

# Designing supported intrapreneurship programs

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“Master of Business Administration”

supervised by  
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Vienna, 30.06.2019

## Affidavit

I, **ALEKSANDRA PETKOV-GEORGIEVA, BSC.**, hereby declare

1. that I am the sole author of the present Master's Thesis, "DESIGNING SUPPORTED INTRAPRENEURSHIP PROGRAMS", 64 pages, bound, and that I have not used any source or tool other than those referenced or any other illicit aid or tool, and
2. that I have not prior to this date submitted the topic of this Master's Thesis or parts of it in any form for assessment as an examination paper, either in Austria or abroad.

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## Abstract

Large corporates have issues with innovating by virtue of lacking the ability to explore rather than exploit. Supported intrapreneurship programs can be a great starting point for exploration and for establishing an ambidextrous organization.

One of the biggest challenges with exploration for large organizations is the struggle with the risks new ventures bear. Human-centred methodologies are a way to reduce uncertainty is by testing the most critical assumptions at an early stage. Through the integration of early customer feedback, not only the risks of venturing are decreased, but the venturing process is also accelerated.

The thesis reviews methodologies and existing innovation processes and proposes an adapted innovation process that support a fast time-to-market and reduce uncertainty. This adapted process ensures exploration with a human-centred approach suitable for SIPs.

In addition to the process, several supporting elements should be taken into consideration for the design of a Supported intrapreneurship programs. By analysing several case studies, I both confirmed that methodological elements outlined in the literature are found in practice and observed additional elements that ensure the removal of impediments and allow for rapid non-incremental venturing. This thesis shows that intrapreneurship requires an ecosystem of ideas, talent and capital (Hammel, 1999). It describes the various roles that can both be found in the literature and outlined in the case studies. It shows that part-time engagement of participants is required if there is a wish to integrate intrapreneurs back into the organization. Moreover, this thesis elaborates what incentivization mechanisms can be applied for SIPs and what cultural aspects need to be considered for the design. Lastly, it offers frameworks that can be helpful in easing stop/go decisions and provides frameworks for measuring the success of SIPs.

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## List of abbreviations

DT	Design Thinking
HMW	How might we
LS	Lean Start-up
MVP	Minimum Viable Product
RBI	Raiffeisen Bank International
SIP	Supported intrapreneurship Programs
VP	Value Proposition

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# 1 Introduction

## 1.1 Context of the thesis

To ignore innovation is to play a dangerous game—especially in an ever-changing digitalized world in which the expectations of customers are changing rapidly and the market-entry barriers of non-incumbents are decreasing. According to Richard N. Foster (2012), the average lifetime of an S&P 500-listed company has decreased by more than 50 years. One of the main reasons companies are losing on the market is a lack of innovative activities (Miller and Friesen 1982). Thus, innovation is becoming increasingly critical for the long-term success—and at times for the survival—of companies.

Nonetheless, for multiple reasons, very large corporates have issues with innovating. For a company to innovate successfully, it needs the ability to explore and exploit (O'Reilly and Tushman, 2004). Exploitation focuses on the refinement and the selective improvement of existing knowledge whereas exploration concentrates on learning acquired through experimentation (Baum et al. 2000). Though both *exploitation* and *exploration* refer to a company's way of learning, the logic of processes and the mindset needed for exploration is completely different for exploitation (Baum et al. 2000; March 1991). Because large companies focus on efficiency, incremental improvements are advocated in support of exploration and of manifesting it deeply in the roots of its culture. Still, use of proven practices and continuous use of existing knowledge prevents companies from innovating (Katila and Ahuja 2002). This leads to established companies discouraging innovation (Ahmed and Shepherd 2012).

In addition, employees with entrepreneurial ambitions see limited ways to innovate within their companies due to a bureaucratic environment (Kanter 1985; Pinchot 1988). At the same time, a majority of entrepreneurs identify the opportunity to realize their own ideas and the possibility of self-fulfilment as their main reasons to start a business (Amway 2016), and there is an increasing trend of entrepreneurship being perceived as a legitimate career path (Ronstadt 1987).

An additional aspect that should be considered is the fact that traditional companies are focussing on minimizing risk and thus face difficulties when dealing with uncertainty. However, new ventures go hand in hand with uncertainty (Ronstadt 1987; Sykes and Block 1989). Start-ups are much better at coping with uncertainty. Compared to listed companies, they do not depend on creating immediate shareholder value but rather focus on long-term value creation for their investors.

Moreover, start-ups in their nature operate with a minimum of capital and human resources, aiming thus to create a venture quickly and go live on the market as soon as possible (Ronstadt

1987; Sykes and Block 1989; Griffin 1993). Corporates, on the other hand, have capital resources, direct access to clients and markets, competence and other resources that new ventures can leverage.

So, can corporations use their competitive advantage and still act in a start-up-like manner? The bridge between the start-up and the corporate world is intrapreneurship, also known as corporate entrepreneurship. The term “Intrapreneur” is defined as entrepreneurs who work within an organization (Pinchot 1988).

## 1.2 Aim of this thesis

This thesis aims to address the challenge of exploration rather than exploitation by introducing intrapreneurship in the form of a supported program into a corporate structure. “Intrapreneurship is the development within a large organization of internal markets and relatively small and independent units designed to create, internally test-market, and expand improved and/or innovative staff services, technologies or methods within the organization” (Nielsen et al. 1985). The promise of intrapreneurship is to create an innovation outcome whilst fostering an entrepreneurial mindset within a firm.

Intrapreneurship can be structured and supported in different ways. According to Schollhammer (1982), there are five types of internal entrepreneurship: administrative, opportunistic, imitative, acquisitive and incubative. A company can build a separate department with autonomous teams that are responsible for generating new business ventures (administrative), collaborate with external innovations (imitative), acquire technologies to grow (acquisitive) or enable new venturing within the company (incubative).

In this thesis, I limit the type to incubative intrapreneurship and wish to provide a design for supported intrapreneurship programs (SIP). I define an SIP as a guided program that

- focuses on non-incremental product, service, and business-model innovation (versus technically or R&D driven innovation)
- is accessible to all employees regardless of their disciplinary background or seniority level, and
- applies a learning-by-doing approach that combines education with the simultaneous application of knowledge to real projects.

The goal of this study is to create a handbook or manual for program managers who wish to introduce SIPs and set a base for designing an SIP in their own organizations. My aim is to provide an overview of applicable methodologies and hands-on instruction based on good and best

practices and to identify additional aspects that need to be considered when conceptualizing such programs.

The time from ideation phase to product launch is referred to as time-to-market (Ronstadt 1987; Sykes and Block 1989; Griffin 1993; Ali et al. 1995). It is an important key performance indicator for new ventures for several reasons. A faster time-to-market allows a company to validate its business assumptions at an early stage and thus minimize the risk of new venturing. Another obvious reason to launch products early is to be faster than competitors (Bayus 1997). In addition, the general shortening of the life-cycles of many products pushes new ventures to launch products (Ronstadt 1987; Sykes and Block 1989; Griffin 1993). Interestingly, even launches that are over development budget have less of an impact on profitability than those that ship later (Ali et al. 1995).

Therefore, in this thesis, I answer to the following research questions:

1. Which methodologies can be applied by SIPs to develop new ventures rapidly?
2. What process is suitable for SIPs to ensure a fast time-to-market and to reduce uncertainty with new ventures?
3. What elements and setup are necessary for SIPs?

### 1.3 Structure of the thesis

**Chapter 1** explains why exploration is challenging for large, established companies. It elaborates on the necessity of dealing with uncertainty when innovating and considers the benefits of a faster time-to-market. It proposes SIPs as a starting point for fostering exploration within an organization. The chapter also includes a discussion of the aim of the thesis, the structure of the thesis and a course investigation.

**Chapter 2** reviews innovation methodologies and concepts of human-centred methodologies. In this chapter, I also elaborate why human-centred methodologies can reduce the time-to-market and thus reduce the risk created by innovative initiatives. Also, it reviews existing processes for innovation that serve as a basis for a mode of process design that supports the human-centred approach outlined in Chapter 4.

**Chapter 3** determines which of the elements discovered in the literature can be found in practice.

**Chapter 4:** introduces an SIP design and provides an adapted-innovation process suitable for human-centric methodologies that facilitate a fast time-to-market. It also analyses methodological elements and supporting elements that have either been uncovered in case studies or are found in the literature and thus need to be taken into consideration when designing such programs.

**Chapter 5** offers a summary and concrete recommendations for SIP managers

## 1.4 Course of investigation

For the purpose of this thesis, multiple research methods were chosen. To answer the research questions, a conceptualize analyse method was applied. After reviewing the academic literature on innovation processes and human-centred methodologies, I synthesized my insights into an adapted-innovation process and outlined elements that are required for SIPs. A case study which included conceptual considerations was applied to review how the methodology is lived in practice. Data for the case study was collected via video-recordings of conference talks, articles, other online sources and information gained during my involvement in program management at Raiffeisen Bank International.

## 2 Literature Review

The question concerning how to manage internal innovations has been widely discussed, and different methodologies have been developed to address the various business contexts and challenges that companies are facing. In the following, I first outline some of the key groups of methodologies. Then I describe why human-centric approaches are usually applicable to non-incremental product, service and business model innovation. Finally, I give a short overview of two main methodologies that should be considered for the SIP.

### 2.1 Innovation methodologies

Innovation can be technology and R&D driven. In the both instances, innovations are commercialized based on generated intellectual property (Freeman and Soete 1997). If exploratory efforts are not triggered by patents or other forms of intellectual property, there are various methodologies—especially in new product development—that apply a funnel logic with various stages (Wheelwright and Clark 1992; McGrath 2012) or circular processes (Buijs 2003).

Another approach to innovation methodologies focuses on problem-solving and creativity rather than pure product development. These methods involve concepts such as TRIZ (Altshuller and Shulyak 1996), the IDEAL cycle (Altshuller and Shulyak 1996; Bransford and Stein 1984), productive thinking (Hurson 2007), creative problem solving (Treffinger et al. 2005) and possibility thinking (Craft et al. 2013).

Next to the before mentioned methodologies, there exists the concept of free revealing innovation includes such as user-innovation, social production, co-creation, open innovation, open-source software and open science to push innovations (Bogers and West 2012).

Regardless of the approach, innovation requires frameworks that help to manage the uncertainty related to cost predictability, knowledge availability and market adoption. By definition, a new venture involves multiple unfamiliar aspects of a business plan. It can involve addressing a new customer segment. A new venture can involve the development of a new product or service. It can also be about finding a new perspective on how a product or service is delivered or how profits are generated. In either case, new business also means dealing with uncertainty. If a new customer group is approached, it is not certain whether one can reach it with the value proposition the existing company has to offer. If a new product or service is to be provided, there is a likelihood that the customer will not want it or need it. If a product or service is delivered in a new manner, it is uncertain whether the partners or the infrastructure can deliver. Innovation is connected to economic development and can be seen as combination of productive resources that allow for

the introduction of new products, new production methods, exploration of new markets, conquering of new sources of supply and new ways of organizing business (Schumpeter and Backhaus n.d.).

Osterwalder and Pigneur (2010) provide a helpful tool with which to discover parts of a new business. They argue that each business model consists of nine elements: customer segments, a value proposition (VP), customer relationships, channels, key activities, key resources, key partners, revenue streams and a cost structure. These nine aspects can be summarized in three overarching categories: desirability, feasibility and viability.

Desirability (Osterwalder 2016), as shown in Figure 1, concerns whether the offering is what the customer really wants. It consists of the value proposition, which is delivered via different channels and is based on different types of customer relationships to various customer segments. Feasibility (Osterwalder 2016), as depicted in Figure 2, relates to whether the offering can be delivered. The value proposition has to be offered utilizing key resources, conducting key activities using potentially key partners. Finally, viability (Osterwalder 2016), as seen in Figure 3, addresses whether the business is profitable. If a value proposition is delivered to a customer segment via different channels then, due to specific customer relations, it should also produce revenue streams. Key activities, resources and potentially partners have an impact on the cost structure.

