Corporate Intrapreneurship: Steps to Building a Sustainable Startup Mentality Within an Established Organization

By

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ABSTRACT

Past research has solidified that breakthrough innovations are often prevalent in the context of entrants rather than incumbents. However, market leaders have been able to survive the disruption caused by market newcomers despite the irregularities of breakthrough innovations within incumbents. This paper will connect current research in corporate intrapreneurship from all perspectives including organizational behavior, corporate governance, incentive programs, and cultural relevance. Drawing from published literature and case studies this research will substantiate the following claim that the success of leading intrapreneurial organizations is due to their capability to support an ecosystem of innovative organizational choices in accordance with their goals and objectives. This paper will propose that there are three main steps to fostering a sustainable startup mentality within an organization. These phases include idea generation, supporting new corporate ventures, and creating a positive learning cycle. Within each phase, the firm has to pay special attention to important aspects of the organization including organizational culture, corporate structure, venture selection, team formation, venture programs, supportive infrastructure, sustainable venture development and positive learning cycles.

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Companies are fundamentally in conflict with the concept of new ventures (Sykes & Block, 1989). Established companies are built on management requirements that are rigid, routine, and structured, causing them to miss out on important industry trends. However, it's these new product markets that offer firms the means of diversifying and provide a opportunity for future growth and profitability (Roberts & Berry, 1984). Roberts and Berry (1984), suggested that the alternative approaches to new business development can include "internal development, acquisition, joint ventures and minority investments of venture capital" (p. 2).

Previous research has also revealed that there are many different innovation-enabling competencies and processes (i.e., innovation strategies) that have become prominent trends in many industries and plays a large role in how entrants (i.e., early stage startups) enter the market and how incumbents (i.e., established firms) stay ahead of the market (Bessant, Robert, & Venables, 2008; Schumpeter, 1934). These strategic innovation trends pertain to but are not limited to open innovation, aligning departmental priorities, knowledge creation, and employee innovation incentives. However, as we learn more about how these strategies are implemented, it has become more apparent that it is often more effective to set in place a portfolio of innovation-enabling competencies and processes within one firm than to have a single all-encompassing platform. This combination of strategies can foster an intrapreneurship ecosystem that is essential for a sustainable startup mentality.

It is to say that there isn't a one-size-fits-all innovation strategy that can efficiently account for all the different aspects that innovation needs in order to breed effectively and sustainably. This means that there is an array of different strategies that foster innovation within different organizational departments. For example, repetitive tasks that provide low resources were negatively correlated with the amount of 'innovativeness' of white-collar workers. However, structured routine were a necessary aspect of workplace efficiency for blue-collar employees (Spiegelaere, Gyes, & Hootegem, 2012). Therefore innovation strategies must be assessed in combination rather than on an individual basis. Hence, using a holistic lens on organizational

innovation strategies (i.e., a portfolio of innovation strategies) is an important next step in understanding intrapreneurship.

This paper will define the parameters that pertain to intrapreneurship, as well as the assumptions made in this research. After which, background for the research is outlined including the importance and scope of the paper, how innovation is measured, the principles that intrapreneurship originated from, and a historical review of the trends of innovation since the 1950's. After which, the intrapreneurship ecosystem will be introduced through the steps to building a sustainable startup mentality. These steps will compose of three main components: fostering an innovative landscape, building a supportive intrapreneurship infrastructure, and creating a positive learning cycle.

Background

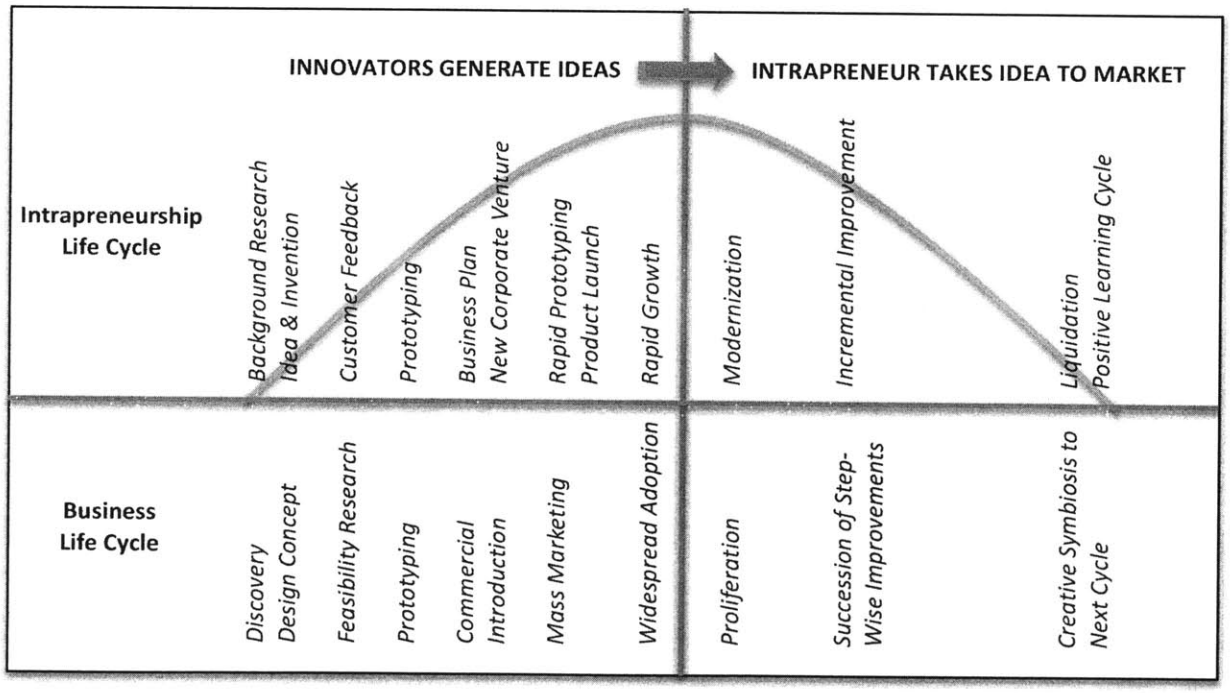
Definitions and Assumptions

Simply put, intrapreneurship is entrepreneurship within a large organization (Antoncic & Hisrich, 2003). Pinchot and Pinchot (1978) coined the term and referred to these entrepreneurs as "intra-corporate entrepreneurs" or "intrapreneurs". Previous to this phenomenon, it was common practice that entrepreneurs leave their large firms and create small firms to exploit the technology that they created while they were at the large firm (Pinchot III, 1985). This is because these large firms were not equipped to incentivize innovation within their organization and often had policies that constrained further development (Meng & Roberts 1996). However, large companies soon realized the benefits of harnessing the entrepreneurial spirit within their organization and began to maximize the potential of their human capital. Pinchot (1985) defined intrapreneurs as visionaries who have the direct responsibility of creating innovation within an organization. This visionary need not be the creator or inventor, but he or she must have hands-on involvement of turning this idea to reality and actively try to turn a profit from the new corporate venture (Pinchot, 1985).

In popular literature, corporate innovator and intrapreneur are sometimes used interchangeably. However, even though many intrapreneurs evolve from innovators, it is important to recognize that the distinction lays in the role they play and where their involvement takes place in the business life cycle. Figure 1 as adapted from Meng and

Robers (1996) illustrates the role the innovator has in a business life cycle and the point at which the innovator takes on the role of an intrapreneur. Essentially, the innovator is involved with idea creation, initial research, customer feedback, and prototyping. It is only after the business plan is generated, does the innovator become the intrapreneur. The intrapreneur then takes the idea through rapid prototyping and then to market or in other cases used within the organization for internal benefits. That is, the moment the innovator begins linking the prototype to real market opportunities, he or she has crossed the threshold from innovator to intrapreneur. The main aspect of an intrapreneur is the commitment he or she makes to bring the prototype to market. Similar to Venture Capitalists' emphasis on investing in entrepreneurs instead of the business plan, large organizations are often more likely to invest resources to support committed intrapreneurs (Meng & Roberts 1996).

Figure 1. From Innovator to Intrapreneur – Roles in a Business Life Cycle
(as adapted and developed from Meng and Robers, 1996)



Innovation is not a new field of study. According to Schumpeterian theory (Schumpeter, 1934), the "process of creative destruction" allow incumbents to hold only temporary monopoly power until a more innovative product or service, which is usually delivered by fresh entrants, disrupt the market and overthrows the incumbent. The idea that even large established firms need to embrace "creative destruction" or face an inevitable demise has become a standard in assessing the survivability of a company. Moreover, it is also believed that small firms are principle drivers of innovation because of the lower risk that new entrants experience relative to incumbents (Schumpeter, 1934).

The vocabulary used for describing innovation is vast, contextual, and differs from paper to paper (Garcia & Calantone, 2002). To mitigate this issue, this paper (as many papers before it) will follow the Organisation for Economic Co-operation and Development's (OECD) Oslo Manual (OECD, 2005), which defines innovation as "the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations" (OECD, 2005, p. 47).

