency at these firm is very high. One of these interview candidates described that in 2025 their department has to “contribute €2.5 billion in sales to the firm”. Despite the presence of strict KPI's one interviewee answered with “that is a very good question, I would not know” when asked how the success of their innovation and venturing unit would be evaluated.

An interviewee at a firm with a dedicated innovation and venturing department with considerable resources explained that their 'satellites' (see Section 6.4.5) have to contribute €100 million in sales to their organisation in 2020. He however pointed out that the plan to get to there was still rather unclear and that they had relatively few KPI's in place. The KPI's the interviewee was aware of were mostly "soft KPI's" such as "achieving cultural change" or "seeing new things". He felt that his firm probably still resided in "a luxury position in which it could still afford to experiment without clear targets", but underlined "that targets definitely had to become more strict as 2020 approached".

"At this point we are probably still in a luxury position in which we can afford to experiment without clear targets."

A striking comment was placed by one manager when it was asked how the success of their efforts would be evaluated. He stated that his team had not defined clearly when the innovation unit would be a success; "not because we do not want to, but because it seems like the board of executives does not think it is important." This observation is considered quite critical. If the board is not concerned with the performance of startup engagement, this could seriously endanger the justification of strategic value to the core business on the long term.

"It is not clearly defined when innovation and venturing is a success. Not because we do not want to, but because it seems like the board of executives does not think it is important."

Two innovation managers stated that their firms have clear targets in place and that they "measure everything". They both explained that they had different types of targets in place for different types of engagement. One said "investments focus on financial returns, but hackathons for example have KPI's on visibility, such as how many views on social media or how many startups have been reached via the event." Their overall efforts were evaluated based on the amount of "strategic gaps" that were filled. This approaches to performance evaluation could promote reciprocity of corporate strategy and startup engagement. The other interviewee explained that for events they have "a frequency-target" while for participation in acceleration programs the aim is to start "a pilot with at least one of the startups from the program". Overall, their startup engagement efforts should result in "one new business model each year". The interviewees of two firms stated they had no specific targets in place.

Opinions differ on metrics that focus on the amount of startups. Some do not focus on the amount of startups or collaborations stating that they value "quality over quantity", while others have targets "on the amount of startups they connect to every year" or "the number of collaborations they have realised".

6.5 Synthesis of interview results

In this section an answer to the second research question is developed: to which extent can corporates be considered strategic in their use of corporate-startup engagement? One thing that strikes upon evaluation of the overall results from the interviews is that there exist many different views, beliefs and practices with respect to startup engagement. Most of the interviewees and their firms have only been actively engaging with startups for a few years and many are still actively experimenting with different types of engagement and different approaches to the strategic management and coordination of those activities.

his section will reflect on the extent to which the two theoretical constructs under study (see Section 6.2) were observed in practice. Some key strategic practices and some strategically underdeveloped areas that were observed in the industry will be pointed out. Firstly, section 6.5.1 addresses the presence of strategic objectives and differentiation according to purpose. Section 6.5.2 then reflects on the observed reciprocity between startup engagement and corporate strategy. In Section 6.5.3 a few other interesting observations with respect to the theoretical framework of Chapter 4 are presented. Section 6.5.4 concludes this section with an answer to the second research question. The key observations are also summarised in Figure 6.4. The colour of various elements within this figure is elaborated in Section 6.5.2.

6.5.1 Strategic objectives and differentiation according to purpose

All firms expressed they had strategic objectives for engaging with startups. The three most expressed objectives were to 1) gain strategic insight in new technologies and business opportunities, 2) to develop new business models and 3) to innovate the existing business.

Most interviewees however did not have a clear overview of these objectives. A much larger amount of objectives generally surfaced throughout the interview than the amount of objectives that was mentioned when a interviewee directly asked to describe objectives (see Section 6.4.3). Also, most interviewees expressed the absence of an engagement strategy in which the objectives for engagement would have been clearly stated (see Section 6.4.5; represented by orange box around 'open innovation strategy' in Figure 6.4). These observations point towards a risk of ambiguity within the firm on the key objectives that are or should be pursued. In agreement of this argument, one interviewee stated that "each has a personal vision, but we do not have one as a firm". Reflecting on the theoretical framework ambiguity or mixed objectives can lead to failure of engagement on the long term (see Section 4.1.2, page 41/42). This observa-

tion is thus considered a risk to the strategic use of startup engagement.

Regarding differentiation according to purpose, various ways of differentiating engagement efforts emerged. Firstly, interviewees explained that they mostly had one or two key objectives for each type of startup engagement, but that in the background the other objectives still played a role. In line with the previous paragraph this could pose a risk of mixed objectives. The findings on the discussion about the Three Horizons model showed that most interviewees also differentiate between startups as a supplier in advancing existing business and startups as a partner or catalyst of innovation in new business development (see Section 6.4.4, page 76). This aligns with the theoretical notions of Vanhaverbeke and Roijakkers (2013) presented in Section 4.1.2 on page 39. Interviewees also pointed out that different types of engagement focused on different startup development stages (see Section 6.4.3). Lastly, a degree of differentiation according to purpose surfaced in the explanations on performance targets and performance evaluation. In some cases firms applied different targets to different types of engagement: e.g. exposure-targets for events versus more financially-oriented targets for investments.

6.5.1 Reciprocity of startup engagement and corporate strategy

In Figure 6.4 the relations and strategic elements that were the focus of the interview phase have been colour-coded to display the extent to which these items are reflected in practice. Orange indicates that an area shows room for improvement, while green aspects reflect strategic behaviour. The constructs and relations that were not explicitly questioned within the interviews are not colour-coded as it is hard to draw conclusions based on incomplete information. Please note that some firms from the sample may perform 'better or worse' than others on the colour-coded aspects. The goal of this overview however is to provide an overall insight based on the entirety of conducted interviews, not to assess individual firm behaviour.

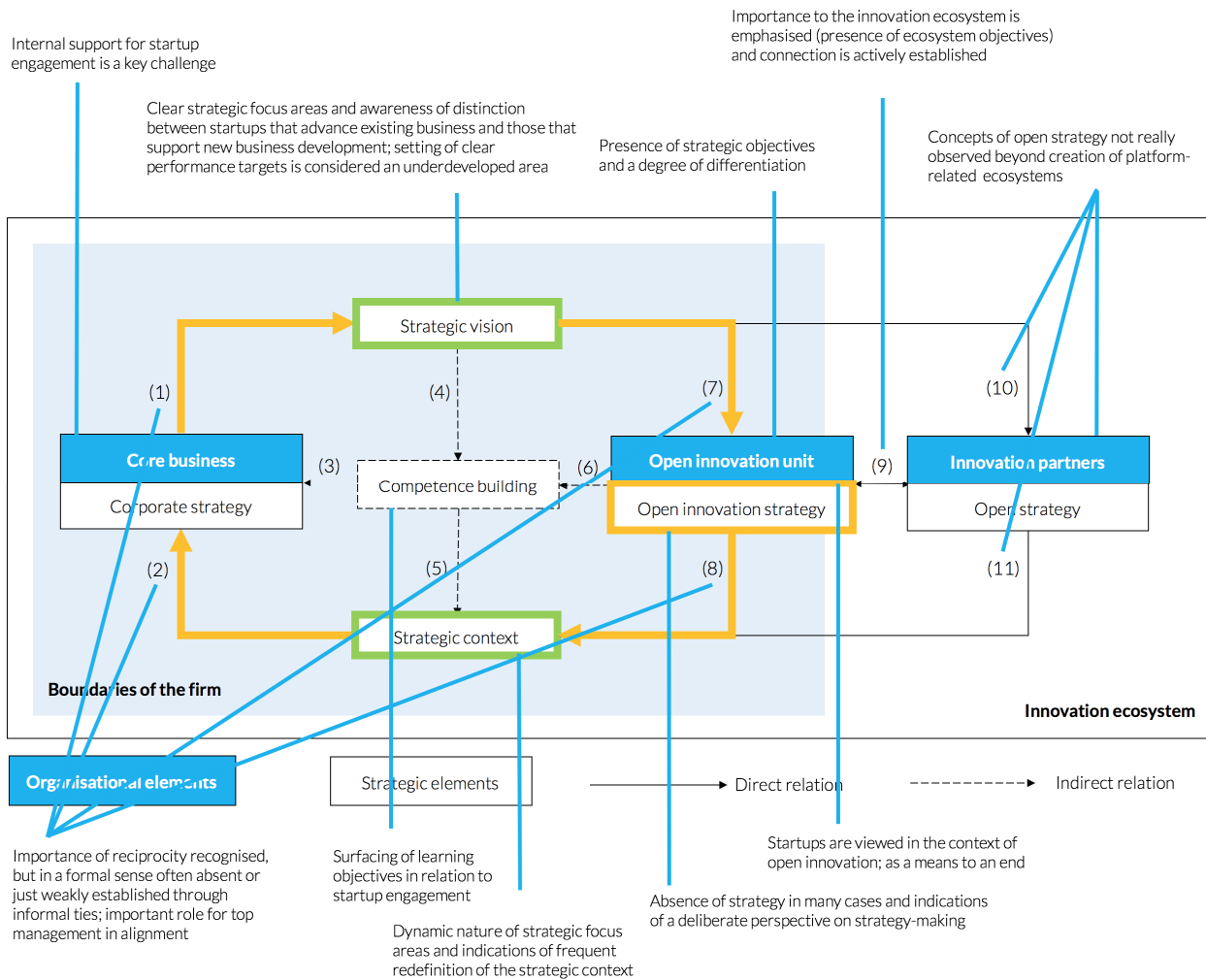


Figure 6.4: Mapping of practical findings onto theoretical framework (orange = area with room for improvement; green = strategic behaviour)

In general, the extent of reciprocity between corporate strategy and startup engagement (i.e. open innovation) on a strategic level was considered moderate with room for improvement (represented by the four orange lines in Figure 6.4). The totality of interview results certainly showed strategic behaviour with respect to startup engagement, but did not indicate frequent loops of strategic learning between startup engagement and corporate strategy.