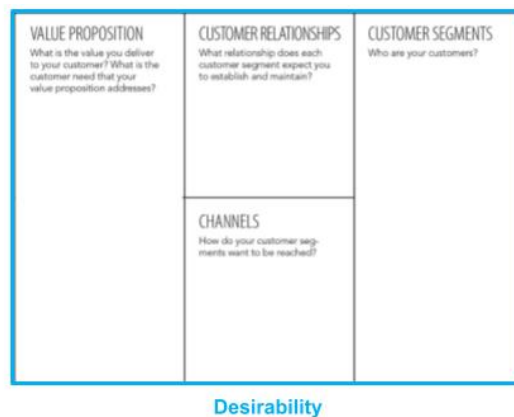
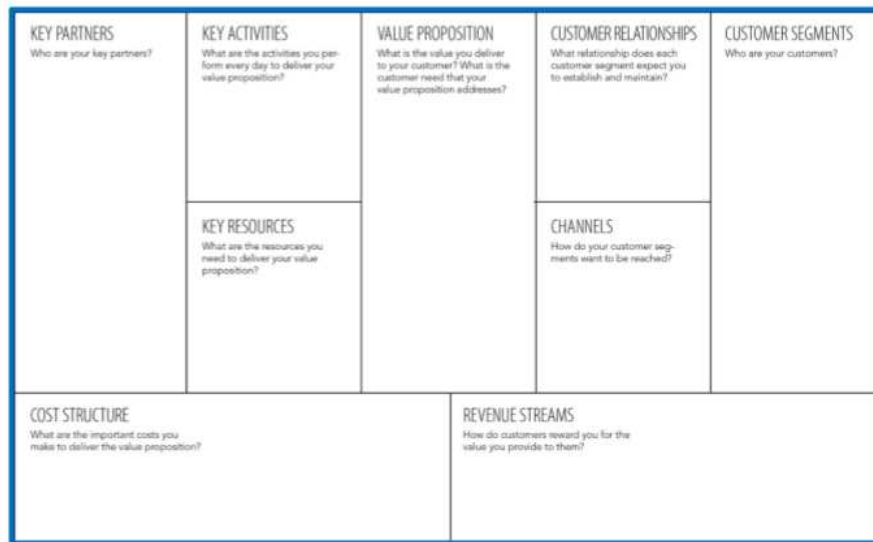


Figure 1. Desirability of the business model canvas adapted from Design a Better Business Tools (2019)



Feasibility

Figure 2. Feasibility of the business model canvas adapted from Design a Better Business Tools (2019)



Viability

Figure 3. Viability of the business model canvas adapted from Design a Better Business Tools (2019)

The key element that connects all aspects of the business plan is the value proposition. Consequently, if anything in the business changes, it can be impacted. When designing new business models, assumptions are made. The way to reduce uncertainty is to test the most critical assumptions of the business model, observing how it influences the VP. To do so, new ventures require the involvement of a beneficiary of the VP at the earliest stage possible. Engagement of users at an early stage is the essence of human-centred methodologies. Therefore, it can be argued that the use of human of human-centred methodologies is crucial to those who would develop new ventures successfully. They allow for a fast time-to-market and a resulting reduction of uncertainty, as the most critical aspects of the new venture are proven by real customer feedback rather than by unvalidated assumptions.

In the following section, I give a brief overview of two human-centred methodologies followed by a review existing innovation process. The literature review will serve as the base for an adapted innovation process that enables human-centric approach with a fast time-to-market and a reduction of uncertainty.

## 2.2 Human-centred methodologies

One of the main reasons new innovations fail is the inability to find a market need. Human-centred methodologies can help companies avoid a failed product-market fit by putting the user in the focus.

Though several methodologies follow this logic, I consider the following two because they follow a human-centric approach yet complement each other. Whereas design thinking tackles the VP and solution design, lean start-up also includes the full business-model composition. In the next paragraphs, I give a rough overview of the methodology before I consider existing innovation processes.

### 2.2.1 Design Thinking

Design thinking (DT) is a human-centred methodology for developing products and services in a fast and efficient way (Brown 2009). It offers a hands-on and creative way to problem-solve. It stands for non-linear iterative phases, as can be seen in Figure 4: empathize, define, ideas and prototype and test. *Empathize* is a stage for a deep understanding of the customer's problem in which one does not have to have a solution in mind.

Design thinkers conduct interviews and observe customers to build empathy and gain insights into their problems. Lead users are particularly relevant for insight (Hippel 1986). They are defined as niche groups of users who can articulate unmet needs significantly before they concern a wider public.

The DT process requires both divergent and convergent thinking. In the discovery of insights, divergent thinking is applied. In a definition phase, the obtained information synthesized and structured. The clustered information reveals insights into customer needs and pains which are the basis for building the "How might we (HMW) question" that connect the problem space with the solution space. Usually several HMW questions are generated; thus, the choice about what to focus on needs to be made by applying convergent thinking. Then ideation begins, during which many ideas about how to solve the underlying problem are selected. This again requires a divergent thinking approach. Afterward, specific ideas are selected, converging again, and the first quick-and-dirty yet tangible prototypes are built and tested with the customer. These prototypes are improved iteratively to ensure the problem-solution fit.



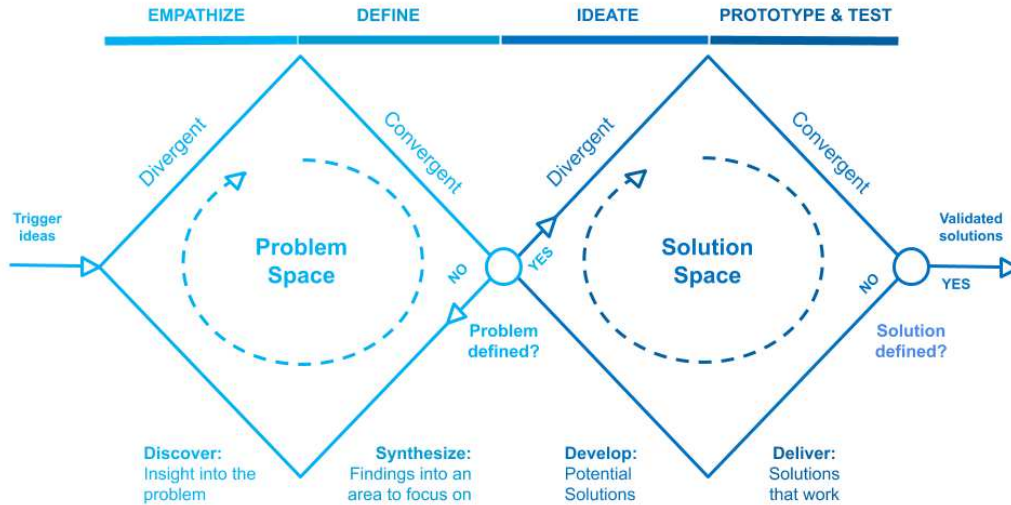


Figure 4. Double diamond of the design thinking process adapted from Design Council UK (2019) and Stanford D. School (2019)

Because DT involves the early and continuous involvement of customers that ensures a problem-solution fit, a consequent product-market fit is much more likely. Therefore, the methodology allows for a gradual reduction of uncertainty with each involvement of the customer.

### 2.2.2 Lean Start-up

Lean start-up (LS) aims to rapidly deliver prototypes and or minimum-viable products to test the most critical assumptions of a business (Ries 2011). It is based on the idea that the success of innovations cannot be predicted but can be estimated through a lean approach.

It follows a scientific approach for developing business ventures by first setting up a hypothesis, then running experiments to either prove or reject it, and finally learning and changing accordingly. The focus is on learning rather than on building the product.

The core concept is not to develop a product for years and then show it to the customer but rather to building a minimum viable product (MVP), which serves as a learning machine with which to test the main hypothesis on customer desirability, feasibility and viability (Gothelf and Seiden 2016). According to research, the use of an MVP is key in new venturing and start-up success (Marmer et al. 2012).

Ries (2011) proposes a build-measure-learn feedback loop, as depicted in Figure 5. The iterative process begins with ideas that are valuable for building a product. The validity of such ideas can then be measured by the data that is collected. This data provides a base from which to learn and aggregate new ideas. Then the loop begins again. The goal should be to minimize the total time

through the loop, pushing for quick releases or a fast time-to-market and resulting in a reduction of uncertainty with each iteration.

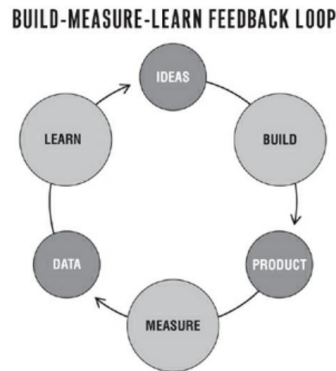


Figure 5. Build-Measure-Learn Feedback Loop (Ries, 2011)

## 2.3 Innovation Processes

Though design thinking and lean start-up have become increasingly popular in the last decade, the processes applied have been around for a long time. In the next paragraphs, I outline similarities between various innovation processes and human-centred methodologies.

Utterback (1971) has formulated a process that includes the generation of ideas, problem-solving and implementation (see Figure 6). Ideas are initiated by current economic and social utilization and are influenced by the current state of technological knowledge. Ideas include the recognition of a need (desirability), of the technical means to meet the need (feasibility) and the synthesis of this information to create an idea or proposal for the development. The subsequent problem-solving sub-process involves the division of the problem into separate subproblems, setting specific technical goals, assigning priorities to that goal, designing alternative solutions, and evaluating the design alternatives based on the goals and priorities. Yet again, the state of the technological knowledge impacts the sub-process, and this requires time. The output of this process is an original solution or invention which influences the technological knowledge. In the last implementation and diffusion sub-process, the solution continues into the manufacturing, engineering, tolling and plant start-up that is necessary to turn the prototype solution into a product.

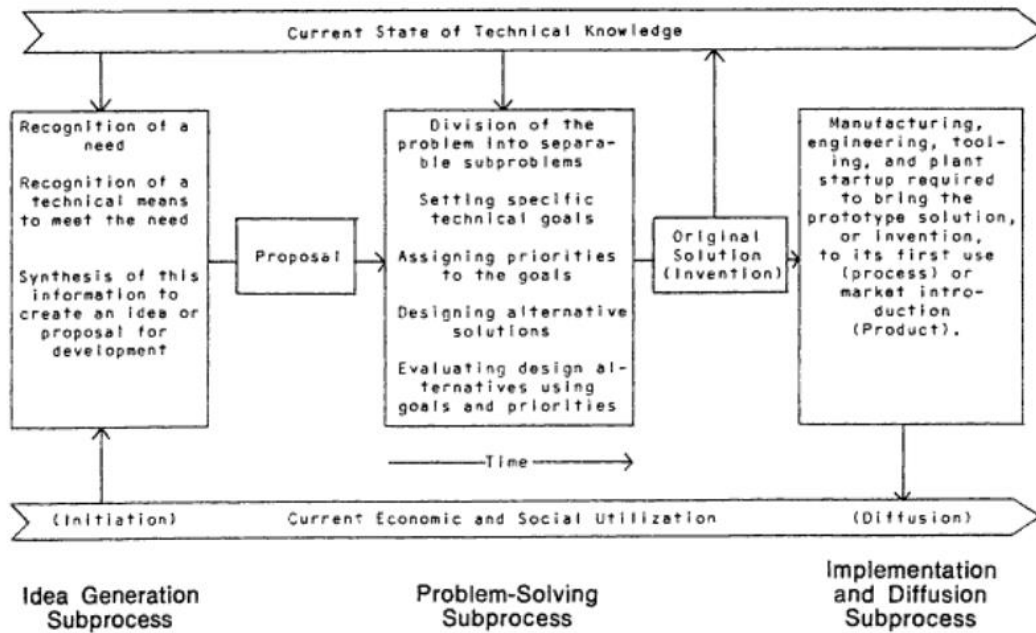


Figure 6. The Process of technical innovation, Utterback (1971)

In comparison to DT or LS, Utterback (1971) has limited the proposed process to technical innovation. Thus, the first two phases focus on the technological invention whereas only the last phase, the implementation phase, concerns market introduction. Also, in comparison to the previously outlined methodologies, the process is sequential rather than iterative.

Interestingly, however, Utterback recognizes the technological, the economic and the social environmental impact as part of the innovation input. This results in the recognition of a need, which is parallel to the design-thinking approach. Also, Utterback recognizes that the development of new solutions influences current technological knowledge, thus highlighting the benefits of learning comparable to the lean start-up methodology.

In Utterback's process, the problem is analysed (divided into subproblems with technical goals set and priorities of the goal assigned) after the proposal is passed. This is followed by a design of alternative solutions comparable to DT's divergent-thinking phase or empathizing and ideation. Afterwards, the design alternatives are evaluated by applying convergent thinking similar to that involved in DT and LS.

Cooper (1990) refers to the innovation process as a funnel with multiple stage-gates, which is depicted in Figure 7. The input of the process or Stage 0 is the discovery. *Discovery* refers to opportunities encountered through technology-driven research, customer research based on interviews, focus groups and lead-user analysis. A parallel to design thinking's empathy building can be detected. The insights provided from the discovery phase are screened and can enter the

first stage: scoping. This stage involves defining the product's vision, scope and possible and is comparable to the initial phases of design thinking. Once the viability of the idea is assessed, it is screened a second time. Once this gate is passed, Stage 2 is reached to build the business case. At this stage, a preliminary business plan, project plan and feasibility are reviewed. Then it is decided which of the opportunities should be developed. Again, even fewer ideas move onto the testing and validation stage before they are finally launched, after which they are reviewed. Cooper (1990) elaborates further on learning and improvement through closed feedback loops. This process hints at an iterative approach and can be compared to the lean start-up method of testing various aspects of the business plan.