Importance of Intrapreneurship

Much of the previous research has already tested and accepted the importance of innovation in generating economic value both for the firm and the market at large. It is through innovation that firms can better defend their market position or even gain market advantage over their competitors (Tirole, 1995). As previously mentioned, innovation is not just a benefit to adding competitive advantage, but it's also crucial for survival for incumbents (Baumol, 2002). This is especially true for multinational enterprises (MNEs) because they face fierce local competition at the subsidiary level as well as direct competition from other MNEs (Franko, 1989; Hitt et al., 1996).

Studies have also drawn correlations between innovation and the improvement of quality of life (Martinez-Fernandez & Potts 2009). Innovation is also deemed as a significant driver for the productivity and prosperity of a region. It can be credited for industry growth, job creation, and the development of smart technologies and new skills (OECD, 1999). Recent research has also shown that innovation can have a positive impact on fringes of cities as well. From the results of the Innovation at the Edges' project (Martinez-Fernandez et al., 2005), innovation was found to play a significant role

in generating prosperity, industry growth and the creation of new jobs in the South West suburbs of Sydney, Australia.

In 2008, the United Nations Conference on Trade and Development's (UNCTAD, 2008) Creative Economy Report, indicated that cultural and creative industries in Italy accounted for over 9% of the GDP and responsible for the jobs of more than 2.5 million people. Similar figures were seen in other countries with leading creative industries: 10% in Sweden, 12% in Denmark, 5.8% in the UK, and 3.3% in the United States (UNCTAD, 2008).

Scope of Paper

As the definition for innovation stated in the Oslo Manual (OECD, 2005), we will focus on breakthrough (i.e., discontinuous) innovations that have made large impacts in generating new businesses or product lines based on new ideas or technologies (Morone, 1993). This will also include innovations that have made substantial cost reductions that have changed consumption patters within a particular market (Garcia & Calantone, 2002). That is, this paper will not focus on incremental (i.e., discontinuous) innovations that make small and continuous improvements in product and service features including less substantial cost saving measures (Bessant, 2003). This is because breakthrough innovations involve more risks and organization buy-in, which can be measured on a larger scale and typically involve more complex organizational support than incremental innovations. Namely, the success of breakthrough innovations depends on a multitude of factors including managerial sponsorship and the generation of technological and business value.

It also needs to be noted that the impact of job design on the effectiveness of fostering innovative work behaviors differ between blue- and white-collar employees (Spiegelaere, Gyes, & Hootegem, 2012). For example, jobs with low resources and require short repetitive routines drastically hinder innovativeness of white-collar workers. Where as, there is less of a negative correlation with blue-collar workers (Spiegelaere, Gyes, & Hootegem, 2012). Even though we will look at a cross-section of many different industries, we will mainly set our focus on innovation generated by white-collar workers.

Traditional studies of intrapreneurship have focused extensively on intra-firm innovation (Antoncic, 2001). This relates to any form of intrapreneurship that occurs

within a firm including new corporate ventures and product and service innovations. However, there has been a recent shift towards an emphasis on inter-firm innovation, which includes network effects and strategic alliances. More and more, firms are looking towards inter-organizational relationship and partnership with other companies to spark innovation and collaborate on new product and process development (Smith, Dickson & Smith, 1991). Though both intra-firm and inter-firm intrapreneurship are both important (Foray, 1991), this paper will use intrapreneurship as it pertains to both intra-firm and inter-firm innovations unless specified otherwise.

Measuring Innovation

Quantifying innovation has been the basis of many ongoing research debates because innovation can be achieved in many ways (e.g., disruptive cost reductions, viral marketing, etc.), which means that a single measure of innovation is not enough to capture the entire story (Shapiro, 2006). For example, a firm that produces 50 high quality novel patents is arguably "more innovative" than a firm that produces 100 minimally innovative patents.

These methods involve looking at a number of aspects within the organization including revenue generation, new products/process/services created, patent quantity, research productivity and more recently patent quality. When evaluating innovation with more than one measure, it's most accurate when the method can capture both quantitative and qualitative attributes (Shapiro, 2006). The most popular method is looking at the revenue of the new product and the revenue of the entire product line, which is equivalent to the percent of revenue derived from the new product. That is, the former gages the success of the new product on its own and the latter captures the impact that new product had on the existing product line.

Another more recent method is to assess the number of patents produced in a firm as well as the quality of those patents (Lanjouw & Schankerman, 2004). The output of patents purely for patent sake is not enough if the quality of those patents is poor or if the amount of innovation achieved is minimal. However, this can also be paired with research productivity, which is the ratio of patents over the amount of research and development (R&D) investment made over a certain time period (Lanjouw & Schankerman, 2004). At the micro data (i.e., firm) level, patent quality has been addressed through the quantity of patent renewals (Schankerman & Pakes, 1986),

patent citations (Trajtenberg, 1990), claims in the patent application (Tong & Frame, 1994), and the patent family size (Putnam, 1996), which is the frequency of the patent being taken out in other countries.

This paper will act as an extension of previous research and seek out patterns of portfolio innovation strategies including strategies that are not easily quantifiable including the behavioral, interpersonal, cultural aspects of an organization. More over, even though strategies at the individual level have been studied extensively, firm level innovation is equally important (Covin & Slevin, 1991) and in this paper, both will be considered equally weighted.

Literature Review

History of the Innovation Process

Rothwell (1994) outlined five generations of innovation processes (Table 1) that spanned from the 1950's to the mid-1990's. Each generation provided a new set of opportunities and constraints that influenced how firms and industries innovated. During the Post-War II era (First Generation), R&D was sought out as a new tool for problem solving as firms pushed technology into the market and often without the necessary demand in place. This generation theorized a linear relationship between R&D and output where companies considered more resources dedicated to R&D lead to more successful products. It wasn't until the second generation that innovation shifted towards the demand side, which focused on product marketing relative to new product development. This shift towards market pull created a reactive R&D strategy that focused on improving existing technology. This was also the era where the US government stepped in and started experimenting with public policy as a means of boosting innovation; namely industrial innovation.

The third generation gave birth to intrapreneurship and the understanding that innovation success within the firm rested on skilled and passionate individuals. It was also theorized that innovation also depended on a multitude of factors that all needed to be performed in a "balanced and well coordinated manner" (Rothwell, 1994, p11). Innovation processes grew increasingly more complex and the addition of academic work in the area propelled the fourth generation to focus on integration and parallel

development. Technology, especially IT-based, was also a cause for larger global manufacturing processes and shortened product life cycles. Japan lead this era, which set new manufacturing standards such as Just-in-time (JIT) manufacturing.

The last generation as summarized by Rothwell (1994), showed the beginnings of Lean Innovation, a practice that emphasizes on creating and preserving value for the end customer by using an optimized amount of resources (Claus & Sonnenberg, 2011). That is, a process that uses fewer resources and provides the same amount of value to the consumer is arguably more 'lean' than a process that uses more resources. As well, more advances in technology including CAD, integrative IT, and digital databases just to name a few, allowed for better manufacturing coordination. This allowed for very complex and sophisticated processes to develop including parallel real-time information processing. More over, companies also started looking externally for partnerships and alliances to boost innovation, which created a network effect for innovation processes. That is, the innovation of an individual firm became dependent on the network of R&D firms that the individual firm was part of. Larger networks lead to more partnerships and alliances, which in turn brought more innovation to members of the partnership.

Table 1. Five Generations of Innovation Processes
(adapted and developed from Rothwell, 1994)

ERAS	INNOVATION TRENDS	OUTCOMES
First Generation **(1950 – 1965)** *Post-War II Industrialization*	Technology Push	Pro-active R&D New industries No improvement on innovation processes Linear R&D approach: more R&D resources leads to more successful new products
Second Generation **(1965 – 1970)** *A shift towards demand*	Market Pull	Reactive R&D Increase manufacturing productivity Innovation based on existing technologies Emphasis on marketing Technological incrementalism Public policy procurement
Third Generation **(1970 – 1985)** *Birth of Intrapreneurship*	"Coupling" Model of Innovation (Rothwell and Zegveld, p50)	Start of empirical innovation studies Increasingly complex innovation process Innovation as multi-factored approach Intrapreneurs at heart of success
Fourth Generation **(1985 – 1990)** *Integration & Parallel Development*	Emphasis on Technology Strategy	Pushed Economic Recovery (Peters and Waterman, 1982)
	IT-based manufacturing	Improved manufacturing strategy (Bessant, 1991) "Design for manufacturability" movement

	Global Strategy Emergence	External networking effect
	Shortened product life cycles	Creation of time-based strategies (e.g., JIT in Japan)
Fifth Generation (1990 – 1995) *Technology-enabled Innovation*	Increasing resource constraints	Emphasis on control of product development speed and "fast innovation" to accelerate product development. Design for Manufacturability
	Lean Innovation	Systems Integration and Networking (SIN) Increased Corporate Flexibility & Responsiveness Networking (joint and collaborative strategic alliances) Parallel (real time) Information Processing
	Concern for the Environment	Intensified regulations

History of Corporate Venture Investments

After the success of organized venture capital funds in the early 1960's, corporate venture funds took shape and began to trend after the mid-1960's during the second generation of innovation processes. By the early 1970's, over 25% of the Fortune 500 companies have tested the waters with their own corporate venture programs. Major firms in the U.S. including DuPont, Exxon, Ford, and General Electric all began experimenting with venture capital investment (VCI) programs for the purpose of new business development. These corporate venture programs took on two forms: internal and external (Gompers & Lerner, 2000). Even though the two forms of corporate venture programs vary on many different respects, both mirror the trend of the overall venture capital market. That is, when venture capital funds are large, so are corporate venture funds and vice versa.