Startup engagement efforts were strategic in a sense that they were generally guided by strategic objectives and strategic focus areas, hence the green box around strategic vision in Figure 6.4 (see Section 6.4.3 and 6.4.4). Strategic focus areas that reflect emerging business areas are

considered to promote higher levels of reciprocity than a focus on innovation themes. Emerging business areas describe clear new business opportunities while the importance of new innovation themes relating to (technology) trends to the core business may be less clear at first. The interviews also showed that at most firms strategic focus areas had a dynamic character and were frequently redefined (see Section 6.4.4 on page 75). This observation points towards the active recognition and identification of new strategic context (see the green box around the strategic context in Figure 6.4).

When interviewees were asked to describe the relation between startup engagement and corporate strategy, most representatives described

that these two aspects were poorly to moderately connected within their firms, especially in a formal sense. This observation was strengthened by questions on the coordination and performance evaluation of startup engagement. With respect to coordination no specific links to the corporate strategy department were mentioned. In all cases the innovation and venturing units or teams did report directly to one or two members of the board of executives, but this could indicate that achieving reciprocity may rely solely at top management. With respect to performance evaluation various interviewees explained that it was still rather unclear how the success of their efforts would be evaluated.

A factor that may hamper reciprocity is the absence of a startup engagement or open innovation strategy at the firms of most interview subjects (see Section 6.5.5). Without a clear formulation of the purpose and plans of an innovation unit it may be difficult to align with corporate strategy. Moreover, as strategy is not clearly defined, there is a risk that different beliefs may exist within the organisation. The fact that internal support for startup engagement was considered a key challenge among many interviewees could be a direct result from the lack of strategy. It can be unclear for employees in the core business how startup engagement efforts deliver strategic value. The innovation and venturing teams' experimentation with new startup initiatives and approaches relates to Burgelman's (1983) concept of autonomous behaviour. It can be argued that the lack of transforming these initiatives into (emerging) strategies, may make it difficult to align their efforts with corporate strategy. Findings indicate that many firms have a rather deliberate perspective on strategy, which could explain the lack of emergent strategy development.

All interviewees agreed that reciprocity between startup engagement and corporate strategy is desirable. Based on the arguments within this section one however may conclude that in most firms there is still room for improvement in this area.

6.5.3 Other observations: open innovation, competence building and open strategy

An important finding that supports the validity of the developed theoretical model was that many interviewees expressed a need to view startup engagement in the context of open innovation. The observation that in most cases startup engagement also belonged to innovation and venturing departments aligns with the validity of the model.

Though not explicitly questioned during the interview, a set of learning objectives emerged in relation to startup engagement. These objectives relate to the aspect of competence building within the theoretical framework. One interviewee specifically explained how the strategic gap between their strategic vision and current capabilities results in make-or-buy decisions; in other words pursuit of competence building (arrow 4 in Figure 6.4) or startup engagement (arrow 7).

Thirdly, some interesting notions emerged in the interview results with respect to the relation to the innovation ecosystem. On the one hand a set of ecosystem-related objectives emerged and extensive connections to the ecosystem were present in all firms within the interview sample. These findings underline the presence of arrow (9) within Figure 6.4. This connection however seemed to predominantly focus on being visible or active within the *existing* ecosystem. Only two firms mentioned to actively build an innovation ecosystem around their technology platform (see Section 6.4.2 on page 70).

Theory however points towards the concept of open strategy with a more strategic and proactive role for corporates within innovation ecosystems (see Section 4.1.3). Corporates should actively involve partners in their strategising process and may take the lead in shaping new innovation ecosystems, also for emerging business areas that are not related to a technology platform. The findings indicate that an open strategy approach is not yet actively pursued by most firms within the interview sample. Drawing strict conclusions on this theme is however not considered possible as it was not specifically questioned.

6.5.4 Extent of strategic use of startup engagement by the interview sample

This section provides the answer to research question two: to which extent can corporates be considered strategic in their use of startup engagement?

The synthesis of the interview results revealed that the corporates within the sample certainly showed strategic use of startup engagement *within* their open innovation and venturing units or departments. A multitude of strategic practices was observed: e.g. clear and dynamic strategic focus areas, presence of objectives, and the differentiation of activities according to purpose. Most interviewees also showed awareness of the different nature of advancing current business through startup engagement and driving new business development by engaging with startups (see Section 4.1.2). Most firms did report the absence of a clear strategy to guide their efforts. Potentially, this lack of strategy can be contributed to a rather deliberate perspective on strategy instead of a dynamic or emergent approach. Strategy-making is considered an underdeveloped area. Strategic performance targets and performance evaluation were considered strategically underdeveloped aspects.

The strategic or reciprocal relation between startup engagement (i.e. open innovation) efforts, corporate strategy or the core business, and the innovation ecosystem was also considered underdeveloped by most interviewees. On an organisational level some firms even considered startup engagement and corporate strategy two separate entities within their firm. Many others described that the relation was mostly informal or only at the level of the board of executives. The lack of strategy and a deliberate perspective on strategy could play a role the lack of reciprocity. With respect to the innovation ecosystem, a connection was certainly established but the focus tended to be geared towards being present in the existing ecosystem, rather than actively involving innovation partners in the strategy-making process. This could be an underdeveloped area.

Concluding, it can be said that most of the corporates from the interview sample show strategic behaviour *within* their innovation units or departments, but could improve in strategically and reciprocally *relating* these internal efforts to corporate strategy and potentially to the innovation ecosystem.

6.6 Chapter summary

This chapter firstly presented the approach to the semi-structured interview. In total 11 interviews were conducted at 10 firms. These interviews focused on following two constructs from the theoretical framework: 1) the reciprocity of startup engagement and corporate strategy, and 2) the presence of strategic objectives and differentiation according to purpose. After coding the interview data the results were presented by means of eight different themes. One important observation that confirmed the validity of the theoretical framework was that many firms expressed that startup engagement should be viewed within the context of open innovation. The synthesis of the interview results

showed that the degree of reciprocity between corporate strategy could be considered only moderate. Especially in a formal and strategic sense the two were not necessarily aligned. Despite that a startup engagement strategy was not operationalised in most firms, they did show strategic behaviour such as the presence of strategic objectives and dynamic strategic focus areas to guide innovation efforts. To answer the second research question the section concluded by stating that overall, most of the corporates from the interview sample show strategic behaviour *within* their innovation units, but could improve in strategically and reciprocally *relating* these internal efforts to corporate strategy and potentially to the innovation ecosystem.



7. DISCUSSION OF RESULTS

This chapter firstly discusses and tries to theorise potential explanations for the discrepancies between the theoretical and practical results. Secondly, the implications of the research for various stakeholders will be discussed. This chapter thereby also provides the answer to the third and final research question.

7.1 Discrepancies between theory and practice

Section 6.5 connected the findings from the interview phase to the theoretical framework. These findings showed that especially the reciprocal relation between startup engagement and corporate strategy was only moderately reflected in practice. This continuous loop of strategic learning between open innovation units and the core business is however considered the backbone of the theoretical framework. This section therefore zooms in on this discrepancy and aims to theorise potential explanations this lack.

An important part of the explanation for this discrepancy lies in the overall infancy of the domain and scientific knowledge. The concept of corporate-startup engagement showed few literary sources but also for associated and much more developed concepts open innovation and corporate venturing, the relation to (corporate) strategy was underdeveloped. Open strategy is another relatively new concept. In the absence of scientific theory, industry professionals are likely to rely on recent and mostly practice-oriented literature to guide their startup engagement efforts. The literature review in Chapter 4 (see page 53) however showed that especially the need for reciprocity was poorly addressed in recent literature on the

topci. Setting and pursuing strategic objectives, differentiation of activities according to purpose and the involvement of top management are examples of aspects that were clearly addressed in these papers. Interestingly, firms from the sample also show strategic behaviour on these aspects. This is an indication that corporates indeed rely on practice-oriented literature and that strategic aspects that receive less attention in these papers are also underdeveloped at the interview subjects.