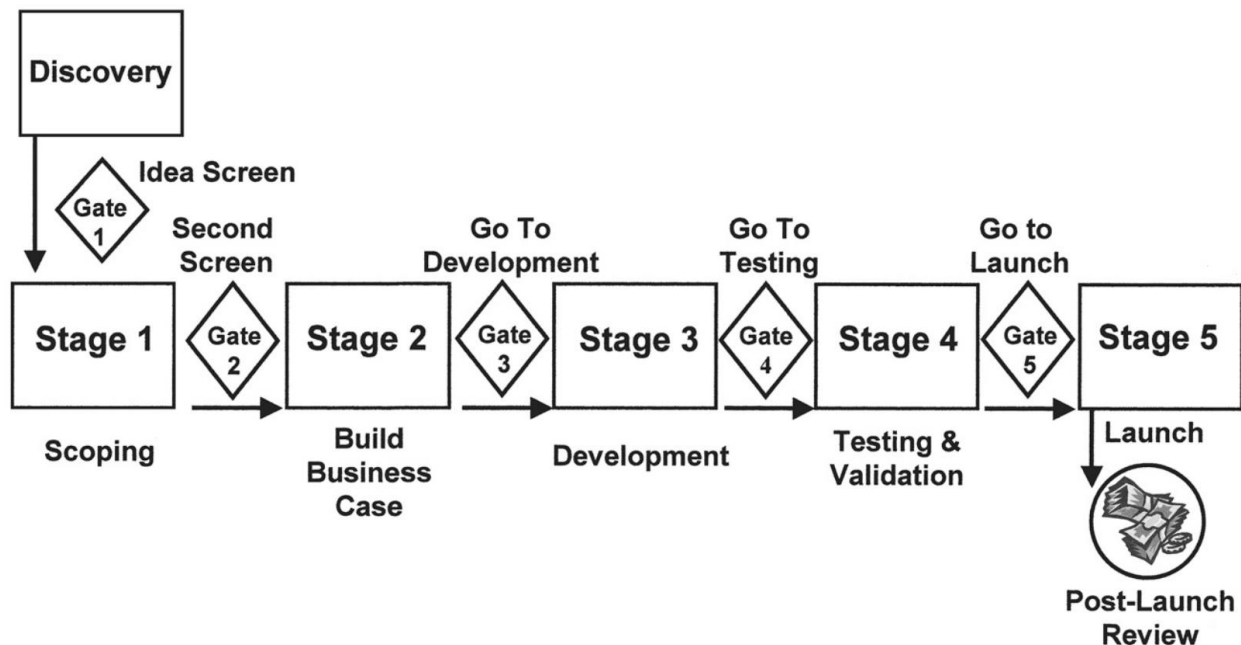


Figure 7. Five-stage, five-gate process used for new product projects (Cooper 2009)

Salerno et al. (2015) reviews cases beyond a traditional linear process from idea to launch. He recognizes processes in which the customer is active at the beginning (even likely to trigger the innovation process) instead of at the end. He refers to it as “anticipating sales”. He differentiates between opportunities which are proposed and co-created with the client and ideas that have been specified by the customer. Also, he elaborates on processes triggered by public or private tender, again putting the customer at the beginning rather than at the end. Finally, he observes the “process of parallel activities”, which is depicted in Figure 8. The process consists of four phases: idea generation, screening and idea selection, and development and diffusion. Idea generation consists of the encouragement of idea generation and registration. The second phase involves the selection and valuation of ideas by applying a portfolio management approach. The last two phases run in parallel. Whilst the company needs to conduct project management and

product development, the sales begin before the development is completed. There are significant parallels to the design thinking and lean start-up method, which ultimately result in a reduction of uncertainty due to a faster time-to-market as it allows for quicker testing of the real market conditions.

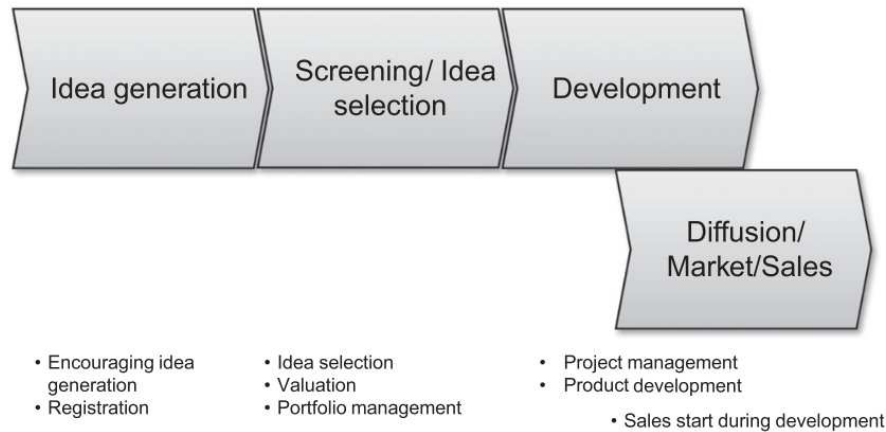


Figure 8. Process with parallel activities (Salerno et. al 2015)

The proposed processes in this section have varying levels of complexity and some key differences, but they also have some common highlights, namely:

- All new ventures and endeavours require the understanding, identification and consequent sharpening of their unique selling proposition over the course of ISP process.
- This can be achieved by involving the client at the earlier possible stage. While this now seems intuitive and is considered common sense, it took decades of empirical research to come to the conclusion that co-creating the product together with the customer boosts the chances of success for innovation in question.
- A generally accepted fact is that a certain portion of the ideas generated in an organization will fail and only some will be successful. The sustainability of a given innovation program requires that all ideas are screened and funnel logic mechanisms are established that allow promising ventures to progress further into the program than less promising.
- Even failed ideas or ventures are successful in that they generate learnings, which can, arguably, be more valuable to the organization as they reduce the future expected failure rates and streamline the whole innovation process.

Last, but not least, the conclusion can be drawn that the ongoing review of the established innovation-related processes adds value by teaching organizations how to build processes that are tailored to the needs of the respective SIP – no process should be taken as a golden rule, rather, the value lies in the constant improvement.

### 3 Case Study

Having reviewed innovation processes and the importance of human-centred methodologies, I wish now to analyse how the theory is turned into practice. By analysing five different SIPs, I investigate how the human-centric approaches are tackled in real business environments. Also, the case studies serve to develop the design of SIPs, as they show aspects that have not been considered in the literature.

The case studies are derived from webinars, recordings of conferences (such as Innov8rs), corporate blogs, articles and my professional experience. The recognized pattern was then enriched with existing concepts found in the published literature.

I have chosen these case studies due to their similarities in hierarchical structure and multinational outlets. At the same time, the cases refer to companies from various industries such as online clothing retail, software, transportation and construction, banking and conglomerates operating in the industry, energy, healthcare, infrastructure and cities. Moreover, the companies have different grades of maturity with founding years ranging back from the 19th century to 2008.

Some of the cases can be regarded as best practices such as Adobe Kick box, which has been made available to a wider public and is used frequently by other companies as well. The other can be considered good practices, as they have so far not been discontinued but have expanded in the companies.

Therefore, in this chapter, I first describe the cases briefly, then elaborate on elements that follow the methodology and can be regarded as confirmed.

#### **Adobe - Kickbox**

Adobe is an international computer software company headquartered in California. It employs over 21,000 employees (Adobe, 2019). Adobe developed its Kickbox, a physical toolkit, for employees who have ideas and want to turn them into new ventures (Burkus 2015). It is a small red cardboard box holding instruction cards, utensils such as pens, post-its, notebooks, and most importantly a USD 1,000 prepaid credit card that is accessible to all employees within the organization. Over 1,000 Kickboxes have been distributed to employees so far. Yet not many participants have made it to the last level. One of the largest successes coming from Adobe's Kickbox is an idea that led to the acquisition of Fotolia, a stock photography company. Despite the modest number of innovations, the company reports that the box is a good way to involve creative employees and attracts talent to join the company (Burkus 2015).



Adobe has distributed its Kickbox to a wider public. The company is providing the box in an open-source manner to be downloaded from their website.

### ***Ferrovial - ShuttleX***

Ferrovial is a Spanish multinational company which has specialized in the construction and operations of infrastructure and cities. The company employs over 96,000 employees across the globe (Ferrovial 2019.)

Ferrovial is conducting a four-month intrapreneurship program with multi-disciplinary teams that work on the challenges of the company. It is a supported intrapreneurship program. Twenty participants are hand-picked by the program management, and HR organized them into four teams that commit 30% of their work time for 2.4 months to elaborating the business model, including first-hand customer feedback. At the end of the four months, they present their concepts to mentors, which then decide which two ideas should continue in implementation (Innov8ors 2018).

### ***Zalando - Slingshot***

Zalando is a German-based, international online retail store present in 17 countries. The company employs over 15,000 employees across Europe (Zalando 2019). Slingshot is Zalando's year-round intrapreneurship program. The program utilizes an idea-management platform in which all employees are able to share their ideas. Then a number of intrapreneurs' ideas are selected to join a hack week in which they are put together in multi-disciplinary teams (Corona 2018). At the end of the hack week, top management decides which ideas should be elaborated further in a second phase called "Slingshot". In this program, intrapreneurs can commit 20% of their work time, receive a small budget for user testing and obtain a facilitator to guide them through the process to experiment with, build and launch new ventures and/or products. It is customer-centric with a problem-first approach using the Google Sprint methodology. After the program, the team is adopted by a business sponsor who also acts as a mentor for further guidance and network. Alternatively, it can continue into an MVP phase in which projects which do not find a home still get the chance to be launched (Innov8ors 2018).

### ***Siemens - intrapreneurs Boot camp***

Siemens is a multinational conglomerate which provides engineering solutions in the fields of IT, industry, finance, healthcare and energy. The company employs around 397,000 employees

across the globe (Siemens 2019). The Siemens Intrapreneurs Boot Camp is a program that lasts seven days distributed over seven weeks (Inov8tors 2019). Each boot camp is themed after one search field (such AI). Employees who have either competence or expertise about a certain topic or are passionate about the search field can apply. If chosen at the first on-site event, they get matched according to their passions and are organized into interdisciplinary teams. Together, they ideate and choose which ideas they want to work on. Supported by facilitators who coach them along the process, they experiment on their ideas, create mock-ups, and in a few days prepare an initial concept for the board. Once the board approves, they continue onto testing with real customers supported by fitting mentors from the business units.

### ***Innovation Garden - Raiffeisen Bank International***

Raiffeisen Bank International (RBI) is a universal bank headquartered in Vienna present in 13 countries in Central Eastern Europe and its home market. The banking group has over 50,000 employees (Raiffeisen Bank International AG n.d.). In 2017, RBI introduced an intrapreneurship program called innovation garden. The goal of the initiative was to create an innovation outcome, groom intrapreneurship within the group by growing talent, and ultimately foster change in the group, thereby establishing long-term innovation capabilities and competencies.

The program is structured in four phases. It initiates with an idea contest from which ideas and talents are sourced. This is followed by a selection phase, where the most promising ideas and talents are chosen. Based on their interest and competencies, talents are then matched to the ideas and assigned to cross-functional teams. These teams then participate in a 12-week long program, where they develop the idea into a prototype whilst being educated on methods such as design thinking and lean start-up. Finally, RBI's Innovation Board elects a number of ideas which receive capital to move onto the MVP phase, in which the teams further develop prototypes into minimum-viable products for real customers by applying the build-measure-learn logic.

Using illustrative examples, I have uncovered the following aspects that emerged in all case studies and thus can be regarded as confirmed elements of the methodology and process.

### **3.1 Customer - centric methodology**

All of the companies mentioned employ a customer-centric methodology. Adobe's Red Box instructs rapid prototyping to test various customer-value propositions by observing customer



behaviour aligned with the lean start-up methodology. Zalando, for example, explicitly points out that it follows a problem-first approach which is in line with the design-thinking methodology. Ferrovial even employs external facilitators who help the intrapreneurship teams to follow the lean start-up methodology. Participants of Siemens Boot Camp produce mock-ups and are asked to test with real customers, which is in line of the DT. RBI's innovation Garden follows both a lean start-up and design-thinking methodology.

### **3.2 Multidisciplinary teams**

In the case studies, Ferrovial, Zalando, RBI and Siemens, for example, put individuals in the team from an early beginning. Adobe also encourages its participants to form a team at a later stage (in the Blue Box). Yet Zalando, Ferrovial, and Siemens highlight the importance of multidisciplinary teams. Zalando initially held hack weeks solely for the tech team (Inov8tors 2019). They expanded, however, to the rest of the organization, thus allowing for cross-functional teams. Ferrovial hand picks participants to form multidisciplinary teams (Inov8tors 2019). Siemens forms the teams to break silos and bring people with diverse skills together (Inov8tors 2019). Raiffeisen Bank International forms teams based on their multidisciplinary background.

## 4 Supported Intrapreneurship Program Design

In the review of existing processes and human-centred methodologies, the case studies serve as a base for an adapted innovation process that ensures a faster time-to-market reduces uncertainty. Whilst the first phase is meant for program managers, who conceptualize SIPs, the learning loops and last phase of the adapted process are described from an intrapreneur's perspective. It explains the tools and methodologies an individual or group should use to validate the business assumptions.

Second, I wish to analyse which methodological elements allow for rapid venturing and supported elements. These insights are again meant for program managers and uncover additional aspects that need to be considered for the design of the SIP

### 4.1 Adapted innovation process

As human-centred methodologies offer a reduction in uncertainty and a faster time-to-market when venturing a new business, they suggest different iterative phases. I shall refer to those as loops, which are to be applied at different stages of the venture development. Combining the reviewed methodologies and innovation processes, the innovation process depicted in Figure 9 is suggested for SIPs.