External corporate venture programs involve investment in outside startups that were independent of the corporation. Much like any other investor, external investments are made directly to the independently managed startup and usually along side other venture capital firms, while the corporation is treated as any other investor. Some companies make investments directly to the startup and can even have an influence on the board of directors at the startup. On the other hand, internal corporate ventures are initiatives developed and funded with the company's own resources (Gompers & Lerner, 2000). This paper will focus on these VCIs for internally developed corporate ventures.

There was a brief period after 1973, where corporate venture programs both internal and external began to decline because of a sudden drop in initial public offerings (IPO). This meant that investors patiently waiting for their companies to go public would never see their hopes materialize and the once lucrative investments were only yielding mild returns (Fast, 1978). Though in 1979 two groundbreaking amendments resurrected the venture capital sector. Specifically, the Employee Retirement Income Security Act was amended to allow pension funds to actively invest in high-risk assets including venture capital funds. Another key change was the lowering of the capital gains tax rates, which lowered the risk for all investors. These two factors boosted corporate venture funding, which peaked in 1986 where nearly 12% (nearly $2 billion) of the total venture pool was attributed to corporate venture funds.

Yet, the venture capital sector took another hit in 1987 when the stock market crashed, sending investments into sharp declines. The after math of the crash carried on for years and by 1992, the venture pool shrank to only 5% of what it was at the peak, while one-third of all corporate venture programs were dissolved. It wasn't until the mid-1990s did corporate venture capital begun to recover (Gompers & Lerner, 2001). Today, corporate venture funds are becoming increasingly important to startups (Forbes, 2013). In 2012, approximately 16% of acquired companies had some form of Corporate Venture Capital (CVC). More impressively, in 2013 thus far, 90% of all companies scheduled for IPOs that year involve CVC.

The Principles of Intrapreneurship

As mentioned above, innovation is the result of many complex inter-dependent factors that can impede or strengthen the innovativeness of a firm. Naturally, these factors will have either a positive or negative affect on innovation, which will either foster or impede upon the innovativeness of a firm respectively. These factors, whether positive or negative, can be dynamic or static, ongoing or stagnant. They can also occur at all levels of the organization (e.g., on the plant floor or at C-level management) and across disciplines or departments (e.g., manufacturing, marketing, sales, human resource).

Pinchot and Pinchot (1978) was the first to recognize "intra-corporate entrepreneurship" and laid the foundation that outlined 8 methods of creating and supporting entrepreneurship within a company. Though in practice, some of these

principles may not be as practical and should be negotiated on a per project bases. (Table 2) below is adapted from these original ideologies and outlines the principles of creating intrapreneurs and keeping them within the organization.

Table 2. Principles of Establishing Intrapreneurs
(as adapted and developed from Pinchot and Pinchot 1978)

PRINCIPLE	RATIONALE	SUGGESTED METHOD
1. Intrapreneurs must risk something of value to him/herself	• To increase intrapreneurial conviction and drive • To provide a binding contract between the corporation and the intrapreneur • To help other employees rationalize the intrapreneur's future rewards (e.g., royalties, salary raises, bonuses, etc.)	Hold salary increases or salary cuts and make them contingent on project completion
2. The organization and the intrapreneur must share the rewards from the project (i.e., revenue, recognition, etc.) in a well-defined and equitable way	• To align the priorities of the intrapreneur and organization • To ensure organization buy-in	Setup a committee that negotiates on the company's behalf of a pre-established percent of the value of the company
3. The successful intrapreneur should earn complete control of an allotment of R&D funds (i.e., "intra-capital")	• To keep talented intrapreneurs within the organization • To incentivize long-term planning • To produce more sustainable project results • To allow projects to extend past its first iteration	Allot 10% of the revenues from the project (in addition to the cash bonus) for the intrapreneur's personal "intra-capital" R&D funds
4. The intrapreneur should have independence when investing his or her intra-capital as long as it is within the bounds of the law	• To lower the barrier of investing in riskier projects and ideas • To foster a corporate environment that breeds creativity and innovation • To allow an ongoing learning cycle for accomplished intrapreneurs	Set a precedent that intrapreneurs are "untouchable by corporate discipline" when it comes to investing his or her intra-capital
5. Every new venture should have a Venture Capital style screening process including pitching a business plan	• To provide a forum where due diligence can be performed • To ensure a higher quality of projects receive corporate funding and resources, and in turn have a higher probability of generating higher returns	Set up an internal expertise committee that will do their due diligence on the intrapreneur's entire business plan
6. Allow continuously successful intrapreneurs to create employee intra-capital syndicates where they can back other employee projects that do not get funded at the corporate level	• To build a community of intrapreneurship within the organization • To diversify the corporate risk of taking on intrapreneur projects • To give more employees the opportunity for intrapreneurship • To boost the quantity and quality of R&D efforts	Set up "Venture Capitalist" designations within the company and provide quarterly cycles where employees can pitch their ideas and potentially get funded by their intrapreneur peers

7. The corporation has right of first refusal for all new products or services developed by its intrapreneurs. However, if a product or service is rejected, the intrapreneur must have other avenues of acquiring funding to bring his or her product to market	• To allow for more efficient use of corporate R&D funds and not let new technology go to waste • To foster a more cohesive intrapreneur ecosystem within the corporation	Unsuccessful intrapreneurs can raise funds from the internal venture capital committee or other successful intrapreneurs to bring their product to market.
8. Policies and management methods within the company should always be revisited to ensure that the functionality of the corporation is optimal	• To ensure that the chaos of the intrapreneurship ecosystem does not overthrow the structure of the organization • To allow for adoption of new methods and procedures that are beneficial to the organization	Perform bi-annual corporate debriefs that challenge current procedures and provide avenues where change can occur and new policies can be adopted

On the contrary, barriers to innovation are categorized as "revealed" or "deterring" (D'Este et al., 2011). The former describes barriers that occur when the firm has already committed to innovation. The latter pertains to obstacles that prevent firms from engaging in innovative activity. That is, deterring factors are seen by the firm as insurmountable and prevents the firm from initiating innovation, while revealed barriers are difficulties during the process of innovation.

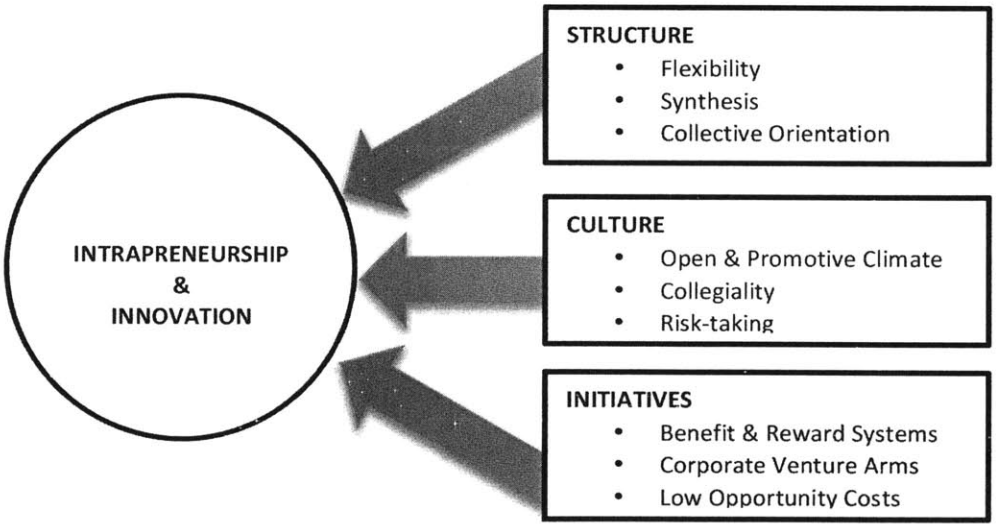
The perception of deterring barriers may be different between firms and failures can be attributed to positive learning cycles (Dixon, 1999), where firms become better equipped to deal with similar obstacles when encountered in the future. Organizational learning is actually crucial for companies to deal with not only unprecedented change (Dixon, 1999), but also evoke change, which is essential to intrapreneurship. This also indicates that there is no significant correlation between the number of failures to the level of risk aversion at a firm. Some of the most innovative firms also face the most number of revealed barriers and the highest number of failed projects (Pablo et al., 2012). Positive learning cycles will be revisited in detail as a main component to building a sustainable intrapreneurship strategy.