Another explanation for the lack of reciprocity could lie in a rather static or deliberate perspective of strategy among industry representatives. This hypothesis has already been addressed in Section 6.4.5 on page 78 and 79. To shortly recapitulate, many of the interview subjects claimed they lacked an engagement strategy and some even explicitly stated that they regarded strategy development to be in conflict with the required agility in startup engagement. This indicates that strategy-making thus may be viewed as a deliberate act that is developed once at the top and thereafter does not provide the flexibility to adapt to changing circumstances.

In line with the theory of emergent strategy and strategic learning of Mintzberg and Waters (1985) and the retroactive strategising of autonomous behavior expressed by Burgelman (1983) this paper

argued that strategy-making can be very dynamic and flexible. As explained on page 7 and 8, emergent strategies allow for learning, flexibility and openness and enable management to act before everything is well understood. A rather deliberate perspective on strategy however may now prevent such emergent strategies from being developed and actively aligned with corporate strategy. Without a process that fosters retroactive strategising, alignment and potential redefinition of corporate strategy, one could argue that the activities of innovation and venturing teams may slowly start to drift away from the core business.

A third explanation for the lack of reciprocity may be found in the underlying 'why' of corporate-startup engagement. This is rooted in the inherent difference between exploitation and exploration (March, 1991). The same reasons that drive corporates towards engaging with startups may now hamper the reciprocal relation between corporate strategy and open innovation: a fear of cannibalisation, power and politics, information filters, bureaucracy, capability gaps, etc. (see Section 3.1.2).

In a sense the innovation and venturing teams may have become the 'startup' within the corporation. Great care is currently paid to the interface of these departments towards the 'outside world' of startups and the innovation ecosystem, but the interface between innovation and venturing units or departments and the core business can be considered equally not more challenging. Especially when the operations of the innovation and venturing teams starts to align more and more with the startup way-of-working and less with the corporate way-of-working.

An condition that may enlarge the implications of this explanation is that today's business environment may confront many corporates for the first time with a serious threat of disruption of their current business models. Traditionally these firms have been focused on exploitation of their current business models. They are less experienced in the exploration of radically new business mod-

els, which may result in a tendency to position these activities far from the core. The explorative activities of innovation and venturing teams may seem so different from the core business, that it is deemed difficult to connect these efforts to their corporate strategy. Some firms may also be hesitant to build links back the core business in a fear of slowing down the development of the much-needed new business model(s).

7.2 Implications of the findings for stakeholders in corporate-startup engagement

The research findings provide valuable insights and recommendations for different organisational levels. In this section some key implications of the findings are discussed for four different stakeholders groups in particular: top-level corporate management and policy-makers, innovation and venturing representatives, core business unit owners, and finally startups and other parties in the innovation ecosystem. This section thereby answers the third question of this research: which recommendations can we make on how to improve the strategic use of corporate-startup engagement.

Implications for top-level management and corporate policy-makers

An important recommendation to top-level management and corporate policy-makers is a new perspective on strategy with respect to open innovation and startup engagement. Strategy is a moving target in innovation. Due to the exploratory nature of innovation and venturing activities a much more dynamic and open type of strategy-making may be required. Top-level management should express the strategic vision that may guide innovation efforts, but should leave room for emerging strategies to crystallise further throughout the innovation process. And these emergent strategies and the new strategic context must be actively and frequently evaluated to determine if a redefinition of corporate strategy and/or an adjustment of the strategic vision to guide open innovation efforts is required.

Also, top-level management should be aware that the internal difficulties that obstructed internal radical innovation and that required them firms to engage with startups in the first place, still play a role in managing open innovation efforts within the corporate context. The inherent challenges in *reconciling* exploitation with exploration are not overcome by having an open innovation department. The interface between open innovation activities and corporate strategy is important and should deserve sufficient attention.

Lastly, top-level management is recommended to take the next step in open innovation, namely open strategy. Corporates can actively shape new ecosystems around their strategic vision and involve a wide range of internal and external parties in the strategy-making process.

Implications for innovation and venturing representatives

Most of the implications for top-level management are also important for innovation and venturing representatives. Some additional notes hold for this specific group.

The research has shown that many innovation and venturing units or department did not have a strategy. It is recommended to start strategising as soon as possible, yet make strategy a moving target; a working document so to say. Articulation of the emergent strategies and strategic vision and context could also enable increased reciprocity with the core business and corporate strategy. This in turn contributes to the long-term survival of innovation and venturing departments, also during economic downturns. The articulation of e.g. emerging strategies, strategic objectives, dynamic focus areas, and their connection or value to the core business may also help to explain and convince other people in the organisation of the strategic value of startup engagement. Thereby challenges in internal support may be overcome. Moreover will the articulation take away the risk of semantics, personal interpretation of objectives, and mixed objectives.

It is also recommended to engage in strategic conversations with core business unit owners about the role of startups as a supplier of incremental innovation. If the needs and requirements of the core business are clear, the success rate and value justification towards the core business of startup engagement activities is likely to increase.

The concept of open strategy also has important implications for innovation and venturing representatives. It is recommended to take a much more pro-active and strategic role towards innovation partners. External parties or partners can be a very important group in identifying the new strategic context for the firm.

Lastly, it is recommended to use the industry insights within this report as a source of inspiration and a benchmark. Within this research a variety of smaller and larger strategic practices has been reported that may foster strategic use of corporate-startup engagement: e.g. a matrix combining strategic focus areas with technology verticals, the principle of a core-satellite strategy, differentiation in performance targets, development of startup scouting profiles, etc. Also within the theoretical framework in Chapter 4 the reported case of DSM or Nokia provide interesting examples.

Implications for core business unit owners

Core business unit owners and managers are recommended to become actively involved in the strategy-making process. It is important to understand where the firm is ultimately heading. Business unit owners and managers can just as well involve external parties in their strategising process.

Also, these managers have to be aware that the innovation and venturing teams acts as a gateway toward the innovation ecosystem. By explicating your business challenges and startup requirements clearly, the innovation and venturing department can also fulfil their roles better.



Implications for startups and other parties in the innovation ecosystem

Lastly, the research also has some implications for startups and other innovation ecosystem partners. Especially the concept of open strategy is important for this group. Startup and ecosystem parties are stimulated to become actively involved in shaping new strategic context for corporates and support them in their strategy-making processes with new strategic insights. At the same time is the notion of strategic as a moving targets with active recognition of new strategic context, also very important for this stakeholder group. They are active

the same fast-paced industry and may also tend to view strategy as a deliberate act. Also for these parties strategy can be a moving target.

Lastly, it may be recommended for startups to ask for the firm's dynamic focus areas or strategic objectives in drafting a value proposition towards the corporate. Here, the distinction between fulfilling a role as supplier of incremental innovation to the core business or catalyst of innovation to new business development is also important. If startups gain awareness into which category they fall at a specific firm, they can also gear their value proposition towards the right target group.

8. CONCLUSIONS AND RECOMMENDATIONS

In this chapter the conclusions of this research are presented in Section 8.1. This section provides the answers to the research questions and will reflect on whether the research objective has been achieved. Thereafter, in Section 8.2 the limitations of the research are described. Lastly, in Section 8.3 a set of recommendations for future research is presented.

6.1 Conclusions

This research started with an analysis of both scientific and practice-oriented literature to determine how corporates could use startup engagement in a strategic manner. Herein, focus was put on the relation between startup engagement and corporate strategy. Drafting from scientific literature on the relation between open innovation and strategy respectively corporate venturing and strategy four key strategic notions were identified. Recent and more practice-oriented complemented the theoretical notions and especially showed that strategic use of startup engagement also needs to be reflected on the organisational and operational level. The key learnings from the literature review are summarised below.

Firstly, the literature review showed that corporates that strategically pursue open innovation are likely to display and actively facilitate a continuous reciprocal relation between their open innovation efforts and their corporate strategy. Corporate strategy provides direction and drives engagement efforts through the articulation of a strategic vision. At the same time open innovation may drive the re-definition of corporate strategy by envisioning the strategic context. Practice-oriented literature does

not emphasise continuous reciprocity to the same extent, but does express a need for alignment between engagement efforts and the core business. On the organisational level it points towards three concrete practices that can promote alignment: commitment of top level management, early- on involvement of business owners and the appointment of internal champions. Regarding a firm's strategic vision the practice-oriented literature stated that it should also encompass long-term performance targets and the allocation of sufficient resources to support the realisation of that vision.

The second strategic practice described in literature involves competence building in association to open innovation efforts. By explicating their strategic vision, corporates can identify the misfit between their existing resources and capabilities and those required to live up to their strategic vision. This strategic gap drives competence building, either internally or by means of open innovation. In turn, building new competences will enable corporates to visualise the strategic context and redefine their corporate strategies.

A third learning from the literature review focuses on setting clear objectives for startup engagement and differentiating activities according to their pur-

pose. Some corporate venturing typologies exist within scientific literature, but these may be outdated. This emphasis on setting and pursuing clear objectives was also strongly emphasised in the recent and mostly practice-oriented literature.