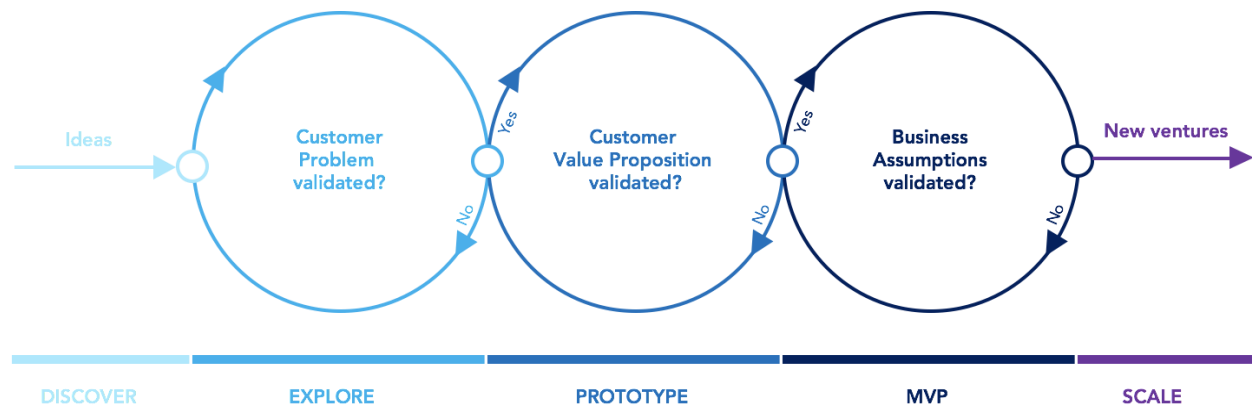


Figure 9. Synthesized innovation process for SIPs

It includes constant customer feedback and production based on validated learning. Exploration, prototype, and MVP are referred to as loop phases. These are iterative rather than sequential with the possibility that any idea may go “back” in the process. It is human-centric, as it initiates with a customer problem, focussing primarily on the need, inspired by Utterback (1971). Then it follows Cooper's (1990) stage-gate logic, in which any continuation requires a validation. Most importantly, it plans for parallel activities, as outlined by Salerno et al. (2015), thereby encouraging access to the market before final product launch.

Ideas that enter the process can be triggered either by problem that has been observed or by a solution that has occurred. Once an idea enters the exploration loop, it is referred to as an opportunity. Once an opportunity has passed all loops with validation of the customer's problem, value proposition, and underlying business assumptions, it can be regarded as a new venture, which then needs to grow and scale. Also, it should be noted that the validation should be more qualitative rather than quantitative in nature, especially in the explore and prototype loops. An intrapreneur will assess a problem which has been validated once a significant number of customers have confirmed the problem either via unbiased interviews or by expressing it on their own. A customer-value proposition is validated once the intrapreneurs assess a problem-solution fit. Depending on the fidelity of the prototype, these results can be more quantifiable. The validation of the business assumptions is achieved once a product-market fit is reached and the most critical business plan assumptions are tested.

Note that the first and last parts of the process are phases and represent the input and output of the process, respectively. All loops focus on experimenting with the venture opportunity rather than on building the venture itself. After each loop, facts are aggregated, which either confirm or reject business assumptions. Consequently, uncertainty with the new venture is reduced. This follows a strictly human-centred approach, as each loop requires validated learning from customer feedback.

Next, I outline how to design the first phase to generate ideas. I then describe the three learning loops in more detail and offer considerations for the scale phase.

#### **4.1.1 Discover phase**

The discovery phase is the starting point of the process, and the input of this process are referred to as ideas. These ideas can be triggered in multiple ways and can come from various sources. The idea-generation process can also be steered to achieve strategic company fit. The design of this phase thus impacts the entire process that follows. Therefore, I will outline in further detail how ideas are triggered and by whom, how ideas can be collected and how idea generation can be steered.

##### *4.1.1.1 Triggering Ideas*

Ideas can be triggered in various ways. In a detailed design of the discovery phase, the triggers and paths of idea generation should be taken into account, as this phase significantly impacts the explore loop that follows. If a resource that can be commercialized is discovered and initiates an idea, it is known as *resource push* (Vogel 2017). Resource-pushed ideas and possibly ideas triggered by a desire to start are already linked to the solution space where the existence of an underlying customer problem is uncertain. Therefore, the emphasis will require extensive

empathy building with research in many different customer segments. This might result in more time for the explore phase.

Individuals might recognize an unmet need for a customer segment. This is referred to as *market pull* (Vogel 2017), which requires less time in the explore phase.

Having reviewed what initiates ideas, we must also consider what are different sources of ideas. Ideas can be generated both from inside of the company and from outside of the company.

#### 4.1.1.2 Sources of Ideas

Though employees tend to have valuable ideas due to the extensive knowledge they have gained through their professional experience, external groups such as users, customers, suppliers, and others can also serve as useful sources of ideas. One external way of sourcing ideas is to find lead users (Hippel 1986) and discover what their pressing needs are. Interviewing and observing current customers, suppliers and other partners can also be beneficial for identifying potential problems and solutions.

Internal sources of ideas are employees. Here it is important to regard all levels of hierarchy for the generation of ideas. Whereas executives and managers may have more input based on the long-term strategy of a company and thus may have a better understanding of its capabilities, operational staff will have a better insight into user problems due to their frequent interaction with customers. Therefore, both should be considered as valuable sources of ideas.

#### 4.1.1.3 Steering Ideas

Now that we have determined who can be a source of ideas and how they are inspired, the question whether the ideas can be steered arises. Depending on a company's innovation need, SIPs can support the triggering and idea-generating processes differently. Let us consider the ideas mentioned previously that can be triggered by problems such as unmet market need and solutions such as a resource that can be commercialized.

Steering the idea-generation process requires either a limitation of the problem or solution space. So how can we limit the space? IBM, for example, streamlines the process by initiating with a preparation phase before ideas are collected (Hienerth et al. 2012). They provide idea donors with up-front information about the problem and the solution. Lego, in comparison, limits only the solution space by providing Lego bricks and parts without any other parts allowed (Hienerth et al. 2012).

If the problem or solution search field is formulated narrowly, the number of generated ideas decreases, thus limiting the choices for further selection. If the search field is formulated widely,

more ideas will be generated, but the fit to an intended search will be limited and the need will arise for high quality decision-making regarding the selection of ideas to be elaborated further.

Besides the widening or narrowing of the spaces, the idea-generation process can be impacted on an additional dimension: problem-first or solution first. Either a problem is formulated and then the solution is sourced, or a solution such as a technology has been developed and is looking for a use case (a problem it can solve). Both have their advantages and disadvantages. If an idea is based on the problem of a user, uncertainty with regards to desirability will likely be low. If the customer problem was solved, it is highly probable that the customer will desire the solution (as long as the problem is large enough). On the other hand, the feasibility and viability of the opportunity is likely unknown and is thus highly uncertain. If there is a solution in place, but it is looking for a use case, feasibility does not become the main cause of concern. In this case, desirability and viability are highly uncertain. Therefore, depending on whether problem or solutions are sourced, different aspects of the business model will require more attention. Note that even though an idea might arise from unmet customer need, desirability is still uncertain, as the problem-solution fit is not guaranteed. Similarly, if a solution exists, adaptations to fit a problem will be required, resulting in a still-to-be validated feasibility.

One way of stimulating legacy paths, in which an idea might be based on another initial idea originating from someone else, is to share ideas via idea-generation platforms (Vogel 2017). Hienerth, Keinz and Lettl (2011) reviewed platforms used for idea contests including IBM's Jam. They have discovered what patterns exist in the successful collection and refinement of ideas. One is to involve different groups of users, such as employees across all hierarchies and functions and possibly employees' family and friends, customers and external shareholders. Allowing for user interaction on the platform (e.g., via likes, comments, etc.), enables participants to refine their ideas and provide more sophisticated concepts. Proactive facilitation of user engagement increases user interaction. The use of transparent IP policies is important and can be implemented by asking for the transfer of all intellectual property rights to ideas from the beginning on. Finally, non-monetary incentive systems have proven successful, as users are willing to contribute to intrinsic motivations and as participating in idea contests can itself become a value proposition.

#### 4.1.1.4 *Selecting ideas*

Depending on the different triggers of ideas and idea-generation methods, a decision about which ideas shall enter the explore loop needs to be made. If the steering of ideas sufficiently limits the number of ideas, no selection might be required. However, if, in spite of the steering, more ideas than capacity are collected, a selection of ideas will be required.

I propose the following framework for a selection that ensures human centrality. It is adapted from (Gruber and Tal 2017) and enables a selection of ideas within a short time involving either small or large groups of decision makers.

The selection process is split into four parts:

1. idea evaluation and shortlisting,
2. challenge evaluation, and
3. idea selection.

### *Idea Evaluation and Shortlisting*

If the idea-collection process results in a large number of initiating ideas, it is cumbersome to elaborate ideas in much detail. Therefore, I propose to first shortlist up to 20 ideas.

This can be done by first evaluating ideas based on specific criteria. To assure a human-centred approach, the criteria should concentrate primarily on desirability while taking viability into account. Thus, the suggested criteria (Gruber and Tal 2017) are as follows:

Desirability criteria:

- unmet need (refers to whether there is an actual problem to be solved),
- effective solution (considers if the need can be addressed by the idea), and
- better than current solutions (elaborates the advantages that the proposed solution might bear).

Viability criteria:

- potential market size (concerns how many users/customers need this solution and anticipates potential market growth),
- customer's willingness to pay (considers whether customers are well funded and the size of the budgets they have available), and
- customer stickiness (concerns how frequently a solution would be used or rebought and the ease with which customers can switch to alternative solutions).

Each criterion should be assessed on range from 1 to 4, where 1 is very low, 2 is low, 3 is high and 4 is very high. If the idea generation was conducted via a platform, it is recommended that an evaluation feature be integrated.

With the criteria in place, the question arises who should be assessing them. Though the practice of using managers is common, managers are not necessarily the most accurate at predicting the

success of novel ideas. Nor are experts valuable in forecasting the outcomes of new ideas (Kornish and Ulrich 2014). According to a late study, those most accurate at predicting the outcome of new ideas are idea generators, who have had previous success with their ideas and have forecast the outcome of other idea generators (Berg 2016). This can be taken into consideration when choosing who should assess the ideas.

Each idea should be evaluated multiple times by various evaluators to ensure meaningful results. Once evaluated, ideas which score high with respect to desirability and/or viability are shortlisted to be reviewed further by experts in workshops.

#### *4.1.1.5 Challenge evaluation - Workshop*

Based on my professional experience, I propose the following format, in which up to 20 shortlisted ideas can be reviewed and selected. In this workshop, experts from various fields—such as sales and marketing, IT, and other venture relevant departments—are to be invited. The number of participants can vary, as the workshop is applicable for small groups of five to 30 persons.

Before the workshop, the facilitator should prepare up to five different challenge boards. The results from the previous idea evaluation on desirability and viability are summed together and represent the potential each idea bears. They can then be mapped on the “potential axis” (see Figure 10) of the challenge board. Each board contains a matrix where the potential of an idea is depicted on a y-axis whilst the challenge is represented on the x-axis.

Depending on the number of participants, up to five groups are formed. In world café format, these groups then move from one board to another in 15-minute cycles. In this time, the participants first get acquainted with the ideas and then have to assess solely the challenge that this idea poses. Once the group agrees on the degree of the challenge, the idea is moved parallel to the x-axis and placed on the matrix. At this point, it is very likely that participants might not agree with the previously conducted evaluation and might be inclined to discuss potential as well. Nonetheless, the facilitators of the workshop should interfere to focus on the challenge only. To help the participants, the facilitator can moderate to discuss the following criteria (Gruber and Tal 2017):



Figure 10. Example of a challenge board (adapted from Gruber and Tal 2017)

- implementation obstacles (for product and IT development challenges, sales and distribution difficulties and funding challenges),
- time to revenue (where development time, time between product and market readiness, and the length of sales cycle should be considered), and
- external risks (such as competitive threat, third-party dependencies, or barriers to adoption).

Once every group has visited every board, the ideas from all boards are mapped on a joint attractiveness map (see Figure 11). The attractiveness map is a matrix that allows evaluators to compare market opportunities and thus make a decision on which to pursue. Gold mines have a high potential and require the least amount of effort. They tend to be the result of an idea that has identified a significant unmet need and are very rare. Quick wins are ideas that are associated with little risk and low returns and can be used as a stepping stone for moon shots. Moon shots are where the truly innovative ideas will lie. They represent high-risk yet high-return opportunities. Finally, some ideas might be located in the lower-right quadrant, defined as questionable. These are opportunities, but they are the least desirable ones. Nonetheless, they should be kept in mind, as conditions in the future might change and enable these opportunities to move in one of the other three quadrants. Then up to 20 minutes of time is given to discuss individual ideas on the matrix.