Factors Affecting Intrapreneurship

The main focus on this paper is innovation strategy within the firm and the impact it has on intrapreneurship. Innovation strategy is defined as "a strategy that promotes the development and implementation of new products and services (Robbins, 1996)." Shoukry and Wang (1993) indicated that there are three main factors that affect

innovation at the firm level (Figure 2): initiatives, structure, and culture. First, structure pertains to the organizational structure and mission that the firm is built on. Namely, a flexible organizational structure, fluid synthesis between different business units, and a collective orientation that instills a common sense of trust and purpose are imperative for intrapreneurship. Second, the culture of an organization must also have an openness of information exchange and a promotive environment where risk-taking and challenging the status quo are common. Ideally, the culture should have an element of collegiality where power and authority is equally distributed and responsibility is shared. Third, initiatives are proactive programs that are explicitly geared towards promoting intrapreneurship. Differing from structure and culture where innovation and intrapreneurship are bi-products amongst other positive organizational efficiencies, the sole purpose of initiatives is to spark innovation. These include, benefit and reward systems, corporate venture arms, and other initiatives that lower opportunity costs for entrepreneurs.

Figure 2. Factors Affecting Intrapreneurship
(adapted and developed from Shoukry and Wang, 1993)



This paper will take the all-inclusive approach and take into all three factors as part of a company's 'innovation strategy'. That is, since organizational culture, structure, and strategy are all choices made on at the firm level, it will be important that each of these components are broken down and assessed as part of the portfolio of

innovation strategies that the organization deploys. This paper will build upon these influencing factors as outlined by Shoukry and Wang (1993) and propose a holistic approach to fostering intrapreneurship where structure, culture and initiatives are inter-dependent elements of an overall dynamic innovation strategy.

Steps to Building a Sustainable Startup Mentality

The methodology of building a sustainable internal corporate intrapreneurship strategy is composed of three main parts (Figure 3) that follow the natural progression of the intrapreneurship life cycle as outlined in Figure 1 (i.e., idea generation to new corporate ventures). Even though, all these intrapreneurship strategies can and should be developed in parallel, the intrapreneur will experience each component as he or she goes from idea generation to new corporate ventures to the positive learning cycle.

First, an innovative environment must be created through the use of cultural and structural strategies in order to help generate ideas that will eventually turn into new corporate ventures. These ideas are then filtered through a selection process where the best ideas are further developed. Criteria for selection will vary by context (e.g., company, industry, goals). Some companies use idea bulletin boards and suggestion boxes for employees to drop off good ideas. On the more involved end of the spectrum, Facebook uses their famous Hackathons to give their engineers an all-night coding workshop geared to help them conceive new products. Past successes include the "Like" button, Timeline, and Chat. The importance and uniqueness of this type of expedited build session is gaining popularity and top tech companies including Twitter and Dropbox have already adopted.

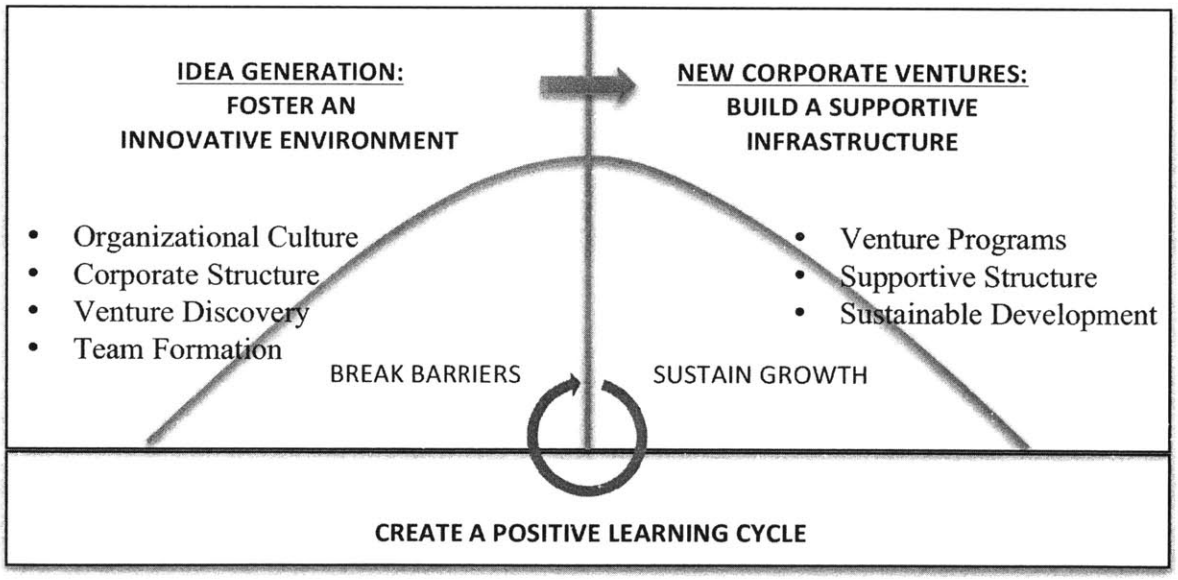
Second, there must be a system of infrastructure that supports intrapreneurs, gives them the strategy, resources, and support to take the new product to market. More over, a sustainable development strategy for the new ventures needs to be in place to ensure that the project meets the predetermined targets (e.g., growth, revenue, etc.). In the case of Tata Refractories (Kamath, 2006), a 40 year old company in a severe cash flow crisis, the company was able to reinvent itself by creating a strong human resource development (HRD) program that became the backbone that supported Tata Refractories' other intrapreneurial strategies collectively called the turnaround

program. Kamath (2006) stated that "the turnaround program could not have been a success at all but for the effectiveness of the HRD programs" (p. 118).

Third, regardless of the venture's success, a feedback mechanism we will call the 'Positive Learning Cycle', will funnel back all the lessons learned from new corporate ventures and instill this knowledge as corporate legacy information for future intrapreneurs. This information is best captured digitally and dynamically to allow live feedback to ongoing projects. Senge (2013), emphasizes on the power of the learning and states that "building a learning organization can be one of the most important activities for long-term organization improvement and flexibility" (p. 77).

Note that this intrapreneurship methodology is an iterative process that has feedback mechanisms within each step and that the relationships between each section are not necessarily linear. That is, the innovator or intrapreneur can at any point of the intrapreneurship life cycle (Figure 1) move forward or backwards on the way to creating a successful new corporate venture, or even cancel the project all together.

Figure 3. The Intrapreneurship Ecosystem



This intrapreneurship process (Figure 3) is built on the assumption that measures can be taken to create an innovative environment (e.g., risk-taking), which empowers employees to over come barriers to innovation and become 'innovators' who generate novel ideas and prototypes. Once these ideas have matured through idea selection,

market research and preliminary prototyping, proactive initiatives (e.g., venture funding) take over to give innovators the proper resources to become 'intrapreneurs' who will take their product to market and produce new sustainable corporate ventures. More specifically, the fostering of an innovative landscape through cultural and structural strategies supports the idea generation phase. Successful ideas will then cross over the innovation threshold to become a new corporate venture. The final outcome of the venture (both positive and negative) has to feed back to the knowledge pool of the firm in order to build an ecosystem that build on factors of success and learn from project failures.

1. Idea Generation: Foster an Innovative Environment

An innovative environment is the foundation that helps members of the organization generate ideas. In an ideal 'innovative' climate, members can freely create new ideas without any cost to them (e.g., financially, promotionally, etc.). However, in reality, a completely chaotic work culture may be at odds with efficiency and hence, corporate structure is usually set in place to manage expectations and values. The sweet spot is when corporate structure and culture can work together to lower barriers for innovation and provide a structured process that supports the intrapreneur in their venturing efforts. This section will outline how an innovative environment is fostered through managing risk and reward in an organizational culture, how corporate structure plays a role in the control, political, and communication aspects of an organization, and how best to identify ideas fit enough for a new corporate venture.

Organizational Culture – Managing Risk and Reward. Organizational culture is defined as the "values and beliefs shared by personnel in a organization" (Martins & Terblanche, 2003, p65). Even though culture is intangible, it is necessary and can manifest itself in human interactions at all levels of the organization including individual attitudes and behavior, daily routines, values, norms, and even philosophies (Hellriegel et al., 1998). It is also considered as a vital part of the overall functioning of an organization and can influence different processes within an organization (Martins &Terblanche, 2003) including those that affect intrapreneurship. Schein (2010) states that "IBM, Hewlett-Packard, Ford and any other company that has had several decades of success will have an organizational culture that drives

how its members think, feel and act" (p. 42). Organizational culture is further defined as a list of dimensions (Martins, 1987) including mission and vision, external environment, means to achieve objectives, image of the organization, management processes, employee needs and objectives, interpersonal relationships, leadership, which will also be touched upon in later parts of this paper.