Lastly, the literature review showed that corporates who strategically engage with startups may open up their strategising process. This means that these firms acknowledge the value of, and actively involve a wide variety of internal and external parties in their strategy-making process. These firms actively shape and manage innovation ecosystems. They align their strategic vision with innovation partners and turn their ecosystem engagement into an important source of strategic insight.

The learnings from literature were also visualised in a new theoretical framework connecting open innovation, corporates strategy, and the innovation ecosystem (see Figure 4.3 in Chapter 4).

The second phase of the research covered a set of interviews with innovation and venturing representatives from ten Dutch corporates that were active in corporate-startup engagement. A desk research on startup engagement activity among the top-100 Dutch corporates was executed to identify a strategic interview sample.

The interviews focused on two specific aspects of the theoretical framework: 1) the reciprocity of startup engagement and corporate strategy, and 2) the presence of strategic objectives and differentiation according to purpose within startup engagement. Based on the interview findings the theoretical framework could be validated with industry results and an indication of the strategic use of corporate-startup engagement within the industry could be obtained. Moreover, the interviews enabled the identification of recommendations on how to improve the strategic use of corporate-startup engagement.

The interview results revealed that the corporates within the sample certainly showed strategic use of startup engagement *within* their open innovation and venturing units or departments. Despite the absence of a startup engagement strategy in many cases, a multitude of strategic practices was observed: e.g. clear and dynamic strategic focus areas, presence of objectives, and the differentiation of activities according to purpose. Most interviewees also showed awareness of the different nature of advancing current business through startup engagement and driving new business development by engaging with startups. The lack of strategy may be contributed to a rather deliberate perspective on strategy instead of a dynamic or emergent approach. Strategy-making is considered an underdeveloped area. Strategic performance targets and performance evaluation were also considered strategically underdeveloped aspects.

The strategic or reciprocal relation between startup engagement (i.e. open innovation) efforts, corporate strategy or the core business, and the innovation ecosystem was also considered underdeveloped by most interviewees. On an organisational level some firms even considered startup engagement and corporate strategy two separate entities within their firm. Many others described that the relation was mostly informal or only at the level of the board of executives. The lack of strategy and a deliberate perspective on strategy could play a role the lack of reciprocity. With respect to the innovation ecosystem, a connection was certainly established but the focus tended to be geared towards being present in the existing ecosystem, rather than actively involving innovation partners in the strategy-making process. This could be an underdeveloped area.

Concluding, it can be said that most of the corporates from the interview sample show strategic behaviour *within* their innovation units or departments, but could improve in strategically and reciprocally *relating* these internal efforts to corporate strategy and potentially to the innovation ecosystem.

Subsequently, in the discussion of the theoretical and practical results the goal was to clarify the discrepancies between theory and practice. Especially explanations for the lack of reciprocity was theorised. An important part of the explanation for the discrepancies was contributed to the overall infancy of the domain. In the absence of scientific theory, industry professionals are likely to rely on recent and mostly practice-oriented literature to guide their startup engagement efforts. This literature however does not emphasise the need for reciprocity of startup engagement and corporate strategy. Another explanation for the lack of reciprocity could lie in a rather static or deliberate perspective of strategy among industry representatives. Strategy-making may be viewed as a deliberate act that is developed once at the top and thereafter does not provide the flexibility to adapt to changing circumstances. In line with the theory of emergent strategy and strategic learning of Mintzberg and Waters (1985) and the retroactive strategising of autonomous behavior expressed by Burgelman (1983) this paper argued that strategy-making can be very dynamic and flexible. A third explanation for the lack of reciprocity may be found in the underlying 'why' of corporate-startup engagement. This is rooted in the inherent difference between exploitation and exploration (March, 1991). The same reasons that drive corporates towards engaging with startups may now hamper the reciprocal relation between corporate strategy and open innovation.

This discussion also zoomed in on the implications of this study for various stakeholders in corporate-startup engagement. This answered the third research question. A key recommendation on how to improve the strategic use of corporate-startup engagement relates to the development of a more emergent/dynamic and open perspective on strategy-making, but also the frequent recognition of the potential impact of these emerging and open strategies and new strategic context for the core business and corporate strategy. Generally, different stakeholders should engage more often in strategic conversations to align their perspectives.

The objective of this research was to contribute to the strategic use of corporate-startup engagement by corporate management by exploring the relation between corporate strategy and the concepts of open innovation, corporate venturing and corporate-startup engagement. This objective was achieved by developing and validating a new theoretical framework. This framework integrates the theory of Burgelman (1983) on the relation between strategy and structure, the concept of emergent strategy by Mintzberg and Waters (1985), the open innovation paradigm of Chesbrough (2003), concept of organisational learning (Vanhaverbeke and Peeters, 2005) and notion of open strategy by Whittington et al. (2011) and Chesbrough and Appleyard (2007). Though this framework requires refinement and further validation, it is considered a good starting point for future research and can be used as a tool to foster a more dynamic and open approach to strategy-making.

8.2 Limitations of the research

This section provides an academic reflection on the conducted research. The identified limitations will also provide an important input to the recommendations for future research in Section 8.3.

A first limitation of the executed research is rooted in its exploratory nature. The research shows characteristics of grounded theory research which means that theory development and theory testing frequently ran in parallel. The fact that theory was still under construction at the time interviews were conducted made it difficult to very explicitly operationalise the constructs of interest within the interviews. Testing the validity of the theoretical framework in practice could have been done in a more structured and explicit way if a detailed theory had been worked out in advance. The exploratory nature of this research however obstructed such an approach.

A second limitation of the research rests in its qualitative nature. This meant that only a small sample could be interviewed. A small sample size in turn

affects the generalisability of the results, especially since quite some different views and approaches were expressed by interviewees. The qualitative nature also resulted in a risk of interpretation bias by the researcher. A good example of this limitation is related to the interviewees' descriptions of their strategic objectives for startup engagement. In their answers they often started storytelling. This meant that specific objectives had to be extracted by the researcher from of a larger contextual 'story'. In some cases it could also be that two objectives from literature were merged into one, or that objectives were explained in different terms than those used in literature. This posed a risk of misinterpreting the results or incorporation of researcher bias in mapping interview results on results from literature. In hindsight, it might have been better to ask interviewees to identify applicable objectives to their case from a predetermined list. This would foster an more objective comparison to literature and would also ease cross-sectional comparison among interviews. At the same, showing objectives in advance could have resulted in a confirmation bias on the side of the interviewee.

In line with the previous limitation, this research discussed topics with considerable semantics on associated terminology. As an example: most interviewees indicated an absence of strategy, but did consider themselves strategic. This reflects quite a different interpretation of the two strongly associated terms 'strategy' and 'strategic'. The large variety of interpretations of the innovation horizons (see Appendix C) also points towards the presence of considerable semantics. An important aspect in this category that may affect the validity of this research's results is the potential confusion that also existed in interviews between startup engagement and open innovation. Various interviewees stated that they viewed startup engagement in the context of open innovation. On one hand this supports the validity of the theoretical framework as it is built on open innovation literature. On the other hand, this resulted in situations in which it could be unclear during interviews if statements were made with respect to startup engagement, open innovation,

a combination of both, or maybe even innovation in general. The exact relation between open innovation and 'regular' innovation was not addressed within this research, though could be relevant considering their close association. The interviews also showed that in many cases startup engagement efforts belonged to an *innovation* and venturing unit or department, indicating startup engagement is part of the wider innovation strategy.

A fourth limitation is that the practical phase of the research only included the perspective of innovation and venturing representatives. Both literature and interview findings however showed that top-level management play an important role in strategic alignment. It is thus certainly a possibility that top-level management has a different perspective on the constructs and relations within the developed theoretical model. The perspectives of business unit owners, policy or strategy departments, startups, and other parties within the innovation ecosystem may also provide valuable insights regarding the notions within the developed framework. These perspectives were however considered out-of-scope for this research.

An important assumption that fueled this research is that it is better to have a strategy. This assumption however forms a fifth limitation to the research as the actual effect of having a strategy was not proven within this research.

The decision to guarantee anonymity to the interviewees also had implications for the way findings could be presented. This decision meant that the findings were categorised and presented per specific theme (e.g. strategic objectives, strategic focus or coordination) but that performance of individual firms across the themes is not shown. This for example prohibits an insight in which firms performed really well and which performed poorly on the strategic use of startup engagement.

Lastly, time limitations of this graduation research made that only a part of the developed theoretical framework could be validated with industry results.

The concepts of competence building and open strategy were not explicitly questioned.

Overall, the limitations make it difficult to already draw strict conclusions on the validity of the theoretical framework. The developed framework and practical study certainly suggest the presence of (in)direct relations between startup engagement, corporate strategy, and open innovation, and give provide indicators of strategic behaviour on startup engagement within corporates. The practical study however cannot be considered an indisputable proof or rejection of (parts of) the proposed theoretical framework. This research and the new framework rather provide a foundation for future research in a currently underdeveloped field of research.