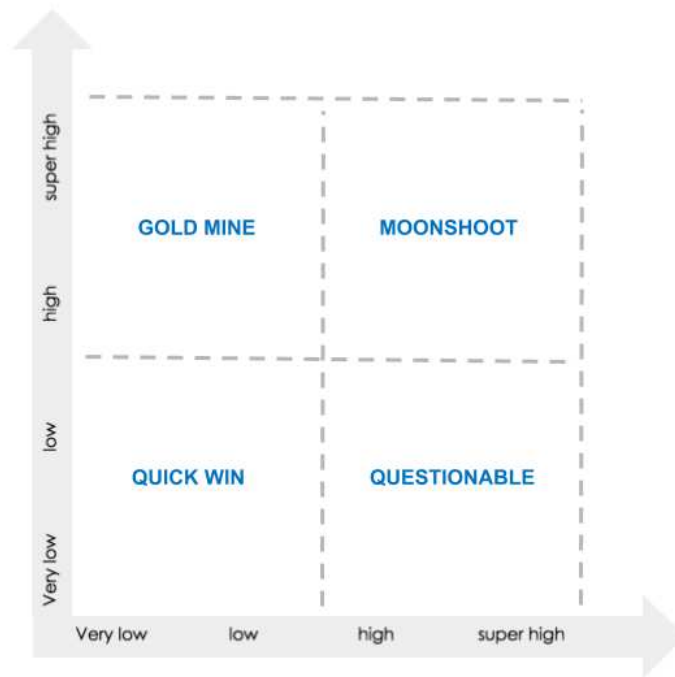


Figure 11. attractiveness map (Gruber and Tal 2017)

#### 4.1.1.6 Idea Selection

After the final discussion, each participant can vote for his or her favourite ideas using the dotcracy method: Each evaluator gets two dots that can be placed on an idea. All ideas, including the questionable ones, are allowed to be chosen. Once the dot voting is finished, the ideas that have been awarded the largest number of votes are selected. If there is no clear winner, the dot-voting can be repeated with one dot per person and the restriction that only those ideas can be chosen which already have a dot.

Using this scalable framework, a number of ideas can be selected by numerous stakeholders in a transparent way within a very short time. Also, the format empowers the wisdom of the group rather than individual experts.

This chapter has elaborated on how ideas can be collected, steered and selected. Once we have found the focus ideas, they enter into the explore loop and become innovation opportunities. In the next chapter, I will describe the explore loop in further detail, outlining what activities are necessary for intrapreneurs to undergo and defining when an opportunity should move into the next learning loop.

## 4.1.2 Explore Loop

The first loop is called the explore loop, and it is built upon design thinking's problem space and consists of empathize and define stages. In the empathize stage, insights into the problem are discovered, whilst in the define phase, the findings are synthesized into a focus area. Here divergent thinking and discovering customer insights are applied. Next the findings are narrowed down to fewer problem areas where convergent thinking is necessary.

Once an idea enters the explore loop, the intrapreneur's main objective should be to validate the customer problem. If intrapreneurs are working in heterogeneous teams, members will first have different types of interpretations with regards to ideas. It will be necessary to bring the team up to the same level of knowledge. To tackle all open questions, the teams need to first understand and structure the problem itself and all the factors surrounding it. After capturing and structuring the problem, they need to gain insights by conducting the following types of research.

### 4.1.2.1 Interviews

Especially in the beginning of a process, interviews help to explore the unknown and help to generate new perspectives. In interviews, the goal is to understand the (subjective) construction of reality of the person that is interviewed. Therefore, it helps to ask questions that trigger the interviewees to answer in a narrative format. Interviews provide an opportunity to gain insight into the subjective perception of relevant stakeholders and, therefore, to gain a different point of view and the possibility to empathize.

### 4.1.2.2 Customer Observation

Customer observation is an explorative way to systematically identify customers' hidden emotions and motives. By observing customers during certain routines/tasks or interviews, one can find out how they resolve pain points, use products in unexpected ways or satisfy undetected needs. With customer observation customer needs which current products or services are missing or failing to satisfy can be discovered (Brown 2009). By methodologically capturing these customer insights, a first important step is taken in understanding your potential target group.

### 4.1.2.3 Research on trends, technology, and existing solutions

Trend and technology research yields insights into the current market and possible future developments. On the one hand, it inspires (opens up), and on the other hand, it sets boundaries and directions (closes down). Trends set general directions for development or changes. Knowledge about trends and an understanding of how they could affect current and future businesses and needs are most valuable for a sustainable solution. They are often connected to available and emerging technology—especially in a business/industry context. Research can provide valuable input regarding potential users, business models, and relevant

technologies. It can be useful to dive deeply into one technology, assess current applications, technical restrictions and future outlooks. Contacting experts (internal and external) and closing knowledge gaps is helpful here as well.

After conducting interviews and making field observations, there is often an overwhelming amount of unstructured information that has to be dealt with. This information, and the impressions and experiences, must be shared and then summarized into validated problem areas.

A problem can only be considered validated once a problem statement can be formulated and evidence is found from real customers that the statement is valid. The problem statement is a concise description of the problem and answers the following questions:

- i. Who has this problem?
- ii. Why is it a problem?
- iii. Why should it be solved?
- iv. What impact would it have if the problem was solved?

Generally, the aim should be to discontinue ideas which are not desirable. If an idea's underlying problem has not been identified, it should not continue to the next loop and thus should be stopped. Some intrapreneurs might already discover in the explore loop that there is no problem to be solved or that the problem is not large enough. This should be regarded positively, as investing resources into ideas which are not worthwhile is not productive and does not contribute towards reducing uncertainty. Therefore, a mechanism that incentivizes the intrapreneur to kill ideas should be put in place.

Only if problems are validated can the opportunity be formulated in a so-called how-might-we (HMW) question, which addresses the problem by asking for a solution. HMW questions represent the first stage gate. They are also connections between the problem and solution space and focus on opportunities and challenges. The intrapreneur should keep an eye open and have the greatest potential for creative thinking. They are open questions that serve as the foundation from which to discover ways in which a problem can be solved. It is crucial to find the right amount of openness for the question (see figure 12). If a question is very wide and can be answered with many solutions, it is hard to find a starting point. If a question is too specific because it is focused on a possible solution, it will allow for a limited number of ideas. Thus, questions should be more about the experience than the solution itself but should already focus on a target group to serve as a good starting point for idea generation.

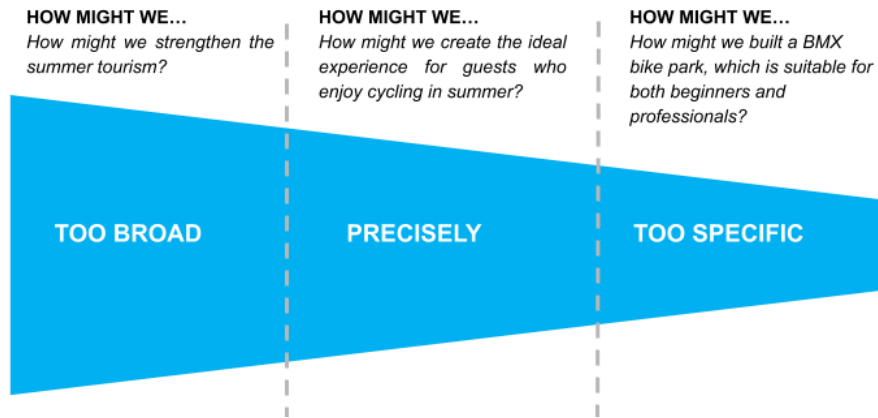


Figure 12. Example of three HMW-questions: too broad, precisely, too specific

Based on the HMW questions, the intrapreneur can then generate multiple ideas that will be tested in the next loop.

#### 4.1.3 Prototype Loop

Just after the problem has been validated and HMW questions have been formulated, ideation begins. Until now, the intrapreneurs have only been allowed to elaborate the customer problem; now they can enter the solution phase. At this point, it is important to generate as many ideas as possible. Once again the intrapreneur has to apply divergent thinking, thereby opening the solution space. Once multiple solution proposals are collected, the intrapreneur decides on one with which to begin and enters into the prototype loop. This loop is about prototyping the solution and testing it with real customers. It combines the ideate and prototype and test phases from design thinking with a build-measure-learn logic from the lean-start-up method. In Figure 13, the loop is shown with four stations that are constantly revised.

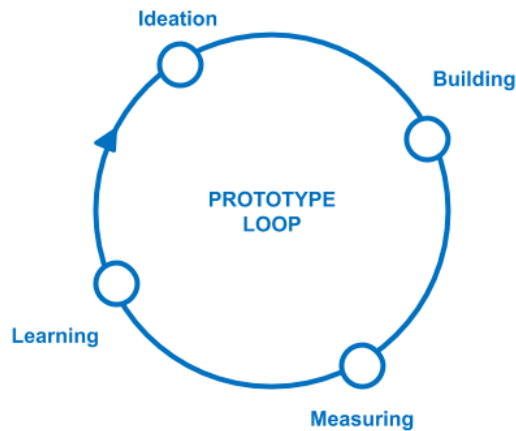


Figure 13. Prototype Loop: Ideation, Building, Measuring and Learning

It begins with ideation, for which multiple solutions are generated. Then prototypes are developed, which need to be tested or, as defined below, “measured”. Finally, the intrapreneur will have generated learning that now leads to new potential solutions.

Before the intrapreneurs begin to build prototypes, it is important to consider what exactly the prototypes should test. Everything we build is based on assumptions which need to be defined in a hypothesis to be proven by an experiment. In the modern world, design is data driven. This means that every decision we take is based on evidence. This evidence is collected based on a hypothesis which we have created based on our intuition. Planning and organizing an experiment takes time, but only a well-organized experiment will create the evidence and insight that is viable.

#### *4.1.3.1 Solution Hypothesis*

The solution hypothesis is an aggregated insight from the ideation-and-build phase, which allows a researcher to describe persona, solution and the value in a single sentence. It is a statement that covers the user (person) who is affected, the solution which should solve the problem and the value the solution creates for the person. The essence is to make it easy to understand and actionable for everyone who is trying to create an experiment to test your hypothesis.

#### *4.1.3.2 Success Factors*

Sometimes the intrapreneur needs to set a goal to strive towards. A success factor is exactly such a goal. It facilitates seeing an experiment like a game which can be won (or lost). A success factor can define an arbitrary event, milestone or piece of evidence in your experiment which also defines success if it appears during your experiment. Define a metric or milestone which enables you to determine whether your concept is a success or needs a pivot. It is a good idea to limit the amount of time or the number of tries made until the intrapreneur expects this success factor to be achieved; otherwise they might search forever.

#### *4.1.3.3 Leap of Faith*

The intrapreneurship team will need to define a point which allows them to decide if an idea is worth going all in for. The leap of faith is the hypothesis on the performance or success which needs to hold true for the business to be a success (Ries 2011). It is the point when one decides to go all in with an idea and leave everything behind. It is the most critical indicator for the intrapreneur. For a start-up, this is the point when the founders quit their old jobs.

#### *4.1.3.4 KPI*

To be able to determine whether your hypothesis is true or false, the intrapreneur will need to be able to evaluate it. This evaluation can only be performed upon a measurable indicator: your key performance indicator. A key performance indicator is a quantitative score for a measurement which can be evaluated. It can be any type of performance that can be measured for an

experiment. Common indicators are the conversion rate, the number of paying customers, the customer-life-time value, the time to success, the click rate, the attention rate, etc.

A prototype is a tool that hints at the value proposition of a product and service. The purpose of the prototype is to check whether potential users would actually use the planned solution and, even better, if they would prefer it to existing solutions. The intrapreneur systematically works from the more important to the less important issues. With each iteration loop, the solution hypotheses become more explicit. At the same time, the intrapreneurs are learning more and more how a product should look and what it will offer. The exacter the specifications the more detailed the tests will get. Different prototypes can test different aspects of the value proposition. What the intrapreneur always needs to bear in mind, however, is that different prototypes serve different purposes. One way to choose a prototype is to consider the fidelity, the effort and the customers it can reach. These are depicted via the axis (see Figure 14). The size of the bubble defines the effort needed to build it.

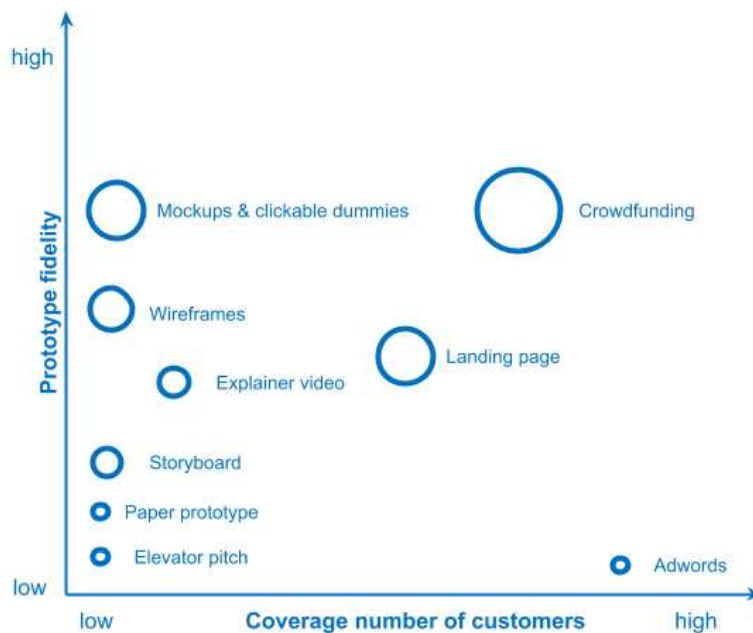


Figure 14. Types of prototypes along the fidelity and coverage axes adapted from (Roock 2012)

Note that intrapreneurs can, in a limited amount of time and effort, test both high coverage and fidelity by running two experiments with two prototypes at the same time.