More recently, Eesley and Longenecker (2006) conducted an extensive study that surveyed 179 managers from more than 20 U.S. manufacturing and service organizations and assessed their experiences with intrapreneurship. Specifically, they were asked what factors stifled or stimulated intrapreneurship at their organization. The study concluded that there were 10 barriers and gateways to intrapreneurship that were significant at the firm level and a significant number of them related to organizational culture and structure and not tangible resources, as most may believe. Many barriers recognized by the majority of the managers were associated with risk-taking. It seems that when organizations punish employees for mistakes or risky activities that are connected to the development of new ideas or innovative behavior, intrapreneurship can be stifled or even wiped out if measures are not implemented to support risk-taking behavior.

Managing Risk. Risk is recognized as a key ingredient to entrepreneurial and hence intrapreneurial behavior. Even in an equilibrium environment (Kihlstrom & Laffont, 1979), where "they [entrepreneurs] differ only in their willingness to bare risks (p. 746)", less risk averse individuals become entrepreneurs while more risk averse individuals become workers. These entrepreneurs were also found to be running larger firms. It is also important to differentiate firm-level risk from individual risk. The culture of risk at the firm level can be shaped by influences at the individual level (Antoncic, 2003). More specifically, the firm can influence the individual's perception, attitude, intention, and behavior towards risk through interactions such as employment contracts and work evaluations.

In order to foster a greater risk-taking culture and support employees who are willing to bear the risks of intrapreneurship, the firm must act on several levels and throughout the intrapreneurial process. That is, not only is it important to create a risk-taking corporate culture, but it's also important to have structure and support for the intrapreneur during the progression of the project and have a clearly implemented set

of evaluations and rewards upon completion (Eesley & Longenecker, 2006). It must also be made clear and explicit at the organization level and understood at the individual level the consequences of potential failed projects and how those projects can be integrated in a continuous cycle of learning within the organization (Dixon, 1999).

For intrapreneurs, first time or otherwise, it is important to encourage risk-taking through empowerment (Eesley & Longenecker, 2006), so that it lowers their individual barriers to take on innovative projects. The empowerment can come in the form of various incentive programs sanctioned and supported by top management that help foster a healthy risk-taking organizational culture.

Providing Rewards. One method of incentivizing risk-taking behavior, experimentation and generating new ideas is the use of rewards (Amabile & Gryskiewicz, 1987). These rewards can be both intrinsic and or extrinsic. Intrinsic rewards come in the form of personal enjoyment and internal motivation including increased autonomy, improved opportunities or professional growth especially in high-level occupations (Mottaz, 1985). Extrinsic rewards are motivations that are attributed to an external force including monetary gain, explicit recognition, or promotion, which is a more significant form of reward in blue-collar occupations (Mottaz, 1985). Even though intrinsic rewards have been seen as more sustainable and shows a stronger relationship with workplace satisfaction (Mottaz, 1985), either form of incentive can have a positive impact that inspire individuals to become more creative and innovative (Tushman & O'Reilly, 1997).

In an experiment conducted by Monsen, Patzelt, and Saxton (2009), they found that the context and recognition of existing trade-offs and opportunity costs are important when employees are deciding whether or not to participate in a new corporate venture. Specifically, the incentive for profit sharing is a good motivator when the probability of project success is high and if there is low pay risk and job risk (Monsen, Patzelt, & Saxton, 2009). This means that in order to create an attractive incentive program for employees such as profit sharing, the employee's salary and job must be at a minimum risk. That is, if the employee is to take on a new corporate venture, his or her position in the company should not be at risk of forfeiture and his or her salary should not diminish significantly if at all. The amount of salary reduction or

in some cases increase will be up to the discretion of the manager and depend on the context of the project and the motivations of the employee.

Corporate Structure – Control, Politics and Communication. Organizational structure is defined as the "formal allocation of work roles and the administrative mechanisms to control and integrate work activities including those, which cross formal organizational boundaries (Child, 1972, p2)." This includes processes that directly affect inter-firm and intra-firm communication, politics, values, and priorities. More importantly, organizational structure is also a fundamental part of how the company operates and can have a direct influence on performance (Child, 1972). For example, an organizations structure can have a direct impact on the flow of information and communication within an organization and that can indirectly the affect the attitudes of organizational culture (Brown & Ken, 1994).

Control Mechanisms. Processes within an organization can be seen as 'control mechanisms' and are meant to increase desired behaviors of an employee (Das & Teng, 1998). A crucial component of that mechanism is trust and the perception of trust both at an inter-personal level and at how individuals relate to the firm and vice-versa (Six & Sorge, 2008) In the context of a corporation, trust is seen as the "belief in the other partner's reliability in terms of fulfillment of obligation in an exchange (Pruitt, 1981)." The existence of trust is not only crucial for technological innovation (Hausler, Hohn & Lutz, 1992), it can also supplement formal controls within an organization to keep organizational processes open to change, which can encourage intrapreneurial activities (Antoncic 2001).

In Eesley and Longenecker (2006), many managers indicated barriers to innovation that were connected to organization structure. Specifically, 35% of the managers surveyed indicated that politics was a barrier to intrapreneurship, while 31% indicated communication. The issue with unhealthy organizational politics pertained to infighting and uncooperative employees. Communication was related to not only the flow of information within the organization but also pertained to providing clear organizational directions, priorities, and objectives from the firm level.

Workplace Politics. Organizational politics is defined as the "management of influence to obtain ends not sanctioned by the organization or obtain sanctioned ends through non-sanctioned influence means" (Mayes & Allen 1977, p. 675). The common vein that workplace politics stem from is the maximization of one's own interest at the expense of others (Vigoda, 2002). Even if there is a positive outcome of workplace politics such as recognition and career advancement (Kumar & Ghadially, 1989), it can still be at the expense of another. And this can create a stressful and aggressive workplace environment (Vigoda, 2002). As a result, stress that's linked to workplace politics can negatively affect organizational efficiency (Leiter & Maslach, 1988; Ganster, 1991) that can negatively impact an intrapreneurial organizational culture and reduce individual performance (Cropanzano et al., 1997).

There are several strategies that can alleviate organizational politics, which can be deployed at the firm level and exercised by supervisors on the individual level. One such strategy is to foster understanding and agreement between employees and management by providing transparent straightforward performance assessments (Ferris et al., 1989). At a high-level, the organization's goals and priorities need to be aligned with that of the employee. It's will be up to the managers to decrease workplace politics by communicating those organizational goals and ensuring that individuals feel empowered that they can add value to the company (Ferris et al., 1989). In short, first-line supervisors have the power to decrease affects of workplace politics by enhancing agreement between the employees and organization about the company's goals and priorities and fostering a sense of control and empowerment within employees (Witt, 1998).

Communication & Information Flow. Communication is an important aspect of organizational structure because it controls the rhythm and path of information transfer (Brown & Ken, 1994). Both intra-firm and inter-firm communications have been found to be positively correlated with intrapreneurship (Antoncic, 2001). On one side, it's the active production of feedback the organization gives to its members that can act as encouragement for intrapreneurial activities, such as risk-taking as discussed above. However, on the other side, it also requires the organization to receive feedback and listen to their members about how improvements can be made. More importantly, that feedback must also be turned into action in order to complete the entire communication

mechanism or else members will be discouraged to give more feedback in the future and the line of communication will be broken (Eesley & Longenecker, 2006).

When communication falls apart, information flow also becomes stagnant, which means that intrapreneurs will miss out on new venture opportunities or opportunities for project feedback and improvement (Eesley & Longenecker, 2006). Open communication has been deemed as a critical component of innovation (Kanter, 1984; Pinchot, 1985) because intra-firm communication facilitates much of the processes that new corporate ventures are initiated (Antoncic, 2001). Of course, all communication is not created equal. Though the quantity of communication is important, quality of communication is also crucial because misinterpretation can easily break trust and impede on intrapreneurship (Zahra, 1991). More over, communication must exist throughout a corporation and transcend organizational structure. That is, communication needs to move in all directions (i.e., vertically and horizontally), much like a network in order to foster innovation and change (Bush & Frohman, 1991).

In the context of inter-firm collaboration, the open communication platform is equally important (Das & Teng, 1998). For example, similar to intra-firm communication, the quality of information flow between manufacturers and dealers within the personal computer industry was found to be a critical component of successful partnerships (Mohr & Spekman, 1994). More over, the frequency of inter-firm communication was also a positive predictor of success for alliances between biotechnology firms (Deeds & Hill, 1998).

At the firm level, the company must clearly communicate the direction, priorities, and objectives that the organization operates on because creativity and innovation relies on a shared common vision and mission (Covey, 1993). Poorly defined missions were also a cause of failure for early versions of corporate venture programs (Siegel, Siegel, & MacMillan, 1988). These values and beliefs are set by the strategic leader and should be clearly defined (Anconcic, 2001). Values that are associated with intrapreneurship are either individual-centered or competition-centered (Zahra, 1991). Namely, individual-centered values focus on how the employee is treated and should evoke to the emotions of a commitment, which outlines the responsibilities that the organization has for each employee (Kanter, 1984). Competition-centered values are focused on pushing the organization to achieve milestones relative to its market competitors.