8.3 Recommendations for future research

The exploratory nature of this research and the development of a new theoretical framework create many opportunities for future research. In this section some key recommendations for future research are presented.

First and foremost researchers are invited to improve, expand, and validate the developed framework and its underlying theoretical notions. Either through studying the relations in more detail from a theoretical perspective or by validating the model with more industry examples, or a combination of both. With the basic framework in place, other researchers may now operationalise the specific constructs in much more detail.

A second recommendation is to create more clarity on the relation between startup engagement, open innovation and corporate innovation in general. Should startup engagement be a research topic on its own, should research focus on open innovation, or maybe even on innovation in general. The three concepts are closely related, which also makes that confusion quickly arises. If this relation remains unclear future studies on corporate-startup engage-

ment may not be viewed within their appropriate context.

Another important recommendation to future researchers in continued development of the framework is to approach it from different perspectives. Especially the perspective of members of the board of executives is considered highly relevant. Both theory and practice pointed to the crucial role top-level management plays in alignment. The practical study moreover showed that startup engagement efforts and corporate strategy tend to come together at board level. It is recommended to investigate if board members also express the absence of startup engagement strategies and to develop more insight on whether and how reciprocity of open innovation and startup strategy is established at this level. It is also recommended to perform in-depth case studies for specific firms to gain an overview of differences and similarities in perspective on the (need for) reciprocity of corporate strategy, open innovation, and the innovation ecosystem. By conducting interview with board members, innovation managers, venturing managers, business owners, operational personnel, partners of the firm, etc. an in-depth analysis of the differences in perspective may be obtained.

Another interesting research opportunity relates to the strategic objectives driving startup engagement. This research has shown that the corporate venturing typologies of among others Chesbrough (2002), Hill and Birkinshaw (2008), and Campbell et al. (2003) do not cover the full range of objectives that is associated with startup engagement/open innovation. With respect to the 'traditional' corporate venturing objectives, a range of new objectives emerged in practice-oriented papers and during interviews: ecosystem objectives, learning objectives, recruitment and cultural objectives, and reputation objectives. Traditional typologies could therefore be considered outdated and incomplete. It is recommended for researchers to look into the development of an updated open innovation or startup engagement typology.

The interviews also showed that some corporates focus their engagement efforts on emerging business areas while others focus on innovation themes (e.g. new technologies or trends). A future research opportunity is to assess whether one of the both types of strategic focus (or a combination) results in better strategic performance and survival rates of innovation and venturing units than the other.

Another specific concept that is recommended to investigate further is that of open strategy. In line with Vanhaverbeke et al. (2017) and Chesbrough (2017) relational capital and ecosystems may become the new innovation imperative. Considering the extensive interaction with the innovation ecosystem that was already witnessed among interviewees, open strategy could be considered the next step in open innovation. At this point it is however an underdeveloped concept and its exact role in corporate strategy-making is unclear. Researchers are recommended to develop this concept further. Herein, it may be particularly interesting to identify how corporate can set up (joint) ecosystem strategies.

Fourthly, two of the interviewees described a new strategic concept: a core-satellite strategy. It is recommended to explore this strategic concept in more detail, for example via in-depth case studies. Maybe this approach to strategy-making can be developed into a generic guideline for strategically organising corporate-startup engagement. Two others described that startup engagement often comes down to a make-or-buy decision. It may be interesting to assess the role of make-or-buy decision in the design of a startup engagement strategy.

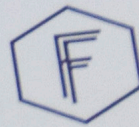
With respect to strategy development it is recommended to explore the industry's perspective on strategy in more detail. Is it indeed the case that industry professionals have a more deliberate perspective on strategy? And is having a deliberate strategy indeed incompatible with the fast pace and uncertainty of startup engagement? In

line with this recommendation, it would also be interesting to challenge the underlying assumption of this thesis, namely that having a strategy is always beneficial. Researchers are recommended to perform a preferably more quantitative analysis on the relation between firm or departmental performance and the pursuit or lack of strategy.

Lastly, it is recommended that the work of this thesis is connected to the research domains of exploration versus exploitation and ambidextrous organisations. These theoretical domains may provide valuable insights in balancing the need for sufficient separation of open innovation and corporate strategy with the need for reciprocity.



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WINNING TOGETHER

A GUIDE TO CORPORATE-STARTUP COLLABORATIONS

Valerie Mocker, Simona Bielli and Christopher Haley

Innovation is changing; big corporates are waking up to the startups, especially digital and tech businesses, are disrupting industries from the bottom up. Forward-looking corporates see not as a threat, but as potential partners to create more value for their company, consumers and sectors. One of the best ways to realise these benefits is setting up structured startup programmes.

Based on our work, we identified three important steps that help corporates and managers identify suitable programmes to work with startups:

STEP 1 Clarify your objectives

The following four objectives tend to be the key reasons for corporate startup programmes.

- Rejuvenating corporate culture, to create an entrepreneurial culture that attracts startup partners and talent.

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APPENDIX A

TYPES OF CORPORATE-STARTUP ENGAGEMENT

Table A.1: Main types of corporate-startup engagement (table continues on the next page)

Author (year)	Engagement type	Description
Weiblen & Chesbrough (2015)	Corporate Venture Capital	To take an equity stake in external startups to participate in the success of external innovation and gain strategic insights into non-core markets
	Corporate Incubation	To provide a viable path to market for promising corporate non-core innovations by nurturing internal ventures with funding, co-location, expertise and contacts to spin-offs
	Outside-in Startup Programs	A lightweight governance program for startups in the role of supplier to insource external innovation and as such stimulate and generate corporate innovation. <i>Corporate accelerator programs have emerged as a subset of outside-in startup programs: time-limited program that startups can apply for if their products falls into a certain category.</i>
	Platform Startup Programs	A lightweight governance program for startups to spur complementary external innovation to push a corporate innovation (the platform)
Kohler (2016)	Corporate Hackathons	Intense collaboration of diverse teams within a restricted time limit to solve a corporate innovation challenge
	Business Incubators	Company-supported flexible working space with additional value-added services such as centralized legal or marketing support
	Corporate Incubation	Provides a path to market for corporate non-core innovation
	Corporate Venturing	Permits corporations to participate in the success of external innovation and helps to gain insights into non-core markets and access to capabilities
	Mergers and Acquisitions	Quick and impactful way of buying complementary technology or capabilities that solve specific business problems and enter new markets
Nesta (2015), Nesta (2016)	One-off Events	Relatively self-contained events that often take the form of competitions, e.g. challenge prizes or hackathons
	Sharing Resources	Providing startups with free or cheaper access to services, tools, products, physical co-working spaces or organisational knowledge
	Business Support	Business support programs such as business incubators or accelerator programmes that foster growth of early-stage startups
	Partnerships	A wide range of strategic business partnerships with startups such as product co-development or procuring from startups
	Investments	Direct investments in startups, often referred to as corporate venturing
	Acquisitions	Acqui-hire or buying startups to quickly access complementary technology or capabilities



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Author (year)	Engagement type	Description
Match-Maker (2016)	One-off Events	Corporate-hosted events for startups (either conducted independently or in collaboration with startup organisations), often in competition format. <i>Low-end business support services such as free office space or consulting by the corporate are also considered a form of one-off event.</i>
	Accelerator and Incubator	Business support programs for startups that focus on validating and developing an idea to a business proposition in exchange for equity
	Corporate Venture Capital	Direct investments in startups by corporates in exchange for equity
	Corp-Up	Any commercial agreement focused on creating joint value, ranging from a joint venture to entering in a supplier-relationship
	Mergers and Acquisitions	Acquisition of a startup by a corporate
Bonzom & Netessine (2015)	Events	Engagements for a short period of time through e.g. conferences, hackathons, competitions or sponsorships of one of the three previous events
	Support Services	Corporate internal resources and capabilities offered to startups; e.g. legal, accounting, mentors or access to customers, suppliers, etc.
	Startup Programs	Corporate startup support package that includes support services and product(s) from the corporate for free
	Co-Working Space	Venue where startups are hosted by large corporations in order to facilitate interactions among them
	Accelerators and Incubators	Corporate program to support small groups of startups during a relatively short period of time with e.g. founding help, space and mentoring in exchange for equity
	Spin-offs	Independent businesses with assets from the parent company
	Investments	Owning stakes in fast growing startups for strategic or financial reasons
	Mergers and Acquisitions	Acqui-hires or buying startups to acquire technology or capabilities

APPENDIX B

INTERVIEW PROTOCOL

In this Chapter the Dutch interview protocol is presented.