Once the prototype is built, it is necessary to test it. A large part of the reaction to a prototype happens in the brain by demanding users to speak, one can dive into their thoughts and base the development on this evidence. Another method is to use stories. A user story is a task that a user is trying to achieve at a certain point when using an application. At any point when the user is

testing the prototype, one can simply ask what the user is trying to achieve and then record this story. High-fidelity prototypes can also include feedback functions. If users know they can leave comments to improve a solution and can leave those comments easily, they are naturally inclined to leave comments if they face a difficult or painful experience with a prototype. In addition, a conversion rate can be measured. The conversion rate is especially interesting to users who are staying on and paying for a service. It is the rate at which the intrapreneur is able to convert visitors into customers. Every improvement of a conversion rate is a step towards providing the customer's value proposition. Finally, A/B testing is an easy way to compare multiple value propositions, usability or designs by allowing the user base to decide which is the most valid version. It is a widely deployed tool in the digital age and is used to take data-driven decisions.

The intrapreneur should iterate within the loop until a problem-solution fit is reached which validates the customer-value proposition. One should note that, in spite of the experimentation-inspired methodology, the intrapreneur will not ever be able to reach an exact and definite conclusion about whether the fit was reached. Based on learning, however, intrapreneurs will have a good approximation regarding whether the solution can solve the problem to some extent.

After testing multiple solutions, the team should have a validated customer's value proposition or problem-solution fit to move to the next loop: the MVP loop.

#### **4.1.4 MVP Loop**

Once an intrapreneur reaches the MVP loop, he or she should have a very clear understanding of the customer VP and should focus on the viability and subsequent feasibility of the new venture. The goal of the MVP loop is not to build an MVP (minimum viable product) but rather to determine whether a product or service should be built or not due to its validated insights on desirability, feasibility and viability. This loop relies solely on the LS methodology of building-measuring-learning.

An MVP, in comparison to the prototype, does not fake a value proposition but delivers a real customer experience. In other words, the product or service is launched to the customer, whilst in the background, work can be done manually.

As the MVP phase is about testing the most critical assumptions of the business case, intrapreneurs should also prepare the MVP testing as an experiment. Once the experiment has been conducted, the findings should be analysed. With each iteration, the main hypothesis of the business model should be validated, thereby giving a more exact picture of a potential business plan. The findings should serve to sharpen the business case and offer as a basis for determining whether the venture is viable or not.



St. Gallen's BMI Lab Reverse Financials (see Figure 17) are an alternative to calculating traditional business plans. They reverse the income statement and offer a great way toward actionable KPIs for the intrapreneurs to use. Reverse Financials start with required profit. The required profit shall be agreed together with the management. All other rows of the reversed income statement are either assumptions made by the intrapreneur or logical calculations.

Reverse Financials of Idea:		BMI Lab	
Specifications	Income Stream	Income Stream	Assumptions and Calculations
<b>Required profits</b> <small>How much profit (before tax) would make the initiative worthwhile?</small>	e.g. EUR 10 million (10% of current profits)		
<b>Return on sales %</b> <small>What is your expected profit in relation to your sales?</small>	e.g. 15%		
<b>Required revenues</b> <small>What is the annual turnover your business has to generate?</small>	Calc: Profit / Return on sales %		
<b>Allowable costs</b> <small>How much costs should your business be allowed to produce?</small>	Calc: Revenues - Profit		
<b>Revenue model(s)</b> <small>Define 1 or more revenue models (the generate income. This cell is not always necessary)</small>	e.g. Pay per KG, annual subscription	If you use an additional income stream ...	
<b>Revenue split</b> <small>If you have multiple sources of income, how is the split between them?</small>	e.g. 80%	e.g. 20%	
<b>Revenues per stream</b> <small>How much turnover must be achieved per income stream?</small>	Calc: Required revenues * Revenue split		
<b>Avg price per unit</b> <small>What do you think the average customer is willing to pay for a unit?</small>	e.g. EUR 22 without VAT		
<b># of units to be sold</b> <small>How many units do you have to sell to reach your sales target?</small>	Calc: Revenues per stream / price per unit		
<b>Units per customer</b> <small>How many units does a customer buy on average per year?</small>	e.g. 23		
<b># of customers</b> <small>How many customers does the business need in order to achieve its sales target?</small>	Calc: # of units / Units per customer		
<b># of new customers</b> <small>How many new customers must be acquired per year?</small>	e.g. 75% of 10.000 customers = 7.500		
<b>Customer acquisition costs (CAC)</b> <small>How much money do you have to spend to acquire a new customer?</small>	e.g. EUR 12 per customer		
<b>Total CAC</b> <small>What is the total marketing budget your business needs to attract new customers?</small>	Calc: # of new customers * CAC		
<b>Direct costs per unit</b> <small>What are the direct costs (material, shipping etc.) of selling a unit?</small>	e.g. EUR 10 for manufacturing		
<b>Total direct costs</b> <small>What are the total direct costs of your business?</small>	Calc: Direct costs * # of units		
<b>Total indirect costs</b> <small>How high are the indirect costs that cannot be allocated to an individual unit (overhead)?</small>	e.g. EUR 500k for overhead		
<b>Anticipated costs</b> <small>What is the sum of all your costs per year?</small>	Calc: Stream 1 * 2 Total CAC + Total direct + Total indirect costs		
<b>Cost buffer</b> <small>How can you calculate how high your cost buffer is. Do you have enough buffer for unexpected cost?</small>	Calc: Allowable costs - Anticipated costs		

Figure 17. Reverse financials of business opportunities (BMI Lab, n.d.)



Consequently, the required revenues and allowable costs are calculated. If the average price per unit is estimated (by the intrapreneur or management), the number of units sold is calculated directly. Once the unit per customers is assumed, the number of customers is calculated. If the percentage of new customers in relation to the total number of customers that must be acquired is estimated, the calculation gives the number of new customers necessary. Assuming the acquisition cost per customer, the total customer acquisition cost can be calculated. Finally, once the direct cost per unit is added and the total direct costs and indirect costs have been calculated, one arrives at the anticipated cost and possibly a cost buffer. Now the intrapreneur can track the assumed positions, and plug in the validated numbers with each experiment. This way everyone can have a good overview of the current business-case potential.

The MVP loop is exited once the most critical assumptions on the business case are validated. If they prove successful, the opportunity becomes a new venture.

#### **4.1.5 Scale Phase**

As the idea has entered the learning loops and the business opportunity has been validated, a new venture is in the so-called scale phase. Here the focus shifts from learning to building a scalable solution. As mentioned earlier, MVPs are not necessarily economically viable and often are not scalable. Therefore, in the scale phase, intrapreneurs build a scalable solution whilst concentrating on reaching a larger customer base. This phase also represents the bridge between exploration and exploitation as efficiency and risk aversion become more prominent.

There are various ways the scale phase can be executed. If a new venture is disruptive, one could decide to create a new separate organisation and create a start-up spin-off. Alternatively, the business line can adopt the new venture, where it will become one of their product portfolios. The intrapreneurs who have worked on the new venture can either join the spin-off team, the business line as product owners, move back to their original positions or start with a new idea.

To sum up, the adapted innovation process enables SIPs to work in a human-centred fashion. As it allows for constant customer feedback and evaluation, it accelerates the time-to-market and gradually reduces the risk of new ventures.

## **4.2 Methodological Elements**

Next, I outline several methodological elements and elaborate how they allow for rapid venturing. These elements must be included in an SIP by the program manager who conceptualizes the program.

#### **4.2.1 Establishing Customer Empathy**

In design thinking and the lead-user method, unstructured interviews with the user are conducted to gain a deep understanding of the problem and potential solutions for the users. During these interviews, it is crucial to build up empathy with the interviewee and understand the needs and pains. It is very important that interviews are done in person and not via market research. Market research might uncover problems that concern a wide audience, whilst the lead-user method and design thinking will uncover issues that concern a smaller number of individuals. These unmet needs, however, could potentially affect a larger user group in the future. Empathizing is a source of paradigm-shifting solutions, whereas traditional market research leads to insights for incremental improvements (Ries 2011)

Moreover, customer empathy allows for a better understanding of the problem, reduces the uncertainty and delivers a better base for the value-proposition design. It also may make fewer iterations necessary to meet the customer's expectation, thus resulting in a faster time-to-market.

#### **4.2.2 Focusing on experimenting**

Design thinking and lean start-up require an experimental attitude and trial-and-error learning in their methodology. Both methodologies indicate that hypothesis have to be framed and then tested. Based on the outcome of the experiment, hypotheses can be rejected, validated or found inconclusive. Yet the findings serve as a base for the next testing iteration.

From DT, especially in the empathize phase, it is crucial that participants do not have their solution in mind, but, without judging, get to know their potential users. Also, intrapreneurs need to avoid the tendency to "fall in love" with their prototyped solutions. It is important to stay neutral and be encouraged to fail early to succeed sooner (Sastry and Penn 2014).

Lean start-up is about building an MVP that serves as a machine for testing and learning (Ries 2011). It is not necessarily a finished product that serves to generate revenue. It should provide testable customer experience and the opportunity to learn from the customer's behaviour and feedback. As every business plan and thus every strategy is based on assumptions, the MVP is setup to prove those.

This experimental attitude makes it possible to focus on learning rather than on building the venture. The more knowledge is acquired, the more uncertainty is reduced. Also, as not fully-fledged products are built, a faster time-to-market can be achieved.

### 4.3 Multidisciplinary team work

DT especially underlines the importance of multidisciplinary teams. Usually, traditional companies have different people behind the life cycle of a business (Pinchot 1988). Intrapreneurs take over the responsibility for the end-to-end process (Pinchot 1988). Intrapreneurs cover an innovation gap in this process and take over the phases of start-up, trying the plan and rapid adjustment of reality, as depicted in Figure 16 below.

It can be argued that an individual intrapreneur cannot fulfil all tasks necessary for a new venture; a multi-disciplinary team, on the other hand, can. In comparison to more traditional product development in which the development phases of each product are passed along from department to department, DT in particular is about bringing together individuals from each department to contribute in all three activities of inspiration, ideation, and implementation. An end-to-end process responsibility is essential for a rapid time-to-market, as impediments can either be discovered as early as possible or even avoided.

In addition, multidisciplinary teams are key to developing truly non-incremental innovations. In the literature, (Pinchot 1988; Leonard and Straus 2011) elaborate on a phenomena known as the comfortable clone syndrome, which occurs when employees with similar interests, education and disciplinary background evaluate ideas through similar cognitive screens. As a result, only familiar ideas rather than disruptive concepts pass are discovered.

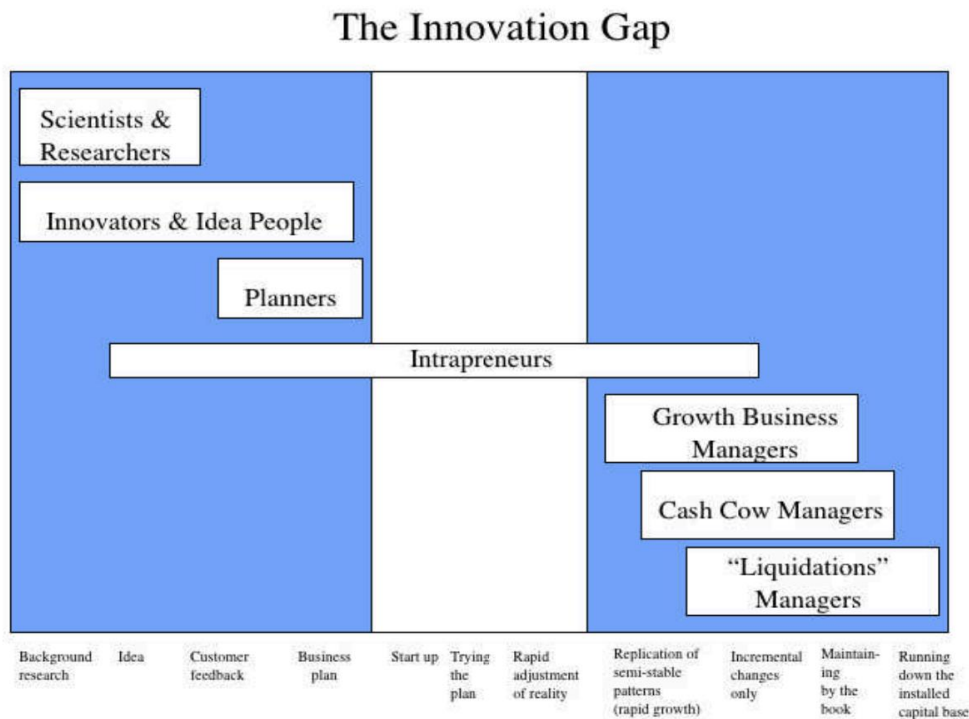


Figure 16. The innovation Gap (Pinchot 1985)

### 4.3.1 Agile Setup

In design thinking and lean start-up, each next step is a logical next step based on the learnings and evidence generated in the previous experiment. Once an experiment is conducted, the teams get an opportunity to learn. If assumptions are validated, they can use the generated data to improve the product. If not, the teams can pivot, let go or completely abandon the solution. Due to this iterative nature, the methodology requires an agile setup rather than a classic project-management approach or waterfall principle. Only actions are made that are really necessary for delivering real customer value. This again allows for a faster-time-to market, as it reduces unnecessary steps that cost time or resources.