Venture Discovery – Uncovering Venture Potential. Opportunities can come from three main sources: internal, external, and industry/market changes. However, whatever the opportunity, the highest performing new business developments are usually in areas related to the firm's core business (Roberts & Berry, 1984) because of the familiarity of the market and availability of expertise (Pinchot & Pinchot, 1978). Companies looking to generate new corporate ventures often start with looking at internal capabilities and markets where these competitive advantages can open up new opportunities. There are also many problems outside of the firm that need solutions. Another alternative is to analyze industry and market changes in the recent years and identify a future opportunity where current competitors are not addressing. This exploitative strategy can prove to be a great competitive advantage if the firm can address the future needs well.

There are many different selection processes that a firm can deploy, yet no screening process is perfect and there is no guarantee for success. This difference between success and failures are clear in hindsight, but it's almost impossible to identify a priori. It's not to say that risky ventures are not fit for investment, it just means that the probability of success is lower (Sykes, 1986).

Selection Criteria. Therefore, in order to minimize the risk of funding new corporate ventures, firms often perform due diligence on such factors as corporate fit, amount of initial investment, the intrapreneur's experience, experience with product/service, competition, IP, gross margin, and rate of return (Desarbo, Wayne, & Day, 1987). Though similar to the venture capital world, the 'science' behind picking the right venture varies between managers. Table 2 identifies the selection criteria (in no particular order) of managers for new corporate ventures. Keep in mind that the list identifies the due diligence taken when selecting a new corporate venture, however, these criteria only reduces venture risk and is not a guarantee of success. Analysis of successful and unsuccessful ventures shows that even experienced teams and qualified ventures can fail if faced unforeseen circumstances such as steep competition (MacMillan, Zemann, & SubbaNarasimha, 1986). Hence, it's nearly impossible to identify and mitigate all the risk factors in the initial stages of the new venture.

Table 3. Criteria for Corporate Venture Decision-Making
(as adapted from Desarbo, Wayne, and Diana, 1987)

CRITERIA	DESCRIPTION
High corporate fit	The suitability and relatedness of the venture to the firm's current activities maximizes skill transfer, which lowers cost of hiring external help and easily draws commitment from management.
Defensible proprietary technology	Technology that is patentable and proprietary makes the firm's venture less vulnerable to competition and sets up barriers of entry for direct and indirect competitors.
Experienced venture champion	The intrapreneur should already have a proven track record of successful ventures or have extensive experience working in the area of the new venture.
Less advanced stage of market development	The more premature the potential market is the more effort is needed to bring in early sales, which is critical for the survival of the venture. Other important factors of venture success found within mature markets is in-depth knowledge of the customer base, intense interaction between the firm and customer and real market need.
Low competition	Entrenched competition and high proportion of satisfied customers are barriers of entry to any new venture. This aspect has to be balanced out by the market maturity as noted above since more mature markets also have more mature market leaders.
Technology	The venture's technology should already be under development and minimal new resources are being afforded to the new venture.
Previous experience with venture product/service	Past experience with the potential venture makes it easy for management to assess the risks and benefits associated with taking on the new venture.
Projected long run business potential	The long-term revenue potential should be at least 5% of current sales.
Previous experience with market	The new venture team should have extensive and direct prior experience with the market that they are entering into.
Projected internal rate of return (IRR)	The venture should have at least a 20% IRR (i.e., annualized effective compounded return rate) for the venture to be profitable.
Risk variability of IRR	The IRR risk variability should be no more than approximately 10%.
Projected gross margin	The new project should perform at a 75% gross margin.
Initial investment required	The initial invest of the new venture should be less than 1% of the firm's total assets.

In comparison to venture capitalist's criteria for startup selection, managers of new corporate ventures seem more conservative. Though, on average, the amount of due diligence performed on new startups versus new corporate ventures are similar, venture capitalists (VC's) are seen making 'bigger gambles'. MacMillan, Zemann, and SubbaNarasimha (1986) found that VC's (in hindsight) were seen making investments in three broad categories of that eventually became unsuccessful ventures. These categories included venture teams that lacked experience, had no prototype, and or no clear market demand for the new product. This type of investment would never have made it through the filters of new corporate ventures let alone receive funding.

Even though this paper primarily focuses on internal capabilities and factors that are more 'in control' of the firm, external market forces are also an important factor to consider (Miller & Camp, 1986). Porter (1980) found that these strategic business units (SBU) focused on new ventures would on average have an return on investment (RIO) of nearly 20% when no significant competitors have entered the same market in the last five years. On the contrary, SBU's that have experienced markets with entries of significant competitors only had an average RIO of 14%. Also, these new ventures should never jeopardize the base business (Sykes & Block, 1989). That is, the new venture should be opening up opportunities instead of potentially competing for the same market share as the corporation's existing products.

Block and MacMillan (1995) quantified these selection criteria into four opportunity benchmarks that a successful venture should possess. First, the new venture should break even in less than thirty-six months. Second, this new business should experience a gross margin of 20%-50%. Third, the after-tax profit potential should be between 10%-15%. And finally, the differentiation of this new product should be based on the product itself and not the price. These benchmarks vary across industry and size of the venture. Similar to independent VC's, it is up to the company's discretion to set benchmarks that optimize for their industry. For example, if the new venture is based on undeveloped technology, then 36-months may be unrealistic as a break-even point.

Team Formation. Apart from choosing the right venture to invest in, team is arguably the second if not most important aspect of a successful venture. Even though the background of each manager depends on the business idea and industry, these managers have to be entrepreneurial. These successful venture manager characteristics include market knowledge, high energy, open-mindedness, flexibility, resourcefulness, persistence, charisma, and team building skills (Block & MacMillan, 1995). It is only when the venture matures, do managers with traditional skills (e.g., product and project management), which are good for growing a company, become essential. From the intrapreneurship lifecycle (Figure 1) perspective, entrepreneurial managers start new businesses and traditional managers sustain and scale ventures.

Once the team is established, the objectives must be clearly communicated to the team. Everyone on the team must also explicitly agree and understand the terms that

they will be working under (Rind, 1981). Early stages of a venture is intense and can take years for the business to break even. Another important aspect of managing a venture is to give the team autonomy. Since decisions have to be made quickly and effectively, it's important for each team member to take on an active role and be flexible enough to act independently. Bureaucracy and politics at an early stage startup can impede progress and be detrimental (Leiter & Maslach, 1988).

However, if the venture lacks skilled people, then the venture should be evaluated more critically. An alternative source of expertise is hiring people from outside the firm (Rind, 1981), but this is usually problematic because it's difficult to align outsiders to the same goals and incentives. On one hand, outsiders do not have the same level of attachment and pride for the success of the venture than current employees. On another hand, companies may find it difficult to provide proper incentives for outside experts because they are often new to the company and have yet to prove real value (Colmen, Perel, & Buffinton, 1979).

2. New Corporate Ventures: Build a Supportive Infrastructure

The definition of a corporate venture (CV) is similar to that of traditional entrepreneurial venture, except corporate ventures operate under the umbrella of a larger more visible business (Zenas & MacMillan, 1995). CV's also have similar goals as startups including increase in sales, profits, productivity, quality, or efficiency. Corporate managers typically manage these CVs separately from the main business (Sykes, 1986). Successful companies that have the culture, experience, knowledge, and resources are able to harness the power of new corporate ventures and boost the company's overall profits and growth. However, traditional VC backed startups are known to be more lucrative than internal corporate ventures. In a comparison study by Sykes (1986), the 37 internally initiated investments by Exxon were less successful financially than the 18 VC-backed investments.

The scale of a CV varies widely and depends on the resources of the firm. Some companies have venture managers taking the lead on CV developments or it can be a corporate-backed venture company managing the entire project. More over, each CV would hold it's own set of risks and rewards and can happen in a broad range of companies, markets, and products (Zenas & MacMillan, 1995). The following section will describe how venture strategy, support structures and sustainable development

can build a supportive infrastructure for CVs and more importantly sustain growth in the long term.

Venture Programs. It goes without saying that venture programs vary in formality, duration, and longevity and differs from firm to firm. Some programs are institutionalized within the form and provide formal avenues of venture application, screening, and deployment. Other initiatives are more loosely defined and involve only a few key decision makers. More established programs provide longer formalized support from the venturing firm, whereas other programs are more autonomous and require a low-touch involvement from headquarters. One key aspect to keep in mind is that the firm's tolerance for risk is highly dependent on the firm's history of venture successes and failures. That is, firms with a history of failed ventures will be more conservative during the venture program selection process than firms that have experienced long periods of success. This is why it's important for the firm to adopt a diversified portfolio of new ventures including long- and short-term with varying degrees of risk (Fast, 1979).

Recall that there are internal and external venture programs, however, regardless of internal investment or external partnerships with portfolio firms, venture success is directly dependent on how well defined the strategic focus of the venture is. That is, firms with a clearly established focus and alignment with the new venture and or external portfolio company more often leads to higher returns and strategic gains (Gompers & Lerner, 2000).