Introductie

- *Wederzijdse kennismaking*: voorstellen
- *Bedanken voor medewerking*: bedankt voor uw tijd en medewerking aan mijn onderzoek
- *Doel van onderzoek*: master thesis naar het strategisch gebruik van corporate-startup engagement met een focus op de koppeling van startup engagement en corporate strategie.
- *Corporate-startup engagement*: een overkoepelende term die doelt op de totaliteit aan activiteiten die een bedrijf onderneemt om met startups samen te werken, startups op te zetten, in startups te investeren of deze over te nemen.
- *Reden voor contact met dit bedrijf en deze persoon*: toelichten benadering van een strategisch sample op basis van de online data analyse (rapportage naar hen opgestuurd), eventueel uitleggen referentie bij intern doorgestuurd contact.
- *Duur van het interview*: ongeveer 1 uur
- *Opzet van het interview* : vier onderdelen: algemene vragen, vragen over strategie, vragen over structuur en processen rondom management van startup engagement, en afsluitende vraag over aanbevelingen en valkuilen.
- *Dataverwerking en anonimiteit*: alle data vanuit de interviews zal worden gegeneraliseerd en geanonimiseerd. Het gaat om de grote lijn. Als quotes worden gebruikt worden deze geanonimiseerd. De transcripts worden niet toegevoegd aan het afstudeerverslag
- *Terugkoppeling*: de eindrapportage zal worden toegestuurd
- *Verzoek om opname*: ik zou het interview graag op willen nemen om de resultaten beter te kunnen verwerken, zou dat mogen?

Algemene vragen

1. Wanneer is uw bedrijf actief samen gaan werken met startups?
 - Probe: Wat is de reden dat jullie de samenwerking met startups hebben opgezocht?
 - Probe: Kunt u beschrijven op welke manieren uw bedrijf samenwerkt met startups?
 - Probe: Heeft u een fysiek overzicht van uw startup activiteiten?

Strategie

2. Kunt u beschrijven wat de doelstellingen van de startup engagement activiteiten van uw bedrijf zijn?
 - Probe: in hoeverre hebben specifieke vormen van startup engagement verschillende onderliggende doelstellingen? Zo ja, kunt u deze verschillen toelichten?
3. Zijn strategische business areas of innovatierichtingen gedefinieerd voor startup engagement?
 - Probe: Bent u bekend met het Three Horizons model? Zo ja, kunt u beschrijven hoe dit model een rol speelt binnen de startup engagement activiteiten van uw bedrijf?
 - Probe: In welke mate zijn de startup engagement activiteiten van uw bedrijf gefocust op startups in een specifiek ontwikkelstadium? Verschilt deze focus nog voor verschillende typen van engagement?
4. Heeft uw bedrijf een startup engagement strategie? Zo ja, kunt u deze strategie toelichten?
 - Probe: Vindt u uw bedrijf strategisch in het nastreven van startup engagement? Waarom wel of waarom niet?
 - Probe: Zou u zeggen dat startup engagement in uw organisatie wordt nagestreefd op een gestructureerde manier of meer ad hoc of opportunistisch? Kunt u dit toelichten?

Voor de volgende vraag leggen we u graag een aantal configuraties voor de relatie tussen startup engagement en de strategie van het bedrijf als geheel; in dit model de business strategie genoemd¹. U ziet hier vijf mogelijk configuraties (zie Figure B.1). Deze configuraties stellen het volgende voor:

- *Model 1.* In dit geval zijn startup engagement en corporate strategie binnen de organisatie grotendeels twee losstaande fenomenen.
- *Model 2.* In dit model worden startup engagement activiteiten sterk gedreven en bepaald door de corporate strategie.
- *Model 3.* In model 3 werkt het precies andersom en volgt de corporate strategie de uitkomsten van de startup engagement activiteiten.

¹ In line with the model of Covin and Miles (2007) the term 'business strategy' was used. However in our interview we always referred the relation between corporate-startup engagement and the strategy of the 'firm as a whole'. We would like to emphasise that we used an adjusted version of the model of Covin and Miles (2007) mainly to facilitate a concrete discussion on the relation between corporate-startup engagement and corporate strategy. This is also why we did not invest too much time in our interviews in explaining the exact details over every configuration.

- *Model 4.* In model 4 zie je een wederkerige relatie en regelmatige afstemming tussen corporate-startup engagement en corporate strategie.
 - *Model 5.* In dit laatste model zijn corporate-startup engagement en corporate strategie met elkaar versmolten. Startup engagement vormt de kern van de corporate strategie.
5. Kunt u de relatie tussen startup engagement en corporate strategie in uw bedrijf toelichten aan de hand van dit model? Welk model vindt u het meest van toepassing op de situatie in uw bedrijf en waarom?

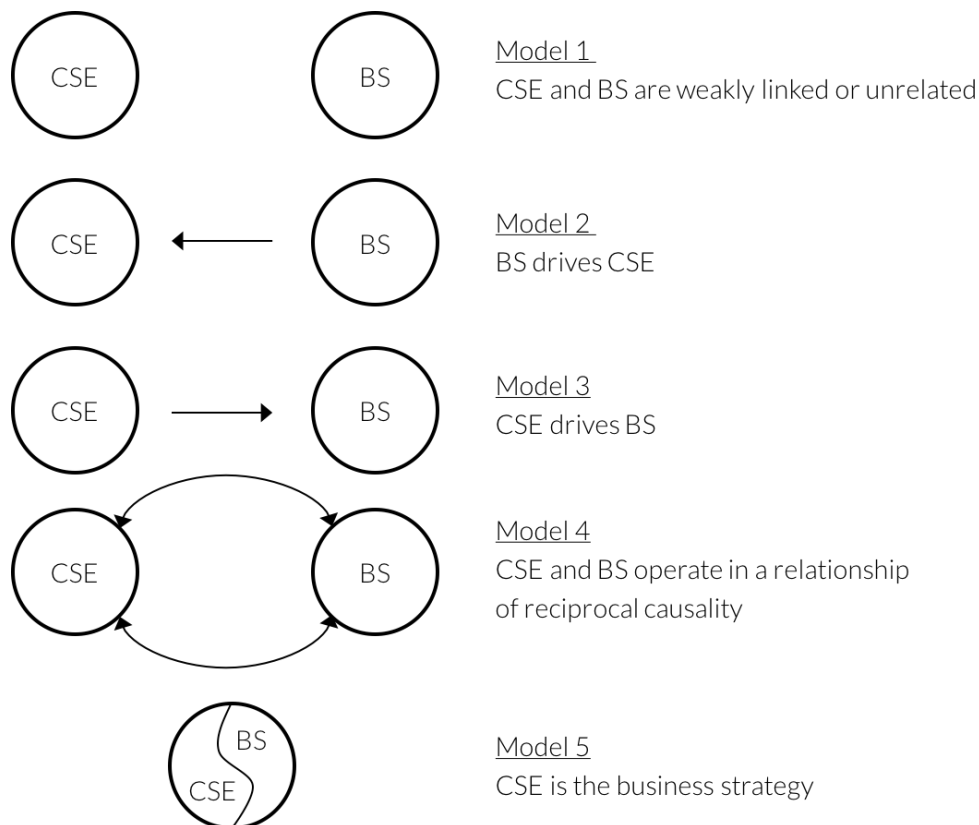


Figure B.1: Five configurations of the extent of reciprocity of corporate-startup engagement (CSE) and business strategy (BS) (Covin and Miles, 2007, adj.)

Structuur en processen

6. Kunt u beschrijven hoe startup engagement wordt gecoördineerd in uw organisatie?
- Probe: In welke mate worden de startup activiteiten op elkaar afgestemd?
 - Probe: Kunt u beschrijven en tekenen waar startup engagement zich in uw organisatie bevindt?
 - Probe: Welke afdelingen en personen zijn er betrokken?



7. In welke mate heeft uw bedrijf concrete en meetbare performance targets voor startup engagement?

- Probe: Hoe meet en bepaalt uw bedrijf of startup engagement succesvol is?

Wrap-up

8. Wat zou u, op basis van uw kennis en ervaring, willen aanbevelen aan andere organisaties aangaande het strategisch inzetten van startup engagement in hun organisaties?

- Probe: Als u vijf jaar terug kon gaan in de tijd met uw huidige kennis en ervaring, zou u dingen anders gedaan hebben aangaande het strategisch inzetten van startup engagement binnen uw bedrijf? Zo ja, wat?

Afsluiting

- Bedankt: ontzettend bedankt voor uw tijd
- Opvolging: ik ga nu hard aan de slag met de verwerking van de resultaten, het rapport stuur ik naar u op wanneer deze gereed is

APPENDIX C

THREE HORIZONS MODEL

Table C.1 presents the interpretations of eight interviewees on the Three Horizons model. Sometimes two horizons were mentioned in one breath (visualised by a cell spanning two columns). In two cases the interviewees only considered two horizons (visualised by two instead of three columns).