### 4.3.2 Accelerating the iterations

According to the project-management triangle, each project is constrained by time, cost and scope (Atkinson 1999). Similarly, innovation opportunities can face different time, budget and scope or fidelity constraints. An exploration loop should require the least amount of time and budget and thus will not achieve a high scope of insights. The prototype loop requires more time and budget to get the required validated learning. Finally, the MVP loop can exhaust more budget and time, thus delivering higher fidelity and real customer experience (see Figure 17).

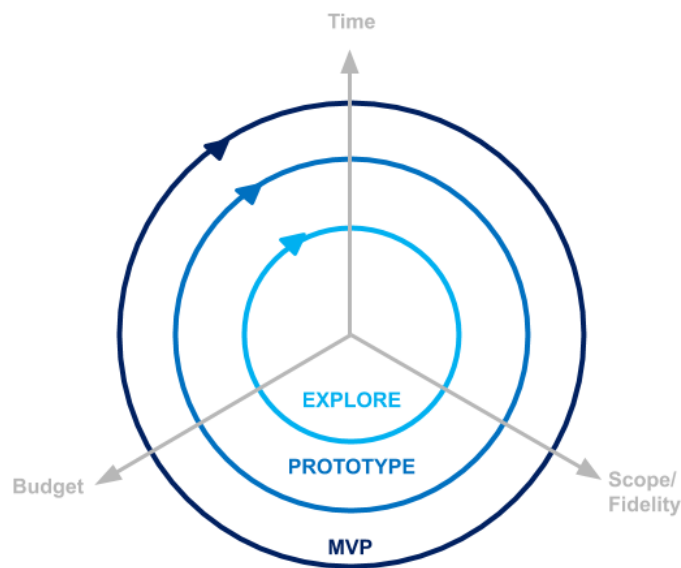


Figure 17. Explore, Prototype and MVP loop along the time, budget and scope/fidelity axis

In comparison to start-ups, large organizations face fewer budget constraints when dealing with individual innovation projects. Corporates have a tendency to launch high-fidelity products, resulting in a slow time-to-market but delivering either late or no customer feedback. Consequently, they run the risk of developing a product that is not adapted, as it does not fit the customer needs. One way to control this tendency is to restrict the time and budget per phase.

As a result, the scope or fidelity of the prototype and MVP is limited. The key aspect to be considered is that nothing is built or created to grow but rather to learn.

Analysing the case studies, I found aspects that have not been considered in the literature yet are essential for the successful implementation of a supported intrapreneurship program. Using additional literature resources, I include what roles are necessary and explain how to create an eco-system of ideas, talents and capital. Moreover, I analyse another common pattern with regards to the motivation of participants and whether the program requires full-time engagement or not.

## 4.4 Supporting Elements

In addition to methodological elements, various supported elements need to be considered by the program management for the design of the SIP. In the next paragraphs, I outline several additional aspects of SIPs that are common patterns that have been uncovered in the case studies and which comprise additional considerations that should be taken into account when initiating intrapreneurship activities.

### 4.4.1 Eco-system of ideas, talents and capital

All programs in the case study offer a limited budget in the beginning with the opportunity to get more funding at a later stage, following Hamel's logic of a free market of capital (Hamel, 1999). Adobe's Kickbox, for example, includes a prepaid credit card with USD 1,000 for the participant to spend as he/she sees fit. Ferrovial, Siemens, RBI and Zalando offer participants initial budgets for marketing and/or user testing. Once the initial stage is completed, the teams pitch for additional resources with which to build their products. In the case of Adobe, Ferrovial and Zalando, participants need to convince the business unit following the logic-or-resource attraction. In the case of Siemens and RBI, it is the top management which decides which project should receive funding by applying a resource-allocation approach.

Though in most programs the ideation is steered by limiting the solution space, ideas circulate freely and no ideas are forbidden in accord with Hamel's free market of ideas. Adobe's Kickbox does not influence the content of the idea sponsor. It sets no limitations to the solutions available, basing all on the support the intrapreneur can gather for his or her idea, thus applying a resource-attraction method. Ferrovial, Zalando, Siemens and RBI, on the other hand, involve top management as evaluators of ideas, who also make the final decision regarding whether a team should continue working on its idea or not. This process is more related to resource allocation.

Like Hamel's concept of a free market of talents, Adobe's kickbox is available to any employee without any directed selection procedure involved. The selection is based on whether the

intrapreneur makes it through all levels. In other words, it is a self-selection mechanism. In comparison, Ferrovial, Siemens and RBI hand pick the contestants. In the case of Zalando, participants are picked based on the success of the initial ideas.

#### 4.4.2 Roles

In the promoter model (Chakrabarti and Hauschildt 1989), an expert promoter is the originator of the idea for a new venture and is expected to lead the initiation of an innovation project due to his/her expert knowledge. Idea sponsors are usually part of the team, possibly taking the role of the expert promoter. Without such an expert promoter, intrapreneurs might miss out on key aspects of the venture opportunity, resulting in a slower reduction of uncertainty and a longer time-to-market.

In the case studies, we see that top management support is also crucial. Ferrovial involves the CEO from the very beginning of the kick-off of the program to ensure the commitment of the team members. Zalando also utilizes the top management, which consists of vice-presidents and senior vice presidents, to select the initial ideas that are being pitched. In Adobe's Kickbox, the participants are instructed to assemble a board of advisors which consist of the sponsor of the project and executives. Siemens uses its top management as "igniters" who, at the end of the bootcamp, give the teams the opportunity, via their network or capital, to continue with their projects. Raiffeisen Bank International enables teams to have multiple touchpoints with the Board. This in line with the power promoter, who should provide the resources for the innovation project to overcome barriers against innovation with its hierarchical power (Chakrabarti and Hauschildt 1989).

Especially in large organizations, non-incremental innovations are likely to face internal resistance. Without power promoters, intrapreneurs will face impediments that they cannot solve and are likely to be delayed if not even stopped with their venture opportunities.

In the case studies, we see that the programs have a bottom-up approach with the aid of top management support. All programs also involve the mid-management. Zalando includes the role of a business sponsor. Ferrovial, for example, recruits mentors, who should build the bridge to the organization, providing information that would otherwise not be available to the team and eliminating other barriers the team might face. Similarly, RBI employs mentors and senior managers who aid the teams and create a link to the organization. Adobe also advises its Kickbox users to invite influential members of the organization or experts, thus possibly involving mid-management as well. Considering the promoter model, the process promoter is defined as someone who recognizes the idea's value for the company, can identify the necessary resources, and can find the power promoter and other key stakeholders (Chakrabarti and Hauschildt 1989).

It should be an individual that possesses hierarchical potential, can support decision and implementation processes, can overcome barriers, can approve resources, can provide personnel, can allocate capacities and can act with a view to the strategic setting of the company by pursuing a long-term perspective. Managers could thus take the role of the process promoter or power promoter.

An additional role that was mentioned across all programs is the role of program management, which is responsible for organizing the process. The scope of the tasks differed in the cases. Whereas in Ferrovial, the program management takes a purely organizational role, in the case of Siemens, it prepares and lobbies for the continuation of the projects before the intrapreneurship teams pitch the idea. Raiffeisen Bank International also takes a mixed role in being responsible for the organization of the program and stakeholder management. Consequently, program managers can also be regarded as process promoters.

Similarly to the power promoter, process promoters can support intrapreneurs with a faster time-to-market when they face internal difficulties with the launch of a new venture.

All programs involve facilitators of some sort. Adobe enables at least one touchpoint with facilitators for the preparation of the pitches. Ferrovial and Siemens enables every team to have an externally-hired facilitator that guides them through the methodology. Zalando and Raiffeisen Bank International also offer internal facilitators, who not only help with getting the idea forward but also help with working in cross-functional teams. Members of a team with diverse backgrounds might not understand or respect each other and thus might have difficulty working together as a team (Chakrabarti and Hauschildt 1989; Leonard and Straus 2011).

#### **4.4.3 Recognizing intrapreneurs**

A broader question that business leaders often face is whether successful intrapreneurs are born or made. It is a question entrepreneurship scholars have pondered for quite a while now. While no clear answer exists, recent research points to the fact that the common traits of successful entrepreneurs can be analysed and taught, and concludes that entrepreneurs are made by circumstantial and environmental factors and definitely not born (Gaily 2018). One can therefore conclude that driven individuals can also be found within existing companies, then taught and ultimately polished into successful intrapreneurs.

One trait they should, however, possess intrinsically is the willingness to take action and proactively tackle business uncertainty—the so called “leap forward in the face of uncertainty” (Mintzberg et al. 2007) often seen in entrepreneurs. Potential innovators should also be seen by their colleagues and managers as having the ability to cope with limited resources and “make do



with what is at hand” (Honigmann and Levi-Strauss 1967). This tendency to rely on available skills, technology and funding instead of trying to plan and demand more resources before engaging in the act of innovation is often described as the entrepreneurial bricolage and is considered a key characteristic of successful innovators (Baker and Nelson 2005).

One can therefore conclude that while promising intrapreneurs are difficult to recognize at first glance and that everyone can be taught and converted into an internal source of innovation, the entrepreneurial bricolage should have manifested itself in the employees enrolled in the intrapreneurship program. How and when this manifestation should have happened and how to recognize it is a separate topic on its own, but suffice to say that the employees who fit the description are usually well known in their departments and team, exactly due to their ability to solve challenges with the resources at hand.

Additional traits or characteristics potentially successful intrapreneurs can possess are proactivity, flexibility, drive, risk taking and so-called opportunity promotion: the willingness to embrace rather than resist change (Vargas-Halabí et al. 2017). Whether or not a given company will devise methods to identify these traits among the participants of the intrapreneurship program or try to teach them (since intrapreneurs are made, not born) will vary significantly on a case-by-case basis. That is, it will depend on the size of the company, the time horizon of the program and the internal talent availability.

#### **4.4.4 Part-time engagement**

In the case studies, none of the programs are designed as full-time programs but rather as part-time, ranging from 30%-70% commitment to programs. As some intrapreneurs might decide to go back to their original roles, part-time engagement allows participants to still be involved with their business line. Also, by being involved with colleagues from their departments, they have access to feedback and information that is relevant to the project and can thus accelerate the exploration process.

#### **4.4.5 Incentivization**

None of the programs described in the case study involve any monetary compensation for participation in the program. Instead participants get the funding and are allowed to dedicate a portion of their working time to the project. They receive funding to realize their ideas and are educated about how to go on with new ventures. Research shows that creativity, which is necessary for entrepreneurial initiatives, is mainly fostered through intrinsic motivation (Beth Hennessey and Amabile 2009).



In terms of extrinsic incentivization, we should take into consideration what impact pay for performance has on innovation. According to studies, individuals whose early failure is tolerated whilst their long-term success is rewarded perform significantly better in their entrepreneurial efforts in comparison to those involved in fixed-wage or standard pay-for-performance incentive schemes (Ederer and Manso 2008).

#### 4.4.6 Cultural aspects

Company culture is frequently defined as a set of assumptions that guide behaviours and are shared among all organizational stakeholders (Ravasi and Schultz 2006). Because culture is based on often unwritten assumptions, changing it is often an insurmountable challenge. In the context of intrapreneurial programs, culture change is especially relevant because large organizations are typically used to operating in a slow and rigid way, which is incompatible with innovation and fast-paced change. There are, however, certain cultural aspects that are fairly easy to grasp and implement:

- Failure culture: Companies usually foster a culture in which no failure is accepted; they reward success rather than failure. The result is risk resistance, lack of innovation and, ultimately, loss of competitive advantage. Companies should aim to foster instead a culture in which falling intelligently is a deliberate strategy used to promote innovation and improvement. Failing can be considered a necessary by-product of learning, and failed experiments should be viewed as learnings (Cannon and Edmondson 2005). This change of perspective on the rather painful topic of failure should be adopted not just by the teams working on innovative projects but also by top management (Cannon and Edmondson 2005; Schein 1997). Ederer and Manso (2008) also recognize that an environment in which early failure is not tolerated has a significantly negative impact on innovation proneness.
- Transformational leadership should be embedded in the intrapreneurship program rather than in command and control. The most straightforward definition of transformational leadership is management via motivating, inspiring, expressing visions, engaging in the emotional involvement of followers while focussing on long-term commitment and the engagement of subordinates (van Kelle et al. 2015; Bass 1990). This type of leadership has clear advantages over deliberate leadership styles, as it accommodates new ideas and solutions to challenges and aims to harness the collective intellect of all project participants. The intrapreneurship program can ultimately become a testing ground for the wider adoption of transformational leadership across a whole organization.