Support Structure – Managers, Funding, and Time. Even though, lack of resources was surprisingly not considered as a strong barrier to intrapreneurship by a majority of managers surveyed in the Eesley and Longenecker (2006) study, it is however still an important aspect of the intrapreneurship life cycle. These resources include managerial support, time, and financial resources.

Managerial Support. Another main cause of venture failure is insufficient corporate commitment (Rind, 1981). Organizational support in the form of employee training and autonomy to find entrepreneurial opportunities was positively correlated to a firm's intrapreneurial activities (Stevenson & Jarillo, 1990). Specifically, managerial involvement and executive support in the form of commitment, adequate staffing, work

discretion, time availability, loose intra-organizational boundaries, autonomy and rewards for venture activities were all important to building a supportive infrastructure and hence important for intrapreneurship (Hornsby et al., 1990; MacMillan, 1986; Marrifield, 1993).

More specifically, corporate level (C-level) managers and lower level managers can both have a positive affect on the CVs success (Miller & Camp; 1986). Even though, these influences differ on scale, ideally the best mode of success for new corporate ventures is to receive buy-in from management from all levels of the company, where all have a shared sense of responsibility. C-level managers can help increase the likelihood of venture success by creating an internal entrepreneurial environment and entering the venture into high growth markets where the venture technology can hold a high competitive advantage. Business level managers on the other hand have a more hands on approach when influencing new ventures. These managers help by creating and maintaining a favorable aggressive position for the new venture. More specifically, this positioning can be boosted an emphasis on product differentiation and addressing specific customer pain points to name a few.

It's also important to note that the manager's effectiveness is highly dependent his or her prior experience in the target market and the amount of general managerial skills he or she has (Sykes, 1986). Even though general managerial skills can be taught, the knowledge of the target market gleaned from prior experience is irreplaceable, yet essential to success. In the scenario where a corporation attempts to target a market that the firm has no experience in, then expertise must be recruited from external sources (e.g., competing companies) and this can put a more financial strain on the new venture. As well, these external experts are typically given autonomy, which may cause misalignment of goals and missions that can steer the venture off course and become even more of a financial burden.

Financial Resources. Financial resources can be divided into two equally important resources: incentive compensation (i.e., financial support for the intrapreneur) and venture financing (i.e., corporate capital for the venture). Incentive compensations are methods of encouragement for the venture manager, usually by financial means and provided by the corporation. Meanwhile, venture financing are direct funds for the development of the venture, which can be used during any stage of

the startup (e.g., prototyping, marketing development, user acquisition, marketing, etc.). Table 4 shows options for performance-based financial incentive programs.

On the individual level, all key venture personnel must be adequately compensated to ensure that all priorities and goals are aligned. Inadequate incentives can lead to lowered motivation, which affects the new venture's probability of success (Block & Ornati, 1987). One method of compensation is profit sharing, which provides the venture manager a percent of the profit made from the venture. However, few firms have deployed this strategy for fear of paying out too much if the venture becomes successful. As well, most corporate ventures do not render a profit for years and managers who initiated the venture would have likely moved on to other positions (Block & Ornati, 1988).

An alternative method of a corporate venture incentive is giving key employees options or equity stake in the new venture because 1) equity is at no current cost to the company 2) the goals of the venture are aligned with the venture team's performance 3) compensation grows with the success of the venture. The amount of equity depends on several factors including market price, profit, and level of involvement from the employee. However, these shares only relate to the overall performance of the parent company and are not directly associated with the venture (Block & Ornati, 1988). Therefore, managers would not be able to reap the rewards of lucrative ventures since the profits of the venture relative to the parent company would be insignificant.

More over, intrapreneurs can be hesitant taking on new ventures because of the career risk and lack of adequate compensation. Therefore, support for the intrapreneur should out weigh those risks and deem the venture worth taking. These incentives can come in the form of a promotion, enhanced reputation, and or a pay raise and should also be in coordination with venture milestones (Kanter, 1983). Studies have found that a pay freeze alone is not enough to justify the risks associated with managing a new venture (Block & Ornati, 1988). Results from Janssen (2000) showed that employees were much more innovative when their perceived effort-reward ratio was fair. In other words, employees were less innovative when they felt that their hard work was not properly incentivized. In essence, no matter what components the incentive package consists of, it has to properly incentivize the intrapreneur to dedicate his or her time and effort 100% of the time.

Table 4. Performance-based Financial Incentive Programs
(as adapted from Block and Ornati, 1988)

Program	Description	Example
Bonus awards for specific contributions	Given after an evaluation of a contribution.	Award for an accepted new venture proposal
Predetermined and known bonus amounts	Given after a agreed upon milestone has been achieved.	Reaching the first million in sales
Variable bonus	Calculated as a percentage of a business metric (e.g., sales, gross margin, operating profit, cash flow, savings vs. planned costs to reach a milestone) and can depend on amount of time used for the accomplishment.	10% of sales if sales reach $1 million by month 3 and 6% if reached by month 6 and 2% if reached by month 9
Options for shadow equity or actual equity of the venture	Options or equity that is dependent on a venture milestone and is only monetarily valuable if they are sold under the provisions set by the firm.	5% equity vested monthly over 4 years with a 1 year cliff
Award of equity upfront	Equity that is given immediately to incentivize the manager's performance to make it grow.	3% equity upfront when taking on the new venture
Royalties	Based on sales dollars or units. This incentive is appropriate for those who were directly involved in the creation of the product (e.g., inventors).	0.5% royalty on every unit sold
Salary increase	An increase in income, which can also be dependent on the role he/she takes on in the venture.	A 20% increase in salary for managing the venture for the first 5 years after which is renegotiable
Cash	Cash bonus for achieving certain milestones.	10% bonus upon salary if customer returns are less than 2% for that year

Venture financing on the other hand is the capital that the company commits to the new venture. This fund is usually provided as a lump sum and depends on the achievement of certain milestones set forth by the business plan. These milestones usually occurs in accordance to the company's budget cycle and can include any aspect of the business including prototyping, market testing, user acquisition, sales, or even employee hiring. Milestone achievements are awarded additional funding, while missing goals can lead to re-assessment, smaller awards, or even complete cut off of corporate funds and dismantling of the venture. The goal of milestone planning is to break a venture life cycle into more manageable less risky timelines, so that the company can periodically assess its performance and whether to keep pursuing the venture (Sykes, 1986).

It is suggested that early stage ventures should have limited resources, which constrains the team to only focus on key goals, testing assumptions, and proving concepts (Sykes & Block, 1989). In later stages when the venture is ready to be commercialized does a sizable injection of capital make sense. This also lowers the downside risk of the venturing firm by limiting the amount of initial investment lost if the venture proves to be a failure.

Time Allocation. Another extension of providing adequate resources for intrapreneurs is to give the new venture team a realistic amount of time to accomplish certain milestones. Certain corporate venture programs allow intrapreneurs to take on the new venture full-time while providing job security for when they eventually return or get promoted to a new position. It's important for managers to assess the cost and benefits of having their employees switch to becoming a full-time intrapreneur. More over, ventures that are managed on a part-time basis are less likely to survive relative to those that have full-time founders because of the dedication and exhaustive nature of early stage ventures. It is especially critical in the early stages of a new venture that key individuals are employed on a full-time basis dedicate time and energy into the project.

Though there are innovation initiatives that can add value on a part-time basis. Senior managers can insist that their employees prioritize new business development as part of their job by weighing this during performance evaluations. The idea is that the startup mentality begins with thinking innovatively about existing capabilities. From there, employees can more easily produce novel ideas that can potentially turn into new ventures (Block & MacMillan, 1995).

For full-time intrapreneurs, it's also important to consider commitment in number of years because a new venture life cycle can last onwards of 10 years. To optimize the success of the venture, Rind (1981) found that firm's commitment should last seven to ten years. Firms that committed for a shorter time period were significantly more likely to fail. And firms that were successful typically took much more time to develop than originally planned.

Sustainable Venture Development. Once the new venture has reached the rapid growth portion of its lifecycle, it's important to prolong that growth and develop the venture sustainably. Unlike the early stages of a new venture where the prototype and business idea requires rapid modifications to become commercially viable, later stages

involve achieving better efficiency and sustaining growth (Sykes & Block, 1989). Even though future projections of growth are approximations at best, these estimates need to factor in how market, industry, and technical trends will affect the venture. This will allow the firm to allocate resources in a more realistic manner and ensure that the firm is flexible enough to adjust to unforeseen market changes. Internally, corporate ventures rely heavily on two main factors for sustainable growth: human capital and corporate venture funding. Both elements should be considered for the entire duration of the venture and be fluid enough to transition between projects and eventually feedback into the knowledge legacy of the firm.

In earlier parts of this paper, we have addressed the importance of managerial support. However, it's also important to recognize that it's not only critical for key venture personnel to dedicate their time on a daily basis, but it's also important to consider long term commitment. In Sykes (1986), it took an average of 4 to 5 years for an internal Exxon venture to see its first sale. Therefore, it's critical that the venture team is prepared and dedicated for the long-term and that incentives are set in reflection of the entire life cycle of a corporate venture. Another initiative that supports the new venture team in the long run is incorporating new personnel into the venture to bring in new points of view (Sykes & Zenas, 1989). This injection of new ideas is expected to challenge existing practices in the hopes of building a more efficient team and a better product.