Table C.1: Interpretation and implementation of the Three Horizon model in practice

Firm	Horizon 1	Horizon 2	Horizon 3
Firm A	Startups with a clear product-market fit in the role of supplier	Network of startups to access and understand new technologies (e.g. blockchain or AI)	
Firm B	Innovations that can be implemented directly into the core business and/or services	Innovations on the edge of the core business	Development of radically new business models
Firm C	Incremental innovations that extend the lifespan of your current revenue stream		Radical innovations that develop new revenue streams
Firm D	Incremental innovations that belong to the current business, though startups may add relevant features	Complex initiatives of the day after the tomorrow; creating validated business options	
Firm E	Innovations within the current business model		Innovations beyond the current business model
Firm F	Incremental: product innovation, cost reduction, efficiency improvement or expansion of the current business		Experimental innovation: creation of new markets, business, products and/or services
Firm G	Innovation that is done by the business	Innovation done by the innovation department, a.o. engaging with startups	Innovations by research and development, focused on IP and/or radically new technologies
Firm H	Running and improving the current business: product and process innovation		Disruptive innovation: e.g. blockchain, AI



APPENDIX D

STARTUP DEVELOPMENT STAGES

This appendix presents two different approaches to describing startups growth. Firstly, the development of a startup can be divided into six Marmer stages (Marmer et al., 2011; Bergfeld, 2015). This division is based on a product and operations perspective.

1. *Discovery*. In the discovery stage startups are focused on validating whether they are solving a meaningful problem and if their solution has commercial viability. The founding team is formed and the company develops their value proposition, minimum viable product and/or prototype. Often startups join an accelerator or incubator.
2. *Validation*. Startups in this stage seek validation of interest in their products through the exchange of money or attention. The stage is characterised by the refinement of the product's core features, focus on the product market fit, initial user growth and hires, and seed funding.
3. *Efficiency*. Startups refine their business model and improve the efficiency of their customer acquisition process. Startups in this stage refine their value proposition, optimise their conversion funnel and work towards scalable customer acquisition processes.
4. *Scaling*. This stage is characterised by aggressive growth strategies with first stage funding, massive customer acquisition and departmentalisation of the startup.
5. *Profit maximisation*. The profit maximisation stage typically shows further expansion of production and operations in order to maximise the profit range, mostly supported by investors and venture capitalists.
6. *Renewal or decline*. This stage can be considered an expansion or exit stage. The startup either continues to grow its offerings which could potentially lead to an initial public offering (IPO), or it fails to renew the product/service lifecycle and is prone to decline.

Another perspective on startup growth is related to different types of investments. Merging the various investment stages described by Metrick and Yasuda (2010), Bergfeld (2015) and Investopedia (2016) results in the following overview:

1. *Pre-seed*. This stage concerns the attraction of some start-up capital, mostly via founders, friends and/or family.
2. *Seed stage*. Business angels and early stage investors support the venture with relatively small amounts of capital to prove a concept and to qualify for start-up capital; often these startups do have a marketable product yet.
3. *Early stages*
 - (a) *Start-up*. This stage is characterised by the involvement of venture capitalist firms to finance startups in completing their product development process and may also include the funding of marketing efforts to move towards commercial sales.
 - (b) *First or growth stage*. In this stage the startup has executed market launch or has already executed launch and capital is injected to further develop marketing, sales and commercial production.
4. *Expansion stages*
 - (a) *Second/third stage*. In this stage capital is provided to expand market reach and may include further plant expansion, marketing, or development of an improved product.
5. *Late stages*
 - (a) *Late stage*. Capital is provided to companies that have reached a fairly stable growth rate.
 - (b) *Exit or bridge (mezzanine)*. It concerns capital required at times when a startup plans to go public within six months to a year.

The Marmer stages and staging based on investments are the two most common ways to describe startup growth (Bergfeld, 2015). When combining both perspectives on startup development a comprehensive overview of startup development is achieved (see Figure D.1).

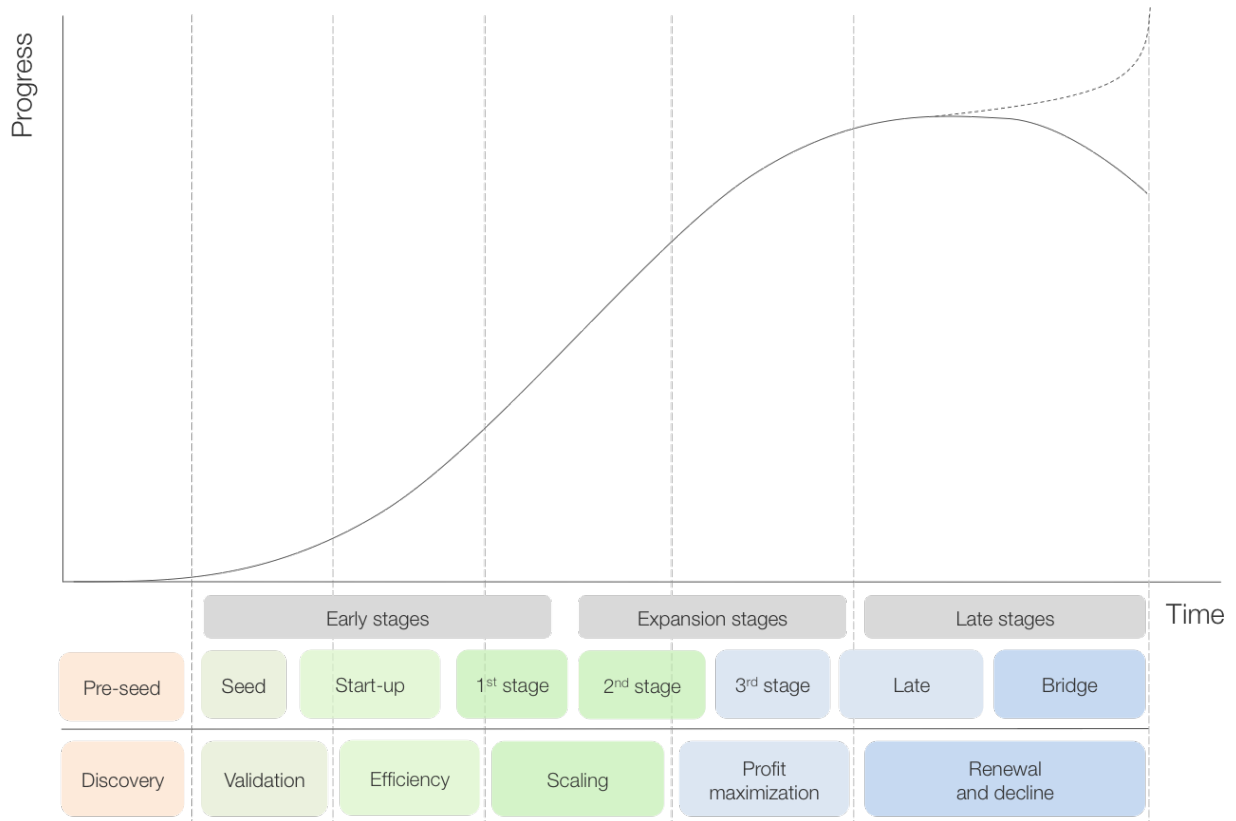
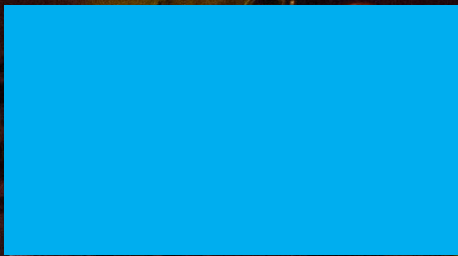


Figure D.1: Startup development over time linked to Marmer stages and venture capital stages (Bergfeld, 2015, based on fig. 6 and fig. 14)



APPENDIX E

POSITION OF CORPORATE-STARTUP ENGAGEMENT IN ORGANISATIONAL STRUCTURES

In this Appendix five different approaches to positioning startup engagement within corporate organisational structures are presented. These different approaches surfaced in the semi-structured interviews.

The first configuration that was described by two out of ten firms is that of a dedicated business unit for innovation and venturing that exists separately alongside other business units (see Figure E.1). In both cases this configuration was associated with significant allocated resources (human and capital). Within these units various departments exist with specific responsibilities. The underlying organisational structures of both units differs but also shows resemblances. Both have a dedicated team to evaluate and manage investments, a team geared at searching/scouting ideas and startups, and specific teams that are responsible for emerging business areas.

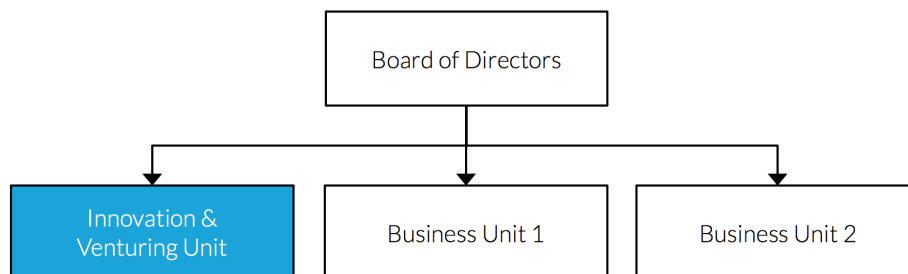


Figure E.1: A separate business unit dedicated to innovation and venturing alongside other business units

The configuration of four corporates resembled the organisational structure that is presented in Figure E.2. In these cases corporate-startup engagement was part of a dedicated Innovation & Venturing department. The interviewees however positioned this department as a staffing function within their organisational structure, rather than a separate business unit. Within the department, similar to the previously described configuration, various departments may exist. These sub-teams can be responsible for specific innovation themes (e.g. artificial intelligence or blockchain) or for the management of corporate acceleration or incubation programs. Three out of the four corporates that displayed this configuration also allocate considerable resources to startup engagement. In a fourth case the responsible team was very small (less than 5 persons) and collectively responsible for managing all engagement. One interviewee also explained that besides their 'physical' department they also had a virtual startup team. This was a team of people throughout the organisation that "can dedicate one or two days of their time each month to helping startups".