- Internal corporate politics should be at least considered. Innovation often comes with the redistribution of power; thus, intrapreneurs should not expect support from everyone (Hamel 2008; Gailly 2018). While no clear solution to internal conflicts exist, a good first step is to map out the key stakeholders of the intrapreneurship programs and the individual projects, highlight the key people who will be impacted and try to manage them proactively by communicating and obtaining their prior approval.
- Last, but not least, consideration should be given to the three different cultures of management that exist in each large company: executives, engineers and operators (Schein 1997). Each of the three branches have their own agendas and management styles resulting from diverging interests: The operators try to perform their tasks as diligently as possible, the engineers care about reliable and efficient operations and the management's goal is usually the minimizing of costs and maximizing of profits. When companies try to learn and innovate, these three different styles and agendas often collide, giving rise to frustration and resistance. The best conflict-mitigation recipe in this particular case is to explain to each of counterparties that they are speaking different languages and care about different objectives but should ultimately respect the opposing views, which are just as relevant (Schein 1997).

#### **4.4.7 STOP/GO decisions**

One of the most critical decisions any company can face is when and why to stop a given project (Schein 1997; Balachandra et al. 1996). The complexity of the choice is often exacerbated in the context of an intrapreneurship program wherein individual projects or initiatives are often communicated to wider audiences as being very promising.

There are two main reasons why the decision is so difficult to make. On the one hand, innovative projects often take time to fully manifest their potential (bring customers or profits), and decision makers can never be sure whether they are cancelling a project prematurely or not. On the other hand, people usually exhibit a tendency to commit fully to their ideas even if there is mounting evidence against their viability. Team members and stakeholders are psychologically committed and invested to the initial course of action: a phenomenon commonly known as the escalation of commitment (Rule 1987; Staw 1976). Additional research demonstrates that decision-makers will frequently gamble more funds on their initial investments (double down) and stick to the choices they have already made (Kahneman and Tversky 1977). One can therefore conclude that any intrapreneurship program should have built-in mechanisms to counter this psychological bias.

One such mechanism is the so-called stage gates: predefined windows of time when additional incoming information is analysed objectively and the option to cancel the project is discussed

(Schmidt and Calantone 2002). The mere existence of such gates encourages decision makers to consider all options, including the cancellation of the process, by removing the taboo nature of the negative choice. Additional helpful tools to reduce the described escalation of commitment are (Behrens and Ernst 2014) as follows:

- The involvement of external consultants tasked with the objective analysis of information and the reduction of investment in the wrong project.
- The use of visual decision aids to support decision-making—e.g., decision trees and process charts with clear stage gates and triggers marked.
- A combination of both approaches, aimed at reducing the possible negative internal reactions to the involvement of external consultants.

#### **4.4.8 Measuring the Success of SIPs**

To understand the extent to which a supported intrapreneurship program is successful or not, one has to define two distinct bases of analysis: the project base and the program base.

Each intrapreneurial project is usually greenlit with a specific purpose. The success of an individual project is usually measured as the achievement against the particular purpose or ambition. In corporate environments, the typical project purposes are as follows:

- cost reductions,
- new revenue streams,
- expansion of existing revenue streams,
- the construction of sustainable competitive advantage, and
- increase in customer satisfaction or brand loyalty.

Each of these purposes can be measured on an individual-project level and can serve as a guide to the success of a project.

Additional complexity arises when one needs to analyse the success of the whole intrapreneurial program. Here two new and separate bases for analysis exist: the degree to which the program manages to evaluate incoming and identify potential project opportunities, and the cumulative success of these opportunities.

In any case, companies should avoid conducting direct cost-benefit analyses but should rather take a portfolio approach - successful entrepreneurship requires that firms pursue a portfolio of projects that are continuously evaluated, selected, prioritized and terminated when they do not meet expectations (McGrath 1999). Each company needs a healthy portfolio of opportunities at

all stages, from exploration to MVP, typically with more opportunities or ideas at the early stages (top heavy). With this in mind, the success of a program can be measured by tracking. For example, consider

- the number of ideas generated, which shows the entrepreneurial engagement of the employees;
- the number of usable ideas vs. ideas generated, which indicates the quality of the generated ideas;
- the number of opportunities initiated, which hints at the entrepreneurial capabilities; and
- the cost per initiated opportunity, which can be useful in controlling the activities if compared to previous years, thus tracking progress.

Often, the innovation success rate can be calculated by the number of product ideas that achieved a goal vs. the number of opportunities started. This rate, however, can indicate various things. If this rate is low, it could indicate that the company's willingness to terminate initiated opportunities is high, which should not be regarded negatively. If it is high, it can show that the quality of the program is high. In either of the cases, choosing the KPI to measure the SIP's quality should be chosen cautiously.

The program also impacts the entrepreneurial culture within organizations. One attempt to measure the environment for the effective implementation of intrapreneurial concepts is the intrapreneurship assessment instrument (Kurakto et al. 1990). It considers three environmental factors that need to be taken into consideration by organizations that wish to foster intrapreneurship: management support for intrapreneurship, organizational structure and resource availability. Research shows that the perception of individuals changes after a training in intrapreneurship (Kurakto et al. 1990). Thus, an evaluation before and after the program can be a useful indicator of educational perspective and culture change.

As a conclusion, this chapter provides guidance and ideas for program managers who are tasked with designing a SIP within their organizations with a certain goal and measurable objectives. It also highlights an adapted innovation process that should help intrapreneurs innovation outcomes. A key distinction between innovation outcome and output needs to be made, as the result of the program does not necessarily need to be positive in terms of tangible innovation (i.e. rejected ideas or cancelled projects are an acceptable outcome) and learnings on their own should be considered outcomes. The chapter also provides a series of additional elements that are relevant from a methodological perspective and support the formulation of effective processes. Last, but not least, I have provided an extensive list of supporting elements for

innovation program managers to consider while designing a SIP, among which various cultural and organizational aspects.

## 5 Discussion and Conclusion

In the final chapter of this thesis, I provide a summary of the outlined content, elaborate on further recommendations for implementation and conclusions based on the literature and case studies.

### 5.1 Summary

Ignoring innovation is a dangerous game, especially in an ever-changing digitalized world where the expectations of the customers change rapidly and the market-entry barriers of non-incumbents are decreased. Yet large corporates have issues with innovating by virtue of lacking the ability to explore rather than exploit. Supported intrapreneurship programs can be a great starting point for exploration and for establishing an ambidextrous organization. SIPs enable the fostering of an entrepreneurial culture by teaching employees how to go about new ventures and at the same time can produce viable innovation output.

As large organizations struggle with the risks new ventures bear, the way to reduce uncertainty is by testing the most critical assumptions. Companies can do this by testing the problem an innovation addresses, its value proposition and business assumptions with real customers. Human-centred methodologies allow this experimentation at an early stage possible. Through the integration of early customer feedback, the risks of venturing are decreased, and the venturing process is accelerated. Therefore, they are key to rapidly developing new ventures.

Several methodologies support a fast time-to-market and reduce uncertainty, including design thinking, the lead-user method and lean start-up. Also, innovation processes can be a useful source of information when conceptualizing SIPs. This is why I reviewed methodologies and existing innovation processes to create an adapted innovation process. This adapted process ensures exploration with a human-centred approach suitable for SIPs. It does so to achieve a fast time-to-market whilst minimizing the risks involved with new ventures. The process starts with a discover phase in which ideas are collected and selected. Then an idea becomes an opportunity and enters a three-loop iterative process of explore, prototype and MVP. In the explore phase, the underlying problem of the innovation opportunity is reviewed and tested with the user. If the problem is validated by the user, the opportunity moves to the prototype loop. In this loop, the solution is tested with the user and iterated until a problem-solution fit is reached and the value proposition is validated. Then the opportunity can enter the next loop: the MVP loop. This loop is about experimenting on underlying business assumptions and developing a business model for the value proposition. Once the business composition of the new venture is validated, the opportunity exits the learning loops and becomes a new venture enter in the scaling phase. In the

loops, learnings generated on the venture are in focus. After an opportunity has existed the last learning loop the attention shifts to growth and profitability. This is also the moment when the project moves from exploring the innovation opportunity to exploiting a business venture.

Though the process ensures a faster-time-to market and a reduction of uncertainty because of its human-centred nature, several additional elements should be taken into consideration for the design of a SIP. By analysing several case studies, I both confirmed that methodological elements outlined in the literature are found in practice and observed supporting elements that ensure the removal of impediments and allow for rapid non-incremental venturing. Confirmed elements include the use of human-centred approaches and the employment of multidisciplinary teams.

However, a customized process and a methodology are not enough in designing SIPs that can achieve a fast time-to-market and a reduction of uncertainty. Therefore, additional supporting elements need to be considered. This thesis shows that intrapreneurship requires an ecosystem of ideas, talent and capital (Hammel, 1999). It describes the various roles that can both be found in the literature and outlined in the case studies. It shows that part-time engagement of participants is required if there is a wish to integrate intrapreneurs back into the organization. Moreover, this thesis shows what incentivization mechanisms can be applied for SIPs and what cultural aspects need to be considered for the design. Finally, the thesis offers frameworks that can be helpful in easing stop/go decisions and provides frameworks for measuring the success of SIPs.

## 5.2 Recommendations for Implementation

As the goal of this thesis is to provide a manual for future SIP managers, I would also like to outline a few recommendations for implementation.

### 1. *Employ a program manager*

An SIP requires a dedicated program manager. She or he should first determine what the goals of the program are and how it will be measured. SIPs can have a significant impact on an organization's culture as SIPs foster and groom entrepreneurship within organizations. On the other hand, SIPs can produce tangible and possibly viable innovation output. The program manager should therefore have a clear understanding of why the program is initiated and who the customer of that program is before designing the SIP.

### 2. *Test small before rolling out full program*

As each organization will face different challenges, a “one fits all” approach is unlikely to work. Following the method of thinking large while acting small, the program manager should pilot with a small number of participants, test the concepts with the organization, discover impediments and adapt if necessary before launching a full-scale program.

### **3. *Ensure top management support***

One of the most important aspects of the SIP is its ability to gain the top management’s support and patronage. Without patronage, the program manager will not be able to resolve organizational issues and the likely internal resistance.

### **4. *Consider who finances the program***

The program will require resources, which should be seen as investments in the future of the organization. Capital can come from either the business units or an R&D fund. Depending on how the SIP is financed, the program will face different governance models.

### **5. *Involve stakeholders strategically***

Different SIP designs will also require the involvement of different stakeholder groups. If SIPs are financed by the business line, it is recommended that one involve the necessary managers at the earliest stage possible to ensure a necessary buy-in. Especially in the first explore phase, managers can be valuable in steering the idea-generation process.

### **6. *Ensure diversity and multi-disciplinarity***

Also, the program managers should take care that they acquire diverse participants from various multidisciplinary backgrounds. As large organizations tend to be tight on resources, freeing up time for individuals will become a major challenge. However, if executive management supports the initiative, it can use its influence to get the talent needed for the program.

### **7. *On- and off-site program design***

In addition, as most programs are not envisaged as full-time, international companies in particular should consider on- and off-site program design. In this way, employees from all countries can come together for onsite sessions and test their assumptions in local markets in offsite sessions.

### **8. *Involve facilitators***

Also, I noted that facilitators, who are methodological experts, are necessary to teach methodology and coach teams. One possibility is to outsource this capability and



collaborate with an external vendor. Nonetheless, one should also consider including a methodological in-house expert who can improve the program continuously together with the program manager. Especially for the MVP phase, in which close collaboration with the organization is required, external experts have limited knowledge about the organization and thus cannot help.

### 5.3 Conclusion

Supported intrapreneurship programs bring benefits to an organization and its employees as they allow individual employees to learn and to launch new ventures regardless of disciplinary background or seniority level. They also empower employees and foster an entrepreneurial culture within an organization. This again permits organizations to have employees that can explore and deliver non-incremental innovations that ensure the long-term success of a company.

A key element for SIPs is to enable rapid new venturing. A fast time-to-market enables a company to determine whether a venture will truly be a success. If new ventures launch early, the company will know about their success or failure sooner. This is viable across industries for product, service, and business-model innovation.

Therefore, SIPs require a process that follows a human-centric approach by involving the users of a product or service at the earliest stage possible in order to validate the customer's problem, its value proposition and business assumptions. If a process enables constant inclusion of users, the venture opportunity will reach a rapid problem-solution fit and thus a fast time-to-market.

In addition to the methodology, program managers who design SIPs, should consider additional organizational and cultural elements to ensure their success.

Then SIPs can ensure the exploration capabilities across an organization that fosters an entrepreneurial mindset and thus result in viable innovation outcome.

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