Corporate venture funding is typically initiated from the profits pool of a company. Though means that profits from the parent company are set aside and invested in new corporate ventures, it is by no means a sustainable means of venture funding. Block and MacMillan (1995) state the importance of a feedback mechanism for venture revenues. Ideally, established ventures that are successful can provide funding for new ventures. For example, 3M's policy manual states "25% of revenues must come from products not in existence five years earlier" (Block & MacMillan, 1995).

3. Create a Positive Learning Cycle

The learning cycle of the intrapreneurship ecosystem can be fostered in many ways including from direct experience, internal human capital, strategic alliances, and

venture capital investment (Roberts & Berry, 1985). Each source of knowledge should be constantly feeding back to the ecosystem, so that future processes, products, and the personnel who will manage new ventures can actively learn from failures and successes. Each corporate venture regardless of success or failure is an experience that the firm needs to capture in their legacy. Similar to a new product learning cycle (Maidique & Zirger, 1985), the positive learning cycle of an intrapreneurship ecosystem constantly feeds back knowledge learned from existing ventures to the firm. It's this knowledge that empowers employees to keep taking risks and innovate.

The learning cycle within a corporation operates at two levels: the individual level and the organizational level. The individual learning cycle is the "process through which those [individual] beliefs change and those [individual] changes are then codified in the individual mental models" (Kim, 1998). The organizational learning cycle is dependent on its members and learns from the collective knowledge pool. Even though, the individual is constantly learning from their actions and experiences, not all lessons learned at the individual level have organizational consequences. Kim (1998) suggested that organizational learning (i.e., increasing an organization's capacity to take effective action) is most effected when it's integrated with individual learning cycles.

Senge (2013), suggests that the learning organization has a culture that allows the free flow of knowledge creation, transfer, and transformation. More specifically, Senge (2013) suggests that there are eight key qualities of an learning organization that helps companies sustain their competitive advantage that's rooted in innovation and adaptability.

Table 5. Qualities of a Learning Organization
(as adapted from Senge, 2013)

QUALITY	DESCRIPTION
Strong links to knowledge management	The mechanism for managing the knowledge of the company must be explicit and efficient.
Facilitates the development of self-motivated and creative work force	The learning organization should foster employees to be motivated individually and self-initiate to be part of the innovative work environment.
More than a training department	The learning organization must have a rich culture of learning that extends past just the department responsible for employee learning initiatives.
Promotes organizational learning	The learning must occur at an organizational level, not just at the individual and should be institutionalized and achieved for future reference.

Develops lifelong learning	Employees should feel that there is an endless amount of knowledge to be gained and be always willing to embrace new understandings.
Involves all employees	Every employee in the learning organization is responsible for generating new knowledge, sharing that knowledge, and creating the learning culture.
Liberates tacit knowledge	Some of the best knowledge is unspoken, the learning organization should be able to capture all times of information through formal and informal means.
Adds real value to the organization's activities	Learning should not be performed for the sake of learning, but knowledge needs to be non-redundant, efficiently captured, and useful to the organization.

With that said, lessons from failed ventures are not as easily integrated into the knowledge pool as successes. Many firms reward their successes and excessively punish their failures, which breeds more conservative managers (Block & Ornati, 1987). This cyclic risk aversion acts as a barrier to innovative ideas that can be lucrative for the firm. Instead, managers are opting for conservative ventures where the payout may also be lower. Unlike independent VCs, corporate VCs are also more unwilling to cutoff unsuccessful ventures because of the potential negative association with a failed venture. Instead, these corporate VCs prolong their investment and drain more corporate funds in the hopes of a revival. In this case, corporate VCs should adopt a more 'independent VC mentality' and write off failing ventures so that the limited corporate funds can be more focused on ventures with higher potentials.

Roberts and Berry (1985) suggested that companies need to seek lessons from external sources and make lower risk venture capital investments and strategic alliances. These external investments borrow expertise from outside expertise who can have potentially more experience in building new ventures. Investing along side seasoned venture capitalists or aligning with another experienced firm can add to the ecosystem knowledge cycle if communication is properly maintained.

Failure mechanisms of this learning cycle come in the form of employee turnover and closed avenues of communication because the biggest asset of human capital is the knowledge base that each employee carries with them. Sykes and Block (1989) state that one method of "protecting the base business" is to avoid turnover of venture management. However, if the manager must to be relocated, then all knowledge must be transferred to an experienced successor before the manager departs.

Conclusion

The claim that the success of leading intrapreneurial organizations is dependent on a portfolio has been substantiated by the wealth of academic research of different innovation strategies all catered to improving intrapreneurship within the firm. What's more important is the ability to adapt to changing trends. Firms fail not because they did not innovate, but because firms couldn't incorporate adaptive strategies fast enough to capture the market quickly. However, it is up to the C-level manager to recognize trends and ensure that the company is not stagnant and to act swiftly and effectively is he or she recognizes that the current business developments are plateauing.

For the practicing manager, three key themes can be distilled from this paper: innovative environment, supportive infrastructure, and learning cycle. That is, the survival of a sustainable startup mentality depends on the simultaneous existence of these three important factors. It's also necessary to consider all the initiatives within each theme as suggested in this paper (e.g., venture programs, managerial support, corporate structure, etc.), however, every firm should have their own portfolio of strategies that resonate with their existing culture and goals.

An innovative environment is the first step to any good idea and it's the iteration of those good ideas that make them great. After which, market research and prototyping will turn these great ideas into feasible new business developments for the firm. Of course, not all ideas are created equal and it's best to give employees formal and informal avenues for bringing these ideas to come to life. On one end of the spectrum, some companies use idea bulletin boards and suggestion boxes for employees to drop off good ideas. On the more involved end of the spectrum is Facebook's famous Hackathons. Ideally, the environment is established in consideration for the existing corporate culture. Initiatives that are too radical may put off current employees, while conservative proposals may not bring enough innovative change to the firm's environment.

A supportive infrastructure is imperative for the development of new corporate ventures. Once the best ideas funnel through the selection process and tested for feasibility, support from all aspects of the organization is essential for the success of the new venture. These support mechanisms include managerial, financial, and venture program support, just to name a few. Here, it is important to recognize the significance

that the members of the new venture team have on the venture itself. Much like the importance of the team in early stage startups, new ventures also depend on a group of highly ambitious and skilled individuals who work hard autonomously yet cooperate well collectively. These team members must also have a non-overlapping complimentary set of skills.

The positive learning cycle ensures that all of the experiences and lessons are captured in an useful way for future intrapreneurs. The method of capturing these lessons differ between companies but it typically involves an extensive review of the progress of the venture. As well, it's also beneficial that future intrapreneurs have access to files of previous ventures so that learning can remain active and autonomous. Of course, certain security and privacy measures must be taken. With the existence of cloud computing, companies should also make files easily sharable between team members so that work is never duplicated and that all documents can be archived in a searchable company repository.

These three key themes can be achieved through the selection of strategies that make up the company's innovation portfolio. However, it will depend on the firm's characteristics including but not restricted to, industry, company size, market penetration, etc. However, each strategy should add value to the purpose of 1) fostering an innovative environment for idea generation 2) build a supportive infrastructure for new corporate ventures and 3) create a positive learning cycle to capture all of the lessons learned from all corporate ventures.

Limitations & Future Research

Even though the claim is clear that a number of factors affect intrapreneurship within a firm. The next avenue of future research is how much each aspect weighs in importance. Many articles referenced in this paper have listed a number of factors that are important for innovation, however their samples are limited and it's questionable how applicable the findings are to other firms. As well, it is a possibility that the factors that affect intrapreneurship vary with the characteristics of the firm. However, if this is the case, future research should control for those variations. Another important factor to account for is the temporal implications of innovation strategies because many initiatives take time to implement and take many more years to build into the existing

culture. Therefore, studies of previous companies should look at more longitudinal trends.

At a higher perspective, the cultural relevance of a company has a lot of influence on the development of the firm and the strategies proposed in this paper may not be as applicable for firms outside of the United States. Since each aspect of the intrapreneurship ecosystem was analyzed using papers based on firms in the United States, further generalizations need to take into account these cultural differences. For example, the monetary incentive strategies suggested might not work for cultures or corporate cultures that do not hold money at high value. Perhaps an incentive strategy that was based on promotion and reputation may be more appropriate in those cases.

There is also a shortfall in recent literature on intrapreneurship within the last 5 years. Even though corporate venturing is not as popular as it had been (Gompers & Lerner, 2000), it is important to recognize the new trend of innovators and disrupters in the industry. Therefore, intrapreneurship research design has a limited capacity to draw inferences on future intrapreneurial trends. However, because of a new shift towards the startup mentality, there is hope that future research on entrepreneurship will extend back to the corporate capacity and the concept of new corporate ventures will be better supported in the modern day context.

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