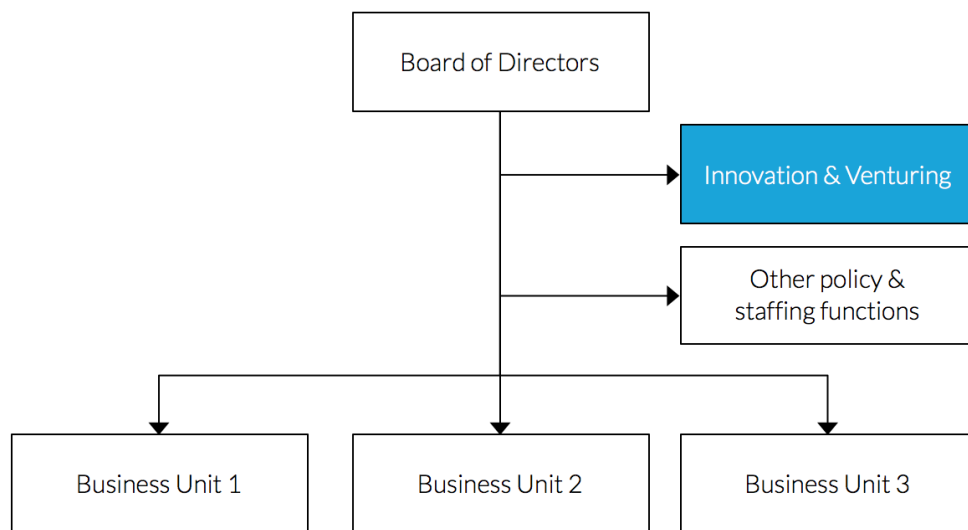


Figure E.2: Innovation and venturing as a dedicated staffing function that overarches business units

A third configuration was described by two firms. In these cases corporate-startup engagement was housed within another staffing function (see Figure E.3). The IT team would for example fulfil a dual role.

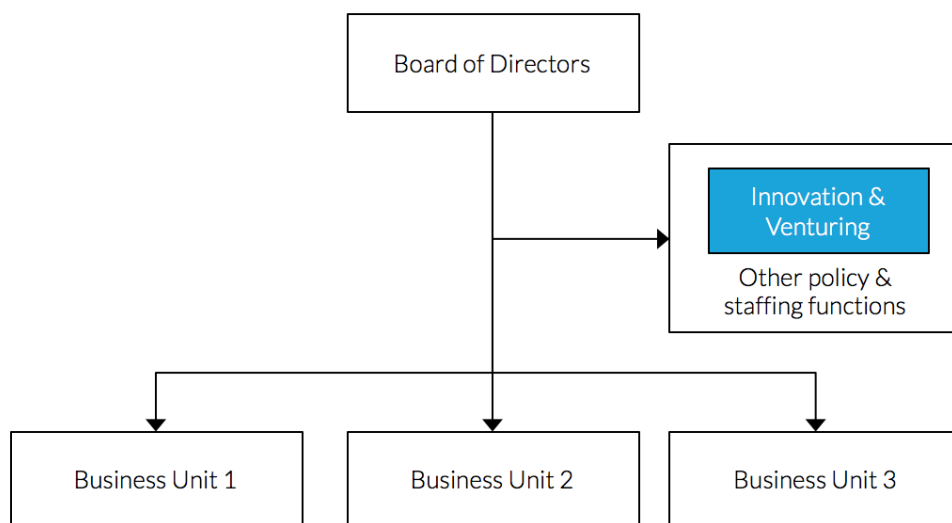


Figure E.3: Innovation and venturing as part of a staffing function

Another configuration was found once in practice. Here, corporate-startup engagement is found across various layers within the firm. Firstly, the interviewee described an Innovation & Venturing staffing function that was responsible for the overall innovation strategy and pursuit of Horizon 3 innovations. Secondly, every business unit would house a business development function that was responsible for Horizon 1 and 2 innovations and associated startup engagement. Thirdly, the firm has a team of startup ambassadors. These ambassadors are positioned at local affiliates. They fulfil a role as public access point for startups and connect startups locally or to backend of the firm for collaborations, but also support startups that approach the firm as a customer with special needs.

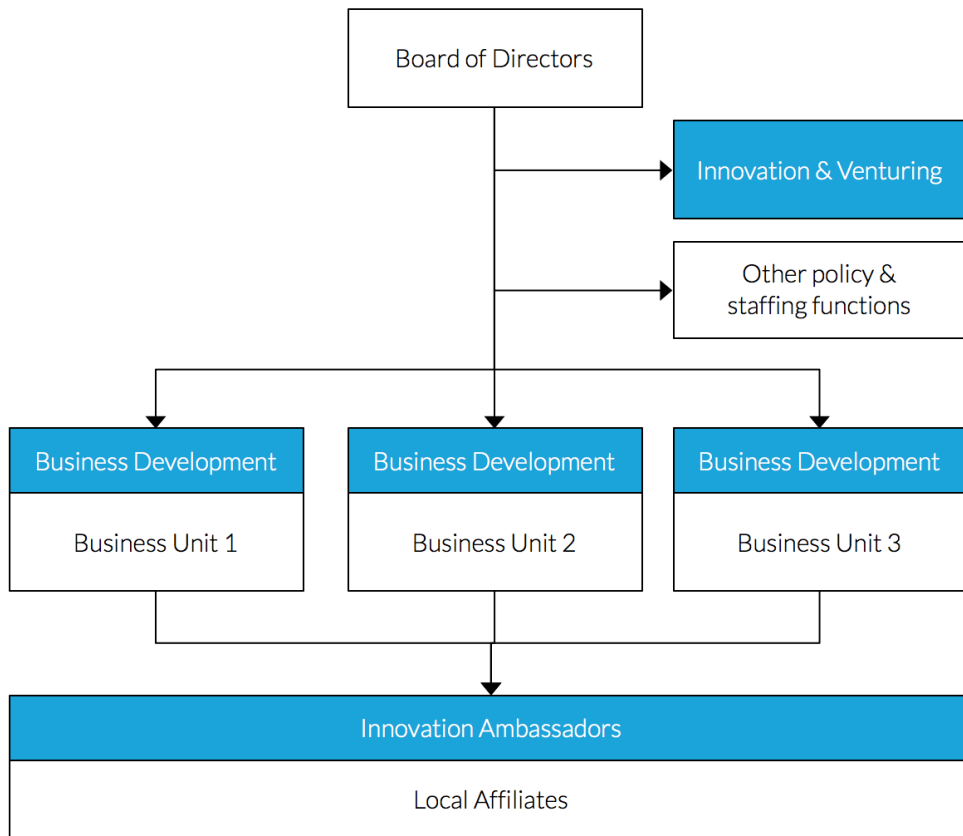


Figure E.4: Innovation and venturing as a staffing function that overarches business units, new business development teams/managers at every business unit and startup representatives at local affiliates

The fifth and last configuration concerns an organisational structure in which a business development manager or small team is positioned at every business unit. It was described by one firm. Here, the business development representatives are collectively responsible for startup engagement. They individually undertake initiatives, but do meet every once in six weeks under the guidance of the CEO to share learnings and align efforts.

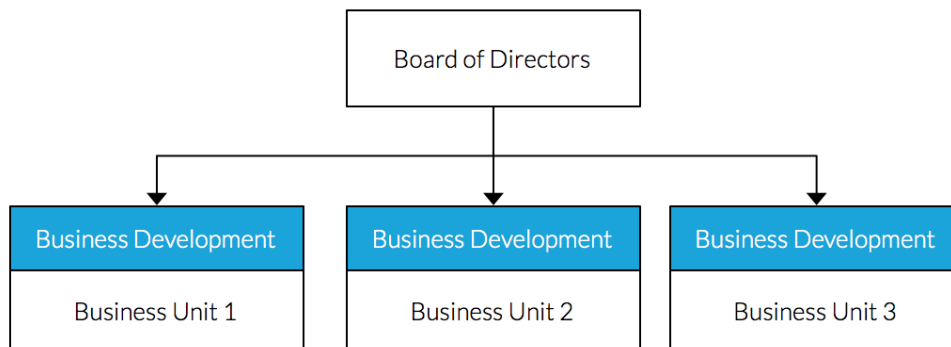


Figure E.5: New business development managers/teams at every business unit

